ALBERT A. WEBB ASSOCIATES

Preliminary On-Site Hydrology for
Rancon Medical and Educational Center
Tentative Parcel Map 36492
Plot Plan for Parcels 1, 2, 3 and 13

Wildomar, California

Rancon Medical and Educational Center, LLC
41391 Kalmia Street, Suite 200
Murrieta, CA 92562

September, 2012

REGISTERED PROFESSIONAL ENGINEER
ENTCHO ANGUELOV
NO C70806
CIVIL
STATE OF CALIFORNIA

Entcho Anguelov, P.E.
Senior Engineer

TABLE OF CONTENTS

SECTION 1 – SUMMARY

INTRODUCTION, PROJECT DESCRIPTION ____ 1-1

EXISTING DRAINAGE FACILITIES ____ 1-1

HYDROLOGICAL DATA ____ 1-1

PROPOSED DRAINAGE FACILITIES ____ 1-2

METHODOLOGY ____ 1-2

HYDROLOGY RESULTS ____ 1-3

CONCLUSION ____ 1-3

VICINITY AND PROJECT LOCATION MAPS ____ 1-4

SECTION 2 –RATIONAL METHOD CALCULATIONS

RAINFALL DATA ____ 2-2

10-YEAR STORM POST-DEVELOPED RATIONAL METHOD HYDROLOGY ____ 2-3

100-YEAR STORM POST-DEVELOPED RATIONAL METHOD HYDROLOGY ____ 2-4

RATIONAL METHOD HYDROLOGY MAP ____ 2-5

SECTION 3 – UNIT HYDROGRAPH CALCULATIONS

2-and 10-YEAR PRE-DEVELOPED UNIT HYDROGRAPH HYDROLOGY ____ 3-2

2-and 10-YEAR POST-DEVELOPED UNIT HYDROGRAPH HYDROLOGY ____ 3-2

100-YEAR POST-DEVELOPED UNIT HYDROGRAPH METHOD HYDROLOGY ____ 3-3

NORTH-WEST AREA UNIT HYDROGRAPH CALCULATIONS ____ 3-4

UNIT HYDROGRAPH MAPS ____ 3-5

SECTION 4 –BASIN ROUTING CALCULATIONS

DETENTION BASIN ROUTING ____ 4-1

SECTION 5 –REFERENCE PLANS AND EXHIBITS

SECTION 1 - Summary

Introduction

The purpose of this report is to present the preliminary hydrology analysis and drainage calculations prepared in conjunction with the preliminary grading and plot plan for the Rancon Medical and Education Center (Tentative Parcel Map 36492, Plot Plan for Parcels 1, 2. 3 and 13).

Project Description

The Rancon Medical and Education Center project site is located at the southwest corner of Clinton Keith Road and Elizabeth Lane in the City of Wildomar, County of Riverside, California. The site is approximately 0.80 miles due east of Clinton Keith Road off-ramp from Interstate 15 and approximately 2.3 miles west of the Clinton Keith off-ramp Interstate 215. The site is bounded to the north by Clinton Keith Road, to the west by Yamas Drive and vacant land, to the east by Elizabeth Lane and a mini storage facility, and to the south by vacant land. Latitude and longitude for the site are 33.59591°N/117.23021°W.

Tentative Parcel Map 36492 proposes to create 13 parcels on approximately 29.5 acres of currently vacant, formerly agricultural land (see enclosed Parcel Map 36492). The Rancon Medical and Educational Center proposes to currently develop only three of those parcels (Parcel 1, 2, and 3) along with Parcel 13 (open space) into an industrial park. The scope of this hydrology study will be limited to this partial development that consists of the following activities:

- Conduct grading operations for the entire 8.3 acres and grade to existing topography along the southern boundary of the 3 parcels.
- Construct half width street improvements for approximately 660 lineal feet along Clinton Keith Road (1.12 acres) and approximately 1320 lineal feet along Elizabeth Lane (1.27 acres).
- Construct storm drain improvements along Clinton Keith Road, Elizabeth Lane, and Bunny Trail.
- Construct one medical office building, three commercial office buildings, one office building, one drive-thru restaurant, and associated parking and landscape areas on Parcels 1 through 3.
- Construct a detention basin/sand filter basin on Parcel 13 (open space) for increased storm water runoff mitigation and water quality treatment.
- Construct sidewalk under drains along Clinton Keith Road and Elizabeth Lane to convey street tributary runoff to on-site vegetated swales that treat the storm water before entering the existing storm drain system.
- Conduct selective grading of the immediate surrounding area and modify existing storm drain design to prevent diversion of flows and maintain existing drainage patterns.

Existing Drainage Facilities

Elevations across the site vary from1372 feet above mean sea level (MSL) in the northwest corner to 1385 feet above MSL in the northeast corner to 1370 feet above MSL in the southwest corner to 1362 feet above MSL in the southeast corner. Off-site flows, north of Clinton Keith Road, enter the site at two locations along Clinton Keith Road. One location is in the extreme northwest corner of Parcel 1. Here, four 48" RCPs convey flows (Q10=229.9 cfs, Q100=384.5 cfs) under Clinton Keith Road to a natural channel that continues southwesterly until joining Murrieta Creek. Also, there is a 24" CMP that conveys street flows from an AC curb/spillway along Clinton Keith Road. The other location is approximately 350' south of the northeast corner. At this location, flows are conveyed through a basin just east of Elizabeth Lane into a 60" RCP that crosses under Elizabeth Lane and outlets into a natural channel (Q100=234.9 cfs). This channel meanders in a southerly direction until joining Murrieta Creek. In addition, flows from the adjacent mini-storage building and parking area to the east confluence with this channel and enter the site at two locations. The first location is at a low point in Elizabeth Lane where a catch basin with 24" RCP to the east street side and a curb opening to the west street side convey street flows and outlet midway along the eastern boundary of the site into this natural channel (Q100=15.1 cfs). The second location is approximately 250' north of the intersection of Elizabeth Lane and Bunny Trail where a 30" RCP culvert outlets into the natural channel (Q100=27.2 cfs). Once the combined flows exit the site, they continue in natural channels for approximately 3 miles until they join Murrieta Creek.

On-site flows presently drain towards three meandering natural drainage courses. The north-west area of the Plot Plan site (2.1 acres) drains into Stream 3, where the existing triple 48" RCP under Clinton Keith Road outlets. The mid-area of the site consists of 3.3 acres and drains into the natural Stream 2. The easterly site area drains into the natural Stream 1 where the proposed Plot Plan will drain to during the post-developed conditions. The existing hydrology conditions, boundaries and facilities are shown on the "Existing Conditions Unit Hydrograph Hydrology Map". The existing conditions unit hydrograph calculations are included in Section 3.

Hydrological and Soil Data

Based on the Riverside County Soils Group designation the majority of the site consists of soil group "C" with a small area at the south-east corner consisting of soil "B". Soil designation is shown on the "Existing Conditions Unit Hydrograph Hydrology Map".

The following precipitation data is from the NOAA Atlas 14 for the Wildomar area and the Slope of Intensity Duration Curve Map from the Riverside County Flood Control and Water Conservation District:

- 10 year – 1 hour Rainfall Intensity = 0.88 inches/hour
- 100 year – 1 hour Rainfall Intensity = 1.49 inches/hour
- Slope of Intensity Duration Curve = 0.48

Proposed Drainage Facilities

The proposed on-site storm drain system and drainage design will maintain these existing flows by the following:

- The existing four 48' RCP culverts in the northwest corner that run under Clinton Keith Road will be extended under the widened southern half of the road, maintaining existing flows with no impact downstream. The site grading proposes that the north-west portion of 0.6 acres drains to Stream 3 in a manner that the proposed conditions flows do not exceed existing conditions flows generated from the 2.1 acres. The unit hydrograph calculations for the existing and proposed conditions for the north-west area are included in Section 3.

- Near the above mentioned culverts, an AC spillway inlet into a 24" CMP will be replaced with a catch basin along with the street improvement widening.

- The existing 60" RCP that carries flows from north side of Clinton Keith Road will be extended approximately 400 lineal feet and outlet back into the natural drainage channel approximately 150' south of the most southerly drive entrance from Elizabeth Lane.

- An existing catch basin at a low point along the east side of Elizabeth Lane that directly discharges into a natural channel will join the above mentioned 60" RCP, as well as a proposed catch basin directly on the west side of Elizabeth Lane.

- The existing 30" RCP that carries flows from the adjacent mini-storage facility will be extended approximately 200 lineal feet and join a culvert that will be built under Bunny Lane.

- A 40' long culvert will be built under Bunny Lane to allow storm water to continue flowing in a southerly direction as it currently does.

- An on-site drainage system is proposed to capture the on-site flows and convey them to the proposed water quality/detention basin. The rational method on-site hydrology calculations are included in Section 2 along with a "Rational Method Hydrology Map".

- A detention basin will be constructed in the southeast corner of Parcel 13 to mitigate the increased runoff from the post-developed project site and release measured flows into the natural Stream 1with no adverse impact downstream. The proposed basin will serve dual purpose as being a water quality sand filtration basin and a detention mitigation basin. The 2-year, 24-hour and the 10-year, 24-hour storm events were mitigated through the basin which is sufficient to prove the basin capacity for this preliminary drainage study. The 100-year events will bypass through. The proposed basin outlet structure will have orifices to restrict the 2- and the 10-year flows and a weir on top of the structure for bypassing the 100-year flows. The basin routing calculations and summary table are included in Section 4.

Methodology

The Riverside County Rational Method described in the Riverside County Hydrology Manual was utilized to determine the 10 and 100-year storm on-site flows. The Riverside County Unit Hydrograph Method was used to provide hydrological information for routing the proposed basin. The Computer Software Program used was Civil Design Version 7.1. Routing program from the same software package was used to size the basin.

Conclusion

Based upon the results of this report, it is concluded that the proposed facilities will adequately provide drainage conveyance in accordance with a 100-Year design storm event. The proposed facilities, with adequate maintenance, will convey flows safely through the region in accordance with Riverside County Requirements and without an impact upon the existing storm drain improvements.

Vicinity and Project Location Maps

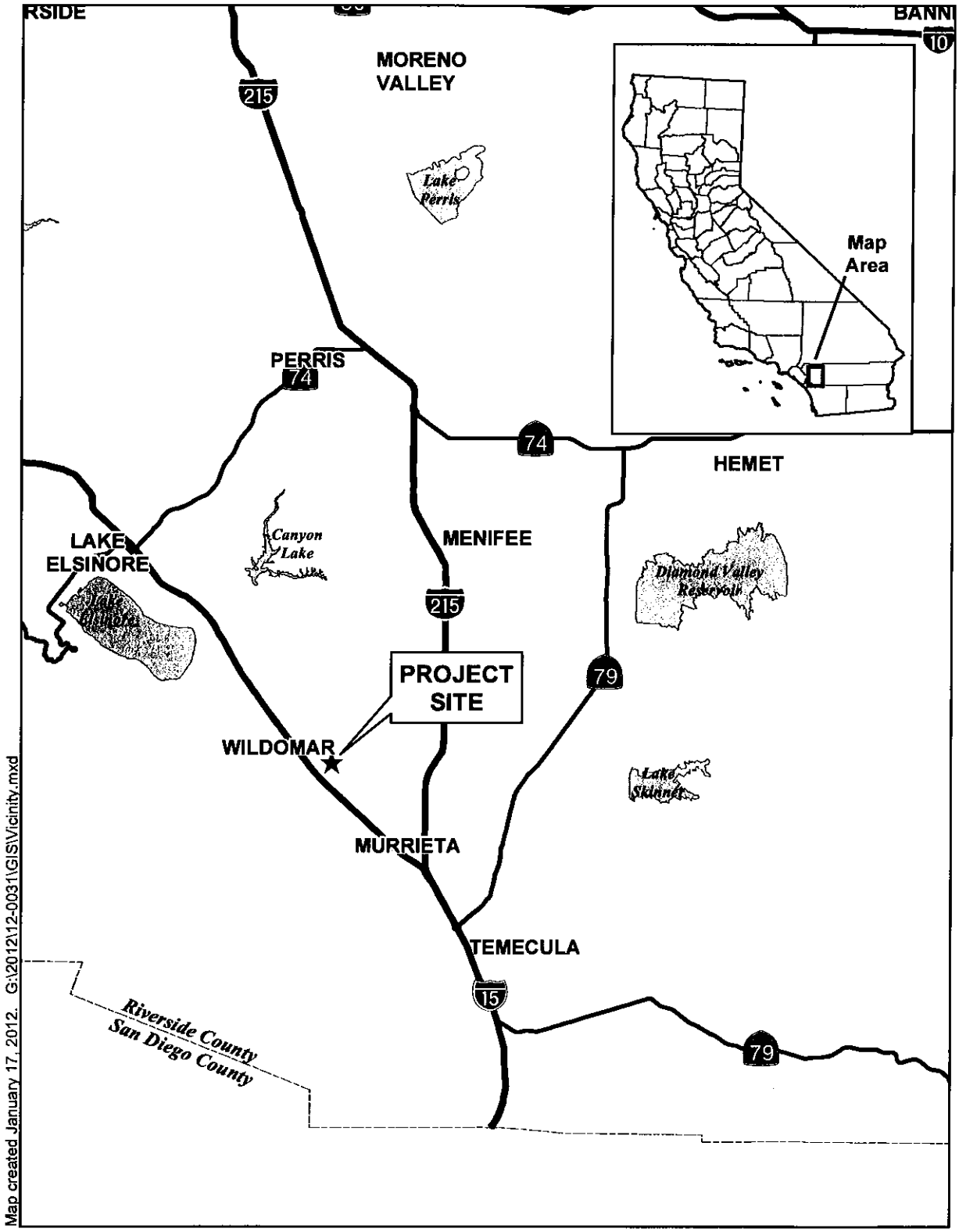


Figure 1. Vicinity Map

Rancon Medical & Educational Center

N W E S

0 2 4 6 Miles

Albert A. WEBB Associates

G:\2012\12-0031\Gis\aerial.mxd

Sources: County of Riverside GIS, 2012;
Eagle Aerial, April 2010.

Figure 1 - Aerial Photograph
Rancon Medical and Education Center

0 250 500 750 Feet

Albert A. WEBB Associates

SECTION 2 - Rational Method Hydrology Calculations

Rainfall Data

10-Year Storm Post-Developed Rational Method Hydrology

100-Year Storm Post-Developed Rational Method Hydrology

Rational Method Hydrology Map

Rainfall Data

NOAA Atlas 14, Volume 6, Version 2
Location name: Wildomar, California, US*
Coordinates: 33.5959, -117.2302
Elevation: 1372ft*
* source: Google Maps

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval(years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.097 (0.081-0.117)	0.131 (0.110-0.158)	0.177 (0.148-0.214)	0.216 (0.179-0.264)	0.271 (0.217-0.343)	0.315 (0.247-0.408)	0.362 (0.276-0.480)	0.411 (0.304-0.561)	0.480 (0.340-0.685)	0.535 (0.365-0.792)
10-min	0.139 (0.117-0.167)	0.188 (0.157-0.226)	0.254 (0.212-0.307)	0.310 (0.257-0.378)	0.389 (0.311-0.492)	0.452 (0.354-0.584)	0.519 (0.395-0.688)	0.589 (0.436-0.805)	0.688 (0.487-0.982)	0.767 (0.524-1.14)
15-min	0.168 (0.141-0.202)	0.227 (0.190-0.273)	0.307 (0.257-0.371)	0.375 (0.310-0.457)	0.470 (0.376-0.594)	0.547 (0.428-0.707)	0.627 (0.478-0.832)	0.712 (0.527-0.973)	0.832 (0.589-1.19)	0.928 (0.633-1.37)
30-min	0.264 (0.221-0.317)	0.356 (0.298-0.429)	0.481 (0.402-0.582)	0.587 (0.486-0.716)	0.738 (0.590-0.932)	0.857 (0.670-1.11)	0.983 (0.749-1.30)	1.12 (0.826-1.53)	1.30 (0.923-1.86)	1.46 (0.993-2.15)
60-min	0.399 (0.334-0.480)	0.538 (0.451-0.648)	0.728 (0.608-0.880)	0.888 (0.735-1.08)	1.12 (0.891-1.41)	1.30 (1.01-1.68)	1.49 (1.13-1.97)	1.69 (1.25-2.31)	1.97 (1.40-2.82)	2.20 (1.50-3.26)
2-hr	0.589 (0.494-0.709)	0.777 (0.651-0.936)	1.03 (0.861-1.25)	1.24 (1.03-1.52)	1.54 (1.23-1.95)	1.78 (1.39-2.30)	2.02 (1.54-2.68)	2.28 (1.69-3.11)	2.64 (1.87-3.77)	2.92 (1.99-4.33)
3-hr	0.731 (0.613-0.880)	0.957 (0.802-1.15)	1.26 (1.05-1.53)	1.52 (1.26-1.85)	1.87 (1.50-2.36)	2.15 (1.68-2.78)	2.44 (1.86-3.23)	2.74 (2.03-3.75)	3.16 (2.24-4.52)	3.49 (2.38-5.17)
6-hr	1.04 (0.871-1.25)	1.36 (1.14-1.64)	1.78 (1.49-2.15)	2.13 (1.77-2.60)	2.62 (2.09-3.31)	3.00 (2.34-3.87)	3.39 (2.58-4.49)	3.80 (2.81-5.18)	4.36 (3.08-6.22)	4.79 (3.27-7.10)
12-hr	1.37 (1.15-1.65)	1.81 (1.52-2.18)	2.40 (2.00-2.90)	2.87 (2.38-3.51)	3.53 (2.82-4.46)	4.04 (3.16-5.22)	4.55 (3.47-6.04)	5.09 (3.76-6.95)	5.81 (4.11-8.30)	6.38 (4.35-9.44)
24-hr	1.79 (1.58-2.06)	2.42 (2.14-2.80)	3.25 (2.87-3.77)	3.93 (3.44-4.59)	4.85 (4.11-5.85)	5.56 (4.61-6.84)	6.28 (5.09-7.91)	7.02 (5.54-9.09)	8.03 (6.09-10.8)	8.81 (6.46-12.3)
2-day	2.14 (1.89-2.47)	2.98 (2.63-3.45)	4.09 (3.61-4.75)	5.01 (4.38-5.85)	6.26 (5.30-7.55)	7.23 (6.00-8.90)	8.23 (6.67-10.4)	9.27 (7.31-12.0)	10.7 (8.10-14.4)	11.8 (8.66-16.4)
3-day	2.29 (2.02-2.64)	3.24 (2.86-3.75)	4.51 (3.97-5.23)	5.57 (4.86-6.50)	7.02 (5.94-8.47)	8.17 (6.78-10.1)	9.36 (7.58-11.8)	10.6 (8.36-13.7)	12.3 (9.35-16.6)	13.7 (10.1-19.1)
4-day	2.47 (2.18-2.85)	3.52 (3.11-4.07)	4.94 (4.35-5.73)	6.13 (5.35-7.15)	7.78 (6.58-9.38)	9.08 (7.53-11.2)	10.4 (8.46-13.1)	11.9 (9.37-15.4)	13.9 (10.5-18.7)	15.5 (11.4-21.6)
7-day	2.82 (2.49-3.25)	4.06 (3.58-4.69)	5.74 (5.06-6.66)	7.16 (6.26-8.37)	9.16 (7.75-11.0)	10.8 (8.92-13.2)	12.4 (10.1-15.6)	14.2 (11.2-18.4)	16.7 (12.7-22.5)	18.7 (13.7-26.1)
10-day	3.01 (2.66-3.47)	4.34 (3.84-5.02)	6.18 (5.44-7.16)	7.73 (6.76-9.03)	9.94 (8.41-12.0)	11.7 (9.71-14.4)	13.6 (11.0-17.1)	15.6 (12.3-20.1)	18.4 (13.9-24.8)	20.7 (15.2-28.8)
20-day	3.62 (3.20-4.18)	5.29 (4.67-6.12)	7.62 (6.71-8.83)	9.61 (8.40-11.2)	12.5 (10.6-15.1)	14.8 (12.3-18.3)	17.3 (14.1-21.9)	20.1 (15.8-26.0)	24.0 (18.2-32.3)	27.2 (19.9-37.8)
30-day	4.27 (3.77-4.93)	6.23 (5.50-7.20)	9.00 (7.93-10.4)	11.4 (9.96-13.3)	14.9 (12.6-18.0)	17.8 (14.8-21.9)	20.9 (16.9-26.3)	24.3 (19.1-31.4)	29.2 (22.1-39.3)	33.2 (24.3-46.2)
45-day	5.00 (4.42-5.77)	7.26 (6.41-8.39)	10.5 (9.23-12.1)	13.3 (11.6-15.5)	17.5 (14.8-21.1)	20.9 (17.4-25.8)	24.7 (20.0-31.1)	28.8 (22.7-37.3)	34.8 (26.4-46.9)	39.9 (29.2-55.5)
60-day	5.77 (5.10-6.66)	8.30 (7.32-9.59)	11.9 (10.5-13.8)	15.1 (13.2-17.7)	19.9 (16.8-24.0)	23.9 (19.8-29.4)	28.2 (22.9-35.6)	33.0 (26.1-42.7)	40.1 (30.4-54.0)	46.0 (33.8-64.1)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

10-Year Storm Post-Developed Rational Method Hydrology

```
                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 08/31/12  File:RMEC1.out
------------------------------------------------------------------------
RANCON MEDICAL AND EDUCATIONAL CENTER
PLOT PLAN Q10 STORM EVENT
POST-DEVELOPED

------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4010

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ Elsinore-Wildomar ] area used.
10 year storm 10 minute intensity =  2.320(In/Hr)
10 year storm 60 minute intensity =  0.980(In/Hr)
100 year storm 10 minute intensity =  3.540(In/Hr)
100 year storm 60 minute intensity =  1.500(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.980(In/Hr)
Slope of intensity duration curve = 0.4800




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      100.000 to Point/Station      101.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
Initial area flow distance =   470.000(Ft.)
Top (of initial area) elevation =  1379.000(Ft.)
Bottom (of initial area) elevation =  1371.500(Ft.)
Difference in elevation =     7.500(Ft.)
Slope =    0.01596  s(percent)=       1.60
TC = k(0.323)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.659 min.
Rainfall intensity =      2.482(In/Hr) for a    10.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.865
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Initial subarea runoff =      3.800(CFS)
Total initial stream area =        1.770(Ac.)
Pervious area fraction = 0.200
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      101.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.865
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =     8.66 min.
Rainfall intensity =      2.482(In/Hr) for a    10.0 year storm
Subarea runoff =      0.665(CFS) for      0.310(Ac.)
Total runoff =      4.465(CFS)   Total area =       2.080(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      102.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1367.500(Ft.)
Downstream point/station elevation =  1364.800(Ft.)
Pipe length  =   529.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.465(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     4.465(CFS)
Normal flow depth in pipe =   11.88(In.)
Flow top width inside pipe =   12.17(In.)
Critical Depth =   10.28(In.)
Pipe flow velocity =      4.28(Ft/s)
Travel time through pipe =    2.06 min.
Time of concentration (TC) =    10.72 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      102.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.862
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =    10.72 min.
Rainfall intensity =      2.240(In/Hr) for a    10.0 year storm
Subarea runoff =      3.051(CFS) for      1.580(Ac.)
Total runoff =      7.517(CFS)   Total area =       3.660(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      102.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.862
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
```

```
Time of concentration =    10.72 min.
Rainfall intensity =      2.240(In/Hr) for a    10.0 year storm
Subarea runoff =      1.275(CFS) for      0.660(Ac.)
Total runoff =      8.791(CFS)    Total area =       4.320(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1364.800(Ft.)
Downstream point/station elevation =  1364.500(Ft.)
Pipe length  =    46.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     8.791(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =     8.791(CFS)
Normal flow depth in pipe =   12.79(In.)
Flow top width inside pipe =   20.50(In.)
Critical Depth =   13.22(In.)
Pipe flow velocity =      5.73(Ft/s)
Travel time through pipe =    0.13 min.
Time of concentration (TC) =    10.85 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      103.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      4.320(Ac.)
Runoff from this stream =      8.791(CFS)
Time of concentration =   10.85 min.
Rainfall intensity =     2.227(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      200.000 to Point/Station      201.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
Initial area flow distance =   207.000(Ft.)
Top (of initial area) elevation =  1376.900(Ft.)
Bottom (of initial area) elevation =  1372.900(Ft.)
Difference in elevation =     4.000(Ft.)
Slope =    0.01932  s(percent)=       1.93
TC = k(0.323)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.003 min.
Rainfall intensity =      2.959(In/Hr) for a    10.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.870
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Initial subarea runoff =      1.338(CFS)
Total initial stream area =        0.520(Ac.)
Pervious area fraction = 0.200


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      202.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1368.900(Ft.)
```

```
Downstream point/station elevation =  1366.200(Ft.)
Pipe length  =   250.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     1.338(CFS)
Nearest computed pipe diameter  =      9.00(In.)
Calculated individual pipe flow  =     1.338(CFS)
Normal flow depth in pipe =    5.97(In.)
Flow top width inside pipe =    8.51(In.)
Critical Depth =    6.39(In.)
Pipe flow velocity =      4.30(Ft/s)
Travel time through pipe =    0.97 min.
Time of concentration (TC) =     6.97 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      202.000 to Point/Station      202.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.868
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =     6.97 min.
Rainfall intensity =      2.754(In/Hr) for a    10.0 year storm
Subarea runoff =      3.513(CFS) for      1.470(Ac.)
Total runoff =      4.851(CFS)   Total area =       1.990(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      202.000 to Point/Station      103.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1366.200(Ft.)
Downstream point/station elevation =  1364.500(Ft.)
Pipe length  =   152.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.851(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     4.851(CFS)
Normal flow depth in pipe =    9.34(In.)
Flow top width inside pipe =   14.54(In.)
Critical Depth =   10.72(In.)
Pipe flow velocity =      6.04(Ft/s)
Travel time through pipe =    0.42 min.
Time of concentration (TC) =     7.39 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      202.000 to Point/Station      103.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.990(Ac.)
Runoff from this stream =      4.851(CFS)
Time of concentration =    7.39 min.
Rainfall intensity =     2.678(In/Hr)
Program is now starting with Main Stream No. 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      300.000 to Point/Station      301.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
Initial area flow distance =   260.000(Ft.)
```

```
Top (of initial area) elevation =  1378.500(Ft.)
Bottom (of initial area) elevation =  1374.500(Ft.)
Difference in elevation =     4.000(Ft.)
Slope =    0.01538  s(percent)=       1.54
TC = k(0.323)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.883 min.
Rainfall intensity =      2.771(In/Hr) for a    10.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.868
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Initial subarea runoff =      2.020(CFS)
Total initial stream area =        0.840(Ac.)
Pervious area fraction = 0.200


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      301.000 to Point/Station      302.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1370.500(Ft.)
Downstream point/station elevation =  1368.100(Ft.)
Pipe length  =    60.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.020(CFS)
Nearest computed pipe diameter  =      9.00(In.)
Calculated individual pipe flow  =     2.020(CFS)
Normal flow depth in pipe =    5.08(In.)
Flow top width inside pipe =    8.92(In.)
Critical Depth =    7.74(In.)
Pipe flow velocity =      7.86(Ft/s)
Travel time through pipe =    0.13 min.
Time of concentration (TC) =     7.01 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      302.000 to Point/Station      302.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.868
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =     7.01 min.
Rainfall intensity =      2.747(In/Hr) for a    10.0 year storm
Subarea runoff =      0.667(CFS) for      0.280(Ac.)
Total runoff =      2.688(CFS)   Total area =       1.120(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      302.000 to Point/Station      303.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1368.100(Ft.)
Downstream point/station elevation =  1367.600(Ft.)
Pipe length  =    49.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.688(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     2.688(CFS)
Normal flow depth in pipe =    7.73(In.)
```

```
Flow top width inside pipe =   11.49(In.)
Critical Depth =    8.43(In.)
Pipe flow velocity =      5.03(Ft/s)
Travel time through pipe =    0.16 min.
Time of concentration (TC) =     7.17 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      303.000 to Point/Station      303.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.867
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =     7.17 min.
Rainfall intensity =      2.717(In/Hr) for a    10.0 year storm
Subarea runoff =      0.330(CFS) for      0.140(Ac.)
Total runoff =      3.018(CFS)   Total area =       1.260(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      303.000 to Point/Station      304.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1367.600(Ft.)
Downstream point/station elevation =  1365.600(Ft.)
Pipe length  =   165.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.018(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     3.018(CFS)
Normal flow depth in pipe =    7.90(In.)
Flow top width inside pipe =   11.38(In.)
Critical Depth =    8.93(In.)
Pipe flow velocity =      5.51(Ft/s)
Travel time through pipe =    0.50 min.
Time of concentration (TC) =     7.67 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      304.000 to Point/Station      304.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.849
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  56.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =     7.67 min.
Rainfall intensity =      2.630(In/Hr) for a    10.0 year storm
Subarea runoff =      1.027(CFS) for      0.460(Ac.)
Total runoff =      4.044(CFS)   Total area =       1.720(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      304.000 to Point/Station      103.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1365.600(Ft.)
Downstream point/station elevation =  1364.500(Ft.)
```

```
Pipe length  =    75.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.044(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     4.044(CFS)
Normal flow depth in pipe =    9.22(In.)
Flow top width inside pipe =   10.12(In.)
Critical Depth =   10.21(In.)
Pipe flow velocity =      6.24(Ft/s)
Travel time through pipe =    0.20 min.
Time of concentration (TC) =     7.87 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      103.000
**** CONFLUENCE OF MAIN STREAMS ****
----------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      1.720(Ac.)
Runoff from this stream =      4.044(CFS)
Time of concentration =    7.87 min.
Rainfall intensity =     2.598(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1        8.791     10.85            2.227
2        4.851      7.39            2.678
3        4.044      7.87            2.598
Largest stream flow has longer time of concentration
Qp =      8.791 + sum of
         Qb         Ia/Ib
          4.851 *    0.832 =      4.035
         Qb         Ia/Ib
          4.044 *    0.857 =      3.467
Qp =     16.293

Total of 3 main streams to confluence:
Flow rates before confluence point:
       8.791       4.851       4.044
Area of streams before confluence:
        4.320        1.990        1.720


Results of confluence:
Total flow rate =     16.293(CFS)
Time of concentration =    10.850 min.
Effective stream area after confluence  =      8.030(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      104.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
----------------------------------------------------------------------
Upstream point/station elevation =  1364.500(Ft.)
Downstream point/station elevation =  1348.000(Ft.)
Pipe length  =   537.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    16.293(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    16.293(CFS)
Normal flow depth in pipe =   13.17(In.)
Flow top width inside pipe =   15.95(In.)
Critical depth could not be calculated.
Pipe flow velocity =     11.77(Ft/s)
Travel time through pipe =    0.76 min.
```

Time of concentration (TC) = 11.61 min.
End of computations, total study area = 8.03 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.200
Area averaged RI index number = 68.3

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
Rational Hydrology Study Date: 08/31/12 File:RMEC1.out

RANCON MEDICAL AND EDUCATIONAL CENTER
Q10 STORM EVENT
POST-DEVELOPED
CLINTON KEITH ROAD

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 4010

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Elsinore-Wildomar] area used.
10 year storm 10 minute intensity = 2.320(In/Hr)
10 year storm 60 minute intensity = 0.980(In/Hr)
100 year storm 10 minute intensity = 3.540(In/Hr)
100 year storm 60 minute intensity = 1.500(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.980(In/Hr)
Slope of intensity duration curve = 0.4800

++
Process from Point/Station 400.000 to Point/Station 401.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 560.000(Ft.)
Top (of initial area) elevation = 1379.500(Ft.)
Bottom (of initial area) elevation = 1375.800(Ft.)
Difference in elevation = 3.700(Ft.)
Slope = 0.00661 s(percent)= 0.66
TC = k(0.323)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 11.078 min.
Rainfall intensity = 2.205(In/Hr) for a 10.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.862
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 69.00
Pervious area fraction = 0.200; Impervious fraction = 0.800
Initial subarea runoff = 2.299(CFS)
Total initial stream area = 1.210(Ac.)
Pervious area fraction = 0.200

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      401.000 to Point/Station      401.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.862
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =    11.08 min.
Rainfall intensity =      2.205(In/Hr) for a    10.0 year storm
Subarea runoff =      0.247(CFS) for      0.130(Ac.)
Total runoff =      2.546(CFS)   Total area =       1.340(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      300.000 to Point/Station      401.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.842
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.300; Impervious fraction =  0.700
Time of concentration =    11.08 min.
Rainfall intensity =      2.205(In/Hr) for a    10.0 year storm
Subarea runoff =      0.966(CFS) for      0.520(Ac.)
Total runoff =      3.511(CFS)   Total area =       1.860(Ac.)
End of computations, total study area =            1.86 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.228
Area averaged RI index number =  69.0
```

```
                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 08/31/12  File:RMEC1.out
------------------------------------------------------------------------
RANCON MEDICAL AND EDUCATIONAL CENTER
Q10 STORM EVENT
POST-DEVELOPED
ELIZABETH LANE
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4010

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =   10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ Elsinore-Wildomar ] area used.
10 year storm 10 minute intensity =  2.320(In/Hr)
10 year storm 60 minute intensity =  0.980(In/Hr)
100 year storm 10 minute intensity =  3.540(In/Hr)
100 year storm 60 minute intensity =  1.500(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.980(In/Hr)
Slope of intensity duration curve = 0.4800




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      500.000 to Point/Station      501.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
Initial area flow distance =   604.000(Ft.)
Top (of initial area) elevation =  1379.000(Ft.)
Bottom (of initial area) elevation =  1361.300(Ft.)
Difference in elevation =    17.700(Ft.)
Slope =    0.02930  s(percent)=       2.93
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    7.873 min.
Rainfall intensity =      2.598(In/Hr) for a    10.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.883
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      1.239(CFS)
Total initial stream area =        0.540(Ac.)
Pervious area fraction = 0.100
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      501.000 to Point/Station      501.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.898
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.010; Impervious fraction =  0.990
Time of concentration =     7.87 min.
Rainfall intensity =      2.598(In/Hr) for a    10.0 year storm
Subarea runoff =      0.163(CFS) for      0.070(Ac.)
Total runoff =      1.402(CFS)   Total area =       0.610(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      501.000 to Point/Station      501.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.897
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  56.00
Pervious area fraction =  0.010; Impervious fraction =  0.990
Time of concentration =     7.87 min.
Rainfall intensity =      2.598(In/Hr) for a    10.0 year storm
Subarea runoff =      0.280(CFS) for      0.120(Ac.)
Total runoff =      1.682(CFS)   Total area =       0.730(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      501.000 to Point/Station      501.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.883
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Time of concentration =     7.87 min.
Rainfall intensity =      2.598(In/Hr) for a    10.0 year storm
Subarea runoff =      0.459(CFS) for      0.200(Ac.)
Total runoff =      2.141(CFS)   Total area =       0.930(Ac.)
End of computations, total study area =            0.93 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.082
Area averaged RI index number =  67.3
```

100-Year Storm Post-Developed Rational Method Hydrology

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
Rational Hydrology Study Date: 08/31/12 File:RMEC1.out

RANCON MEDICAL AND EDUCATIONAL CENTER
PLOT PLAN Q100 STORM EVENT
POST-DEVELOPED

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 4010

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Elsinore-Wildomar] area used.
10 year storm 10 minute intensity = 2.320(In/Hr)
10 year storm 60 minute intensity = 0.980(In/Hr)
100 year storm 10 minute intensity = 3.540(In/Hr)
100 year storm 60 minute intensity = 1.500(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.500(In/Hr)
Slope of intensity duration curve = 0.4800

++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 470.000(Ft.)
Top (of initial area) elevation = 1379.000(Ft.)
Bottom (of initial area) elevation = 1371.500(Ft.)
Difference in elevation = 7.500(Ft.)
Slope = 0.01596 s(percent)= 1.60
TC = k(0.323)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 8.659 min.
Rainfall intensity = 3.799(In/Hr) for a 100.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.875
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 69.00
Pervious area fraction = 0.200; Impervious fraction = 0.800
Initial subarea runoff = 5.886(CFS)
Total initial stream area = 1.770(Ac.)
Pervious area fraction = 0.200

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      101.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.875
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =     8.66 min.
Rainfall intensity =      3.799(In/Hr) for a   100.0 year storm
Subarea runoff =      1.031(CFS) for      0.310(Ac.)
Total runoff =      6.917(CFS)   Total area =       2.080(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      102.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1367.500(Ft.)
Downstream point/station elevation =  1364.800(Ft.)
Pipe length  =   529.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     6.917(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =     6.917(CFS)
Normal flow depth in pipe =   13.62(In.)
Flow top width inside pipe =   15.45(In.)
Critical Depth =   12.22(In.)
Pipe flow velocity =      4.82(Ft/s)
Travel time through pipe =    1.83 min.
Time of concentration (TC) =    10.49 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      102.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.873
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =    10.49 min.
Rainfall intensity =      3.465(In/Hr) for a   100.0 year storm
Subarea runoff =      4.782(CFS) for      1.580(Ac.)
Total runoff =     11.699(CFS)   Total area =       3.660(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      102.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.873
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
```

```
Time of concentration =    10.49 min.
Rainfall intensity =      3.465(In/Hr) for a   100.0 year storm
Subarea runoff =      1.997(CFS) for      0.660(Ac.)
Total runoff =     13.696(CFS)    Total area =       4.320(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1364.800(Ft.)
Downstream point/station elevation =  1364.500(Ft.)
Pipe length  =    46.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    13.696(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    13.696(CFS)
Normal flow depth in pipe =   15.50(In.)
Flow top width inside pipe =   22.95(In.)
Critical Depth =   15.99(In.)
Pipe flow velocity =      6.38(Ft/s)
Travel time through pipe =    0.12 min.
Time of concentration (TC) =    10.61 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      103.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      4.320(Ac.)
Runoff from this stream =     13.696(CFS)
Time of concentration =   10.61 min.
Rainfall intensity =     3.446(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      200.000 to Point/Station      201.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
Initial area flow distance =   207.000(Ft.)
Top (of initial area) elevation =  1376.900(Ft.)
Bottom (of initial area) elevation =  1372.900(Ft.)
Difference in elevation =     4.000(Ft.)
Slope =    0.01932  s(percent)=       1.93
TC = k(0.323)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.003 min.
Rainfall intensity =      4.529(In/Hr) for a   100.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.879
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Initial subarea runoff =      2.070(CFS)
Total initial stream area =        0.520(Ac.)
Pervious area fraction = 0.200


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      202.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1368.900(Ft.)
```

```
Downstream point/station elevation =  1366.200(Ft.)
Pipe length  =   250.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.070(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     2.070(CFS)
Normal flow depth in pipe =    6.42(In.)
Flow top width inside pipe =   11.97(In.)
Critical Depth =    7.38(In.)
Pipe flow velocity =      4.85(Ft/s)
Travel time through pipe =    0.86 min.
Time of concentration (TC) =     6.86 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      202.000 to Point/Station      202.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.878
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =     6.86 min.
Rainfall intensity =      4.247(In/Hr) for a   100.0 year storm
Subarea runoff =      5.480(CFS) for      1.470(Ac.)
Total runoff =      7.550(CFS)   Total area =       1.990(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      202.000 to Point/Station      103.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1366.200(Ft.)
Downstream point/station elevation =  1364.500(Ft.)
Pipe length  =   152.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     7.550(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =     7.550(CFS)
Normal flow depth in pipe =   10.88(In.)
Flow top width inside pipe =   17.61(In.)
Critical Depth =   12.77(In.)
Pipe flow velocity =      6.76(Ft/s)
Travel time through pipe =    0.37 min.
Time of concentration (TC) =     7.24 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      202.000 to Point/Station      103.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.990(Ac.)
Runoff from this stream =      7.550(CFS)
Time of concentration =    7.24 min.
Rainfall intensity =     4.140(In/Hr)
Program is now starting with Main Stream No. 3


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      300.000 to Point/Station      301.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
Initial area flow distance =   260.000(Ft.)
```

```
Top (of initial area) elevation =  1378.500(Ft.)
Bottom (of initial area) elevation =  1374.500(Ft.)
Difference in elevation =     4.000(Ft.)
Slope =    0.01538  s(percent)=       1.54
TC = k(0.323)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.883 min.
Rainfall intensity =      4.241(In/Hr) for a   100.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.878
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Initial subarea runoff =      3.127(CFS)
Total initial stream area =        0.840(Ac.)
Pervious area fraction = 0.200


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      301.000 to Point/Station      302.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1370.500(Ft.)
Downstream point/station elevation =  1368.100(Ft.)
Pipe length  =    60.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.127(CFS)
Nearest computed pipe diameter  =      9.00(In.)
Calculated individual pipe flow  =     3.127(CFS)
Normal flow depth in pipe =    6.97(In.)
Flow top width inside pipe =    7.52(In.)
Critical depth could not be calculated.
Pipe flow velocity =      8.52(Ft/s)
Travel time through pipe =    0.12 min.
Time of concentration (TC) =     7.00 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      302.000 to Point/Station      302.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.878
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =     7.00 min.
Rainfall intensity =      4.207(In/Hr) for a   100.0 year storm
Subarea runoff =      1.034(CFS) for      0.280(Ac.)
Total runoff =      4.161(CFS)   Total area =       1.120(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      302.000 to Point/Station      303.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1368.100(Ft.)
Downstream point/station elevation =  1367.600(Ft.)
Pipe length  =    49.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.161(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     4.161(CFS)
Normal flow depth in pipe =    8.70(In.)
```

```
Flow top width inside pipe =   14.81(In.)
Critical Depth =    9.90(In.)
Pipe flow velocity =      5.64(Ft/s)
Travel time through pipe =    0.14 min.
Time of concentration (TC) =     7.15 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      303.000 to Point/Station      303.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.877
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =     7.15 min.
Rainfall intensity =      4.166(In/Hr) for a   100.0 year storm
Subarea runoff =      0.512(CFS) for      0.140(Ac.)
Total runoff =      4.672(CFS)   Total area =       1.260(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      303.000 to Point/Station      304.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1367.600(Ft.)
Downstream point/station elevation =  1365.600(Ft.)
Pipe length  =   165.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.672(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     4.672(CFS)
Normal flow depth in pipe =    8.87(In.)
Flow top width inside pipe =   14.75(In.)
Critical Depth =   10.51(In.)
Pipe flow velocity =      6.18(Ft/s)
Travel time through pipe =    0.44 min.
Time of concentration (TC) =     7.59 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      304.000 to Point/Station      304.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.863
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  56.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =     7.59 min.
Rainfall intensity =      4.047(In/Hr) for a   100.0 year storm
Subarea runoff =      1.606(CFS) for      0.460(Ac.)
Total runoff =      6.279(CFS)   Total area =       1.720(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      304.000 to Point/Station      103.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1365.600(Ft.)
Downstream point/station elevation =  1364.500(Ft.)
```

```
Pipe length  =    75.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     6.279(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     6.279(CFS)
Normal flow depth in pipe =   10.17(In.)
Flow top width inside pipe =   14.02(In.)
Critical Depth =   12.13(In.)
Pipe flow velocity =      7.09(Ft/s)
Travel time through pipe =    0.18 min.
Time of concentration (TC) =     7.77 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      103.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 3
Stream flow area =      1.720(Ac.)
Runoff from this stream =      6.279(CFS)
Time of concentration =    7.77 min.
Rainfall intensity =     4.002(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1       13.696     10.61            3.446
2        7.550      7.24            4.140
3        6.279      7.77            4.002
Largest stream flow has longer time of concentration
Qp =     13.696 + sum of
         Qb         Ia/Ib
          7.550 *    0.832 =      6.284
         Qb         Ia/Ib
          6.279 *    0.861 =      5.406
Qp =     25.386

Total of 3 main streams to confluence:
Flow rates before confluence point:
      13.696       7.550       6.279
Area of streams before confluence:
        4.320        1.990        1.720


Results of confluence:
Total flow rate =     25.386(CFS)
Time of concentration =    10.608 min.
Effective stream area after confluence  =      8.030(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      104.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________
Upstream point/station elevation =  1364.500(Ft.)
Downstream point/station elevation =  1348.000(Ft.)
Pipe length  =   537.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    25.386(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    25.386(CFS)
Normal flow depth in pipe =   15.77(In.)
Flow top width inside pipe =   18.16(In.)
Critical depth could not be calculated.
Pipe flow velocity =     13.09(Ft/s)
Travel time through pipe =    0.68 min.
```

```
Time of concentration (TC) =     11.29 min.
End of computations, total study area =            8.03 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.200
Area averaged RI index number =  68.3
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
Rational Hydrology Study Date: 08/31/12 File:RMEC1.out

RANCON MEDICAL AND EDUCATIONAL CENTER
Q100 STORM EVENT
POST-DEVELOPED
CLINTON KEITH ROAD

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 4010

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Elsinore-Wildomar] area used.
10 year storm 10 minute intensity = 2.320(In/Hr)
10 year storm 60 minute intensity = 0.980(In/Hr)
100 year storm 10 minute intensity = 3.540(In/Hr)
100 year storm 60 minute intensity = 1.500(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.500(In/Hr)
Slope of intensity duration curve = 0.4800

++
Process from Point/Station 400.000 to Point/Station 401.000
**** INITIAL AREA EVALUATION ****

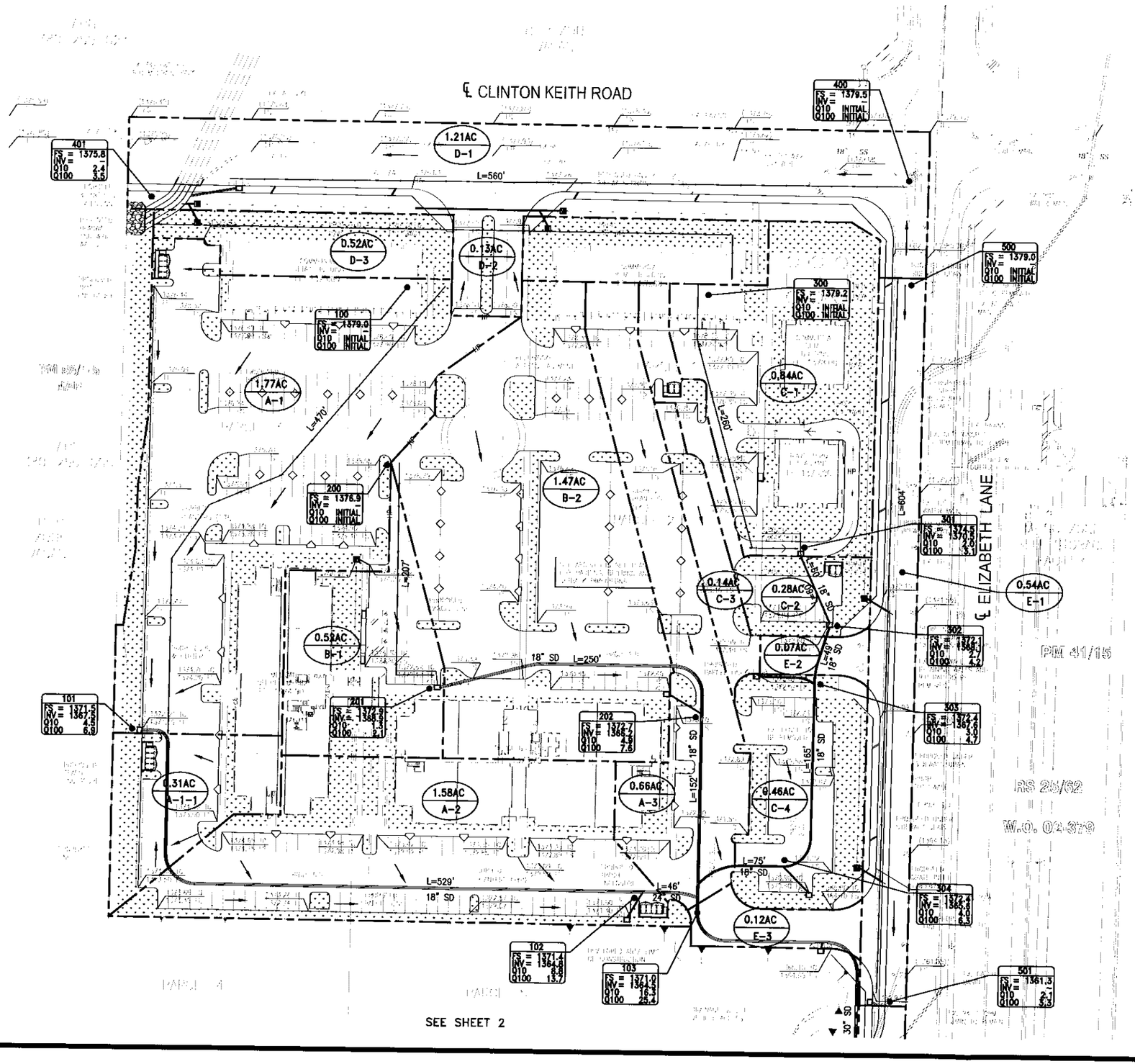
Initial area flow distance = 560.000(Ft.)
Top (of initial area) elevation = 1379.500(Ft.)
Bottom (of initial area) elevation = 1375.800(Ft.)
Difference in elevation = 3.700(Ft.)
Slope = 0.00661 s(percent)= 0.66
TC = k(0.323)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 11.078 min.
Rainfall intensity = 3.375(In/Hr) for a 100.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.873
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 69.00
Pervious area fraction = 0.200; Impervious fraction = 0.800
Initial subarea runoff = 3.564(CFS)
Total initial stream area = 1.210(Ac.)
Pervious area fraction = 0.200

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      401.000 to Point/Station      401.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.873
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Time of concentration =    11.08 min.
Rainfall intensity =      3.375(In/Hr) for a   100.0 year storm
Subarea runoff =      0.383(CFS) for      0.130(Ac.)
Total runoff =      3.947(CFS)   Total area =       1.340(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      300.000 to Point/Station      401.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.859
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.300; Impervious fraction =  0.700
Time of concentration =    11.08 min.
Rainfall intensity =      3.375(In/Hr) for a   100.0 year storm
Subarea runoff =      1.508(CFS) for      0.520(Ac.)
Total runoff =      5.455(CFS)   Total area =       1.860(Ac.)
End of computations, total study area =            1.86 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.228
Area averaged RI index number =  69.0
```

```
                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
      Rational Hydrology Study        Date: 08/31/12  File:RMEC1.out
------------------------------------------------------------------------
RANCON MEDICAL AND EDUCATIONAL CENTER
Q100 STORM EVENT
POST-DEVELOPED
ELIZABETH LANE
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

 English (in-lb) Units used in input data file

------------------------------------------------------------------------


Program License Serial Number 4010

------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) =  100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [ Elsinore-Wildomar ] area used.
10 year storm 10 minute intensity =  2.320(In/Hr)
10 year storm 60 minute intensity =  0.980(In/Hr)
100 year storm 10 minute intensity =  3.540(In/Hr)
100 year storm 60 minute intensity =  1.500(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.500(In/Hr)
Slope of intensity duration curve = 0.4800




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      500.000 to Point/Station      501.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________
Initial area flow distance =   604.000(Ft.)
Top (of initial area) elevation =  1379.000(Ft.)
Bottom (of initial area) elevation =  1361.300(Ft.)
Difference in elevation =    17.700(Ft.)
Slope =    0.02930  s(percent)=       2.93
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    7.873 min.
Rainfall intensity =      3.976(In/Hr) for a   100.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.888
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      1.907(CFS)
Total initial stream area =        0.540(Ac.)
Pervious area fraction = 0.100
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      501.000 to Point/Station      501.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.899
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.010; Impervious fraction =  0.990
Time of concentration =     7.87 min.
Rainfall intensity =      3.976(In/Hr) for a   100.0 year storm
Subarea runoff =      0.250(CFS) for      0.070(Ac.)
Total runoff =      2.157(CFS)   Total area =       0.610(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      501.000 to Point/Station      501.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.898
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  56.00
Pervious area fraction =  0.010; Impervious fraction =  0.990
Time of concentration =     7.87 min.
Rainfall intensity =      3.976(In/Hr) for a   100.0 year storm
Subarea runoff =      0.429(CFS) for      0.120(Ac.)
Total runoff =      2.586(CFS)   Total area =       0.730(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      501.000 to Point/Station      501.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________
USER INPUT of soil data for subarea
Runoff Coefficient = 0.888
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Time of concentration =     7.87 min.
Rainfall intensity =      3.976(In/Hr) for a   100.0 year storm
Subarea runoff =      0.706(CFS) for      0.200(Ac.)
Total runoff =      3.292(CFS)   Total area =       0.930(Ac.)
End of computations, total study area =            0.93 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.082
Area averaged RI index number =  67.3
```

Rational Method Hydrology Map



LEGEND

- DRAINAGE BOUNDARY
- FLOW LINE
- L=XXX' — LENGTH OF FLOW
- FLOW DIRECTION
- 101 — NODE NUMBER
  - FS = XXXX — FINISHED SURFACE ELEVATION
  - INV = XXXX — INVERT ELEVATION
  - Q10 XX.X — 10 YEAR STORM FLOW RATE (CFS)
  - Q100 XX.X — 100 YEAR STORM FLOW RATE (CFS)
- X.XXAC / X — DRAINAGE SUBAREA (ACRES) / DRAINAGE SUBAREA DESIGNATION
- LANDSCAPE AREAS

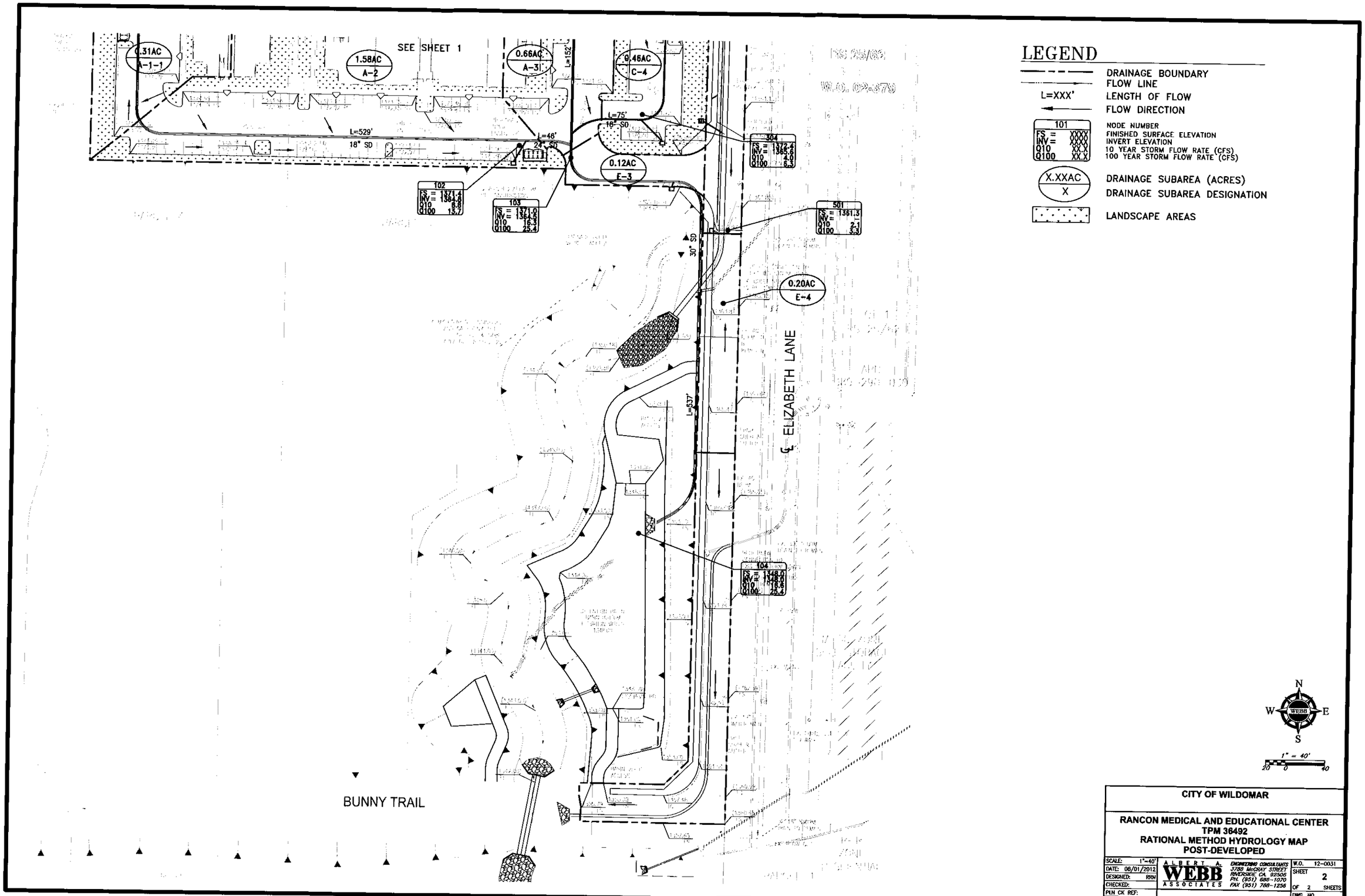
N W E S

1" = 40'
20 0 40

CITY OF WILDOMAR

RANCON MEDICAL AND EDUCATIONAL CENTER
TPM 36492
RATIONAL METHOD HYDROLOGY MAP
POST-DEVELOPED

SCALE: 1"=40'	ALBERT A. WEBB ASSOCIATES — ENGINEERING CONSULTANTS, 3788 McGRAY STREET, RIVERSIDE, CA. 92506, PH. (951) 686-1070, FAX (951) 788-1256	W.O. 12-0031	
DATE: 08/01/2012		SHEET 1 OF 2 SHEETS	
DESIGNED: RRH			
CHECKED: ETA			
PLN CK REF:		DWG. NO.	
F.B.			



CITY OF WILDOMAR

RANCON MEDICAL AND EDUCATIONAL CENTER
TPM 36492
RATIONAL METHOD HYDROLOGY MAP
POST-DEVELOPED

SCALE: 1"=40'	ALBERT A. WEBB ASSOCIATES — ENGINEERING CONSULTANTS, 3785 McCRAY STREET, RIVERSIDE, CA. 92506, PH. (951) 686-1070, FAX (951) 788-1256	W.O. 12-0031
DATE: 08/01/2012		SHEET 2
DESIGNED: RRN		OF 2 SHEETS
CHECKED:		DWG. NO.
PLN CK REF:		
F.B.		

SECTION 3 - Unit Hydrograph Hydrology Calculations

2- and 10-year Pre-Developed Unit Hydrograph Hydrology

2-and 10-year Post-Developed Unit Hydrograph Hydrology

100-year Post-Developed Unit Hydrograph Hydrology

North-West Area Unit Hydrograph Calculations

Unit Hydrograph Hydrology Map

Rancon Group 8/30/2012
Rancon Medical and Distribution Center
PROJECT W.O. 12-0031

PLOT PLAN
UNIT HYDROGRAPH INPUT DATA

	EXISTING CONDITION	DEVELOPED CONDITION	
TOTAL AREA	8.5 ***	8.8 ***	
L (ft)	1460	1620	
Lc (ft)	800	930	
DIFFERENCE IN ELEV. (ft)	43	31	
AVERAGE "N"	0.030	0.015	
LOW LOSS RATE	0.90	0.24	
AMC II SOIL GROUP B			
AREA (ac)	3.4	0.6	
% IMPERVIOUS	0	0.8	
RI	69 *	56 **	
AMC II SOIL GROUP C			Basin Site
AREA (ac)	5.1	7.1	1.1
% IMPERVIOUS	0	0.8	0
RI	79 *	69 **	69

* Grass, annual or parennial, fair cover
** Urban Cover, Commercial Landscaping
*** Including 1.1 ac Future Basin Site

2-and 10-Year Pre-Developed Unit Hydrograph Hydrology

```
      U n i t   H y d r o g r a p h   A n a l y s i s

      Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
            Study date  08/30/12 File: RMEC1242.out

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
----------------------------------------------------------------------

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978


Program License Serial Number 4010

--------------------------------------------------------------------
 English (in-lb) Input Units Used
 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



--------------------------------------------------------------------
Plot Plan Unit Hydrograph
Pre-developed Conditions
2-yr 24-hr storm event
rmec1242.out     eta
--------------------------------------------------------------------
Drainage Area =    8.50(Ac.)  =  0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =  8.50(Ac.)  =  0.013 Sq. Mi.
Length along longest watercourse =    1460.00(Ft.)
Length along longest watercourse measured to centroid =     800.00(Ft.)
Length along longest watercourse =      0.277 Mi.
Length along longest watercourse measured to centroid =      0.152 Mi.
Difference in elevation =      43.00(Ft.)
Slope along watercourse =    155.5068 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.083 Hr.
Lag time =     4.96 Min.
25% of lag time =     1.24 Min.
40% of lag time =     1.98 Min.
Unit time =     5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow =     0.00(CFS)

2 YEAR Area rainfall data:


Area(Ac.)[1]        Rainfall(In)[2]       Weighting[1*2]
        8.50          2.42                 20.57

100 YEAR Area rainfall data:


Area(Ac.)[1]        Rainfall(In)[2]       Weighting[1*2]
        8.50          6.28                 53.38

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.420(In)
Area Averaged 100-Year Rainfall =    6.280(In)

Point rain (area averaged) =    2.420(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.420(In)
```

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
3.400	69.00	0.000
5.100	79.00	0.000

Total Area Entered = 8.50(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	49.8	0.574	0.000	0.574	0.400	0.230
79.0	61.8	0.451	0.000	0.451	0.600	0.270
					Sum (F) =	0.500

Area averaged mean soil loss (F) (In/Hr) = 0.500
Minimum soil loss rate ((In/Hr)) = 0.250
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	100.807	19.448	1.666
2	0.167	201.615	48.461	4.151
3	0.250	302.422	15.514	1.329
4	0.333	403.229	7.020	0.601
5	0.417	504.037	3.943	0.338
6	0.500	604.844	2.551	0.219
7	0.583	705.651	1.574	0.135
8	0.667	806.459	1.488	0.127
			Sum = 100.000	Sum= 8.566

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.019	(0.886)	0.017	0.002
2	0.17	0.07	0.019	(0.883)	0.017	0.002
3	0.25	0.07	0.019	(0.879)	0.017	0.002
4	0.33	0.10	0.029	(0.876)	0.026	0.003
5	0.42	0.10	0.029	(0.873)	0.026	0.003
6	0.50	0.10	0.029	(0.869)	0.026	0.003
7	0.58	0.10	0.029	(0.866)	0.026	0.003
8	0.67	0.10	0.029	(0.862)	0.026	0.003
9	0.75	0.10	0.029	(0.859)	0.026	0.003
10	0.83	0.13	0.039	(0.856)	0.035	0.004
11	0.92	0.13	0.039	(0.852)	0.035	0.004
12	1.00	0.13	0.039	(0.849)	0.035	0.004
13	1.08	0.10	0.029	(0.846)	0.026	0.003
14	1.17	0.10	0.029	(0.842)	0.026	0.003
15	1.25	0.10	0.029	(0.839)	0.026	0.003
16	1.33	0.10	0.029	(0.836)	0.026	0.003
17	1.42	0.10	0.029	(0.832)	0.026	0.003
18	1.50	0.10	0.029	(0.829)	0.026	0.003
19	1.58	0.10	0.029	(0.826)	0.026	0.003
20	1.67	0.10	0.029	(0.822)	0.026	0.003
21	1.75	0.10	0.029	(0.819)	0.026	0.003
22	1.83	0.13	0.039	(0.816)	0.035	0.004
23	1.92	0.13	0.039	(0.812)	0.035	0.004
24	2.00	0.13	0.039	(0.809)	0.035	0.004

25	2.08	0.13	0.039	(0.806)	0.035	0.004
26	2.17	0.13	0.039	(0.803)	0.035	0.004
27	2.25	0.13	0.039	(0.799)	0.035	0.004
28	2.33	0.13	0.039	(0.796)	0.035	0.004
29	2.42	0.13	0.039	(0.793)	0.035	0.004
30	2.50	0.13	0.039	(0.790)	0.035	0.004
31	2.58	0.17	0.048	(0.786)	0.044	0.005
32	2.67	0.17	0.048	(0.783)	0.044	0.005
33	2.75	0.17	0.048	(0.780)	0.044	0.005
34	2.83	0.17	0.048	(0.777)	0.044	0.005
35	2.92	0.17	0.048	(0.773)	0.044	0.005
36	3.00	0.17	0.048	(0.770)	0.044	0.005
37	3.08	0.17	0.048	(0.767)	0.044	0.005
38	3.17	0.17	0.048	(0.764)	0.044	0.005
39	3.25	0.17	0.048	(0.761)	0.044	0.005
40	3.33	0.17	0.048	(0.758)	0.044	0.005
41	3.42	0.17	0.048	(0.754)	0.044	0.005
42	3.50	0.17	0.048	(0.751)	0.044	0.005
43	3.58	0.17	0.048	(0.748)	0.044	0.005
44	3.67	0.17	0.048	(0.745)	0.044	0.005
45	3.75	0.17	0.048	(0.742)	0.044	0.005
46	3.83	0.20	0.058	(0.739)	0.052	0.006
47	3.92	0.20	0.058	(0.736)	0.052	0.006
48	4.00	0.20	0.058	(0.732)	0.052	0.006
49	4.08	0.20	0.058	(0.729)	0.052	0.006
50	4.17	0.20	0.058	(0.726)	0.052	0.006
51	4.25	0.20	0.058	(0.723)	0.052	0.006
52	4.33	0.23	0.068	(0.720)	0.061	0.007
53	4.42	0.23	0.068	(0.717)	0.061	0.007
54	4.50	0.23	0.068	(0.714)	0.061	0.007
55	4.58	0.23	0.068	(0.711)	0.061	0.007
56	4.67	0.23	0.068	(0.708)	0.061	0.007
57	4.75	0.23	0.068	(0.705)	0.061	0.007
58	4.83	0.27	0.077	(0.702)	0.070	0.008
59	4.92	0.27	0.077	(0.699)	0.070	0.008
60	5.00	0.27	0.077	(0.696)	0.070	0.008
61	5.08	0.20	0.058	(0.693)	0.052	0.006
62	5.17	0.20	0.058	(0.690)	0.052	0.006
63	5.25	0.20	0.058	(0.687)	0.052	0.006
64	5.33	0.23	0.068	(0.684)	0.061	0.007
65	5.42	0.23	0.068	(0.681)	0.061	0.007
66	5.50	0.23	0.068	(0.678)	0.061	0.007
67	5.58	0.27	0.077	(0.675)	0.070	0.008
68	5.67	0.27	0.077	(0.672)	0.070	0.008
69	5.75	0.27	0.077	(0.669)	0.070	0.008
70	5.83	0.27	0.077	(0.666)	0.070	0.008
71	5.92	0.27	0.077	(0.663)	0.070	0.008
72	6.00	0.27	0.077	(0.660)	0.070	0.008
73	6.08	0.30	0.087	(0.657)	0.078	0.009
74	6.17	0.30	0.087	(0.654)	0.078	0.009
75	6.25	0.30	0.087	(0.651)	0.078	0.009
76	6.33	0.30	0.087	(0.648)	0.078	0.009
77	6.42	0.30	0.087	(0.645)	0.078	0.009
78	6.50	0.30	0.087	(0.642)	0.078	0.009
79	6.58	0.33	0.097	(0.640)	0.087	0.010
80	6.67	0.33	0.097	(0.637)	0.087	0.010
81	6.75	0.33	0.097	(0.634)	0.087	0.010
82	6.83	0.33	0.097	(0.631)	0.087	0.010
83	6.92	0.33	0.097	(0.628)	0.087	0.010
84	7.00	0.33	0.097	(0.625)	0.087	0.010
85	7.08	0.33	0.097	(0.622)	0.087	0.010
86	7.17	0.33	0.097	(0.620)	0.087	0.010
87	7.25	0.33	0.097	(0.617)	0.087	0.010
88	7.33	0.37	0.106	(0.614)	0.096	0.011
89	7.42	0.37	0.106	(0.611)	0.096	0.011
90	7.50	0.37	0.106	(0.608)	0.096	0.011
91	7.58	0.40	0.116	(0.605)	0.105	0.012

92	7.67	0.40	0.116	(0.603)	0.105	0.012
93	7.75	0.40	0.116	(0.600)	0.105	0.012
94	7.83	0.43	0.126	(0.597)	0.113	0.013
95	7.92	0.43	0.126	(0.594)	0.113	0.013
96	8.00	0.43	0.126	(0.592)	0.113	0.013
97	8.08	0.50	0.145	(0.589)	0.131	0.015
98	8.17	0.50	0.145	(0.586)	0.131	0.015
99	8.25	0.50	0.145	(0.583)	0.131	0.015
100	8.33	0.50	0.145	(0.581)	0.131	0.015
101	8.42	0.50	0.145	(0.578)	0.131	0.015
102	8.50	0.50	0.145	(0.575)	0.131	0.015
103	8.58	0.53	0.155	(0.573)	0.139	0.015
104	8.67	0.53	0.155	(0.570)	0.139	0.015
105	8.75	0.53	0.155	(0.567)	0.139	0.015
106	8.83	0.57	0.165	(0.565)	0.148	0.016
107	8.92	0.57	0.165	(0.562)	0.148	0.016
108	9.00	0.57	0.165	(0.559)	0.148	0.016
109	9.08	0.63	0.184	(0.557)	0.166	0.018
110	9.17	0.63	0.184	(0.554)	0.166	0.018
111	9.25	0.63	0.184	(0.551)	0.166	0.018
112	9.33	0.67	0.194	(0.549)	0.174	0.019
113	9.42	0.67	0.194	(0.546)	0.174	0.019
114	9.50	0.67	0.194	(0.543)	0.174	0.019
115	9.58	0.70	0.203	(0.541)	0.183	0.020
116	9.67	0.70	0.203	(0.538)	0.183	0.020
117	9.75	0.70	0.203	(0.536)	0.183	0.020
118	9.83	0.73	0.213	(0.533)	0.192	0.021
119	9.92	0.73	0.213	(0.530)	0.192	0.021
120	10.00	0.73	0.213	(0.528)	0.192	0.021
121	10.08	0.50	0.145	(0.525)	0.131	0.015
122	10.17	0.50	0.145	(0.523)	0.131	0.015
123	10.25	0.50	0.145	(0.520)	0.131	0.015
124	10.33	0.50	0.145	(0.518)	0.131	0.015
125	10.42	0.50	0.145	(0.515)	0.131	0.015
126	10.50	0.50	0.145	(0.513)	0.131	0.015
127	10.58	0.67	0.194	(0.510)	0.174	0.019
128	10.67	0.67	0.194	(0.508)	0.174	0.019
129	10.75	0.67	0.194	(0.505)	0.174	0.019
130	10.83	0.67	0.194	(0.503)	0.174	0.019
131	10.92	0.67	0.194	(0.500)	0.174	0.019
132	11.00	0.67	0.194	(0.498)	0.174	0.019
133	11.08	0.63	0.184	(0.495)	0.166	0.018
134	11.17	0.63	0.184	(0.493)	0.166	0.018
135	11.25	0.63	0.184	(0.491)	0.166	0.018
136	11.33	0.63	0.184	(0.488)	0.166	0.018
137	11.42	0.63	0.184	(0.486)	0.166	0.018
138	11.50	0.63	0.184	(0.483)	0.166	0.018
139	11.58	0.57	0.165	(0.481)	0.148	0.016
140	11.67	0.57	0.165	(0.478)	0.148	0.016
141	11.75	0.57	0.165	(0.476)	0.148	0.016
142	11.83	0.60	0.174	(0.474)	0.157	0.017
143	11.92	0.60	0.174	(0.471)	0.157	0.017
144	12.00	0.60	0.174	(0.469)	0.157	0.017
145	12.08	0.83	0.242	(0.467)	0.218	0.024
146	12.17	0.83	0.242	(0.464)	0.218	0.024
147	12.25	0.83	0.242	(0.462)	0.218	0.024
148	12.33	0.87	0.252	(0.460)	0.227	0.025
149	12.42	0.87	0.252	(0.457)	0.227	0.025
150	12.50	0.87	0.252	(0.455)	0.227	0.025
151	12.58	0.93	0.271	(0.453)	0.244	0.027
152	12.67	0.93	0.271	(0.451)	0.244	0.027
153	12.75	0.93	0.271	(0.448)	0.244	0.027
154	12.83	0.97	0.281	(0.446)	0.253	0.028
155	12.92	0.97	0.281	(0.444)	0.253	0.028
156	13.00	0.97	0.281	(0.441)	0.253	0.028
157	13.08	1.13	0.329	(0.439)	0.296	0.033
158	13.17	1.13	0.329	(0.437)	0.296	0.033

159	13.25	1.13	0.329	(0.435)	0.296	0.033
160	13.33	1.13	0.329	(0.433)	0.296	0.033
161	13.42	1.13	0.329	(0.430)	0.296	0.033
162	13.50	1.13	0.329	(0.428)	0.296	0.033
163	13.58	0.77	0.223	(0.426)	0.200	0.022
164	13.67	0.77	0.223	(0.424)	0.200	0.022
165	13.75	0.77	0.223	(0.422)	0.200	0.022
166	13.83	0.77	0.223	(0.420)	0.200	0.022
167	13.92	0.77	0.223	(0.417)	0.200	0.022
168	14.00	0.77	0.223	(0.415)	0.200	0.022
169	14.08	0.90	0.261	(0.413)	0.235	0.026
170	14.17	0.90	0.261	(0.411)	0.235	0.026
171	14.25	0.90	0.261	(0.409)	0.235	0.026
172	14.33	0.87	0.252	(0.407)	0.227	0.025
173	14.42	0.87	0.252	(0.405)	0.227	0.025
174	14.50	0.87	0.252	(0.403)	0.227	0.025
175	14.58	0.87	0.252	(0.401)	0.227	0.025
176	14.67	0.87	0.252	(0.399)	0.227	0.025
177	14.75	0.87	0.252	(0.397)	0.227	0.025
178	14.83	0.83	0.242	(0.394)	0.218	0.024
179	14.92	0.83	0.242	(0.392)	0.218	0.024
180	15.00	0.83	0.242	(0.390)	0.218	0.024
181	15.08	0.80	0.232	(0.388)	0.209	0.023
182	15.17	0.80	0.232	(0.386)	0.209	0.023
183	15.25	0.80	0.232	(0.384)	0.209	0.023
184	15.33	0.77	0.223	(0.383)	0.200	0.022
185	15.42	0.77	0.223	(0.381)	0.200	0.022
186	15.50	0.77	0.223	(0.379)	0.200	0.022
187	15.58	0.63	0.184	(0.377)	0.166	0.018
188	15.67	0.63	0.184	(0.375)	0.166	0.018
189	15.75	0.63	0.184	(0.373)	0.166	0.018
190	15.83	0.63	0.184	(0.371)	0.166	0.018
191	15.92	0.63	0.184	(0.369)	0.166	0.018
192	16.00	0.63	0.184	(0.367)	0.166	0.018
193	16.08	0.13	0.039	(0.365)	0.035	0.004
194	16.17	0.13	0.039	(0.363)	0.035	0.004
195	16.25	0.13	0.039	(0.362)	0.035	0.004
196	16.33	0.13	0.039	(0.360)	0.035	0.004
197	16.42	0.13	0.039	(0.358)	0.035	0.004
198	16.50	0.13	0.039	(0.356)	0.035	0.004
199	16.58	0.10	0.029	(0.354)	0.026	0.003
200	16.67	0.10	0.029	(0.352)	0.026	0.003
201	16.75	0.10	0.029	(0.351)	0.026	0.003
202	16.83	0.10	0.029	(0.349)	0.026	0.003
203	16.92	0.10	0.029	(0.347)	0.026	0.003
204	17.00	0.10	0.029	(0.345)	0.026	0.003
205	17.08	0.17	0.048	(0.344)	0.044	0.005
206	17.17	0.17	0.048	(0.342)	0.044	0.005
207	17.25	0.17	0.048	(0.340)	0.044	0.005
208	17.33	0.17	0.048	(0.338)	0.044	0.005
209	17.42	0.17	0.048	(0.337)	0.044	0.005
210	17.50	0.17	0.048	(0.335)	0.044	0.005
211	17.58	0.17	0.048	(0.333)	0.044	0.005
212	17.67	0.17	0.048	(0.332)	0.044	0.005
213	17.75	0.17	0.048	(0.330)	0.044	0.005
214	17.83	0.13	0.039	(0.328)	0.035	0.004
215	17.92	0.13	0.039	(0.327)	0.035	0.004
216	18.00	0.13	0.039	(0.325)	0.035	0.004
217	18.08	0.13	0.039	(0.324)	0.035	0.004
218	18.17	0.13	0.039	(0.322)	0.035	0.004
219	18.25	0.13	0.039	(0.320)	0.035	0.004
220	18.33	0.13	0.039	(0.319)	0.035	0.004
221	18.42	0.13	0.039	(0.317)	0.035	0.004
222	18.50	0.13	0.039	(0.316)	0.035	0.004
223	18.58	0.10	0.029	(0.314)	0.026	0.003
224	18.67	0.10	0.029	(0.313)	0.026	0.003
225	18.75	0.10	0.029	(0.311)	0.026	0.003

226	18.83	0.07	0.019	(0.310)	0.017	0.002
227	18.92	0.07	0.019	(0.308)	0.017	0.002
228	19.00	0.07	0.019	(0.307)	0.017	0.002
229	19.08	0.10	0.029	(0.305)	0.026	0.003
230	19.17	0.10	0.029	(0.304)	0.026	0.003
231	19.25	0.10	0.029	(0.302)	0.026	0.003
232	19.33	0.13	0.039	(0.301)	0.035	0.004
233	19.42	0.13	0.039	(0.300)	0.035	0.004
234	19.50	0.13	0.039	(0.298)	0.035	0.004
235	19.58	0.10	0.029	(0.297)	0.026	0.003
236	19.67	0.10	0.029	(0.296)	0.026	0.003
237	19.75	0.10	0.029	(0.294)	0.026	0.003
238	19.83	0.07	0.019	(0.293)	0.017	0.002
239	19.92	0.07	0.019	(0.292)	0.017	0.002
240	20.00	0.07	0.019	(0.290)	0.017	0.002
241	20.08	0.10	0.029	(0.289)	0.026	0.003
242	20.17	0.10	0.029	(0.288)	0.026	0.003
243	20.25	0.10	0.029	(0.286)	0.026	0.003
244	20.33	0.10	0.029	(0.285)	0.026	0.003
245	20.42	0.10	0.029	(0.284)	0.026	0.003
246	20.50	0.10	0.029	(0.283)	0.026	0.003
247	20.58	0.10	0.029	(0.282)	0.026	0.003
248	20.67	0.10	0.029	(0.280)	0.026	0.003
249	20.75	0.10	0.029	(0.279)	0.026	0.003
250	20.83	0.07	0.019	(0.278)	0.017	0.002
251	20.92	0.07	0.019	(0.277)	0.017	0.002
252	21.00	0.07	0.019	(0.276)	0.017	0.002
253	21.08	0.10	0.029	(0.275)	0.026	0.003
254	21.17	0.10	0.029	(0.274)	0.026	0.003
255	21.25	0.10	0.029	(0.273)	0.026	0.003
256	21.33	0.07	0.019	(0.272)	0.017	0.002
257	21.42	0.07	0.019	(0.271)	0.017	0.002
258	21.50	0.07	0.019	(0.270)	0.017	0.002
259	21.58	0.10	0.029	(0.269)	0.026	0.003
260	21.67	0.10	0.029	(0.268)	0.026	0.003
261	21.75	0.10	0.029	(0.267)	0.026	0.003
262	21.83	0.07	0.019	(0.266)	0.017	0.002
263	21.92	0.07	0.019	(0.265)	0.017	0.002
264	22.00	0.07	0.019	(0.264)	0.017	0.002
265	22.08	0.10	0.029	(0.263)	0.026	0.003
266	22.17	0.10	0.029	(0.262)	0.026	0.003
267	22.25	0.10	0.029	(0.261)	0.026	0.003
268	22.33	0.07	0.019	(0.261)	0.017	0.002
269	22.42	0.07	0.019	(0.260)	0.017	0.002
270	22.50	0.07	0.019	(0.259)	0.017	0.002
271	22.58	0.07	0.019	(0.258)	0.017	0.002
272	22.67	0.07	0.019	(0.258)	0.017	0.002
273	22.75	0.07	0.019	(0.257)	0.017	0.002
274	22.83	0.07	0.019	(0.256)	0.017	0.002
275	22.92	0.07	0.019	(0.256)	0.017	0.002
276	23.00	0.07	0.019	(0.255)	0.017	0.002
277	23.08	0.07	0.019	(0.254)	0.017	0.002
278	23.17	0.07	0.019	(0.254)	0.017	0.002
279	23.25	0.07	0.019	(0.253)	0.017	0.002
280	23.33	0.07	0.019	(0.253)	0.017	0.002
281	23.42	0.07	0.019	(0.252)	0.017	0.002
282	23.50	0.07	0.019	(0.252)	0.017	0.002
283	23.58	0.07	0.019	(0.251)	0.017	0.002
284	23.67	0.07	0.019	(0.251)	0.017	0.002
285	23.75	0.07	0.019	(0.251)	0.017	0.002
286	23.83	0.07	0.019	(0.250)	0.017	0.002
287	23.92	0.07	0.019	(0.250)	0.017	0.002
288	24.00	0.07	0.019	(0.250)	0.017	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 2.9

Flood volume = Effective rainfall 0.24(In)
times area 8.5(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)

```
Total soil loss =      2.18(In)
Total soil loss =     1.543(Ac.Ft)
Total rainfall =      2.42(In)
Flood volume =        7466.8 Cubic Feet
Total soil loss =       67201.1 Cubic Feet
-----------------------------------------------------------------
 Peak flow rate of this hydrograph =      0.281(CFS)
-----------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                    24 - H O U R   S T O R M
               R u n o f f     H y d r o g r a p h
-----------------------------------------------------------------
             Hydrograph in   5   Minute intervals ((CFS))

-----------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5       10.0
-----------------------------------------------------------------
  0+ 5       0.0000      0.00  Q          |         |         |         |
  0+10       0.0001      0.01  Q          |         |         |         |
  0+15       0.0002      0.01  Q          |         |         |         |
  0+20       0.0003      0.02  Q          |         |         |         |
  0+25       0.0005      0.02  Q          |         |         |         |
  0+30       0.0006      0.02  Q          |         |         |         |
  0+35       0.0008      0.02  Q          |         |         |         |
  0+40       0.0009      0.02  Q          |         |         |         |
  0+45       0.0011      0.02  Q          |         |         |         |
  0+50       0.0013      0.03  Q          |         |         |         |
  0+55       0.0015      0.03  Q          |         |         |         |
  1+ 0       0.0017      0.03  Q          |         |         |         |
  1+ 5       0.0019      0.03  Q          |         |         |         |
  1+10       0.0021      0.03  Q          |         |         |         |
  1+15       0.0023      0.03  Q          |         |         |         |
  1+20       0.0025      0.03  Q          |         |         |         |
  1+25       0.0027      0.03  Q          |         |         |         |
  1+30       0.0028      0.03  Q          |         |         |         |
  1+35       0.0030      0.03  Q          |         |         |         |
  1+40       0.0032      0.02  Q          |         |         |         |
  1+45       0.0033      0.02  Q          |         |         |         |
  1+50       0.0035      0.03  Q          |         |         |         |
  1+55       0.0037      0.03  Q          |         |         |         |
  2+ 0       0.0040      0.03  Q          |         |         |         |
  2+ 5       0.0042      0.03  Q          |         |         |         |
  2+10       0.0044      0.03  QV         |         |         |         |
  2+15       0.0046      0.03  QV         |         |         |         |
  2+20       0.0049      0.03  QV         |         |         |         |
  2+25       0.0051      0.03  QV         |         |         |         |
  2+30       0.0053      0.03  QV         |         |         |         |
  2+35       0.0056      0.03  QV         |         |         |         |
  2+40       0.0058      0.04  QV         |         |         |         |
  2+45       0.0061      0.04  QV         |         |         |         |
  2+50       0.0064      0.04  QV         |         |         |         |
  2+55       0.0067      0.04  QV         |         |         |         |
  3+ 0       0.0069      0.04  QV         |         |         |         |
  3+ 5       0.0072      0.04  QV         |         |         |         |
  3+10       0.0075      0.04  QV         |         |         |         |
  3+15       0.0078      0.04  QV         |         |         |         |
  3+20       0.0081      0.04  QV         |         |         |         |
  3+25       0.0084      0.04  QV         |         |         |         |
  3+30       0.0087      0.04  Q V        |         |         |         |
  3+35       0.0089      0.04  Q V        |         |         |         |
  3+40       0.0092      0.04  Q V        |         |         |         |
  3+45       0.0095      0.04  Q V        |         |         |         |
  3+50       0.0098      0.04  Q V        |         |         |         |
  3+55       0.0101      0.05  Q V        |         |         |         |
  4+ 0       0.0105      0.05  Q V        |         |         |         |
  4+ 5       0.0108      0.05  Q V        |         |         |         |
  4+10       0.0111      0.05  Q V        |         |         |         |
```

4+15	0.0115	0.05	Q	V
4+20	0.0118	0.05	Q	V
4+25	0.0122	0.06	Q	V
4+30	0.0126	0.06	Q	V
4+35	0.0130	0.06	Q	V
4+40	0.0134	0.06	Q	V
4+45	0.0138	0.06	Q	V
4+50	0.0142	0.06	Q	V
4+55	0.0147	0.06	Q	V
5+ 0	0.0151	0.06	Q	V
5+ 5	0.0155	0.06	Q	V
5+10	0.0159	0.05	Q	V
5+15	0.0163	0.05	Q	V
5+20	0.0166	0.05	Q	V
5+25	0.0170	0.06	Q	V
5+30	0.0174	0.06	Q	V
5+35	0.0178	0.06	Q	V
5+40	0.0183	0.06	Q	V
5+45	0.0187	0.06	Q	V
5+50	0.0192	0.07	Q	V
5+55	0.0196	0.07	Q	V
6+ 0	0.0201	0.07	Q	V
6+ 5	0.0205	0.07	Q	V
6+10	0.0210	0.07	Q	V
6+15	0.0215	0.07	Q	V
6+20	0.0220	0.07	Q	V
6+25	0.0225	0.07	Q	V
6+30	0.0231	0.07	Q	V
6+35	0.0236	0.08	Q	V
6+40	0.0241	0.08	Q	V
6+45	0.0247	0.08	Q	V
6+50	0.0253	0.08	Q	V
6+55	0.0258	0.08	Q	V
7+ 0	0.0264	0.08	Q	V
7+ 5	0.0270	0.08	Q	V
7+10	0.0275	0.08	Q	V
7+15	0.0281	0.08	Q	V
7+20	0.0287	0.08	Q	V
7+25	0.0293	0.09	Q	V
7+30	0.0299	0.09	Q	V
7+35	0.0306	0.09	Q	V
7+40	0.0312	0.10	Q	V
7+45	0.0319	0.10	Q	V
7+50	0.0326	0.10	Q	V
7+55	0.0333	0.10	Q	V
8+ 0	0.0340	0.11	Q	V
8+ 5	0.0348	0.11	Q	V
8+10	0.0356	0.12	Q	V
8+15	0.0365	0.12	Q	V
8+20	0.0373	0.12	Q	V
8+25	0.0382	0.12	Q	V
8+30	0.0390	0.12	Q	V
8+35	0.0399	0.13	Q	V
8+40	0.0408	0.13	Q	V
8+45	0.0417	0.13	Q	V
8+50	0.0426	0.13	Q	V
8+55	0.0435	0.14	Q	V
9+ 0	0.0445	0.14	Q	V
9+ 5	0.0455	0.14	Q	V
9+10	0.0465	0.15	Q	V
9+15	0.0476	0.15	Q	V
9+20	0.0487	0.16	Q	V
9+25	0.0498	0.16	Q	V
9+30	0.0509	0.16	Q	V
9+35	0.0521	0.17	Q	V
9+40	0.0533	0.17	Q	V
9+45	0.0544	0.17	Q	V

```
 9+50        0.0557       0.17  Q          | V        |          |          |
 9+55        0.0569       0.18  Q          |  V       |          |          |
10+ 0        0.0581       0.18  Q          |  V       |          |          |
10+ 5        0.0593       0.17  Q          |  V       |          |          |
10+10        0.0603       0.14  Q          |   V      |          |          |
10+15        0.0612       0.13  Q          |   V      |          |          |
10+20        0.0621       0.13  Q          |   V      |          |          |
10+25        0.0630       0.13  Q          |   V      |          |          |
10+30        0.0639       0.13  Q          |   V      |          |          |
10+35        0.0648       0.13  Q          |    V     |          |          |
10+40        0.0658       0.15  Q          |    V     |          |          |
10+45        0.0669       0.16  Q          |    V     |          |          |
10+50        0.0680       0.16  Q          |    V     |          |          |
10+55        0.0692       0.16  Q          |     V    |          |          |
11+ 0        0.0703       0.16  Q          |     V    |          |          |
11+ 5        0.0714       0.16  Q          |     V    |          |          |
11+10        0.0725       0.16  Q          |     V    |          |          |
11+15        0.0736       0.16  Q          |      V   |          |          |
11+20        0.0747       0.16  Q          |      V   |          |          |
11+25        0.0758       0.16  Q          |      V   |          |          |
11+30        0.0769       0.16  Q          |      V   |          |          |
11+35        0.0780       0.15  Q          |       V  |          |          |
11+40        0.0790       0.15  Q          |       V  |          |          |
11+45        0.0800       0.14  Q          |       V  |          |          |
11+50        0.0809       0.14  Q          |       V  |          |          |
11+55        0.0820       0.15  Q          |        V|          |          |
12+ 0        0.0830       0.15  Q          |        V|          |          |
12+ 5        0.0841       0.16  Q          |        V|          |          |
12+10        0.0854       0.19  Q          |        V|          |          |
12+15        0.0867       0.20  Q          |         V          |          |
12+20        0.0881       0.20  Q          |         V          |          |
12+25        0.0896       0.21  Q          |         V          |          |
12+30        0.0911       0.21  Q          |          |V        |          |
12+35        0.0926       0.22  Q          |          |V        |          |
12+40        0.0941       0.23  Q          |          |V        |          |
12+45        0.0957       0.23  Q          |          | V       |          |
12+50        0.0973       0.23  Q          |          | V       |          |
12+55        0.0989       0.24  Q          |          |  V      |          |
13+ 0        0.1006       0.24  Q          |          |  V      |          |
13+ 5        0.1023       0.25  Q          |          |  V      |          |
13+10        0.1041       0.27  |Q         |          |   V     |          |
13+15        0.1060       0.27  |Q         |          |   V     |          |
13+20        0.1079       0.28  |Q         |          |    V    |          |
13+25        0.1099       0.28  |Q         |          |    V    |          |
13+30        0.1118       0.28  |Q         |          |     V   |          |
13+35        0.1136       0.26  |Q         |          |     V   |          |
13+40        0.1151       0.22  Q          |          |     V   |          |
13+45        0.1165       0.21  Q          |          |      V  |          |
13+50        0.1179       0.20  Q          |          |      V  |          |
13+55        0.1193       0.20  Q          |          |      V  |          |
14+ 0        0.1206       0.19  Q          |          |       V |          |
14+ 5        0.1220       0.20  Q          |          |       V |          |
14+10        0.1234       0.21  Q          |          |       V |          |
14+15        0.1249       0.22  Q          |          |        V|          |
14+20        0.1264       0.22  Q          |          |        V|          |
14+25        0.1279       0.22  Q          |          |        V|          |
14+30        0.1294       0.22  Q          |          |         V          |
14+35        0.1309       0.22  Q          |          |         V          |
14+40        0.1324       0.22  Q          |          |         V          |
14+45        0.1339       0.22  Q          |          |          |V        |
14+50        0.1354       0.21  Q          |          |          |V        |
14+55        0.1368       0.21  Q          |          |          |V        |
15+ 0        0.1382       0.21  Q          |          |          | V       |
15+ 5        0.1397       0.21  Q          |          |          | V       |
15+10        0.1411       0.20  Q          |          |          | V       |
15+15        0.1424       0.20  Q          |          |          |  V      |
15+20        0.1438       0.20  Q          |          |          |  V      |
```

15+25	0.1451	0.19	Q			V	
15+30	0.1465	0.19	Q			V	
15+35	0.1478	0.19	Q			V	
15+40	0.1489	0.17	Q			V	
15+45	0.1500	0.16	Q			V	
15+50	0.1511	0.16	Q			V	
15+55	0.1522	0.16	Q			V	
16+ 0	0.1533	0.16	Q			V	
16+ 5	0.1543	0.13	Q			V	
16+10	0.1548	0.07	Q			V	
16+15	0.1551	0.05	Q			V	
16+20	0.1554	0.05	Q			V	
16+25	0.1557	0.04	Q			V	
16+30	0.1560	0.04	Q			V	
16+35	0.1562	0.03	Q			V	
16+40	0.1564	0.03	Q			V	
16+45	0.1566	0.03	Q			V	
16+50	0.1568	0.03	Q			V	
16+55	0.1569	0.03	Q			V	
17+ 0	0.1571	0.03	Q			V	
17+ 5	0.1573	0.03	Q			V	
17+10	0.1575	0.04	Q			V	
17+15	0.1578	0.04	Q			V	
17+20	0.1581	0.04	Q			V	
17+25	0.1584	0.04	Q			V	
17+30	0.1586	0.04	Q			V	
17+35	0.1589	0.04	Q			V	
17+40	0.1592	0.04	Q			V	
17+45	0.1595	0.04	Q			V	
17+50	0.1598	0.04	Q			V	
17+55	0.1600	0.04	Q			V	
18+ 0	0.1603	0.03	Q			V	
18+ 5	0.1605	0.03	Q			V	
18+10	0.1607	0.03	Q			V	
18+15	0.1610	0.03	Q			V	
18+20	0.1612	0.03	Q			V	
18+25	0.1614	0.03	Q			V	
18+30	0.1616	0.03	Q			V	
18+35	0.1619	0.03	Q			V	
18+40	0.1621	0.03	Q			V	
18+45	0.1622	0.03	Q			V	
18+50	0.1624	0.02	Q			V	
18+55	0.1625	0.02	Q			V	
19+ 0	0.1627	0.02	Q			V	
19+ 5	0.1628	0.02	Q			V	
19+10	0.1629	0.02	Q			V	
19+15	0.1631	0.02	Q			V	
19+20	0.1633	0.03	Q			V	
19+25	0.1635	0.03	Q			V	
19+30	0.1637	0.03	Q			V	
19+35	0.1639	0.03	Q			V	
19+40	0.1641	0.03	Q			V	
19+45	0.1643	0.03	Q			V	
19+50	0.1645	0.02	Q			V	
19+55	0.1646	0.02	Q			V	
20+ 0	0.1647	0.02	Q			V	
20+ 5	0.1648	0.02	Q			V	
20+10	0.1650	0.02	Q			V	
20+15	0.1652	0.02	Q			V	
20+20	0.1653	0.02	Q			V	
20+25	0.1655	0.02	Q			V	
20+30	0.1657	0.02	Q			V	
20+35	0.1658	0.02	Q			V	
20+40	0.1660	0.02	Q			V	
20+45	0.1662	0.02	Q			V	
20+50	0.1663	0.02	Q			V	
20+55	0.1665	0.02	Q			V	

21+ 0	0.1666	0.02	Q				V
21+ 5	0.1667	0.02	Q				V
21+10	0.1669	0.02	Q				V
21+15	0.1671	0.02	Q				V
21+20	0.1672	0.02	Q				V
21+25	0.1673	0.02	Q				V
21+30	0.1675	0.02	Q				V
21+35	0.1676	0.02	Q				V
21+40	0.1677	0.02	Q				V
21+45	0.1679	0.02	Q				V
21+50	0.1681	0.02	Q				V
21+55	0.1682	0.02	Q				V
22+ 0	0.1683	0.02	Q				V
22+ 5	0.1684	0.02	Q				V
22+10	0.1686	0.02	Q				V
22+15	0.1688	0.02	Q				V
22+20	0.1689	0.02	Q				V
22+25	0.1691	0.02	Q				V
22+30	0.1692	0.02	Q				V
22+35	0.1693	0.02	Q				V
22+40	0.1694	0.02	Q				V
22+45	0.1695	0.02	Q				V
22+50	0.1696	0.02	Q				V
22+55	0.1698	0.02	Q				V
23+ 0	0.1699	0.02	Q				V
23+ 5	0.1700	0.02	Q				V
23+10	0.1701	0.02	Q				V
23+15	0.1702	0.02	Q				V
23+20	0.1703	0.02	Q				V
23+25	0.1704	0.02	Q				V
23+30	0.1706	0.02	Q				V
23+35	0.1707	0.02	Q				V
23+40	0.1708	0.02	Q				V
23+45	0.1709	0.02	Q				V
23+50	0.1710	0.02	Q				V
23+55	0.1711	0.02	Q				V
24+ 0	0.1712	0.02	Q				V
24+ 5	0.1713	0.01	Q				V
24+10	0.1714	0.01	Q				V
24+15	0.1714	0.00	Q				V
24+20	0.1714	0.00	Q				V
24+25	0.1714	0.00	Q				V
24+30	0.1714	0.00	Q				V
24+35	0.1714	0.00	Q				V

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 08/29/12 File: rmec12410.out

++

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 4010

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

RANCON MEDICAL AND EDUCATIONAL CENTER
10 YEAR - 24 HOUR STORM EVENT
PRE-DEVELOPED

Drainage Area = 8.50(Ac.) = 0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 8.50(Ac.) = 0.013 Sq. Mi.
Length along longest watercourse = 1460.00(Ft.)
Length along longest watercourse measured to centroid = 800.00(Ft.)
Length along longest watercourse = 0.277 Mi.
Length along longest watercourse measured to centroid = 0.152 Mi.
Difference in elevation = 43.00(Ft.)
Slope along watercourse = 155.5068 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.083 Hr.
Lag time = 4.96 Min.
25% of lag time = 1.24 Min.
40% of lag time = 1.98 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
8.50	2.42	20.57

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
8.50	6.28	53.38

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.420(In)
Area Averaged 100-Year Rainfall = 6.280(In)

Point rain (area averaged) = 4.008(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.008(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
3.400	69.00	0.000
5.100	79.00	0.000

Total Area Entered = 8.50(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	69.0	0.373	0.000	0.373	0.400	0.149
79.0	79.0	0.256	0.000	0.256	0.600	0.153
					Sum (F) =	0.303

Area averaged mean soil loss (F) (In/Hr) = 0.303
Minimum soil loss rate ((In/Hr)) = 0.151
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	100.807	19.448	1.666
2	0.167	201.615	48.461	4.151
3	0.250	302.422	15.514	1.329
4	0.333	403.229	7.020	0.601
5	0.417	504.037	3.943	0.338
6	0.500	604.844	2.551	0.219
7	0.583	705.651	1.574	0.135
8	0.667	806.459	1.488	0.127
			Sum = 100.000	Sum= 8.566

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.536)	0.029	0.003
2	0.17	0.07	0.032	(0.534)	0.029	0.003
3	0.25	0.07	0.032	(0.532)	0.029	0.003
4	0.33	0.10	0.048	(0.530)	0.043	0.005
5	0.42	0.10	0.048	(0.528)	0.043	0.005
6	0.50	0.10	0.048	(0.526)	0.043	0.005
7	0.58	0.10	0.048	(0.524)	0.043	0.005
8	0.67	0.10	0.048	(0.522)	0.043	0.005
9	0.75	0.10	0.048	(0.520)	0.043	0.005
10	0.83	0.13	0.064	(0.518)	0.058	0.006
11	0.92	0.13	0.064	(0.516)	0.058	0.006
12	1.00	0.13	0.064	(0.514)	0.058	0.006
13	1.08	0.10	0.048	(0.512)	0.043	0.005
14	1.17	0.10	0.048	(0.510)	0.043	0.005
15	1.25	0.10	0.048	(0.508)	0.043	0.005
16	1.33	0.10	0.048	(0.506)	0.043	0.005
17	1.42	0.10	0.048	(0.504)	0.043	0.005
18	1.50	0.10	0.048	(0.502)	0.043	0.005
19	1.58	0.10	0.048	(0.500)	0.043	0.005
20	1.67	0.10	0.048	(0.498)	0.043	0.005
21	1.75	0.10	0.048	(0.496)	0.043	0.005
22	1.83	0.13	0.064	(0.494)	0.058	0.006
23	1.92	0.13	0.064	(0.492)	0.058	0.006
24	2.00	0.13	0.064	(0.490)	0.058	0.006

25	2.08	0.13	0.064	(0.488)	0.058	0.006
26	2.17	0.13	0.064	(0.486)	0.058	0.006
27	2.25	0.13	0.064	(0.484)	0.058	0.006
28	2.33	0.13	0.064	(0.482)	0.058	0.006
29	2.42	0.13	0.064	(0.480)	0.058	0.006
30	2.50	0.13	0.064	(0.478)	0.058	0.006
31	2.58	0.17	0.080	(0.476)	0.072	0.008
32	2.67	0.17	0.080	(0.474)	0.072	0.008
33	2.75	0.17	0.080	(0.472)	0.072	0.008
34	2.83	0.17	0.080	(0.470)	0.072	0.008
35	2.92	0.17	0.080	(0.468)	0.072	0.008
36	3.00	0.17	0.080	(0.466)	0.072	0.008
37	3.08	0.17	0.080	(0.464)	0.072	0.008
38	3.17	0.17	0.080	(0.462)	0.072	0.008
39	3.25	0.17	0.080	(0.460)	0.072	0.008
40	3.33	0.17	0.080	(0.459)	0.072	0.008
41	3.42	0.17	0.080	(0.457)	0.072	0.008
42	3.50	0.17	0.080	(0.455)	0.072	0.008
43	3.58	0.17	0.080	(0.453)	0.072	0.008
44	3.67	0.17	0.080	(0.451)	0.072	0.008
45	3.75	0.17	0.080	(0.449)	0.072	0.008
46	3.83	0.20	0.096	(0.447)	0.087	0.010
47	3.92	0.20	0.096	(0.445)	0.087	0.010
48	4.00	0.20	0.096	(0.443)	0.087	0.010
49	4.08	0.20	0.096	(0.441)	0.087	0.010
50	4.17	0.20	0.096	(0.440)	0.087	0.010
51	4.25	0.20	0.096	(0.438)	0.087	0.010
52	4.33	0.23	0.112	(0.436)	0.101	0.011
53	4.42	0.23	0.112	(0.434)	0.101	0.011
54	4.50	0.23	0.112	(0.432)	0.101	0.011
55	4.58	0.23	0.112	(0.430)	0.101	0.011
56	4.67	0.23	0.112	(0.428)	0.101	0.011
57	4.75	0.23	0.112	(0.427)	0.101	0.011
58	4.83	0.27	0.128	(0.425)	0.115	0.013
59	4.92	0.27	0.128	(0.423)	0.115	0.013
60	5.00	0.27	0.128	(0.421)	0.115	0.013
61	5.08	0.20	0.096	(0.419)	0.087	0.010
62	5.17	0.20	0.096	(0.417)	0.087	0.010
63	5.25	0.20	0.096	(0.416)	0.087	0.010
64	5.33	0.23	0.112	(0.414)	0.101	0.011
65	5.42	0.23	0.112	(0.412)	0.101	0.011
66	5.50	0.23	0.112	(0.410)	0.101	0.011
67	5.58	0.27	0.128	(0.408)	0.115	0.013
68	5.67	0.27	0.128	(0.407)	0.115	0.013
69	5.75	0.27	0.128	(0.405)	0.115	0.013
70	5.83	0.27	0.128	(0.403)	0.115	0.013
71	5.92	0.27	0.128	(0.401)	0.115	0.013
72	6.00	0.27	0.128	(0.399)	0.115	0.013
73	6.08	0.30	0.144	(0.398)	0.130	0.014
74	6.17	0.30	0.144	(0.396)	0.130	0.014
75	6.25	0.30	0.144	(0.394)	0.130	0.014
76	6.33	0.30	0.144	(0.392)	0.130	0.014
77	6.42	0.30	0.144	(0.391)	0.130	0.014
78	6.50	0.30	0.144	(0.389)	0.130	0.014
79	6.58	0.33	0.160	(0.387)	0.144	0.016
80	6.67	0.33	0.160	(0.385)	0.144	0.016
81	6.75	0.33	0.160	(0.384)	0.144	0.016
82	6.83	0.33	0.160	(0.382)	0.144	0.016
83	6.92	0.33	0.160	(0.380)	0.144	0.016
84	7.00	0.33	0.160	(0.378)	0.144	0.016
85	7.08	0.33	0.160	(0.377)	0.144	0.016
86	7.17	0.33	0.160	(0.375)	0.144	0.016
87	7.25	0.33	0.160	(0.373)	0.144	0.016
88	7.33	0.37	0.176	(0.372)	0.159	0.018
89	7.42	0.37	0.176	(0.370)	0.159	0.018
90	7.50	0.37	0.176	(0.368)	0.159	0.018
91	7.58	0.40	0.192	(0.367)	0.173	0.019

92	7.67	0.40	0.192	(0.365)	0.173	0.019
93	7.75	0.40	0.192	(0.363)	0.173	0.019
94	7.83	0.43	0.208	(0.361)	0.188	0.021
95	7.92	0.43	0.208	(0.360)	0.188	0.021
96	8.00	0.43	0.208	(0.358)	0.188	0.021
97	8.08	0.50	0.240	(0.356)	0.216	0.024
98	8.17	0.50	0.240	(0.355)	0.216	0.024
99	8.25	0.50	0.240	(0.353)	0.216	0.024
100	8.33	0.50	0.240	(0.351)	0.216	0.024
101	8.42	0.50	0.240	(0.350)	0.216	0.024
102	8.50	0.50	0.240	(0.348)	0.216	0.024
103	8.58	0.53	0.257	(0.347)	0.231	0.026
104	8.67	0.53	0.257	(0.345)	0.231	0.026
105	8.75	0.53	0.257	(0.343)	0.231	0.026
106	8.83	0.57	0.273	(0.342)	0.245	0.027
107	8.92	0.57	0.273	(0.340)	0.245	0.027
108	9.00	0.57	0.273	(0.338)	0.245	0.027
109	9.08	0.63	0.305	(0.337)	0.274	0.030
110	9.17	0.63	0.305	(0.335)	0.274	0.030
111	9.25	0.63	0.305	(0.334)	0.274	0.030
112	9.33	0.67	0.321	(0.332)	0.289	0.032
113	9.42	0.67	0.321	(0.331)	0.289	0.032
114	9.50	0.67	0.321	(0.329)	0.289	0.032
115	9.58	0.70	0.337	(0.327)	0.303	0.034
116	9.67	0.70	0.337	(0.326)	0.303	0.034
117	9.75	0.70	0.337	(0.324)	0.303	0.034
118	9.83	0.73	0.353	(0.323)	0.317	0.035
119	9.92	0.73	0.353	(0.321)	0.317	0.035
120	10.00	0.73	0.353	(0.320)	0.317	0.035
121	10.08	0.50	0.240	(0.318)	0.216	0.024
122	10.17	0.50	0.240	(0.316)	0.216	0.024
123	10.25	0.50	0.240	(0.315)	0.216	0.024
124	10.33	0.50	0.240	(0.313)	0.216	0.024
125	10.42	0.50	0.240	(0.312)	0.216	0.024
126	10.50	0.50	0.240	(0.310)	0.216	0.024
127	10.58	0.67	0.321	(0.309)	0.289	0.032
128	10.67	0.67	0.321	(0.307)	0.289	0.032
129	10.75	0.67	0.321	(0.306)	0.289	0.032
130	10.83	0.67	0.321	(0.304)	0.289	0.032
131	10.92	0.67	0.321	(0.303)	0.289	0.032
132	11.00	0.67	0.321	(0.301)	0.289	0.032
133	11.08	0.63	0.305	(0.300)	0.274	0.030
134	11.17	0.63	0.305	(0.298)	0.274	0.030
135	11.25	0.63	0.305	(0.297)	0.274	0.030
136	11.33	0.63	0.305	(0.295)	0.274	0.030
137	11.42	0.63	0.305	(0.294)	0.274	0.030
138	11.50	0.63	0.305	(0.293)	0.274	0.030
139	11.58	0.57	0.273	(0.291)	0.245	0.027
140	11.67	0.57	0.273	(0.290)	0.245	0.027
141	11.75	0.57	0.273	(0.288)	0.245	0.027
142	11.83	0.60	0.289	(0.287)	0.260	0.029
143	11.92	0.60	0.289	(0.285)	0.260	0.029
144	12.00	0.60	0.289	(0.284)	0.260	0.029
145	12.08	0.83	0.401	0.282	(0.361)	0.118
146	12.17	0.83	0.401	0.281	(0.361)	0.120
147	12.25	0.83	0.401	0.280	(0.361)	0.121
148	12.33	0.87	0.417	0.278	(0.375)	0.139
149	12.42	0.87	0.417	0.277	(0.375)	0.140
150	12.50	0.87	0.417	0.275	(0.375)	0.141
151	12.58	0.93	0.449	0.274	(0.404)	0.175
152	12.67	0.93	0.449	0.273	(0.404)	0.176
153	12.75	0.93	0.449	0.271	(0.404)	0.178
154	12.83	0.97	0.465	0.270	(0.418)	0.195
155	12.92	0.97	0.465	0.269	(0.418)	0.196
156	13.00	0.97	0.465	0.267	(0.418)	0.198
157	13.08	1.13	0.545	0.266	(0.491)	0.279
158	13.17	1.13	0.545	0.265	(0.491)	0.281

159	13.25	1.13	0.545	0.263	(0.491)	0.282
160	13.33	1.13	0.545	0.262	(0.491)	0.283
161	13.42	1.13	0.545	0.261	(0.491)	0.285
162	13.50	1.13	0.545	0.259	(0.491)	0.286
163	13.58	0.77	0.369	0.258	(0.332)	0.111
164	13.67	0.77	0.369	0.257	(0.332)	0.112
165	13.75	0.77	0.369	0.255	(0.332)	0.113
166	13.83	0.77	0.369	0.254	(0.332)	0.115
167	13.92	0.77	0.369	0.253	(0.332)	0.116
168	14.00	0.77	0.369	0.251	(0.332)	0.117
169	14.08	0.90	0.433	0.250	(0.390)	0.183
170	14.17	0.90	0.433	0.249	(0.390)	0.184
171	14.25	0.90	0.433	0.248	(0.390)	0.185
172	14.33	0.87	0.417	0.246	(0.375)	0.171
173	14.42	0.87	0.417	0.245	(0.375)	0.172
174	14.50	0.87	0.417	0.244	(0.375)	0.173
175	14.58	0.87	0.417	0.242	(0.375)	0.174
176	14.67	0.87	0.417	0.241	(0.375)	0.176
177	14.75	0.87	0.417	0.240	(0.375)	0.177
178	14.83	0.83	0.401	0.239	(0.361)	0.162
179	14.92	0.83	0.401	0.238	(0.361)	0.163
180	15.00	0.83	0.401	0.236	(0.361)	0.164
181	15.08	0.80	0.385	0.235	(0.346)	0.150
182	15.17	0.80	0.385	0.234	(0.346)	0.151
183	15.25	0.80	0.385	0.233	(0.346)	0.152
184	15.33	0.77	0.369	0.232	(0.332)	0.137
185	15.42	0.77	0.369	0.230	(0.332)	0.138
186	15.50	0.77	0.369	0.229	(0.332)	0.140
187	15.58	0.63	0.305	0.228	(0.274)	0.077
188	15.67	0.63	0.305	0.227	(0.274)	0.078
189	15.75	0.63	0.305	0.226	(0.274)	0.079
190	15.83	0.63	0.305	0.225	(0.274)	0.080
191	15.92	0.63	0.305	0.223	(0.274)	0.081
192	16.00	0.63	0.305	0.222	(0.274)	0.082
193	16.08	0.13	0.064	(0.221)	0.058	0.006
194	16.17	0.13	0.064	(0.220)	0.058	0.006
195	16.25	0.13	0.064	(0.219)	0.058	0.006
196	16.33	0.13	0.064	(0.218)	0.058	0.006
197	16.42	0.13	0.064	(0.217)	0.058	0.006
198	16.50	0.13	0.064	(0.215)	0.058	0.006
199	16.58	0.10	0.048	(0.214)	0.043	0.005
200	16.67	0.10	0.048	(0.213)	0.043	0.005
201	16.75	0.10	0.048	(0.212)	0.043	0.005
202	16.83	0.10	0.048	(0.211)	0.043	0.005
203	16.92	0.10	0.048	(0.210)	0.043	0.005
204	17.00	0.10	0.048	(0.209)	0.043	0.005
205	17.08	0.17	0.080	(0.208)	0.072	0.008
206	17.17	0.17	0.080	(0.207)	0.072	0.008
207	17.25	0.17	0.080	(0.206)	0.072	0.008
208	17.33	0.17	0.080	(0.205)	0.072	0.008
209	17.42	0.17	0.080	(0.204)	0.072	0.008
210	17.50	0.17	0.080	(0.203)	0.072	0.008
211	17.58	0.17	0.080	(0.202)	0.072	0.008
212	17.67	0.17	0.080	(0.201)	0.072	0.008
213	17.75	0.17	0.080	(0.200)	0.072	0.008
214	17.83	0.13	0.064	(0.199)	0.058	0.006
215	17.92	0.13	0.064	(0.198)	0.058	0.006
216	18.00	0.13	0.064	(0.197)	0.058	0.006
217	18.08	0.13	0.064	(0.196)	0.058	0.006
218	18.17	0.13	0.064	(0.195)	0.058	0.006
219	18.25	0.13	0.064	(0.194)	0.058	0.006
220	18.33	0.13	0.064	(0.193)	0.058	0.006
221	18.42	0.13	0.064	(0.192)	0.058	0.006
222	18.50	0.13	0.064	(0.191)	0.058	0.006
223	18.58	0.10	0.048	(0.190)	0.043	0.005
224	18.67	0.10	0.048	(0.189)	0.043	0.005
225	18.75	0.10	0.048	(0.188)	0.043	0.005

226	18.83	0.07	0.032	(0.187)	0.029	0.003
227	18.92	0.07	0.032	(0.187)	0.029	0.003
228	19.00	0.07	0.032	(0.186)	0.029	0.003
229	19.08	0.10	0.048	(0.185)	0.043	0.005
230	19.17	0.10	0.048	(0.184)	0.043	0.005
231	19.25	0.10	0.048	(0.183)	0.043	0.005
232	19.33	0.13	0.064	(0.182)	0.058	0.006
233	19.42	0.13	0.064	(0.181)	0.058	0.006
234	19.50	0.13	0.064	(0.181)	0.058	0.006
235	19.58	0.10	0.048	(0.180)	0.043	0.005
236	19.67	0.10	0.048	(0.179)	0.043	0.005
237	19.75	0.10	0.048	(0.178)	0.043	0.005
238	19.83	0.07	0.032	(0.177)	0.029	0.003
239	19.92	0.07	0.032	(0.176)	0.029	0.003
240	20.00	0.07	0.032	(0.176)	0.029	0.003
241	20.08	0.10	0.048	(0.175)	0.043	0.005
242	20.17	0.10	0.048	(0.174)	0.043	0.005
243	20.25	0.10	0.048	(0.173)	0.043	0.005
244	20.33	0.10	0.048	(0.173)	0.043	0.005
245	20.42	0.10	0.048	(0.172)	0.043	0.005
246	20.50	0.10	0.048	(0.171)	0.043	0.005
247	20.58	0.10	0.048	(0.170)	0.043	0.005
248	20.67	0.10	0.048	(0.170)	0.043	0.005
249	20.75	0.10	0.048	(0.169)	0.043	0.005
250	20.83	0.07	0.032	(0.168)	0.029	0.003
251	20.92	0.07	0.032	(0.168)	0.029	0.003
252	21.00	0.07	0.032	(0.167)	0.029	0.003
253	21.08	0.10	0.048	(0.166)	0.043	0.005
254	21.17	0.10	0.048	(0.166)	0.043	0.005
255	21.25	0.10	0.048	(0.165)	0.043	0.005
256	21.33	0.07	0.032	(0.164)	0.029	0.003
257	21.42	0.07	0.032	(0.164)	0.029	0.003
258	21.50	0.07	0.032	(0.163)	0.029	0.003
259	21.58	0.10	0.048	(0.163)	0.043	0.005
260	21.67	0.10	0.048	(0.162)	0.043	0.005
261	21.75	0.10	0.048	(0.161)	0.043	0.005
262	21.83	0.07	0.032	(0.161)	0.029	0.003
263	21.92	0.07	0.032	(0.160)	0.029	0.003
264	22.00	0.07	0.032	(0.160)	0.029	0.003
265	22.08	0.10	0.048	(0.159)	0.043	0.005
266	22.17	0.10	0.048	(0.159)	0.043	0.005
267	22.25	0.10	0.048	(0.158)	0.043	0.005
268	22.33	0.07	0.032	(0.158)	0.029	0.003
269	22.42	0.07	0.032	(0.157)	0.029	0.003
270	22.50	0.07	0.032	(0.157)	0.029	0.003
271	22.58	0.07	0.032	(0.156)	0.029	0.003
272	22.67	0.07	0.032	(0.156)	0.029	0.003
273	22.75	0.07	0.032	(0.155)	0.029	0.003
274	22.83	0.07	0.032	(0.155)	0.029	0.003
275	22.92	0.07	0.032	(0.155)	0.029	0.003
276	23.00	0.07	0.032	(0.154)	0.029	0.003
277	23.08	0.07	0.032	(0.154)	0.029	0.003
278	23.17	0.07	0.032	(0.154)	0.029	0.003
279	23.25	0.07	0.032	(0.153)	0.029	0.003
280	23.33	0.07	0.032	(0.153)	0.029	0.003
281	23.42	0.07	0.032	(0.153)	0.029	0.003
282	23.50	0.07	0.032	(0.152)	0.029	0.003
283	23.58	0.07	0.032	(0.152)	0.029	0.003
284	23.67	0.07	0.032	(0.152)	0.029	0.003
285	23.75	0.07	0.032	(0.152)	0.029	0.003
286	23.83	0.07	0.032	(0.152)	0.029	0.003
287	23.92	0.07	0.032	(0.151)	0.029	0.003
288	24.00	0.07	0.032	(0.151)	0.029	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 10.5

Flood volume = Effective rainfall 0.88(In)

times area 8.5(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)

```
Total soil loss =      3.13(In)
Total soil loss =     2.217(Ac.Ft)
Total rainfall =      4.01(In)
Flood volume =       27097.7 Cubic Feet
Total soil loss =       96568.1 Cubic Feet
-----------------------------------------------------------------
 Peak flow rate of this hydrograph =      2.412(CFS)
-----------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                    24 - H O U R   S T O R M
               R u n o f f     H y d r o g r a p h
-----------------------------------------------------------------
            Hydrograph in   5   Minute intervals ((CFS))

-----------------------------------------------------------------
```

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.01	Q				
0+10	0.0002	0.02	Q				
0+15	0.0003	0.02	Q				
0+20	0.0005	0.03	Q				
0+25	0.0008	0.04	Q				
0+30	0.0010	0.04	Q				
0+35	0.0013	0.04	Q				
0+40	0.0016	0.04	Q				
0+45	0.0018	0.04	Q				
0+50	0.0022	0.04	Q				
0+55	0.0025	0.05	Q				
1+ 0	0.0029	0.05	Q				
1+ 5	0.0032	0.05	Q				
1+10	0.0035	0.04	Q				
1+15	0.0038	0.04	Q				
1+20	0.0041	0.04	Q				
1+25	0.0044	0.04	Q				
1+30	0.0047	0.04	Q				
1+35	0.0050	0.04	Q				
1+40	0.0053	0.04	Q				
1+45	0.0055	0.04	Q				
1+50	0.0058	0.04	Q				
1+55	0.0062	0.05	Q				
2+ 0	0.0066	0.05	Q				
2+ 5	0.0069	0.05	Q				
2+10	0.0073	0.05	Q				
2+15	0.0077	0.05	Q				
2+20	0.0080	0.05	Q				
2+25	0.0084	0.05	Q				
2+30	0.0088	0.05	Q				
2+35	0.0092	0.06	Q				
2+40	0.0096	0.06	Q				
2+45	0.0101	0.07	Q				
2+50	0.0106	0.07	Q				
2+55	0.0110	0.07	Q				
3+ 0	0.0115	0.07	Q				
3+ 5	0.0120	0.07	Q				
3+10	0.0124	0.07	Q				
3+15	0.0129	0.07	Q				
3+20	0.0134	0.07	Q				
3+25	0.0139	0.07	Q				
3+30	0.0143	0.07	Q				
3+35	0.0148	0.07	Q				
3+40	0.0153	0.07	Q				
3+45	0.0158	0.07	QV				
3+50	0.0163	0.07	QV				
3+55	0.0168	0.08	QV				
4+ 0	0.0173	0.08	QV				
4+ 5	0.0179	0.08	QV				
4+10	0.0185	0.08	QV				

4+15	0.0190	0.08	QV
4+20	0.0196	0.08	QV
4+25	0.0202	0.09	QV
4+30	0.0209	0.09	QV
4+35	0.0215	0.09	QV
4+40	0.0222	0.10	QV
4+45	0.0229	0.10	QV
4+50	0.0235	0.10	QV
4+55	0.0243	0.11	QV
5+ 0	0.0250	0.11	QV
5+ 5	0.0257	0.10	QV
5+10	0.0263	0.09	QV
5+15	0.0269	0.09	QV
5+20	0.0275	0.09	QV
5+25	0.0282	0.09	QV
5+30	0.0288	0.09	QV
5+35	0.0295	0.10	QV
5+40	0.0302	0.10	QV
5+45	0.0310	0.11	QV
5+50	0.0317	0.11	Q V
5+55	0.0325	0.11	Q V
6+ 0	0.0332	0.11	Q V
6+ 5	0.0340	0.11	Q V
6+10	0.0348	0.12	Q V
6+15	0.0357	0.12	Q V
6+20	0.0365	0.12	Q V
6+25	0.0373	0.12	Q V
6+30	0.0382	0.12	Q V
6+35	0.0391	0.13	Q V
6+40	0.0400	0.13	Q V
6+45	0.0409	0.14	Q V
6+50	0.0418	0.14	Q V
6+55	0.0428	0.14	Q V
7+ 0	0.0437	0.14	Q V
7+ 5	0.0447	0.14	Q V
7+10	0.0456	0.14	Q V
7+15	0.0466	0.14	Q V
7+20	0.0475	0.14	Q V
7+25	0.0485	0.15	Q V
7+30	0.0496	0.15	Q V
7+35	0.0506	0.15	Q V
7+40	0.0517	0.16	Q V
7+45	0.0528	0.16	Q V
7+50	0.0540	0.17	Q V
7+55	0.0552	0.17	Q V
8+ 0	0.0564	0.18	Q V
8+ 5	0.0576	0.18	Q V
8+10	0.0590	0.20	Q V
8+15	0.0604	0.20	Q V
8+20	0.0618	0.20	Q V
8+25	0.0632	0.20	Q V
8+30	0.0646	0.21	Q V
8+35	0.0660	0.21	Q V
8+40	0.0675	0.22	Q V
8+45	0.0690	0.22	Q V
8+50	0.0705	0.22	Q V
8+55	0.0721	0.23	Q V
9+ 0	0.0737	0.23	Q V
9+ 5	0.0753	0.24	Q V
9+10	0.0771	0.25	|Q V
9+15	0.0788	0.26	|Q V
9+20	0.0806	0.26	|Q V
9+25	0.0825	0.27	|Q V
9+30	0.0844	0.27	|Q V
9+35	0.0863	0.28	|Q V
9+40	0.0882	0.28	|Q V
9+45	0.0902	0.29	|Q V

9+50	0.0922	0.29		Q V			
9+55	0.0942	0.30		Q V			
10+ 0	0.0963	0.30		Q V			
10+ 5	0.0982	0.28		Q V			
10+10	0.0999	0.24	Q V			
10+15	0.1014	0.22	Q V			
10+20	0.1029	0.22	Q V			
10+25	0.1043	0.21	Q V			
10+30	0.1058	0.21	Q V			
10+35	0.1073	0.22	Q V			
10+40	0.1090	0.25		Q V			
10+45	0.1108	0.26		Q V			
10+50	0.1127	0.27		Q V			
10+55	0.1145	0.27		Q V			
11+ 0	0.1164	0.27		Q V			
11+ 5	0.1183	0.27		Q V			
11+10	0.1201	0.27		Q V			
11+15	0.1219	0.26		Q V			
11+20	0.1237	0.26		Q V			
11+25	0.1255	0.26		Q V			
11+30	0.1273	0.26		Q V			
11+35	0.1291	0.26		Q V			
11+40	0.1308	0.24	Q V			
11+45	0.1324	0.24	Q V			
11+50	0.1341	0.24	Q V			
11+55	0.1357	0.24	Q V			
12+ 0	0.1374	0.25	Q V			
12+ 5	0.1402	0.40		Q V				
12+10	0.1455	0.77		Q V				
12+15	0.1516	0.90		Q V				
12+20	0.1584	0.99		Q V			
12+25	0.1660	1.10		Q V			
12+30	0.1739	1.15		Q	V			
12+35	0.1824	1.23		Q	V			
12+40	0.1920	1.40		Q	V			
12+45	0.2020	1.45		Q	V			
12+50	0.2125	1.51		Q	V			
12+55	0.2235	1.61		Q	V			
13+ 0	0.2349	1.65		Q	V			
13+ 5	0.2473	1.81		Q	V			
13+10	0.2622	2.16		Q	V			
13+15	0.2779	2.28		Q	V			
13+20	0.2940	2.34		Q	V			
13+25	0.3104	2.38		Q	V			
13+30	0.3270	2.41		Q		V		
13+35	0.3418	2.14		Q		V		
13+40	0.3516	1.43		Q		V		
13+45	0.3599	1.21		Q		V		
13+50	0.3676	1.11		Q		V		
13+55	0.3749	1.06		Q		V		
14+ 0	0.3821	1.04		Q		V		
14+ 5	0.3898	1.13		Q		V		
14+10	0.3994	1.38		Q		V		
14+15	0.4096	1.48		Q		V		
14+20	0.4199	1.50		Q		V		
14+25	0.4301	1.47		Q		V		
14+30	0.4402	1.47		Q		V		
14+35	0.4504	1.48		Q		V		
14+40	0.4607	1.50		Q		V		
14+45	0.4711	1.50		Q		V	
14+50	0.4813	1.49		Q		V		
14+55	0.4911	1.43		Q			V	
15+ 0	0.5009	1.42		Q			V	
15+ 5	0.5105	1.39		Q			V	
15+10	0.5196	1.33		Q			V	
15+15	0.5287	1.31		Q			V	
15+20	0.5375	1.29		Q			V	

15+25	0.5460	1.22	Q			V
15+30	0.5543	1.21	Q			V
15+35	0.5619	1.10	Q			V
15+40	0.5676	0.84	Q			V
15+45	0.5728	0.76	Q			V
15+50	0.5778	0.73	Q			V
15+55	0.5827	0.71	Q			V
16+ 0	0.5876	0.71	Q			V
16+ 5	0.5916	0.58	Q			V
16+10	0.5934	0.26	Q			V
16+15	0.5945	0.16	Q			V
16+20	0.5953	0.12	Q			V
16+25	0.5960	0.09	Q			V
16+30	0.5965	0.07	Q			V
16+35	0.5969	0.06	Q			V
16+40	0.5972	0.05	Q			V
16+45	0.5975	0.04	Q			V
16+50	0.5978	0.04	Q			V
16+55	0.5981	0.04	Q			V
17+ 0	0.5984	0.04	Q			V
17+ 5	0.5987	0.05	Q			V
17+10	0.5991	0.06	Q			V
17+15	0.5996	0.06	Q			V
17+20	0.6000	0.07	Q			V
17+25	0.6005	0.07	Q			V
17+30	0.6009	0.07	Q			V
17+35	0.6014	0.07	Q			V
17+40	0.6019	0.07	Q			V
17+45	0.6024	0.07	Q			V
17+50	0.6028	0.07	Q			V
17+55	0.6032	0.06	Q			V
18+ 0	0.6036	0.06	Q			V
18+ 5	0.6040	0.06	Q			V
18+10	0.6044	0.06	Q			V
18+15	0.6048	0.06	Q			V
18+20	0.6051	0.06	Q			V
18+25	0.6055	0.05	Q			V
18+30	0.6059	0.05	Q			V
18+35	0.6063	0.05	Q			V
18+40	0.6066	0.05	Q			V
18+45	0.6069	0.04	Q			V
18+50	0.6071	0.04	Q			V
18+55	0.6074	0.03	Q			V
19+ 0	0.6076	0.03	Q			V
19+ 5	0.6078	0.03	Q			V
19+10	0.6081	0.04	Q			V
19+15	0.6083	0.04	Q			V
19+20	0.6086	0.04	Q			V
19+25	0.6090	0.05	Q			V
19+30	0.6093	0.05	Q			V
19+35	0.6097	0.05	Q			V
19+40	0.6100	0.04	Q			V
19+45	0.6103	0.04	Q			V
19+50	0.6106	0.04	Q			V
19+55	0.6108	0.03	Q			V
20+ 0	0.6110	0.03	Q			V
20+ 5	0.6112	0.03	Q			V
20+10	0.6115	0.04	Q			V
20+15	0.6117	0.04	Q			V
20+20	0.6120	0.04	Q			V
20+25	0.6123	0.04	Q			V
20+30	0.6126	0.04	Q			V
20+35	0.6129	0.04	Q			V
20+40	0.6131	0.04	Q			V
20+45	0.6134	0.04	Q			V
20+50	0.6137	0.04	Q			V
20+55	0.6139	0.03	Q			V

21+ 0	0.6141	0.03	Q	|	|	|	V|
21+ 5	0.6143	0.03	Q	|	|	|	V|
21+10	0.6146	0.04	Q	|	|	|	V|
21+15	0.6149	0.04	Q	|	|	|	V|
21+20	0.6151	0.04	Q	|	|	|	V|
21+25	0.6153	0.03	Q	|	|	|	V|
21+30	0.6155	0.03	Q	|	|	|	V|
21+35	0.6157	0.03	Q	|	|	|	V|
21+40	0.6160	0.04	Q	|	|	|	V|
21+45	0.6163	0.04	Q	|	|	|	V|
21+50	0.6165	0.04	Q	|	|	|	V|
21+55	0.6168	0.03	Q	|	|	|	V|
22+ 0	0.6170	0.03	Q	|	|	|	V|
22+ 5	0.6172	0.03	Q	|	|	|	V|
22+10	0.6174	0.04	Q	|	|	|	V|
22+15	0.6177	0.04	Q	|	|	|	V|
22+20	0.6180	0.04	Q	|	|	|	V|
22+25	0.6182	0.03	Q	|	|	|	V|
22+30	0.6184	0.03	Q	|	|	|	V|
22+35	0.6186	0.03	Q	|	|	|	V|
22+40	0.6188	0.03	Q	|	|	|	V|
22+45	0.6190	0.03	Q	|	|	|	V|
22+50	0.6191	0.03	Q	|	|	|	V|
22+55	0.6193	0.03	Q	|	|	|	V|
23+ 0	0.6195	0.03	Q	|	|	|	V|
23+ 5	0.6197	0.03	Q	|	|	|	V|
23+10	0.6199	0.03	Q	|	|	|	V|
23+15	0.6201	0.03	Q	|	|	|	V|
23+20	0.6203	0.03	Q	|	|	|	V|
23+25	0.6205	0.03	Q	|	|	|	V|
23+30	0.6207	0.03	Q	|	|	|	V|
23+35	0.6209	0.03	Q	|	|	|	V|
23+40	0.6210	0.03	Q	|	|	|	V|
23+45	0.6212	0.03	Q	|	|	|	V|
23+50	0.6214	0.03	Q	|	|	|	V|
23+55	0.6216	0.03	Q	|	|	|	V|
24+ 0	0.6218	0.03	Q	|	|	|	V|
24+ 5	0.6219	0.02	Q	|	|	|	V|
24+10	0.6220	0.01	Q	|	|	|	V|
24+15	0.6220	0.00	Q	|	|	|	V|
24+20	0.6221	0.00	Q	|	|	|	V|
24+25	0.6221	0.00	Q	|	|	|	V|
24+30	0.6221	0.00	Q	|	|	|	V|
24+35	0.6221	0.00	Q	|	|	|	V

2-and 10-Year Post-Developed Unit Hydrograph Hydrology

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 08/30/12 File: RMEC1242.out

++

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 4010

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Plot Plan Unit Htdrograph
Post-developed conditions
2-yr 24-hr storm event rmec1242.out
eta

Drainage Area = 8.80(Ac.) = 0.014 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 8.80(Ac.) = 0.014 Sq. Mi.
Length along longest watercourse = 1620.00(Ft.)
Length along longest watercourse measured to centroid = 930.00(Ft.)
Length along longest watercourse = 0.307 Mi.
Length along longest watercourse measured to centroid = 0.176 Mi.
Difference in elevation = 31.00(Ft.)
Slope along watercourse = 101.0370 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.049 Hr.
Lag time = 2.97 Min.
25% of lag time = 0.74 Min.
40% of lag time = 1.19 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
8.80	2.42	21.30

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
8.80	6.28	55.26

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.420(In)
Area Averaged 100-Year Rainfall = 6.280(In)

Point rain (area averaged) = 2.420(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.420(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	56.00	0.800
7.100	69.00	0.800
1.100	69.00	0.000

Total Area Entered = 8.80(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	36.0	0.706	0.800	0.198	0.068	0.013
69.0	49.8	0.574	0.800	0.161	0.807	0.130
69.0	49.8	0.574	0.000	0.574	0.125	0.072
					Sum (F) =	0.215

Area averaged mean soil loss (F) (In/Hr) = 0.215
Minimum soil loss rate ((In/Hr)) = 0.107
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	168.628	37.399	3.317
2	0.167	337.256	45.618	4.046
3	0.250	505.885	10.206	0.905
4	0.333	674.513	4.304	0.382
5	0.417	843.141	2.472	0.219
			Sum = 100.000	Sum= 8.869

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.019	(0.381)	0.004	0.015
2	0.17	0.07	0.019	(0.379)	0.004	0.015
3	0.25	0.07	0.019	(0.378)	0.004	0.015
4	0.33	0.10	0.029	(0.377)	0.007	0.022
5	0.42	0.10	0.029	(0.375)	0.007	0.022
6	0.50	0.10	0.029	(0.374)	0.007	0.022
7	0.58	0.10	0.029	(0.372)	0.007	0.022
8	0.67	0.10	0.029	(0.371)	0.007	0.022
9	0.75	0.10	0.029	(0.369)	0.007	0.022
10	0.83	0.13	0.039	(0.368)	0.009	0.030
11	0.92	0.13	0.039	(0.366)	0.009	0.030
12	1.00	0.13	0.039	(0.365)	0.009	0.030
13	1.08	0.10	0.029	(0.363)	0.007	0.022
14	1.17	0.10	0.029	(0.362)	0.007	0.022
15	1.25	0.10	0.029	(0.361)	0.007	0.022
16	1.33	0.10	0.029	(0.359)	0.007	0.022
17	1.42	0.10	0.029	(0.358)	0.007	0.022
18	1.50	0.10	0.029	(0.356)	0.007	0.022
19	1.58	0.10	0.029	(0.355)	0.007	0.022
20	1.67	0.10	0.029	(0.353)	0.007	0.022
21	1.75	0.10	0.029	(0.352)	0.007	0.022
22	1.83	0.13	0.039	(0.351)	0.009	0.030
23	1.92	0.13	0.039	(0.349)	0.009	0.030
24	2.00	0.13	0.039	(0.348)	0.009	0.030
25	2.08	0.13	0.039	(0.346)	0.009	0.030

26	2.17	0.13	0.039	(0.345)	0.009	0.030
27	2.25	0.13	0.039	(0.344)	0.009	0.030
28	2.33	0.13	0.039	(0.342)	0.009	0.030
29	2.42	0.13	0.039	(0.341)	0.009	0.030
30	2.50	0.13	0.039	(0.339)	0.009	0.030
31	2.58	0.17	0.048	(0.338)	0.011	0.037
32	2.67	0.17	0.048	(0.337)	0.011	0.037
33	2.75	0.17	0.048	(0.335)	0.011	0.037
34	2.83	0.17	0.048	(0.334)	0.011	0.037
35	2.92	0.17	0.048	(0.332)	0.011	0.037
36	3.00	0.17	0.048	(0.331)	0.011	0.037
37	3.08	0.17	0.048	(0.330)	0.011	0.037
38	3.17	0.17	0.048	(0.328)	0.011	0.037
39	3.25	0.17	0.048	(0.327)	0.011	0.037
40	3.33	0.17	0.048	(0.326)	0.011	0.037
41	3.42	0.17	0.048	(0.324)	0.011	0.037
42	3.50	0.17	0.048	(0.323)	0.011	0.037
43	3.58	0.17	0.048	(0.322)	0.011	0.037
44	3.67	0.17	0.048	(0.320)	0.011	0.037
45	3.75	0.17	0.048	(0.319)	0.011	0.037
46	3.83	0.20	0.058	(0.318)	0.013	0.045
47	3.92	0.20	0.058	(0.316)	0.013	0.045
48	4.00	0.20	0.058	(0.315)	0.013	0.045
49	4.08	0.20	0.058	(0.313)	0.013	0.045
50	4.17	0.20	0.058	(0.312)	0.013	0.045
51	4.25	0.20	0.058	(0.311)	0.013	0.045
52	4.33	0.23	0.068	(0.310)	0.016	0.052
53	4.42	0.23	0.068	(0.308)	0.016	0.052
54	4.50	0.23	0.068	(0.307)	0.016	0.052
55	4.58	0.23	0.068	(0.306)	0.016	0.052
56	4.67	0.23	0.068	(0.304)	0.016	0.052
57	4.75	0.23	0.068	(0.303)	0.016	0.052
58	4.83	0.27	0.077	(0.302)	0.018	0.060
59	4.92	0.27	0.077	(0.300)	0.018	0.060
60	5.00	0.27	0.077	(0.299)	0.018	0.060
61	5.08	0.20	0.058	(0.298)	0.013	0.045
62	5.17	0.20	0.058	(0.296)	0.013	0.045
63	5.25	0.20	0.058	(0.295)	0.013	0.045
64	5.33	0.23	0.068	(0.294)	0.016	0.052
65	5.42	0.23	0.068	(0.293)	0.016	0.052
66	5.50	0.23	0.068	(0.291)	0.016	0.052
67	5.58	0.27	0.077	(0.290)	0.018	0.060
68	5.67	0.27	0.077	(0.289)	0.018	0.060
69	5.75	0.27	0.077	(0.287)	0.018	0.060
70	5.83	0.27	0.077	(0.286)	0.018	0.060
71	5.92	0.27	0.077	(0.285)	0.018	0.060
72	6.00	0.27	0.077	(0.284)	0.018	0.060
73	6.08	0.30	0.087	(0.282)	0.020	0.067
74	6.17	0.30	0.087	(0.281)	0.020	0.067
75	6.25	0.30	0.087	(0.280)	0.020	0.067
76	6.33	0.30	0.087	(0.279)	0.020	0.067
77	6.42	0.30	0.087	(0.277)	0.020	0.067
78	6.50	0.30	0.087	(0.276)	0.020	0.067
79	6.58	0.33	0.097	(0.275)	0.022	0.075
80	6.67	0.33	0.097	(0.274)	0.022	0.075
81	6.75	0.33	0.097	(0.272)	0.022	0.075
82	6.83	0.33	0.097	(0.271)	0.022	0.075
83	6.92	0.33	0.097	(0.270)	0.022	0.075
84	7.00	0.33	0.097	(0.269)	0.022	0.075
85	7.08	0.33	0.097	(0.268)	0.022	0.075
86	7.17	0.33	0.097	(0.266)	0.022	0.075
87	7.25	0.33	0.097	(0.265)	0.022	0.075
88	7.33	0.37	0.106	(0.264)	0.024	0.082
89	7.42	0.37	0.106	(0.263)	0.024	0.082
90	7.50	0.37	0.106	(0.261)	0.024	0.082
91	7.58	0.40	0.116	(0.260)	0.027	0.089
92	7.67	0.40	0.116	(0.259)	0.027	0.089

93	7.75	0.40	0.116	(0.258)	0.027	0.089
94	7.83	0.43	0.126	(0.257)	0.029	0.097
95	7.92	0.43	0.126	(0.255)	0.029	0.097
96	8.00	0.43	0.126	(0.254)	0.029	0.097
97	8.08	0.50	0.145	(0.253)	0.033	0.112
98	8.17	0.50	0.145	(0.252)	0.033	0.112
99	8.25	0.50	0.145	(0.251)	0.033	0.112
100	8.33	0.50	0.145	(0.250)	0.033	0.112
101	8.42	0.50	0.145	(0.248)	0.033	0.112
102	8.50	0.50	0.145	(0.247)	0.033	0.112
103	8.58	0.53	0.155	(0.246)	0.036	0.119
104	8.67	0.53	0.155	(0.245)	0.036	0.119
105	8.75	0.53	0.155	(0.244)	0.036	0.119
106	8.83	0.57	0.165	(0.243)	0.038	0.127
107	8.92	0.57	0.165	(0.242)	0.038	0.127
108	9.00	0.57	0.165	(0.240)	0.038	0.127
109	9.08	0.63	0.184	(0.239)	0.042	0.142
110	9.17	0.63	0.184	(0.238)	0.042	0.142
111	9.25	0.63	0.184	(0.237)	0.042	0.142
112	9.33	0.67	0.194	(0.236)	0.045	0.149
113	9.42	0.67	0.194	(0.235)	0.045	0.149
114	9.50	0.67	0.194	(0.234)	0.045	0.149
115	9.58	0.70	0.203	(0.232)	0.047	0.157
116	9.67	0.70	0.203	(0.231)	0.047	0.157
117	9.75	0.70	0.203	(0.230)	0.047	0.157
118	9.83	0.73	0.213	(0.229)	0.049	0.164
119	9.92	0.73	0.213	(0.228)	0.049	0.164
120	10.00	0.73	0.213	(0.227)	0.049	0.164
121	10.08	0.50	0.145	(0.226)	0.033	0.112
122	10.17	0.50	0.145	(0.225)	0.033	0.112
123	10.25	0.50	0.145	(0.224)	0.033	0.112
124	10.33	0.50	0.145	(0.223)	0.033	0.112
125	10.42	0.50	0.145	(0.221)	0.033	0.112
126	10.50	0.50	0.145	(0.220)	0.033	0.112
127	10.58	0.67	0.194	(0.219)	0.045	0.149
128	10.67	0.67	0.194	(0.218)	0.045	0.149
129	10.75	0.67	0.194	(0.217)	0.045	0.149
130	10.83	0.67	0.194	(0.216)	0.045	0.149
131	10.92	0.67	0.194	(0.215)	0.045	0.149
132	11.00	0.67	0.194	(0.214)	0.045	0.149
133	11.08	0.63	0.184	(0.213)	0.042	0.142
134	11.17	0.63	0.184	(0.212)	0.042	0.142
135	11.25	0.63	0.184	(0.211)	0.042	0.142
136	11.33	0.63	0.184	(0.210)	0.042	0.142
137	11.42	0.63	0.184	(0.209)	0.042	0.142
138	11.50	0.63	0.184	(0.208)	0.042	0.142
139	11.58	0.57	0.165	(0.207)	0.038	0.127
140	11.67	0.57	0.165	(0.206)	0.038	0.127
141	11.75	0.57	0.165	(0.205)	0.038	0.127
142	11.83	0.60	0.174	(0.204)	0.040	0.134
143	11.92	0.60	0.174	(0.203)	0.040	0.134
144	12.00	0.60	0.174	(0.202)	0.040	0.134
145	12.08	0.83	0.242	(0.201)	0.056	0.186
146	12.17	0.83	0.242	(0.200)	0.056	0.186
147	12.25	0.83	0.242	(0.199)	0.056	0.186
148	12.33	0.87	0.252	(0.198)	0.058	0.194
149	12.42	0.87	0.252	(0.197)	0.058	0.194
150	12.50	0.87	0.252	(0.196)	0.058	0.194
151	12.58	0.93	0.271	(0.195)	0.062	0.209
152	12.67	0.93	0.271	(0.194)	0.062	0.209
153	12.75	0.93	0.271	(0.193)	0.062	0.209
154	12.83	0.97	0.281	(0.192)	0.065	0.216
155	12.92	0.97	0.281	(0.191)	0.065	0.216
156	13.00	0.97	0.281	(0.190)	0.065	0.216
157	13.08	1.13	0.329	(0.189)	0.076	0.253
158	13.17	1.13	0.329	(0.188)	0.076	0.253
159	13.25	1.13	0.329	(0.187)	0.076	0.253

160	13.33	1.13	0.329	(0.186)	0.076	0.253
161	13.42	1.13	0.329	(0.185)	0.076	0.253
162	13.50	1.13	0.329	(0.184)	0.076	0.253
163	13.58	0.77	0.223	(0.183)	0.051	0.171
164	13.67	0.77	0.223	(0.182)	0.051	0.171
165	13.75	0.77	0.223	(0.181)	0.051	0.171
166	13.83	0.77	0.223	(0.180)	0.051	0.171
167	13.92	0.77	0.223	(0.179)	0.051	0.171
168	14.00	0.77	0.223	(0.178)	0.051	0.171
169	14.08	0.90	0.261	(0.178)	0.060	0.201
170	14.17	0.90	0.261	(0.177)	0.060	0.201
171	14.25	0.90	0.261	(0.176)	0.060	0.201
172	14.33	0.87	0.252	(0.175)	0.058	0.194
173	14.42	0.87	0.252	(0.174)	0.058	0.194
174	14.50	0.87	0.252	(0.173)	0.058	0.194
175	14.58	0.87	0.252	(0.172)	0.058	0.194
176	14.67	0.87	0.252	(0.171)	0.058	0.194
177	14.75	0.87	0.252	(0.170)	0.058	0.194
178	14.83	0.83	0.242	(0.170)	0.056	0.186
179	14.92	0.83	0.242	(0.169)	0.056	0.186
180	15.00	0.83	0.242	(0.168)	0.056	0.186
181	15.08	0.80	0.232	(0.167)	0.053	0.179
182	15.17	0.80	0.232	(0.166)	0.053	0.179
183	15.25	0.80	0.232	(0.165)	0.053	0.179
184	15.33	0.77	0.223	(0.164)	0.051	0.171
185	15.42	0.77	0.223	(0.164)	0.051	0.171
186	15.50	0.77	0.223	(0.163)	0.051	0.171
187	15.58	0.63	0.184	(0.162)	0.042	0.142
188	15.67	0.63	0.184	(0.161)	0.042	0.142
189	15.75	0.63	0.184	(0.160)	0.042	0.142
190	15.83	0.63	0.184	(0.159)	0.042	0.142
191	15.92	0.63	0.184	(0.159)	0.042	0.142
192	16.00	0.63	0.184	(0.158)	0.042	0.142
193	16.08	0.13	0.039	(0.157)	0.009	0.030
194	16.17	0.13	0.039	(0.156)	0.009	0.030
195	16.25	0.13	0.039	(0.155)	0.009	0.030
196	16.33	0.13	0.039	(0.155)	0.009	0.030
197	16.42	0.13	0.039	(0.154)	0.009	0.030
198	16.50	0.13	0.039	(0.153)	0.009	0.030
199	16.58	0.10	0.029	(0.152)	0.007	0.022
200	16.67	0.10	0.029	(0.151)	0.007	0.022
201	16.75	0.10	0.029	(0.151)	0.007	0.022
202	16.83	0.10	0.029	(0.150)	0.007	0.022
203	16.92	0.10	0.029	(0.149)	0.007	0.022
204	17.00	0.10	0.029	(0.148)	0.007	0.022
205	17.08	0.17	0.048	(0.148)	0.011	0.037
206	17.17	0.17	0.048	(0.147)	0.011	0.037
207	17.25	0.17	0.048	(0.146)	0.011	0.037
208	17.33	0.17	0.048	(0.145)	0.011	0.037
209	17.42	0.17	0.048	(0.145)	0.011	0.037
210	17.50	0.17	0.048	(0.144)	0.011	0.037
211	17.58	0.17	0.048	(0.143)	0.011	0.037
212	17.67	0.17	0.048	(0.143)	0.011	0.037
213	17.75	0.17	0.048	(0.142)	0.011	0.037
214	17.83	0.13	0.039	(0.141)	0.009	0.030
215	17.92	0.13	0.039	(0.140)	0.009	0.030
216	18.00	0.13	0.039	(0.140)	0.009	0.030
217	18.08	0.13	0.039	(0.139)	0.009	0.030
218	18.17	0.13	0.039	(0.138)	0.009	0.030
219	18.25	0.13	0.039	(0.138)	0.009	0.030
220	18.33	0.13	0.039	(0.137)	0.009	0.030
221	18.42	0.13	0.039	(0.136)	0.009	0.030
222	18.50	0.13	0.039	(0.136)	0.009	0.030
223	18.58	0.10	0.029	(0.135)	0.007	0.022
224	18.67	0.10	0.029	(0.134)	0.007	0.022
225	18.75	0.10	0.029	(0.134)	0.007	0.022
226	18.83	0.07	0.019	(0.133)	0.004	0.015

227	18.92	0.07	0.019	(0.132)	0.004	0.015
228	19.00	0.07	0.019	(0.132)	0.004	0.015
229	19.08	0.10	0.029	(0.131)	0.007	0.022
230	19.17	0.10	0.029	(0.131)	0.007	0.022
231	19.25	0.10	0.029	(0.130)	0.007	0.022
232	19.33	0.13	0.039	(0.129)	0.009	0.030
233	19.42	0.13	0.039	(0.129)	0.009	0.030
234	19.50	0.13	0.039	(0.128)	0.009	0.030
235	19.58	0.10	0.029	(0.128)	0.007	0.022
236	19.67	0.10	0.029	(0.127)	0.007	0.022
237	19.75	0.10	0.029	(0.126)	0.007	0.022
238	19.83	0.07	0.019	(0.126)	0.004	0.015
239	19.92	0.07	0.019	(0.125)	0.004	0.015
240	20.00	0.07	0.019	(0.125)	0.004	0.015
241	20.08	0.10	0.029	(0.124)	0.007	0.022
242	20.17	0.10	0.029	(0.124)	0.007	0.022
243	20.25	0.10	0.029	(0.123)	0.007	0.022
244	20.33	0.10	0.029	(0.123)	0.007	0.022
245	20.42	0.10	0.029	(0.122)	0.007	0.022
246	20.50	0.10	0.029	(0.122)	0.007	0.022
247	20.58	0.10	0.029	(0.121)	0.007	0.022
248	20.67	0.10	0.029	(0.121)	0.007	0.022
249	20.75	0.10	0.029	(0.120)	0.007	0.022
250	20.83	0.07	0.019	(0.120)	0.004	0.015
251	20.92	0.07	0.019	(0.119)	0.004	0.015
252	21.00	0.07	0.019	(0.119)	0.004	0.015
253	21.08	0.10	0.029	(0.118)	0.007	0.022
254	21.17	0.10	0.029	(0.118)	0.007	0.022
255	21.25	0.10	0.029	(0.117)	0.007	0.022
256	21.33	0.07	0.019	(0.117)	0.004	0.015
257	21.42	0.07	0.019	(0.116)	0.004	0.015
258	21.50	0.07	0.019	(0.116)	0.004	0.015
259	21.58	0.10	0.029	(0.115)	0.007	0.022
260	21.67	0.10	0.029	(0.115)	0.007	0.022
261	21.75	0.10	0.029	(0.115)	0.007	0.022
262	21.83	0.07	0.019	(0.114)	0.004	0.015
263	21.92	0.07	0.019	(0.114)	0.004	0.015
264	22.00	0.07	0.019	(0.113)	0.004	0.015
265	22.08	0.10	0.029	(0.113)	0.007	0.022
266	22.17	0.10	0.029	(0.113)	0.007	0.022
267	22.25	0.10	0.029	(0.112)	0.007	0.022
268	22.33	0.07	0.019	(0.112)	0.004	0.015
269	22.42	0.07	0.019	(0.112)	0.004	0.015
270	22.50	0.07	0.019	(0.111)	0.004	0.015
271	22.58	0.07	0.019	(0.111)	0.004	0.015
272	22.67	0.07	0.019	(0.111)	0.004	0.015
273	22.75	0.07	0.019	(0.110)	0.004	0.015
274	22.83	0.07	0.019	(0.110)	0.004	0.015
275	22.92	0.07	0.019	(0.110)	0.004	0.015
276	23.00	0.07	0.019	(0.110)	0.004	0.015
277	23.08	0.07	0.019	(0.109)	0.004	0.015
278	23.17	0.07	0.019	(0.109)	0.004	0.015
279	23.25	0.07	0.019	(0.109)	0.004	0.015
280	23.33	0.07	0.019	(0.109)	0.004	0.015
281	23.42	0.07	0.019	(0.108)	0.004	0.015
282	23.50	0.07	0.019	(0.108)	0.004	0.015
283	23.58	0.07	0.019	(0.108)	0.004	0.015
284	23.67	0.07	0.019	(0.108)	0.004	0.015
285	23.75	0.07	0.019	(0.108)	0.004	0.015
286	23.83	0.07	0.019	(0.108)	0.004	0.015
287	23.92	0.07	0.019	(0.108)	0.004	0.015
288	24.00	0.07	0.019	(0.107)	0.004	0.015

(Loss Rate Not Used)

Sum = 100.0 Sum = 22.4

Flood volume = Effective rainfall 1.86(In)
times area 8.8(Ac.)/[(In)/(Ft.)] = 1.4(Ac.Ft)
Total soil loss = 0.56(In)

```
Total soil loss =      0.408(Ac.Ft)
Total rainfall =       2.42(In)
Flood volume =        59523.4 Cubic Feet
Total soil loss =       17779.7 Cubic Feet
-----------------------------------------------------------------
 Peak flow rate of this hydrograph =      2.249(CFS)
-----------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                    24 - H O U R    S T O R M
               R u n o f f      H y d r o g r a p h
-----------------------------------------------------------------
            Hydrograph in   5   Minute intervals ((CFS))

-----------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0         2.5       5.0       7.5       10.0
-----------------------------------------------------------------
  0+ 5       0.0003       0.05  Q         |         |         |         |
  0+10       0.0011       0.11  Q         |         |         |         |
  0+15       0.0019       0.12  Q         |         |         |         |
  0+20       0.0030       0.15  Q         |         |         |         |
  0+25       0.0043       0.19  Q         |         |         |         |
  0+30       0.0056       0.19  Q         |         |         |         |
  0+35       0.0070       0.20  Q         |         |         |         |
  0+40       0.0084       0.20  Q         |         |         |         |
  0+45       0.0097       0.20  Q         |         |         |         |
  0+50       0.0113       0.22  Q         |         |         |         |
  0+55       0.0130       0.25  VQ        |         |         |         |
  1+ 0       0.0148       0.26  VQ        |         |         |         |
  1+ 5       0.0164       0.24  Q         |         |         |         |
  1+10       0.0179       0.21  Q         |         |         |         |
  1+15       0.0193       0.20  Q         |         |         |         |
  1+20       0.0206       0.20  Q         |         |         |         |
  1+25       0.0220       0.20  Q         |         |         |         |
  1+30       0.0234       0.20  Q         |         |         |         |
  1+35       0.0247       0.20  Q         |         |         |         |
  1+40       0.0261       0.20  Q         |         |         |         |
  1+45       0.0275       0.20  Q         |         |         |         |
  1+50       0.0290       0.22  Q         |         |         |         |
  1+55       0.0308       0.25  VQ        |         |         |         |
  2+ 0       0.0326       0.26  VQ        |         |         |         |
  2+ 5       0.0344       0.26  |Q        |         |         |         |
  2+10       0.0362       0.26  |Q        |         |         |         |
  2+15       0.0380       0.26  |Q        |         |         |         |
  2+20       0.0398       0.26  |Q        |         |         |         |
  2+25       0.0417       0.26  |Q        |         |         |         |
  2+30       0.0435       0.26  |Q        |         |         |         |
  2+35       0.0455       0.29  |Q        |         |         |         |
  2+40       0.0477       0.32  |Q        |         |         |         |
  2+45       0.0499       0.33  |Q        |         |         |         |
  2+50       0.0522       0.33  |Q        |         |         |         |
  2+55       0.0545       0.33  |Q        |         |         |         |
  3+ 0       0.0567       0.33  |Q        |         |         |         |
  3+ 5       0.0590       0.33  |Q        |         |         |         |
  3+10       0.0613       0.33  |Q        |         |         |         |
  3+15       0.0636       0.33  |Q        |         |         |         |
  3+20       0.0658       0.33  |Q        |         |         |         |
  3+25       0.0681       0.33  |Q        |         |         |         |
  3+30       0.0704       0.33  |QV       |         |         |         |
  3+35       0.0727       0.33  |QV       |         |         |         |
  3+40       0.0750       0.33  |QV       |         |         |         |
  3+45       0.0772       0.33  |QV       |         |         |         |
  3+50       0.0797       0.36  |QV       |         |         |         |
  3+55       0.0823       0.39  |QV       |         |         |         |
  4+ 0       0.0850       0.39  |QV       |         |         |         |
  4+ 5       0.0878       0.40  |QV       |         |         |         |
  4+10       0.0905       0.40  |QV       |         |         |         |
  4+15       0.0932       0.40  |QV       |         |         |         |
```

4+20	0.0961	0.42	QV			
4+25	0.0992	0.45	QV			
4+30	0.1024	0.46	QV			
4+35	0.1056	0.46	Q V			
4+40	0.1088	0.46	Q V			
4+45	0.1120	0.46	Q V			
4+50	0.1153	0.49	Q V			
4+55	0.1189	0.52	QV			
5+ 0	0.1225	0.52	QV			
5+ 5	0.1258	0.48	Q V			
5+10	0.1287	0.42	Q V			
5+15	0.1315	0.41	Q V			
5+20	0.1344	0.42	Q V			
5+25	0.1375	0.45	Q V			
5+30	0.1407	0.46	Q V			
5+35	0.1440	0.49	Q V			
5+40	0.1476	0.52	Q V			
5+45	0.1512	0.52	Q V			
5+50	0.1548	0.53	Q V			
5+55	0.1585	0.53	Q V			
6+ 0	0.1621	0.53	Q V			
6+ 5	0.1659	0.55	Q V			
6+10	0.1699	0.58	Q V			
6+15	0.1740	0.59	Q V			
6+20	0.1781	0.59	Q V			
6+25	0.1822	0.60	Q V			
6+30	0.1863	0.60	Q V			
6+35	0.1906	0.62	Q V			
6+40	0.1950	0.65	Q V			
6+45	0.1996	0.66	Q V			
6+50	0.2041	0.66	Q V			
6+55	0.2087	0.66	Q V			
7+ 0	0.2132	0.66	Q V			
7+ 5	0.2178	0.66	Q V			
7+10	0.2223	0.66	Q V			
7+15	0.2269	0.66	Q V			
7+20	0.2316	0.69	Q V			
7+25	0.2365	0.72	Q V			
7+30	0.2415	0.72	Q V			
7+35	0.2467	0.75	Q V			
7+40	0.2521	0.78	Q V			
7+45	0.2575	0.79	Q V			
7+50	0.2631	0.82	Q V			
7+55	0.2690	0.85	Q V			
8+ 0	0.2749	0.86	Q V			
8+ 5	0.2811	0.91	Q V			
8+10	0.2878	0.97	Q V			
8+15	0.2946	0.98	Q V			
8+20	0.3014	0.99	Q V			
8+25	0.3082	0.99	Q V			
8+30	0.3151	0.99	Q V			
8+35	0.3221	1.02	Q V			
8+40	0.3293	1.05	Q V			
8+45	0.3365	1.05	Q V			
8+50	0.3440	1.08	Q V			
8+55	0.3516	1.11	Q V			
9+ 0	0.3593	1.12	Q V			
9+ 5	0.3674	1.17	Q V			
9+10	0.3759	1.23	Q V			
9+15	0.3845	1.25	Q V			
9+20	0.3933	1.28	Q V			
9+25	0.4023	1.31	Q V			
9+30	0.4114	1.32	Q V			
9+35	0.4207	1.35	Q V			
9+40	0.4302	1.38	Q V			
9+45	0.4397	1.38	Q V			
9+50	0.4494	1.41	Q V			

9+55	0.4594	1.44	Q	V			
10+ 0	0.4694	1.45	Q	V			
10+ 5	0.4782	1.28	Q	V			
10+10	0.4856	1.07	Q	V			
10+15	0.4926	1.02	Q	V			
10+20	0.4995	1.00	Q	V			
10+25	0.5064	0.99	Q	V			
10+30	0.5132	0.99	Q	V			
10+35	0.5209	1.12	Q	V			
10+40	0.5296	1.27	Q	V			
10+45	0.5386	1.30	Q	V			
10+50	0.5476	1.31	Q	V			
10+55	0.5567	1.32	Q	V			
11+ 0	0.5658	1.32	Q	V			
11+ 5	0.5748	1.30	Q	V			
11+10	0.5835	1.27	Q	V			
11+15	0.5922	1.26	Q	V			
11+20	0.6008	1.26	Q	V			
11+25	0.6095	1.26	Q	V			
11+30	0.6182	1.26	Q	V			
11+35	0.6265	1.21	Q	V			
11+40	0.6344	1.15	Q	V			
11+45	0.6422	1.13	Q	V			
11+50	0.6501	1.15	Q	V			
11+55	0.6582	1.18	Q	V			
12+ 0	0.6664	1.19	Q	V			
12+ 5	0.6758	1.36	Q	V			
12+10	0.6866	1.57	Q	V			
12+15	0.6978	1.62	Q	V			
12+20	0.7093	1.67	Q	V			
12+25	0.7210	1.71	Q	V			
12+30	0.7329	1.72	Q	V			
12+35	0.7450	1.77	Q	V			
12+40	0.7576	1.83	Q	V			
12+45	0.7703	1.84	Q	V			
12+50	0.7832	1.87	Q	V			
12+55	0.7963	1.91	Q	V			
13+ 0	0.8095	1.91	Q	V			
13+ 5	0.8236	2.04	Q	V			
13+10	0.8387	2.19	Q	V			
13+15	0.8540	2.23	Q	V			
13+20	0.8694	2.24	Q	V			
13+25	0.8849	2.25	Q	V			
13+30	0.9004	2.25	Q	V			
13+35	0.9140	1.98	Q	V			
13+40	0.9254	1.64	Q	V			
13+45	0.9362	1.57	Q	V			
13+50	0.9468	1.54	Q	V			
13+55	0.9572	1.52	Q	V			
14+ 0	0.9677	1.52	Q	V			
14+ 5	0.9789	1.62	Q	V			
14+10	0.9909	1.74	Q	V			
14+15	1.0030	1.77	Q	V			
14+20	1.0151	1.75	Q	V			
14+25	1.0270	1.73	Q	V			
14+30	1.0389	1.72	Q	V			
14+35	1.0508	1.72	Q	V			
14+40	1.0626	1.72	Q	V			
14+45	1.0745	1.72	Q	V			
14+50	1.0861	1.69	Q	V			
14+55	1.0976	1.66	Q	V			
15+ 0	1.1090	1.66	Q	V			
15+ 5	1.1202	1.63	Q	V			
15+10	1.1312	1.60	Q	V			
15+15	1.1422	1.59	Q	V			
15+20	1.1530	1.56	Q	V			
15+25	1.1635	1.53	Q	V			

```
15+30        1.1740      1.53  |      Q    |           |           |   V      |
15+35        1.1839      1.42  |     Q     |           |           |   V      |
15+40        1.1928      1.30  |     Q     |           |           |   V      |
15+45        1.2016      1.27  |     Q     |           |           |    V     |
15+50        1.2103      1.26  |     Q     |           |           |    V     |
15+55        1.2189      1.26  |     Q     |           |           |    V     |
16+ 0        1.2276      1.26  |     Q     |           |           |    V     |
16+ 5        1.2337      0.89  |   Q       |           |           |     V    |
16+10        1.2367      0.43  |Q          |           |           |     V    |
16+15        1.2390      0.33  |Q          |           |           |     V    |
16+20        1.2410      0.29  |Q          |           |           |     V    |
16+25        1.2428      0.26  |Q          |           |           |     V    |
16+30        1.2446      0.26  |Q          |           |           |     V    |
16+35        1.2463      0.24  Q           |           |           |     V    |
16+40        1.2477      0.21  Q           |           |           |     V    |
16+45        1.2491      0.20  Q           |           |           |     V    |
16+50        1.2505      0.20  Q           |           |           |     V    |
16+55        1.2518      0.20  Q           |           |           |     V    |
17+ 0        1.2532      0.20  Q           |           |           |     V    |
17+ 5        1.2549      0.25  Q           |           |           |     V    |
17+10        1.2570      0.31  |Q          |           |           |     V    |
17+15        1.2593      0.32  |Q          |           |           |     V    |
17+20        1.2615      0.33  |Q          |           |           |     V    |
17+25        1.2638      0.33  |Q          |           |           |     V    |
17+30        1.2661      0.33  |Q          |           |           |      V   |
17+35        1.2683      0.33  |Q          |           |           |      V   |
17+40        1.2706      0.33  |Q          |           |           |      V   |
17+45        1.2729      0.33  |Q          |           |           |      V   |
17+50        1.2750      0.31  |Q          |           |           |      V   |
17+55        1.2769      0.28  |Q          |           |           |      V   |
18+ 0        1.2788      0.27  |Q          |           |           |      V   |
18+ 5        1.2806      0.27  |Q          |           |           |      V   |
18+10        1.2824      0.26  |Q          |           |           |      V   |
18+15        1.2842      0.26  |Q          |           |           |      V   |
18+20        1.2861      0.26  |Q          |           |           |      V   |
18+25        1.2879      0.26  |Q          |           |           |      V   |
18+30        1.2897      0.26  |Q          |           |           |      V   |
18+35        1.2913      0.24  Q           |           |           |      V   |
18+40        1.2928      0.21  Q           |           |           |      V   |
18+45        1.2942      0.20  Q           |           |           |      V   |
18+50        1.2954      0.18  Q           |           |           |      V   |
18+55        1.2964      0.14  Q           |           |           |      V   |
19+ 0        1.2973      0.14  Q           |           |           |      V   |
19+ 5        1.2984      0.16  Q           |           |           |       V  |
19+10        1.2997      0.19  Q           |           |           |       V  |
19+15        1.3010      0.19  Q           |           |           |       V  |
19+20        1.3026      0.22  Q           |           |           |       V  |
19+25        1.3043      0.25  |Q          |           |           |       V  |
19+30        1.3061      0.26  |Q          |           |           |       V  |
19+35        1.3077      0.24  Q           |           |           |       V  |
19+40        1.3092      0.21  Q           |           |           |       V  |
19+45        1.3106      0.20  Q           |           |           |       V  |
19+50        1.3118      0.18  Q           |           |           |       V  |
19+55        1.3128      0.14  Q           |           |           |       V  |
20+ 0        1.3137      0.14  Q           |           |           |       V  |
20+ 5        1.3148      0.16  Q           |           |           |       V  |
20+10        1.3161      0.19  Q           |           |           |       V  |
20+15        1.3174      0.19  Q           |           |           |       V  |
20+20        1.3188      0.20  Q           |           |           |       V  |
20+25        1.3202      0.20  Q           |           |           |       V  |
20+30        1.3215      0.20  Q           |           |           |       V  |
20+35        1.3229      0.20  Q           |           |           |       V  |
20+40        1.3243      0.20  Q           |           |           |       V  |
20+45        1.3256      0.20  Q           |           |           |       V  |
20+50        1.3268      0.17  Q           |           |           |       V  |
20+55        1.3278      0.14  Q           |           |           |       V  |
21+ 0        1.3288      0.14  Q           |           |           |       V  |
```

21+ 5	1.3298	0.16	Q	|	|	|	V |
21+10	1.3311	0.19	Q	|	|	|	V |
21+15	1.3325	0.19	Q	|	|	|	V|
21+20	1.3337	0.17	Q	|	|	|	V|
21+25	1.3346	0.14	Q	|	|	|	V|
21+30	1.3356	0.14	Q	|	|	|	V|
21+35	1.3367	0.16	Q	|	|	|	V|
21+40	1.3380	0.19	Q	|	|	|	V|
21+45	1.3393	0.19	Q	|	|	|	V|
21+50	1.3405	0.17	Q	|	|	|	V|
21+55	1.3415	0.14	Q	|	|	|	V|
22+ 0	1.3424	0.14	Q	|	|	|	V|
22+ 5	1.3435	0.16	Q	|	|	|	V|
22+10	1.3448	0.19	Q	|	|	|	V|
22+15	1.3461	0.19	Q	|	|	|	V|
22+20	1.3473	0.17	Q	|	|	|	V|
22+25	1.3483	0.14	Q	|	|	|	V|
22+30	1.3493	0.14	Q	|	|	|	V|
22+35	1.3502	0.13	Q	|	|	|	V|
22+40	1.3511	0.13	Q	|	|	|	V|
22+45	1.3520	0.13	Q	|	|	|	V|
22+50	1.3529	0.13	Q	|	|	|	V|
22+55	1.3538	0.13	Q	|	|	|	V|
23+ 0	1.3547	0.13	Q	|	|	|	V|
23+ 5	1.3556	0.13	Q	|	|	|	V|
23+10	1.3566	0.13	Q	|	|	|	V|
23+15	1.3575	0.13	Q	|	|	|	V|
23+20	1.3584	0.13	Q	|	|	|	V|
23+25	1.3593	0.13	Q	|	|	|	V|
23+30	1.3602	0.13	Q	|	|	|	V|
23+35	1.3611	0.13	Q	|	|	|	V|
23+40	1.3620	0.13	Q	|	|	|	V|
23+45	1.3629	0.13	Q	|	|	|	V|
23+50	1.3638	0.13	Q	|	|	|	V|
23+55	1.3647	0.13	Q	|	|	|	V|
24+ 0	1.3657	0.13	Q	|	|	|	V|
24+ 5	1.3662	0.08	Q	|	|	|	V|
24+10	1.3664	0.02	Q	|	|	|	V|
24+15	1.3664	0.01	Q	|	|	|	V|
24+20	1.3665	0.00	Q	|	|	|	V

```
      U n i t   H y d r o g r a p h   A n a l y s i s

      Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
            Study date  08/30/12 File: RMEC12410.out

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
--------------------------------------------------------------------------

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978


Program License Serial Number 4010

---------------------------------------------------------------------
 English (in-lb) Input Units Used
 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



---------------------------------------------------------------------
Plot Plan Unit Htdrograph
Post-developed conditions
10-yr 24-hr storm event         rmec12410.out
eta
---------------------------------------------------------------------
Drainage Area =     8.80(Ac.)  = 0.014 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 8.80(Ac.)  =  0.014 Sq. Mi.
Length along longest watercourse =     1620.00(Ft.)
Length along longest watercourse measured to centroid =     930.00(Ft.)
Length along longest watercourse =       0.307 Mi.
Length along longest watercourse measured to centroid =      0.176 Mi.
Difference in elevation =       31.00(Ft.)
Slope along watercourse =    101.0370 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =     0.049 Hr.
Lag time =      2.97 Min.
25% of lag time =      0.74 Min.
40% of lag time =      1.19 Min.
Unit time =      5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow =      0.00(CFS)

2 YEAR Area rainfall data:


Area(Ac.)[1]        Rainfall(In)[2]       Weighting[1*2]
        8.80          2.42                 21.30

100 YEAR Area rainfall data:


Area(Ac.)[1]        Rainfall(In)[2]       Weighting[1*2]
        8.80          6.28                 55.26

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =     2.420(In)
Area Averaged 100-Year Rainfall =    6.280(In)

Point rain (area averaged) =     4.008(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =     4.008(In)
```

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	56.00	0.800
7.100	69.00	0.800
1.100	69.00	0.000

Total Area Entered = 8.80(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	0.068	0.010
69.0	69.0	0.373	0.800	0.104	0.807	0.084
69.0	69.0	0.373	0.000	0.373	0.125	0.047
					Sum (F) =	0.141

Area averaged mean soil loss (F) (In/Hr) = 0.141
Minimum soil loss rate ((In/Hr)) = 0.070
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	168.628	37.399	3.317
2	0.167	337.256	45.618	4.046
3	0.250	505.885	10.206	0.905
4	0.333	674.513	4.304	0.382
5	0.417	843.141	2.472	0.219
			Sum = 100.000	Sum= 8.869

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.249)	0.007	0.025
2	0.17	0.07	0.032	(0.248)	0.007	0.025
3	0.25	0.07	0.032	(0.247)	0.007	0.025
4	0.33	0.10	0.048	(0.246)	0.011	0.037
5	0.42	0.10	0.048	(0.245)	0.011	0.037
6	0.50	0.10	0.048	(0.244)	0.011	0.037
7	0.58	0.10	0.048	(0.243)	0.011	0.037
8	0.67	0.10	0.048	(0.242)	0.011	0.037
9	0.75	0.10	0.048	(0.242)	0.011	0.037
10	0.83	0.13	0.064	(0.241)	0.015	0.049
11	0.92	0.13	0.064	(0.240)	0.015	0.049
12	1.00	0.13	0.064	(0.239)	0.015	0.049
13	1.08	0.10	0.048	(0.238)	0.011	0.037
14	1.17	0.10	0.048	(0.237)	0.011	0.037
15	1.25	0.10	0.048	(0.236)	0.011	0.037
16	1.33	0.10	0.048	(0.235)	0.011	0.037
17	1.42	0.10	0.048	(0.234)	0.011	0.037
18	1.50	0.10	0.048	(0.233)	0.011	0.037
19	1.58	0.10	0.048	(0.232)	0.011	0.037
20	1.67	0.10	0.048	(0.231)	0.011	0.037
21	1.75	0.10	0.048	(0.230)	0.011	0.037
22	1.83	0.13	0.064	(0.229)	0.015	0.049
23	1.92	0.13	0.064	(0.228)	0.015	0.049
24	2.00	0.13	0.064	(0.228)	0.015	0.049
25	2.08	0.13	0.064	(0.227)	0.015	0.049

26	2.17	0.13	0.064	(0.226)	0.015	0.049
27	2.25	0.13	0.064	(0.225)	0.015	0.049
28	2.33	0.13	0.064	(0.224)	0.015	0.049
29	2.42	0.13	0.064	(0.223)	0.015	0.049
30	2.50	0.13	0.064	(0.222)	0.015	0.049
31	2.58	0.17	0.080	(0.221)	0.018	0.062
32	2.67	0.17	0.080	(0.220)	0.018	0.062
33	2.75	0.17	0.080	(0.219)	0.018	0.062
34	2.83	0.17	0.080	(0.218)	0.018	0.062
35	2.92	0.17	0.080	(0.217)	0.018	0.062
36	3.00	0.17	0.080	(0.217)	0.018	0.062
37	3.08	0.17	0.080	(0.216)	0.018	0.062
38	3.17	0.17	0.080	(0.215)	0.018	0.062
39	3.25	0.17	0.080	(0.214)	0.018	0.062
40	3.33	0.17	0.080	(0.213)	0.018	0.062
41	3.42	0.17	0.080	(0.212)	0.018	0.062
42	3.50	0.17	0.080	(0.211)	0.018	0.062
43	3.58	0.17	0.080	(0.210)	0.018	0.062
44	3.67	0.17	0.080	(0.209)	0.018	0.062
45	3.75	0.17	0.080	(0.209)	0.018	0.062
46	3.83	0.20	0.096	(0.208)	0.022	0.074
47	3.92	0.20	0.096	(0.207)	0.022	0.074
48	4.00	0.20	0.096	(0.206)	0.022	0.074
49	4.08	0.20	0.096	(0.205)	0.022	0.074
50	4.17	0.20	0.096	(0.204)	0.022	0.074
51	4.25	0.20	0.096	(0.203)	0.022	0.074
52	4.33	0.23	0.112	(0.202)	0.026	0.086
53	4.42	0.23	0.112	(0.202)	0.026	0.086
54	4.50	0.23	0.112	(0.201)	0.026	0.086
55	4.58	0.23	0.112	(0.200)	0.026	0.086
56	4.67	0.23	0.112	(0.199)	0.026	0.086
57	4.75	0.23	0.112	(0.198)	0.026	0.086
58	4.83	0.27	0.128	(0.197)	0.029	0.099
59	4.92	0.27	0.128	(0.196)	0.029	0.099
60	5.00	0.27	0.128	(0.196)	0.029	0.099
61	5.08	0.20	0.096	(0.195)	0.022	0.074
62	5.17	0.20	0.096	(0.194)	0.022	0.074
63	5.25	0.20	0.096	(0.193)	0.022	0.074
64	5.33	0.23	0.112	(0.192)	0.026	0.086
65	5.42	0.23	0.112	(0.191)	0.026	0.086
66	5.50	0.23	0.112	(0.191)	0.026	0.086
67	5.58	0.27	0.128	(0.190)	0.029	0.099
68	5.67	0.27	0.128	(0.189)	0.029	0.099
69	5.75	0.27	0.128	(0.188)	0.029	0.099
70	5.83	0.27	0.128	(0.187)	0.029	0.099
71	5.92	0.27	0.128	(0.186)	0.029	0.099
72	6.00	0.27	0.128	(0.186)	0.029	0.099
73	6.08	0.30	0.144	(0.185)	0.033	0.111
74	6.17	0.30	0.144	(0.184)	0.033	0.111
75	6.25	0.30	0.144	(0.183)	0.033	0.111
76	6.33	0.30	0.144	(0.182)	0.033	0.111
77	6.42	0.30	0.144	(0.181)	0.033	0.111
78	6.50	0.30	0.144	(0.181)	0.033	0.111
79	6.58	0.33	0.160	(0.180)	0.037	0.123
80	6.67	0.33	0.160	(0.179)	0.037	0.123
81	6.75	0.33	0.160	(0.178)	0.037	0.123
82	6.83	0.33	0.160	(0.177)	0.037	0.123
83	6.92	0.33	0.160	(0.177)	0.037	0.123
84	7.00	0.33	0.160	(0.176)	0.037	0.123
85	7.08	0.33	0.160	(0.175)	0.037	0.123
86	7.17	0.33	0.160	(0.174)	0.037	0.123
87	7.25	0.33	0.160	(0.173)	0.037	0.123
88	7.33	0.37	0.176	(0.173)	0.041	0.136
89	7.42	0.37	0.176	(0.172)	0.041	0.136
90	7.50	0.37	0.176	(0.171)	0.041	0.136
91	7.58	0.40	0.192	(0.170)	0.044	0.148
92	7.67	0.40	0.192	(0.169)	0.044	0.148

93	7.75	0.40	0.192	(0.169)	0.044	0.148
94	7.83	0.43	0.208	(0.168)	0.048	0.160
95	7.92	0.43	0.208	(0.167)	0.048	0.160
96	8.00	0.43	0.208	(0.166)	0.048	0.160
97	8.08	0.50	0.240	(0.166)	0.055	0.185
98	8.17	0.50	0.240	(0.165)	0.055	0.185
99	8.25	0.50	0.240	(0.164)	0.055	0.185
100	8.33	0.50	0.240	(0.163)	0.055	0.185
101	8.42	0.50	0.240	(0.163)	0.055	0.185
102	8.50	0.50	0.240	(0.162)	0.055	0.185
103	8.58	0.53	0.257	(0.161)	0.059	0.198
104	8.67	0.53	0.257	(0.160)	0.059	0.198
105	8.75	0.53	0.257	(0.159)	0.059	0.198
106	8.83	0.57	0.273	(0.159)	0.063	0.210
107	8.92	0.57	0.273	(0.158)	0.063	0.210
108	9.00	0.57	0.273	(0.157)	0.063	0.210
109	9.08	0.63	0.305	(0.156)	0.070	0.235
110	9.17	0.63	0.305	(0.156)	0.070	0.235
111	9.25	0.63	0.305	(0.155)	0.070	0.235
112	9.33	0.67	0.321	(0.154)	0.074	0.247
113	9.42	0.67	0.321	(0.154)	0.074	0.247
114	9.50	0.67	0.321	(0.153)	0.074	0.247
115	9.58	0.70	0.337	(0.152)	0.077	0.259
116	9.67	0.70	0.337	(0.151)	0.077	0.259
117	9.75	0.70	0.337	(0.151)	0.077	0.259
118	9.83	0.73	0.353	(0.150)	0.081	0.272
119	9.92	0.73	0.353	(0.149)	0.081	0.272
120	10.00	0.73	0.353	(0.148)	0.081	0.272
121	10.08	0.50	0.240	(0.148)	0.055	0.185
122	10.17	0.50	0.240	(0.147)	0.055	0.185
123	10.25	0.50	0.240	(0.146)	0.055	0.185
124	10.33	0.50	0.240	(0.146)	0.055	0.185
125	10.42	0.50	0.240	(0.145)	0.055	0.185
126	10.50	0.50	0.240	(0.144)	0.055	0.185
127	10.58	0.67	0.321	(0.143)	0.074	0.247
128	10.67	0.67	0.321	(0.143)	0.074	0.247
129	10.75	0.67	0.321	(0.142)	0.074	0.247
130	10.83	0.67	0.321	(0.141)	0.074	0.247
131	10.92	0.67	0.321	(0.141)	0.074	0.247
132	11.00	0.67	0.321	(0.140)	0.074	0.247
133	11.08	0.63	0.305	(0.139)	0.070	0.235
134	11.17	0.63	0.305	(0.139)	0.070	0.235
135	11.25	0.63	0.305	(0.138)	0.070	0.235
136	11.33	0.63	0.305	(0.137)	0.070	0.235
137	11.42	0.63	0.305	(0.137)	0.070	0.235
138	11.50	0.63	0.305	(0.136)	0.070	0.235
139	11.58	0.57	0.273	(0.135)	0.063	0.210
140	11.67	0.57	0.273	(0.135)	0.063	0.210
141	11.75	0.57	0.273	(0.134)	0.063	0.210
142	11.83	0.60	0.289	(0.133)	0.066	0.222
143	11.92	0.60	0.289	(0.133)	0.066	0.222
144	12.00	0.60	0.289	(0.132)	0.066	0.222
145	12.08	0.83	0.401	(0.131)	0.092	0.309
146	12.17	0.83	0.401	(0.131)	0.092	0.309
147	12.25	0.83	0.401	(0.130)	0.092	0.309
148	12.33	0.87	0.417	(0.129)	0.096	0.321
149	12.42	0.87	0.417	(0.129)	0.096	0.321
150	12.50	0.87	0.417	(0.128)	0.096	0.321
151	12.58	0.93	0.449	(0.127)	0.103	0.346
152	12.67	0.93	0.449	(0.127)	0.103	0.346
153	12.75	0.93	0.449	(0.126)	0.103	0.346
154	12.83	0.97	0.465	(0.125)	0.107	0.358
155	12.92	0.97	0.465	(0.125)	0.107	0.358
156	13.00	0.97	0.465	(0.124)	0.107	0.358
157	13.08	1.13	0.545	0.124	(0.125)	0.422
158	13.17	1.13	0.545	0.123	(0.125)	0.422
159	13.25	1.13	0.545	0.122	(0.125)	0.423

160	13.33	1.13	0.545	0.122	(0.125)	0.423
161	13.42	1.13	0.545	0.121	(0.125)	0.424
162	13.50	1.13	0.545	0.120	(0.125)	0.425
163	13.58	0.77	0.369	(0.120)	0.085	0.284
164	13.67	0.77	0.369	(0.119)	0.085	0.284
165	13.75	0.77	0.369	(0.119)	0.085	0.284
166	13.83	0.77	0.369	(0.118)	0.085	0.284
167	13.92	0.77	0.369	(0.117)	0.085	0.284
168	14.00	0.77	0.369	(0.117)	0.085	0.284
169	14.08	0.90	0.433	(0.116)	0.100	0.333
170	14.17	0.90	0.433	(0.116)	0.100	0.333
171	14.25	0.90	0.433	(0.115)	0.100	0.333
172	14.33	0.87	0.417	(0.114)	0.096	0.321
173	14.42	0.87	0.417	(0.114)	0.096	0.321
174	14.50	0.87	0.417	(0.113)	0.096	0.321
175	14.58	0.87	0.417	(0.113)	0.096	0.321
176	14.67	0.87	0.417	(0.112)	0.096	0.321
177	14.75	0.87	0.417	(0.111)	0.096	0.321
178	14.83	0.83	0.401	(0.111)	0.092	0.309
179	14.92	0.83	0.401	(0.110)	0.092	0.309
180	15.00	0.83	0.401	(0.110)	0.092	0.309
181	15.08	0.80	0.385	(0.109)	0.088	0.296
182	15.17	0.80	0.385	(0.109)	0.088	0.296
183	15.25	0.80	0.385	(0.108)	0.088	0.296
184	15.33	0.77	0.369	(0.108)	0.085	0.284
185	15.42	0.77	0.369	(0.107)	0.085	0.284
186	15.50	0.77	0.369	(0.106)	0.085	0.284
187	15.58	0.63	0.305	(0.106)	0.070	0.235
188	15.67	0.63	0.305	(0.105)	0.070	0.235
189	15.75	0.63	0.305	(0.105)	0.070	0.235
190	15.83	0.63	0.305	(0.104)	0.070	0.235
191	15.92	0.63	0.305	(0.104)	0.070	0.235
192	16.00	0.63	0.305	(0.103)	0.070	0.235
193	16.08	0.13	0.064	(0.103)	0.015	0.049
194	16.17	0.13	0.064	(0.102)	0.015	0.049
195	16.25	0.13	0.064	(0.102)	0.015	0.049
196	16.33	0.13	0.064	(0.101)	0.015	0.049
197	16.42	0.13	0.064	(0.101)	0.015	0.049
198	16.50	0.13	0.064	(0.100)	0.015	0.049
199	16.58	0.10	0.048	(0.100)	0.011	0.037
200	16.67	0.10	0.048	(0.099)	0.011	0.037
201	16.75	0.10	0.048	(0.099)	0.011	0.037
202	16.83	0.10	0.048	(0.098)	0.011	0.037
203	16.92	0.10	0.048	(0.098)	0.011	0.037
204	17.00	0.10	0.048	(0.097)	0.011	0.037
205	17.08	0.17	0.080	(0.097)	0.018	0.062
206	17.17	0.17	0.080	(0.096)	0.018	0.062
207	17.25	0.17	0.080	(0.096)	0.018	0.062
208	17.33	0.17	0.080	(0.095)	0.018	0.062
209	17.42	0.17	0.080	(0.095)	0.018	0.062
210	17.50	0.17	0.080	(0.094)	0.018	0.062
211	17.58	0.17	0.080	(0.094)	0.018	0.062
212	17.67	0.17	0.080	(0.093)	0.018	0.062
213	17.75	0.17	0.080	(0.093)	0.018	0.062
214	17.83	0.13	0.064	(0.092)	0.015	0.049
215	17.92	0.13	0.064	(0.092)	0.015	0.049
216	18.00	0.13	0.064	(0.091)	0.015	0.049
217	18.08	0.13	0.064	(0.091)	0.015	0.049
218	18.17	0.13	0.064	(0.091)	0.015	0.049
219	18.25	0.13	0.064	(0.090)	0.015	0.049
220	18.33	0.13	0.064	(0.090)	0.015	0.049
221	18.42	0.13	0.064	(0.089)	0.015	0.049
222	18.50	0.13	0.064	(0.089)	0.015	0.049
223	18.58	0.10	0.048	(0.088)	0.011	0.037
224	18.67	0.10	0.048	(0.088)	0.011	0.037
225	18.75	0.10	0.048	(0.088)	0.011	0.037
226	18.83	0.07	0.032	(0.087)	0.007	0.025

227	18.92	0.07	0.032	(0.087)	0.007	0.025
228	19.00	0.07	0.032	(0.086)	0.007	0.025
229	19.08	0.10	0.048	(0.086)	0.011	0.037
230	19.17	0.10	0.048	(0.085)	0.011	0.037
231	19.25	0.10	0.048	(0.085)	0.011	0.037
232	19.33	0.13	0.064	(0.085)	0.015	0.049
233	19.42	0.13	0.064	(0.084)	0.015	0.049
234	19.50	0.13	0.064	(0.084)	0.015	0.049
235	19.58	0.10	0.048	(0.083)	0.011	0.037
236	19.67	0.10	0.048	(0.083)	0.011	0.037
237	19.75	0.10	0.048	(0.083)	0.011	0.037
238	19.83	0.07	0.032	(0.082)	0.007	0.025
239	19.92	0.07	0.032	(0.082)	0.007	0.025
240	20.00	0.07	0.032	(0.082)	0.007	0.025
241	20.08	0.10	0.048	(0.081)	0.011	0.037
242	20.17	0.10	0.048	(0.081)	0.011	0.037
243	20.25	0.10	0.048	(0.081)	0.011	0.037
244	20.33	0.10	0.048	(0.080)	0.011	0.037
245	20.42	0.10	0.048	(0.080)	0.011	0.037
246	20.50	0.10	0.048	(0.080)	0.011	0.037
247	20.58	0.10	0.048	(0.079)	0.011	0.037
248	20.67	0.10	0.048	(0.079)	0.011	0.037
249	20.75	0.10	0.048	(0.079)	0.011	0.037
250	20.83	0.07	0.032	(0.078)	0.007	0.025
251	20.92	0.07	0.032	(0.078)	0.007	0.025
252	21.00	0.07	0.032	(0.078)	0.007	0.025
253	21.08	0.10	0.048	(0.077)	0.011	0.037
254	21.17	0.10	0.048	(0.077)	0.011	0.037
255	21.25	0.10	0.048	(0.077)	0.011	0.037
256	21.33	0.07	0.032	(0.076)	0.007	0.025
257	21.42	0.07	0.032	(0.076)	0.007	0.025
258	21.50	0.07	0.032	(0.076)	0.007	0.025
259	21.58	0.10	0.048	(0.076)	0.011	0.037
260	21.67	0.10	0.048	(0.075)	0.011	0.037
261	21.75	0.10	0.048	(0.075)	0.011	0.037
262	21.83	0.07	0.032	(0.075)	0.007	0.025
263	21.92	0.07	0.032	(0.074)	0.007	0.025
264	22.00	0.07	0.032	(0.074)	0.007	0.025
265	22.08	0.10	0.048	(0.074)	0.011	0.037
266	22.17	0.10	0.048	(0.074)	0.011	0.037
267	22.25	0.10	0.048	(0.073)	0.011	0.037
268	22.33	0.07	0.032	(0.073)	0.007	0.025
269	22.42	0.07	0.032	(0.073)	0.007	0.025
270	22.50	0.07	0.032	(0.073)	0.007	0.025
271	22.58	0.07	0.032	(0.073)	0.007	0.025
272	22.67	0.07	0.032	(0.072)	0.007	0.025
273	22.75	0.07	0.032	(0.072)	0.007	0.025
274	22.83	0.07	0.032	(0.072)	0.007	0.025
275	22.92	0.07	0.032	(0.072)	0.007	0.025
276	23.00	0.07	0.032	(0.072)	0.007	0.025
277	23.08	0.07	0.032	(0.072)	0.007	0.025
278	23.17	0.07	0.032	(0.071)	0.007	0.025
279	23.25	0.07	0.032	(0.071)	0.007	0.025
280	23.33	0.07	0.032	(0.071)	0.007	0.025
281	23.42	0.07	0.032	(0.071)	0.007	0.025
282	23.50	0.07	0.032	(0.071)	0.007	0.025
283	23.58	0.07	0.032	(0.071)	0.007	0.025
284	23.67	0.07	0.032	(0.071)	0.007	0.025
285	23.75	0.07	0.032	(0.070)	0.007	0.025
286	23.83	0.07	0.032	(0.070)	0.007	0.025
287	23.92	0.07	0.032	(0.070)	0.007	0.025
288	24.00	0.07	0.032	(0.070)	0.007	0.025

(Loss Rate Not Used)

Sum = 100.0 Sum = 37.1

Flood volume = Effective rainfall 3.09(In)
times area 8.8(Ac.)/[(In)/(Ft.)] = 2.3(Ac.Ft)
Total soil loss = 0.92(In)

```
Total soil loss =      0.675(Ac.Ft)
Total rainfall =       4.01(In)
Flood volume =        98638.1 Cubic Feet
Total soil loss =       29392.4 Cubic Feet
---------------------------------------------------------------------
 Peak flow rate of this hydrograph =      3.763(CFS)
---------------------------------------------------------------------
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                    24 - H O U R    S T O R M
                 R u n o f f      H y d r o g r a p h
---------------------------------------------------------------------
             Hydrograph in   5   Minute intervals ((CFS))

---------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0         2.5       5.0       7.5       10.0
---------------------------------------------------------------------
  0+ 5       0.0006      0.08  Q          |         |         |         |
  0+10       0.0018      0.18  Q          |         |         |         |
  0+15       0.0032      0.20  Q          |         |         |         |
  0+20       0.0050      0.25  VQ         |         |         |         |
  0+25       0.0071      0.31  VQ         |         |         |         |
  0+30       0.0093      0.32  VQ         |         |         |         |
  0+35       0.0116      0.33  VQ         |         |         |         |
  0+40       0.0138      0.33  VQ         |         |         |         |
  0+45       0.0161      0.33  VQ         |         |         |         |
  0+50       0.0186      0.37  VQ         |         |         |         |
  0+55       0.0215      0.42  VQ         |         |         |         |
  1+ 0       0.0245      0.43  VQ         |         |         |         |
  1+ 5       0.0272      0.39  VQ         |         |         |         |
  1+10       0.0296      0.35  VQ         |         |         |         |
  1+15       0.0319      0.34  VQ         |         |         |         |
  1+20       0.0342      0.33  VQ         |         |         |         |
  1+25       0.0365      0.33  VQ         |         |         |         |
  1+30       0.0387      0.33  VQ         |         |         |         |
  1+35       0.0410      0.33  VQ         |         |         |         |
  1+40       0.0433      0.33  VQ         |         |         |         |
  1+45       0.0455      0.33  VQ         |         |         |         |
  1+50       0.0481      0.37  VQ         |         |         |         |
  1+55       0.0510      0.42  VQ         |         |         |         |
  2+ 0       0.0539      0.43  VQ         |         |         |         |
  2+ 5       0.0569      0.44  |Q         |         |         |         |
  2+10       0.0599      0.44  |Q         |         |         |         |
  2+15       0.0630      0.44  |Q         |         |         |         |
  2+20       0.0660      0.44  |Q         |         |         |         |
  2+25       0.0690      0.44  |Q         |         |         |         |
  2+30       0.0720      0.44  |Q         |         |         |         |
  2+35       0.0753      0.48  |Q         |         |         |         |
  2+40       0.0789      0.53  |VQ        |         |         |         |
  2+45       0.0827      0.54  |VQ        |         |         |         |
  2+50       0.0864      0.54  |VQ        |         |         |         |
  2+55       0.0902      0.55  |VQ        |         |         |         |
  3+ 0       0.0940      0.55  |VQ        |         |         |         |
  3+ 5       0.0977      0.55  |VQ        |         |         |         |
  3+10       0.1015      0.55  |VQ        |         |         |         |
  3+15       0.1053      0.55  |VQ        |         |         |         |
  3+20       0.1091      0.55  |VQ        |         |         |         |
  3+25       0.1128      0.55  |VQ        |         |         |         |
  3+30       0.1166      0.55  | Q        |         |         |         |
  3+35       0.1204      0.55  | Q        |         |         |         |
  3+40       0.1241      0.55  | Q        |         |         |         |
  3+45       0.1279      0.55  | Q        |         |         |         |
  3+50       0.1320      0.59  | Q        |         |         |         |
  3+55       0.1364      0.64  | Q        |         |         |         |
  4+ 0       0.1408      0.65  | Q        |         |         |         |
  4+ 5       0.1453      0.65  | Q        |         |         |         |
  4+10       0.1499      0.66  | Q        |         |         |         |
  4+15       0.1544      0.66  | Q        |         |         |         |
```

4+20	0.1592	0.70	Q			
4+25	0.1644	0.75	Q			
4+30	0.1696	0.76	VQ			
4+35	0.1749	0.76	Q			
4+40	0.1801	0.77	Q			
4+45	0.1854	0.77	Q			
4+50	0.1910	0.81	Q			
4+55	0.1969	0.86	Q			
5+ 0	0.2029	0.87	Q			
5+ 5	0.2083	0.79	Q			
5+10	0.2131	0.69	QV			
5+15	0.2177	0.67	QV			
5+20	0.2226	0.70	QV			
5+25	0.2277	0.75	Q V			
5+30	0.2330	0.76	QV			
5+35	0.2385	0.81	QV			
5+40	0.2444	0.86	QV			
5+45	0.2504	0.87	QV			
5+50	0.2564	0.87	QV			
5+55	0.2624	0.88	QV			
6+ 0	0.2685	0.88	QV			
6+ 5	0.2748	0.92	QV			
6+10	0.2815	0.97	QV			
6+15	0.2882	0.98	Q V			
6+20	0.2950	0.98	Q V			
6+25	0.3018	0.99	Q V			
6+30	0.3085	0.99	Q V			
6+35	0.3156	1.03	QV			
6+40	0.3230	1.08	QV			
6+45	0.3305	1.09	QV			
6+50	0.3381	1.09	QV			
6+55	0.3456	1.10	Q V			
7+ 0	0.3531	1.10	Q V			
7+ 5	0.3607	1.10	Q V			
7+10	0.3682	1.10	Q V			
7+15	0.3758	1.10	Q V			
7+20	0.3836	1.14	Q V			
7+25	0.3918	1.19	Q V			
7+30	0.4000	1.20	Q V			
7+35	0.4086	1.24	Q V			
7+40	0.4175	1.30	Q V			
7+45	0.4265	1.31	Q V			
7+50	0.4358	1.35	Q V			
7+55	0.4455	1.41	Q V			
8+ 0	0.4553	1.42	Q V			
8+ 5	0.4656	1.50	Q V			
8+10	0.4767	1.61	Q V			
8+15	0.4879	1.63	Q V			
8+20	0.4992	1.64	Q V			
8+25	0.5105	1.64	Q V			
8+30	0.5218	1.64	Q V			
8+35	0.5334	1.68	Q V			
8+40	0.5453	1.73	Q V			
8+45	0.5574	1.75	Q V			
8+50	0.5697	1.79	Q V			
8+55	0.5824	1.84	Q V			
9+ 0	0.5952	1.85	Q V			
9+ 5	0.6085	1.94	Q V			
9+10	0.6226	2.04	Q V			
9+15	0.6368	2.07	Q V			
9+20	0.6514	2.12	Q V			
9+25	0.6664	2.17	Q V			
9+30	0.6814	2.18	Q V			
9+35	0.6968	2.23	Q V			
9+40	0.7125	2.28	Q V			
9+45	0.7283	2.29	Q V			
9+50	0.7444	2.34	Q V			

9+55	0.7608	2.39	
10+ 0	0.7774	2.40	
10+ 5	0.7920	2.12	
10+10	0.8042	1.77	
10+15	0.8159	1.70	
10+20	0.8273	1.66	
10+25	0.8386	1.64	
10+30	0.8500	1.64	
10+35	0.8627	1.85	
10+40	0.8771	2.10	
10+45	0.8920	2.15	
10+50	0.9070	2.18	
10+55	0.9220	2.19	
11+ 0	0.9371	2.19	
11+ 5	0.9519	2.15	
11+10	0.9664	2.10	
11+15	0.9808	2.09	
11+20	0.9951	2.08	
11+25	1.0095	2.08	
11+30	1.0238	2.08	
11+35	1.0376	2.00	
11+40	1.0506	1.90	
11+45	1.0636	1.88	
11+50	1.0767	1.91	
11+55	1.0902	1.95	
12+ 0	1.1037	1.96	
12+ 5	1.1192	2.26	
12+10	1.1372	2.61	
12+15	1.1557	2.69	
12+20	1.1747	2.76	
12+25	1.1942	2.83	
12+30	1.2138	2.84	
12+35	1.2339	2.93	
12+40	1.2548	3.03	
12+45	1.2758	3.05	
12+50	1.2972	3.10	
12+55	1.3189	3.16	
13+ 0	1.3407	3.17	
13+ 5	1.3641	3.38	
13+10	1.3892	3.65	
13+15	1.4147	3.71	
13+20	1.4405	3.74	
13+25	1.4664	3.76	
13+30	1.4923	3.76	
13+35	1.5150	3.30	
13+40	1.5338	2.73	
13+45	1.5517	2.60	
13+50	1.5693	2.55	
13+55	1.5867	2.52	
14+ 0	1.6040	2.52	
14+ 5	1.6225	2.68	
14+10	1.6423	2.88	
14+15	1.6625	2.93	
14+20	1.6825	2.91	
14+25	1.7023	2.87	
14+30	1.7219	2.86	
14+35	1.7416	2.85	
14+40	1.7612	2.85	
14+45	1.7808	2.85	
14+50	1.8001	2.81	
14+55	1.8191	2.76	
15+ 0	1.8380	2.75	
15+ 5	1.8566	2.70	
15+10	1.8748	2.65	
15+15	1.8930	2.64	
15+20	1.9108	2.59	
15+25	1.9283	2.54	

15+30	1.9457	2.53		Q			V
15+35	1.9620	2.36		Q			V
15+40	1.9768	2.16		Q			V
15+45	1.9913	2.11		Q			V
15+50	2.0058	2.09		Q			V
15+55	2.0201	2.08		Q			V
16+ 0	2.0344	2.08		Q			V
16+ 5	2.0445	1.47		Q			V
16+10	2.0495	0.72		Q			V
16+15	2.0532	0.55		Q			V
16+20	2.0565	0.48		Q			V
16+25	2.0596	0.44		Q			V
16+30	2.0626	0.44		Q			V
16+35	2.0653	0.40		Q			V
16+40	2.0677	0.35		Q			V
16+45	2.0700	0.34		Q			V
16+50	2.0723	0.33		Q			V
16+55	2.0746	0.33		Q			V
17+ 0	2.0768	0.33		Q			V
17+ 5	2.0797	0.41		Q			V
17+10	2.0832	0.51		Q			V
17+15	2.0868	0.53		Q			V
17+20	2.0906	0.54		Q			V
17+25	2.0943	0.55		Q			V
17+30	2.0981	0.55		Q			V
17+35	2.1019	0.55		Q			V
17+40	2.1057	0.55		Q			V
17+45	2.1094	0.55		Q			V
17+50	2.1129	0.51		Q			V
17+55	2.1161	0.46		Q			V
18+ 0	2.1191	0.45		Q			V
18+ 5	2.1222	0.44		Q			V
18+10	2.1252	0.44		Q			V
18+15	2.1282	0.44		Q			V
18+20	2.1312	0.44		Q			V
18+25	2.1342	0.44		Q			V
18+30	2.1373	0.44		Q			V
18+35	2.1400	0.40		Q			V
18+40	2.1424	0.35		Q			V
18+45	2.1447	0.34		Q			V
18+50	2.1467	0.29		Q			V
18+55	2.1483	0.24	Q			V
19+ 0	2.1499	0.23	Q			V
19+ 5	2.1517	0.26		Q			V
19+10	2.1538	0.31		Q			V
19+15	2.1561	0.32		Q			V
19+20	2.1586	0.37		Q			V
19+25	2.1615	0.42		Q			V
19+30	2.1644	0.43		Q			V
19+35	2.1672	0.39		Q			V
19+40	2.1695	0.35		Q			V
19+45	2.1719	0.34		Q			V
19+50	2.1739	0.29		Q			V
19+55	2.1755	0.24	Q			V
20+ 0	2.1771	0.23	Q			V
20+ 5	2.1789	0.26		Q			V
20+10	2.1810	0.31		Q			V
20+15	2.1832	0.32		Q			V
20+20	2.1855	0.33		Q			V
20+25	2.1877	0.33		Q			V
20+30	2.1900	0.33		Q			V
20+35	2.1923	0.33		Q			V
20+40	2.1945	0.33		Q			V
20+45	2.1968	0.33		Q			V
20+50	2.1988	0.29		Q			V
20+55	2.2004	0.24	Q			V
21+ 0	2.2020	0.23	Q			V

```
21+ 5        2.2038       0.26  |Q         |         |         |        V |
21+10        2.2059       0.31  |Q         |         |         |        V |
21+15        2.2081       0.32  |Q         |         |         |         V|
21+20        2.2101       0.28  |Q         |         |         |         V|
21+25        2.2117       0.24  Q          |         |         |         V|
21+30        2.2133       0.23  Q          |         |         |         V|
21+35        2.2151       0.26  |Q         |         |         |         V|
21+40        2.2172       0.31  |Q         |         |         |         V|
21+45        2.2194       0.32  |Q         |         |         |         V|
21+50        2.2214       0.28  |Q         |         |         |         V|
21+55        2.2230       0.24  Q          |         |         |         V|
22+ 0        2.2246       0.23  Q          |         |         |         V|
22+ 5        2.2264       0.26  |Q         |         |         |         V|
22+10        2.2285       0.31  |Q         |         |         |         V|
22+15        2.2307       0.32  |Q         |         |         |         V|
22+20        2.2327       0.28  |Q         |         |         |         V|
22+25        2.2343       0.24  Q          |         |         |         V|
22+30        2.2359       0.23  Q          |         |         |         V|
22+35        2.2374       0.22  Q          |         |         |         V|
22+40        2.2389       0.22  Q          |         |         |         V|
22+45        2.2404       0.22  Q          |         |         |         V|
22+50        2.2420       0.22  Q          |         |         |         V|
22+55        2.2435       0.22  Q          |         |         |         V|
23+ 0        2.2450       0.22  Q          |         |         |         V|
23+ 5        2.2465       0.22  Q          |         |         |         V|
23+10        2.2480       0.22  Q          |         |         |         V|
23+15        2.2495       0.22  Q          |         |         |         V|
23+20        2.2510       0.22  Q          |         |         |         V|
23+25        2.2525       0.22  Q          |         |         |         V|
23+30        2.2540       0.22  Q          |         |         |         V|
23+35        2.2555       0.22  Q          |         |         |         V|
23+40        2.2570       0.22  Q          |         |         |         V|
23+45        2.2586       0.22  Q          |         |         |         V|
23+50        2.2601       0.22  Q          |         |         |         V|
23+55        2.2616       0.22  Q          |         |         |         V|
24+ 0        2.2631       0.22  Q          |         |         |         V|
24+ 5        2.2640       0.14  Q          |         |         |         V|
24+10        2.2643       0.04  Q          |         |         |         V|
24+15        2.2644       0.01  Q          |         |         |         V|
24+20        2.2644       0.01  Q          |         |         |          V
-----------------------------------------------------------------------------
```

100-year Post-Developed Unit Hydrograph Hydrology

```
      U n i t   H y d r o g r a p h   A n a l y s i s

      Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
            Study date  08/30/12 File: RMEC11100.out

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
------------------------------------------------------------------------------

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978


Program License Serial Number 4010

-------------------------------------------------------------------------
 English (in-lb) Input Units Used
 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



-------------------------------------------------------------------------
Plot Plan Unit Htdrograph
Post-developed conditions
100-yr -hr storm event          rmec1100.out
eta
-------------------------------------------------------------------------
Drainage Area =       8.80(Ac.)  =      0.014 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =  8.80(Ac.)  =  0.014 Sq. Mi.
Length along longest watercourse =    1620.00(Ft.)
Length along longest watercourse measured to centroid =     930.00(Ft.)
Length along longest watercourse =      0.307 Mi.
Length along longest watercourse measured to centroid =      0.176 Mi.
Difference in elevation =      31.00(Ft.)
Slope along watercourse =    101.0370 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.049 Hr.
Lag time =     2.97 Min.
25% of lag time =     0.74 Min.
40% of lag time =     1.19 Min.
Unit time =     5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow =     0.00(CFS)

2 YEAR Area rainfall data:


Area(Ac.)[1]        Rainfall(In)[2]       Weighting[1*2]
        8.80          0.54                 4.75

100 YEAR Area rainfall data:


Area(Ac.)[1]        Rainfall(In)[2]       Weighting[1*2]
        8.80          1.49                13.11

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.540(In)
Area Averaged 100-Year Rainfall =    1.490(In)

Point rain (area averaged) =    1.490(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    1.490(In)
```

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	56.00	0.800
7.100	69.00	0.800
1.100	69.00	0.000

Total Area Entered = 8.80(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	0.068	0.010
69.0	69.0	0.373	0.800	0.104	0.807	0.084
69.0	69.0	0.373	0.000	0.373	0.125	0.047
					Sum (F) =	0.141

Area averaged mean soil loss (F) (In/Hr) = 0.141
Minimum soil loss rate ((In/Hr)) = 0.070
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

Slope of intensity-duration curve for a 1 hour storm =0.4800

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	168.628	37.399	3.317
2	0.167	337.256	45.618	4.046
3	0.250	505.885	10.206	0.905
4	0.333	674.513	4.304	0.382
5	0.417	843.141	2.472	0.219
			Sum = 100.000	Sum= 8.869

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	4.40	0.787	0.141	(0.181)	0.646
2	0.17	4.50	0.805	0.141	(0.185)	0.664
3	0.25	5.40	0.965	0.141	(0.222)	0.825
4	0.33	5.40	0.965	0.141	(0.222)	0.825
5	0.42	5.70	1.019	0.141	(0.234)	0.879
6	0.50	6.40	1.144	0.141	(0.263)	1.004
7	0.58	7.90	1.412	0.141	(0.325)	1.272
8	0.67	9.10	1.627	0.141	(0.374)	1.486
9	0.75	12.80	2.288	0.141	(0.526)	2.148
10	0.83	25.60	4.577	0.141	(1.053)	4.436
11	0.92	7.90	1.412	0.141	(0.325)	1.272
12	1.00	4.90	0.876	0.141	(0.201)	0.735
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	16.2

Flood volume = Effective rainfall 1.35(In)
times area 8.8(Ac.)/[(In)/(Ft.)] = 1.0(Ac.Ft)
Total soil loss = 0.14(In)
Total soil loss = 0.103(Ac.Ft)
Total rainfall = 1.49(In)
Flood volume = 43102.4 Cubic Feet
Total soil loss = 4490.4 Cubic Feet

Peak flow rate of this hydrograph = 25.469(CFS)

```
-----------------------------------------------------------------------
+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                    1 - H O U R    S T O R M
                 R u n o f f     H y d r o g r a p h
-----------------------------------------------------------------------
             Hydrograph in   5   Minute intervals ((CFS))

-----------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0         7.5       15.0      22.5      30.0
-----------------------------------------------------------------------
  0+ 5       0.0148      2.14  V Q       |         |         |         |
  0+10       0.0480      4.82  |V    Q   |         |         |         |
  0+15       0.0893      6.01  |  V    Q |         |         |         |
  0+20       0.1370      6.92  |    V   Q|         |         |         |
  0+25       0.1880      7.40  |      V Q|         |         |         |
  0+30       0.2437      8.09  |        VQ         |         |         |
  0+35       0.3097      9.57  |         | Q       |         |         |
  0+40       0.3889     11.51  |         |   Q     |         |         |
  0+45       0.4913     14.87  |         |       Q|         |         |
  0+50       0.6667     25.47  |         |         |    V    |  Q      |
  0+55       0.8387     24.97  |         |         |         |  Q      |
  1+ 0       0.9265     12.75  |         |     Q   |         |     V   |
  1+ 5       0.9699      6.29  |       Q |         |         |       V|
  1+10       0.9845      2.13  | Q       |         |         |       V|
  1+15       0.9884      0.56  Q         |         |         |       V|
  1+20       0.9895      0.16  Q         |         |         |        V
-----------------------------------------------------------------------
```

North-West Area Unit Hydrograph Calculations

Rancon MC 12-0039

PLOT PLAN NORTH-WEST AREA SUMMARY

STORM	DURATION	Unit Hydrograph Results			
		EXISTING CONDITIONS		DEVELOPED CONDITIONS	
		Flood Volume Ac.Ft.	Peak Flow CFS	Flood Volume Ac.Ft.	Peak Flow CFS
2-YEAR	24-HOUR	0.042	0.07	0.080	0.13
10-YEAR	24-HOUR	0.190	0.69	0.137	0.26

Rancon Group 8/30/2012
Rancon Medical and Distribution Center
PROJECT W.O. 12-0031

PLOT PLAN NW AREA
UNIT HYDROGRAPH INPUT DATA

	EXISTING CONDITION	DEVELOPED CONDITION
TOTAL AREA	2.1	0.6
L (ft)	540	540
Lc (ft)	200	280
DIFFERENCE IN ELEV. (ft)	18	4
AVERAGE "N"	0.030	0.020
LOW LOSS RATE	0.90	0.24
AMC II SOIL GROUP C		
AREA (ac)	2.1	0.6
% IMPERVIOUS	0	0.8
RI	79 *	69 **

* Grass, annual or parennial, fair cover
** Urban Cover, Commercial Landscaping

```
      U n i t   H y d r o g r a p h   A n a l y s i s

      Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
            Study date  08/30/12 File: nw242.out

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
--------------------------------------------------------------------------

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978


Program License Serial Number 4010

---------------------------------------------------------------------
 English (in-lb) Input Units Used
 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



---------------------------------------------------------------------
Plot Plan Unit Hydrograph
Pre-developed Conditions, North-West Corner, 2.1 ac.
2-yr 24-hr storm event
Nw242.out     eta
---------------------------------------------------------------------
Drainage Area =  2.10(Ac.)  = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =  2.10(Ac.)  = 0.003 Sq. Mi.
Length along longest watercourse =     540.00(Ft.)
Length along longest watercourse measured to centroid =     200.00(Ft.)
Length along longest watercourse =      0.102 Mi.
Length along longest watercourse measured to centroid =      0.038 Mi.
Difference in elevation =      18.00(Ft.)
Slope along watercourse =    176.0000 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.033 Hr.
Lag time =     1.96 Min.
25% of lag time =     0.49 Min.
40% of lag time =     0.78 Min.
Unit time =     5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow =     0.00(CFS)

2 YEAR Area rainfall data:


Area(Ac.)[1]        Rainfall(In)[2]       Weighting[1*2]
        2.10          2.42                  5.08

100 YEAR Area rainfall data:


Area(Ac.)[1]        Rainfall(In)[2]       Weighting[1*2]
        2.10          6.28                 13.19

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.420(In)
Area Averaged 100-Year Rainfall =    6.280(In)

Point rain (area averaged) =    2.420(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.420(In)
```

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.100	79.00	0.000

Total Area Entered = 2.10(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
79.0	61.8	0.451	0.000	0.451	1.000	0.451
					Sum (F) =	0.451

Area averaged mean soil loss (F) (In/Hr) = 0.451
Minimum soil loss rate ((In/Hr)) = 0.225
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	255.055	51.547	1.091
2	0.167	510.111	39.743	0.841
3	0.250	765.166	6.857	0.145
4	0.333	1020.221	1.853	0.039
			Sum = 100.000	Sum= 2.116

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.019	(0.799)	0.017	0.002
2	0.17	0.07	0.019	(0.796)	0.017	0.002
3	0.25	0.07	0.019	(0.793)	0.017	0.002
4	0.33	0.10	0.029	(0.789)	0.026	0.003
5	0.42	0.10	0.029	(0.786)	0.026	0.003
6	0.50	0.10	0.029	(0.783)	0.026	0.003
7	0.58	0.10	0.029	(0.780)	0.026	0.003
8	0.67	0.10	0.029	(0.777)	0.026	0.003
9	0.75	0.10	0.029	(0.774)	0.026	0.003
10	0.83	0.13	0.039	(0.771)	0.035	0.004
11	0.92	0.13	0.039	(0.768)	0.035	0.004
12	1.00	0.13	0.039	(0.765)	0.035	0.004
13	1.08	0.10	0.029	(0.762)	0.026	0.003
14	1.17	0.10	0.029	(0.759)	0.026	0.003
15	1.25	0.10	0.029	(0.756)	0.026	0.003
16	1.33	0.10	0.029	(0.753)	0.026	0.003
17	1.42	0.10	0.029	(0.750)	0.026	0.003
18	1.50	0.10	0.029	(0.747)	0.026	0.003
19	1.58	0.10	0.029	(0.744)	0.026	0.003
20	1.67	0.10	0.029	(0.741)	0.026	0.003
21	1.75	0.10	0.029	(0.738)	0.026	0.003
22	1.83	0.13	0.039	(0.735)	0.035	0.004
23	1.92	0.13	0.039	(0.732)	0.035	0.004
24	2.00	0.13	0.039	(0.729)	0.035	0.004
25	2.08	0.13	0.039	(0.726)	0.035	0.004
26	2.17	0.13	0.039	(0.723)	0.035	0.004
27	2.25	0.13	0.039	(0.720)	0.035	0.004
28	2.33	0.13	0.039	(0.717)	0.035	0.004
29	2.42	0.13	0.039	(0.715)	0.035	0.004
30	2.50	0.13	0.039	(0.712)	0.035	0.004

31	2.58	0.17	0.048	(0.709)	0.044	0.005
32	2.67	0.17	0.048	(0.706)	0.044	0.005
33	2.75	0.17	0.048	(0.703)	0.044	0.005
34	2.83	0.17	0.048	(0.700)	0.044	0.005
35	2.92	0.17	0.048	(0.697)	0.044	0.005
36	3.00	0.17	0.048	(0.694)	0.044	0.005
37	3.08	0.17	0.048	(0.691)	0.044	0.005
38	3.17	0.17	0.048	(0.688)	0.044	0.005
39	3.25	0.17	0.048	(0.686)	0.044	0.005
40	3.33	0.17	0.048	(0.683)	0.044	0.005
41	3.42	0.17	0.048	(0.680)	0.044	0.005
42	3.50	0.17	0.048	(0.677)	0.044	0.005
43	3.58	0.17	0.048	(0.674)	0.044	0.005
44	3.67	0.17	0.048	(0.671)	0.044	0.005
45	3.75	0.17	0.048	(0.669)	0.044	0.005
46	3.83	0.20	0.058	(0.666)	0.052	0.006
47	3.92	0.20	0.058	(0.663)	0.052	0.006
48	4.00	0.20	0.058	(0.660)	0.052	0.006
49	4.08	0.20	0.058	(0.657)	0.052	0.006
50	4.17	0.20	0.058	(0.655)	0.052	0.006
51	4.25	0.20	0.058	(0.652)	0.052	0.006
52	4.33	0.23	0.068	(0.649)	0.061	0.007
53	4.42	0.23	0.068	(0.646)	0.061	0.007
54	4.50	0.23	0.068	(0.643)	0.061	0.007
55	4.58	0.23	0.068	(0.641)	0.061	0.007
56	4.67	0.23	0.068	(0.638)	0.061	0.007
57	4.75	0.23	0.068	(0.635)	0.061	0.007
58	4.83	0.27	0.077	(0.632)	0.070	0.008
59	4.92	0.27	0.077	(0.630)	0.070	0.008
60	5.00	0.27	0.077	(0.627)	0.070	0.008
61	5.08	0.20	0.058	(0.624)	0.052	0.006
62	5.17	0.20	0.058	(0.622)	0.052	0.006
63	5.25	0.20	0.058	(0.619)	0.052	0.006
64	5.33	0.23	0.068	(0.616)	0.061	0.007
65	5.42	0.23	0.068	(0.613)	0.061	0.007
66	5.50	0.23	0.068	(0.611)	0.061	0.007
67	5.58	0.27	0.077	(0.608)	0.070	0.008
68	5.67	0.27	0.077	(0.605)	0.070	0.008
69	5.75	0.27	0.077	(0.603)	0.070	0.008
70	5.83	0.27	0.077	(0.600)	0.070	0.008
71	5.92	0.27	0.077	(0.597)	0.070	0.008
72	6.00	0.27	0.077	(0.595)	0.070	0.008
73	6.08	0.30	0.087	(0.592)	0.078	0.009
74	6.17	0.30	0.087	(0.589)	0.078	0.009
75	6.25	0.30	0.087	(0.587)	0.078	0.009
76	6.33	0.30	0.087	(0.584)	0.078	0.009
77	6.42	0.30	0.087	(0.582)	0.078	0.009
78	6.50	0.30	0.087	(0.579)	0.078	0.009
79	6.58	0.33	0.097	(0.576)	0.087	0.010
80	6.67	0.33	0.097	(0.574)	0.087	0.010
81	6.75	0.33	0.097	(0.571)	0.087	0.010
82	6.83	0.33	0.097	(0.569)	0.087	0.010
83	6.92	0.33	0.097	(0.566)	0.087	0.010
84	7.00	0.33	0.097	(0.563)	0.087	0.010
85	7.08	0.33	0.097	(0.561)	0.087	0.010
86	7.17	0.33	0.097	(0.558)	0.087	0.010
87	7.25	0.33	0.097	(0.556)	0.087	0.010
88	7.33	0.37	0.106	(0.553)	0.096	0.011
89	7.42	0.37	0.106	(0.551)	0.096	0.011
90	7.50	0.37	0.106	(0.548)	0.096	0.011
91	7.58	0.40	0.116	(0.546)	0.105	0.012
92	7.67	0.40	0.116	(0.543)	0.105	0.012
93	7.75	0.40	0.116	(0.541)	0.105	0.012
94	7.83	0.43	0.126	(0.538)	0.113	0.013
95	7.92	0.43	0.126	(0.536)	0.113	0.013
96	8.00	0.43	0.126	(0.533)	0.113	0.013
97	8.08	0.50	0.145	(0.531)	0.131	0.015

98	8.17	0.50	0.145	(0.528)	0.131	0.015
99	8.25	0.50	0.145	(0.526)	0.131	0.015
100	8.33	0.50	0.145	(0.523)	0.131	0.015
101	8.42	0.50	0.145	(0.521)	0.131	0.015
102	8.50	0.50	0.145	(0.518)	0.131	0.015
103	8.58	0.53	0.155	(0.516)	0.139	0.015
104	8.67	0.53	0.155	(0.514)	0.139	0.015
105	8.75	0.53	0.155	(0.511)	0.139	0.015
106	8.83	0.57	0.165	(0.509)	0.148	0.016
107	8.92	0.57	0.165	(0.506)	0.148	0.016
108	9.00	0.57	0.165	(0.504)	0.148	0.016
109	9.08	0.63	0.184	(0.502)	0.166	0.018
110	9.17	0.63	0.184	(0.499)	0.166	0.018
111	9.25	0.63	0.184	(0.497)	0.166	0.018
112	9.33	0.67	0.194	(0.494)	0.174	0.019
113	9.42	0.67	0.194	(0.492)	0.174	0.019
114	9.50	0.67	0.194	(0.490)	0.174	0.019
115	9.58	0.70	0.203	(0.487)	0.183	0.020
116	9.67	0.70	0.203	(0.485)	0.183	0.020
117	9.75	0.70	0.203	(0.483)	0.183	0.020
118	9.83	0.73	0.213	(0.480)	0.192	0.021
119	9.92	0.73	0.213	(0.478)	0.192	0.021
120	10.00	0.73	0.213	(0.476)	0.192	0.021
121	10.08	0.50	0.145	(0.473)	0.131	0.015
122	10.17	0.50	0.145	(0.471)	0.131	0.015
123	10.25	0.50	0.145	(0.469)	0.131	0.015
124	10.33	0.50	0.145	(0.467)	0.131	0.015
125	10.42	0.50	0.145	(0.464)	0.131	0.015
126	10.50	0.50	0.145	(0.462)	0.131	0.015
127	10.58	0.67	0.194	(0.460)	0.174	0.019
128	10.67	0.67	0.194	(0.458)	0.174	0.019
129	10.75	0.67	0.194	(0.455)	0.174	0.019
130	10.83	0.67	0.194	(0.453)	0.174	0.019
131	10.92	0.67	0.194	(0.451)	0.174	0.019
132	11.00	0.67	0.194	(0.449)	0.174	0.019
133	11.08	0.63	0.184	(0.446)	0.166	0.018
134	11.17	0.63	0.184	(0.444)	0.166	0.018
135	11.25	0.63	0.184	(0.442)	0.166	0.018
136	11.33	0.63	0.184	(0.440)	0.166	0.018
137	11.42	0.63	0.184	(0.438)	0.166	0.018
138	11.50	0.63	0.184	(0.436)	0.166	0.018
139	11.58	0.57	0.165	(0.433)	0.148	0.016
140	11.67	0.57	0.165	(0.431)	0.148	0.016
141	11.75	0.57	0.165	(0.429)	0.148	0.016
142	11.83	0.60	0.174	(0.427)	0.157	0.017
143	11.92	0.60	0.174	(0.425)	0.157	0.017
144	12.00	0.60	0.174	(0.423)	0.157	0.017
145	12.08	0.83	0.242	(0.421)	0.218	0.024
146	12.17	0.83	0.242	(0.418)	0.218	0.024
147	12.25	0.83	0.242	(0.416)	0.218	0.024
148	12.33	0.87	0.252	(0.414)	0.227	0.025
149	12.42	0.87	0.252	(0.412)	0.227	0.025
150	12.50	0.87	0.252	(0.410)	0.227	0.025
151	12.58	0.93	0.271	(0.408)	0.244	0.027
152	12.67	0.93	0.271	(0.406)	0.244	0.027
153	12.75	0.93	0.271	(0.404)	0.244	0.027
154	12.83	0.97	0.281	(0.402)	0.253	0.028
155	12.92	0.97	0.281	(0.400)	0.253	0.028
156	13.00	0.97	0.281	(0.398)	0.253	0.028
157	13.08	1.13	0.329	(0.396)	0.296	0.033
158	13.17	1.13	0.329	(0.394)	0.296	0.033
159	13.25	1.13	0.329	(0.392)	0.296	0.033
160	13.33	1.13	0.329	(0.390)	0.296	0.033
161	13.42	1.13	0.329	(0.388)	0.296	0.033
162	13.50	1.13	0.329	(0.386)	0.296	0.033
163	13.58	0.77	0.223	(0.384)	0.200	0.022
164	13.67	0.77	0.223	(0.382)	0.200	0.022

165	13.75	0.77	0.223	(0.380)	0.200	0.022
166	13.83	0.77	0.223	(0.378)	0.200	0.022
167	13.92	0.77	0.223	(0.376)	0.200	0.022
168	14.00	0.77	0.223	(0.374)	0.200	0.022
169	14.08	0.90	0.261	(0.372)	0.235	0.026
170	14.17	0.90	0.261	(0.370)	0.235	0.026
171	14.25	0.90	0.261	(0.369)	0.235	0.026
172	14.33	0.87	0.252	(0.367)	0.227	0.025
173	14.42	0.87	0.252	(0.365)	0.227	0.025
174	14.50	0.87	0.252	(0.363)	0.227	0.025
175	14.58	0.87	0.252	(0.361)	0.227	0.025
176	14.67	0.87	0.252	(0.359)	0.227	0.025
177	14.75	0.87	0.252	(0.357)	0.227	0.025
178	14.83	0.83	0.242	(0.356)	0.218	0.024
179	14.92	0.83	0.242	(0.354)	0.218	0.024
180	15.00	0.83	0.242	(0.352)	0.218	0.024
181	15.08	0.80	0.232	(0.350)	0.209	0.023
182	15.17	0.80	0.232	(0.348)	0.209	0.023
183	15.25	0.80	0.232	(0.347)	0.209	0.023
184	15.33	0.77	0.223	(0.345)	0.200	0.022
185	15.42	0.77	0.223	(0.343)	0.200	0.022
186	15.50	0.77	0.223	(0.341)	0.200	0.022
187	15.58	0.63	0.184	(0.339)	0.166	0.018
188	15.67	0.63	0.184	(0.338)	0.166	0.018
189	15.75	0.63	0.184	(0.336)	0.166	0.018
190	15.83	0.63	0.184	(0.334)	0.166	0.018
191	15.92	0.63	0.184	(0.333)	0.166	0.018
192	16.00	0.63	0.184	(0.331)	0.166	0.018
193	16.08	0.13	0.039	(0.329)	0.035	0.004
194	16.17	0.13	0.039	(0.327)	0.035	0.004
195	16.25	0.13	0.039	(0.326)	0.035	0.004
196	16.33	0.13	0.039	(0.324)	0.035	0.004
197	16.42	0.13	0.039	(0.323)	0.035	0.004
198	16.50	0.13	0.039	(0.321)	0.035	0.004
199	16.58	0.10	0.029	(0.319)	0.026	0.003
200	16.67	0.10	0.029	(0.318)	0.026	0.003
201	16.75	0.10	0.029	(0.316)	0.026	0.003
202	16.83	0.10	0.029	(0.314)	0.026	0.003
203	16.92	0.10	0.029	(0.313)	0.026	0.003
204	17.00	0.10	0.029	(0.311)	0.026	0.003
205	17.08	0.17	0.048	(0.310)	0.044	0.005
206	17.17	0.17	0.048	(0.308)	0.044	0.005
207	17.25	0.17	0.048	(0.307)	0.044	0.005
208	17.33	0.17	0.048	(0.305)	0.044	0.005
209	17.42	0.17	0.048	(0.303)	0.044	0.005
210	17.50	0.17	0.048	(0.302)	0.044	0.005
211	17.58	0.17	0.048	(0.300)	0.044	0.005
212	17.67	0.17	0.048	(0.299)	0.044	0.005
213	17.75	0.17	0.048	(0.297)	0.044	0.005
214	17.83	0.13	0.039	(0.296)	0.035	0.004
215	17.92	0.13	0.039	(0.295)	0.035	0.004
216	18.00	0.13	0.039	(0.293)	0.035	0.004
217	18.08	0.13	0.039	(0.292)	0.035	0.004
218	18.17	0.13	0.039	(0.290)	0.035	0.004
219	18.25	0.13	0.039	(0.289)	0.035	0.004
220	18.33	0.13	0.039	(0.287)	0.035	0.004
221	18.42	0.13	0.039	(0.286)	0.035	0.004
222	18.50	0.13	0.039	(0.285)	0.035	0.004
223	18.58	0.10	0.029	(0.283)	0.026	0.003
224	18.67	0.10	0.029	(0.282)	0.026	0.003
225	18.75	0.10	0.029	(0.280)	0.026	0.003
226	18.83	0.07	0.019	(0.279)	0.017	0.002
227	18.92	0.07	0.019	(0.278)	0.017	0.002
228	19.00	0.07	0.019	(0.276)	0.017	0.002
229	19.08	0.10	0.029	(0.275)	0.026	0.003
230	19.17	0.10	0.029	(0.274)	0.026	0.003
231	19.25	0.10	0.029	(0.273)	0.026	0.003

232	19.33	0.13	0.039	(0.271)	0.035	0.004
233	19.42	0.13	0.039	(0.270)	0.035	0.004
234	19.50	0.13	0.039	(0.269)	0.035	0.004
235	19.58	0.10	0.029	(0.268)	0.026	0.003
236	19.67	0.10	0.029	(0.266)	0.026	0.003
237	19.75	0.10	0.029	(0.265)	0.026	0.003
238	19.83	0.07	0.019	(0.264)	0.017	0.002
239	19.92	0.07	0.019	(0.263)	0.017	0.002
240	20.00	0.07	0.019	(0.262)	0.017	0.002
241	20.08	0.10	0.029	(0.260)	0.026	0.003
242	20.17	0.10	0.029	(0.259)	0.026	0.003
243	20.25	0.10	0.029	(0.258)	0.026	0.003
244	20.33	0.10	0.029	(0.257)	0.026	0.003
245	20.42	0.10	0.029	(0.256)	0.026	0.003
246	20.50	0.10	0.029	(0.255)	0.026	0.003
247	20.58	0.10	0.029	(0.254)	0.026	0.003
248	20.67	0.10	0.029	(0.253)	0.026	0.003
249	20.75	0.10	0.029	(0.252)	0.026	0.003
250	20.83	0.07	0.019	(0.251)	0.017	0.002
251	20.92	0.07	0.019	(0.250)	0.017	0.002
252	21.00	0.07	0.019	(0.249)	0.017	0.002
253	21.08	0.10	0.029	(0.248)	0.026	0.003
254	21.17	0.10	0.029	(0.247)	0.026	0.003
255	21.25	0.10	0.029	(0.246)	0.026	0.003
256	21.33	0.07	0.019	(0.245)	0.017	0.002
257	21.42	0.07	0.019	(0.244)	0.017	0.002
258	21.50	0.07	0.019	(0.243)	0.017	0.002
259	21.58	0.10	0.029	(0.242)	0.026	0.003
260	21.67	0.10	0.029	(0.241)	0.026	0.003
261	21.75	0.10	0.029	(0.240)	0.026	0.003
262	21.83	0.07	0.019	(0.240)	0.017	0.002
263	21.92	0.07	0.019	(0.239)	0.017	0.002
264	22.00	0.07	0.019	(0.238)	0.017	0.002
265	22.08	0.10	0.029	(0.237)	0.026	0.003
266	22.17	0.10	0.029	(0.236)	0.026	0.003
267	22.25	0.10	0.029	(0.236)	0.026	0.003
268	22.33	0.07	0.019	(0.235)	0.017	0.002
269	22.42	0.07	0.019	(0.234)	0.017	0.002
270	22.50	0.07	0.019	(0.233)	0.017	0.002
271	22.58	0.07	0.019	(0.233)	0.017	0.002
272	22.67	0.07	0.019	(0.232)	0.017	0.002
273	22.75	0.07	0.019	(0.231)	0.017	0.002
274	22.83	0.07	0.019	(0.231)	0.017	0.002
275	22.92	0.07	0.019	(0.230)	0.017	0.002
276	23.00	0.07	0.019	(0.230)	0.017	0.002
277	23.08	0.07	0.019	(0.229)	0.017	0.002
278	23.17	0.07	0.019	(0.229)	0.017	0.002
279	23.25	0.07	0.019	(0.228)	0.017	0.002
280	23.33	0.07	0.019	(0.228)	0.017	0.002
281	23.42	0.07	0.019	(0.227)	0.017	0.002
282	23.50	0.07	0.019	(0.227)	0.017	0.002
283	23.58	0.07	0.019	(0.227)	0.017	0.002
284	23.67	0.07	0.019	(0.226)	0.017	0.002
285	23.75	0.07	0.019	(0.226)	0.017	0.002
286	23.83	0.07	0.019	(0.226)	0.017	0.002
287	23.92	0.07	0.019	(0.225)	0.017	0.002
288	24.00	0.07	0.019	(0.225)	0.017	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 2.9

Flood volume = Effective rainfall 0.24(In)
times area 2.1(Ac.)/[(In)/(Ft.)] = 0.0(Ac.Ft)

Total soil loss = 2.18(In)
Total soil loss = 0.381(Ac.Ft)
Total rainfall = 2.42(In)
Flood volume = 1844.8 Cubic Feet
Total soil loss = 16602.8 Cubic Feet

Peak flow rate of this hydrograph = 0.070(CFS)

++

24 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0000	0.00	Q				
0+15	0.0001	0.00	Q				
0+20	0.0001	0.01	Q				
0+25	0.0001	0.01	Q				
0+30	0.0002	0.01	Q				
0+35	0.0002	0.01	Q				
0+40	0.0003	0.01	Q				
0+45	0.0003	0.01	Q				
0+50	0.0004	0.01	Q				
0+55	0.0004	0.01	Q				
1+ 0	0.0005	0.01	Q				
1+ 5	0.0005	0.01	Q				
1+10	0.0006	0.01	Q				
1+15	0.0006	0.01	Q				
1+20	0.0007	0.01	Q				
1+25	0.0007	0.01	Q				
1+30	0.0007	0.01	Q				
1+35	0.0008	0.01	Q				
1+40	0.0008	0.01	Q				
1+45	0.0009	0.01	Q				
1+50	0.0009	0.01	Q				
1+55	0.0010	0.01	Q				
2+ 0	0.0010	0.01	Q				
2+ 5	0.0011	0.01	QV				
2+10	0.0011	0.01	QV				
2+15	0.0012	0.01	QV				
2+20	0.0013	0.01	QV				
2+25	0.0013	0.01	QV				
2+30	0.0014	0.01	QV				
2+35	0.0014	0.01	QV				
2+40	0.0015	0.01	QV				
2+45	0.0016	0.01	QV				
2+50	0.0016	0.01	QV				
2+55	0.0017	0.01	QV				
3+ 0	0.0018	0.01	QV				
3+ 5	0.0018	0.01	QV				
3+10	0.0019	0.01	QV				
3+15	0.0020	0.01	QV				
3+20	0.0021	0.01	QV				
3+25	0.0021	0.01	Q V				
3+30	0.0022	0.01	Q V				
3+35	0.0023	0.01	Q V				
3+40	0.0023	0.01	Q V				
3+45	0.0024	0.01	Q V				
3+50	0.0025	0.01	Q V				
3+55	0.0026	0.01	Q V				
4+ 0	0.0027	0.01	Q V				
4+ 5	0.0027	0.01	Q V				
4+10	0.0028	0.01	Q V				
4+15	0.0029	0.01	Q V				
4+20	0.0030	0.01	Q V				
4+25	0.0031	0.01	Q V				
4+30	0.0032	0.01	Q V				
4+35	0.0033	0.01	Q V				
4+40	0.0034	0.01	Q V				

4+45	0.0035	0.01	Q	V
4+50	0.0036	0.02	Q	V
4+55	0.0037	0.02	Q	V
5+ 0	0.0038	0.02	Q	V
5+ 5	0.0039	0.01	Q	V
5+10	0.0040	0.01	Q	V
5+15	0.0041	0.01	Q	V
5+20	0.0042	0.01	Q	V
5+25	0.0043	0.01	Q	V
5+30	0.0044	0.01	Q	V
5+35	0.0045	0.02	Q	V
5+40	0.0046	0.02	Q	V
5+45	0.0047	0.02	Q	V
5+50	0.0048	0.02	Q	V
5+55	0.0049	0.02	Q	V
6+ 0	0.0051	0.02	Q	V
6+ 5	0.0052	0.02	Q	V
6+10	0.0053	0.02	Q	V
6+15	0.0054	0.02	Q	V
6+20	0.0056	0.02	Q	V
6+25	0.0057	0.02	Q	V
6+30	0.0058	0.02	Q	V
6+35	0.0059	0.02	Q	V
6+40	0.0061	0.02	Q	V
6+45	0.0062	0.02	Q	V
6+50	0.0064	0.02	Q	V
6+55	0.0065	0.02	Q	V
7+ 0	0.0067	0.02	Q	V
7+ 5	0.0068	0.02	Q	V
7+10	0.0069	0.02	Q	V
7+15	0.0071	0.02	Q	V
7+20	0.0072	0.02	Q	V
7+25	0.0074	0.02	Q	V
7+30	0.0075	0.02	Q	V
7+35	0.0077	0.02	Q	V
7+40	0.0079	0.02	Q	V
7+45	0.0080	0.02	Q	V
7+50	0.0082	0.03	Q	V
7+55	0.0084	0.03	Q	V
8+ 0	0.0086	0.03	Q	V
8+ 5	0.0088	0.03	Q	V
8+10	0.0090	0.03	Q	V
8+15	0.0092	0.03	Q	V
8+20	0.0094	0.03	Q	V
8+25	0.0096	0.03	Q	V
8+30	0.0098	0.03	Q	V
8+35	0.0100	0.03	Q	V
8+40	0.0103	0.03	Q	V
8+45	0.0105	0.03	Q	V
8+50	0.0107	0.03	Q	V
8+55	0.0110	0.03	Q	V
9+ 0	0.0112	0.03	Q	V
9+ 5	0.0115	0.04	Q	V
9+10	0.0117	0.04	Q	V
9+15	0.0120	0.04	Q	V
9+20	0.0123	0.04	Q	V
9+25	0.0126	0.04	Q	V
9+30	0.0128	0.04	Q	V
9+35	0.0131	0.04	Q	V
9+40	0.0134	0.04	Q	V
9+45	0.0137	0.04	Q	V
9+50	0.0140	0.04	Q	V
9+55	0.0143	0.04	Q	V
10+ 0	0.0146	0.05	Q	V
10+ 5	0.0149	0.04	Q	V
10+10	0.0151	0.03	Q	V
10+15	0.0153	0.03	Q	V

10+20	0.0155	0.03	Q		V			
10+25	0.0158	0.03	Q		V			
10+30	0.0160	0.03	Q		V			
10+35	0.0162	0.04	Q		V			
10+40	0.0165	0.04	Q		V			
10+45	0.0168	0.04	Q		V			
10+50	0.0171	0.04	Q		V			
10+55	0.0173	0.04	Q		V			
11+ 0	0.0176	0.04	Q		V			
11+ 5	0.0179	0.04	Q		V			
11+10	0.0182	0.04	Q		V			
11+15	0.0184	0.04	Q		V			
11+20	0.0187	0.04	Q		V			
11+25	0.0190	0.04	Q		V			
11+30	0.0192	0.04	Q		V			
11+35	0.0195	0.04	Q		V			
11+40	0.0197	0.04	Q		V			
11+45	0.0200	0.03	Q		V			
11+50	0.0202	0.04	Q		V			
11+55	0.0205	0.04	Q		V			
12+ 0	0.0207	0.04	Q		V			
12+ 5	0.0210	0.04	Q		V			
12+10	0.0214	0.05	Q		V			
12+15	0.0217	0.05	Q		V			
12+20	0.0221	0.05	Q		V			
12+25	0.0225	0.05	Q			V			
12+30	0.0228	0.05	Q			V			
12+35	0.0232	0.06	Q			V			
12+40	0.0236	0.06	Q			V			
12+45	0.0240	0.06	Q			V			
12+50	0.0244	0.06	Q				V			
12+55	0.0248	0.06	Q				V			
13+ 0	0.0252	0.06	Q				V			
13+ 5	0.0257	0.06	Q					V		
13+10	0.0261	0.07	Q					V		
13+15	0.0266	0.07	Q						V		
13+20	0.0271	0.07	Q						V		
13+25	0.0276	0.07	Q							V		
13+30	0.0280	0.07	Q							V		
13+35	0.0284	0.06	Q							V		
13+40	0.0288	0.05	Q								V		
13+45	0.0291	0.05	Q								V		
13+50	0.0294	0.05	Q								V		
13+55	0.0298	0.05	Q									V		
14+ 0	0.0301	0.05	Q									V		
14+ 5	0.0304	0.05	Q									V		
14+10	0.0308	0.05	Q										V		
14+15	0.0312	0.06	Q										V		
14+20	0.0316	0.05	Q										V		
14+25	0.0319	0.05	Q											V		
14+30	0.0323	0.05	Q											V		
14+35	0.0327	0.05	Q											V		
14+40	0.0330	0.05	Q												V		
14+45	0.0334	0.05	Q												V		
14+50	0.0338	0.05	Q												V		
14+55	0.0341	0.05	Q												V		
15+ 0	0.0345	0.05	Q												V		
15+ 5	0.0348	0.05	Q												V		
15+10	0.0352	0.05	Q													V		
15+15	0.0355	0.05	Q													V		
15+20	0.0358	0.05	Q													V		
15+25	0.0362	0.05	Q														V|	
15+30	0.0365	0.05	Q														V|	
15+35	0.0368	0.04	Q														V|	
15+40	0.0371	0.04	Q														V|	
15+45	0.0373	0.04	Q															V|
15+50	0.0376	0.04	Q															V|

15+55	0.0379	0.04	Q				V
16+ 0	0.0381	0.04	Q				V
16+ 5	0.0383	0.02	Q				V
16+10	0.0384	0.01	Q				V
16+15	0.0384	0.01	Q				V
16+20	0.0385	0.01	Q				V
16+25	0.0385	0.01	Q				V
16+30	0.0386	0.01	Q				V
16+35	0.0386	0.01	Q				V
16+40	0.0387	0.01	Q				V
16+45	0.0387	0.01	Q				V
16+50	0.0388	0.01	Q				V
16+55	0.0388	0.01	Q				V
17+ 0	0.0389	0.01	Q				V
17+ 5	0.0389	0.01	Q				V
17+10	0.0390	0.01	Q				V
17+15	0.0390	0.01	Q				V
17+20	0.0391	0.01	Q				V
17+25	0.0392	0.01	Q				V
17+30	0.0393	0.01	Q				V
17+35	0.0393	0.01	Q				V
17+40	0.0394	0.01	Q				V
17+45	0.0395	0.01	Q				V
17+50	0.0395	0.01	Q				V
17+55	0.0396	0.01	Q				V
18+ 0	0.0396	0.01	Q				V
18+ 5	0.0397	0.01	Q				V
18+10	0.0398	0.01	Q				V
18+15	0.0398	0.01	Q				V
18+20	0.0399	0.01	Q				V
18+25	0.0399	0.01	Q				V
18+30	0.0400	0.01	Q				V
18+35	0.0400	0.01	Q				V
18+40	0.0401	0.01	Q				V
18+45	0.0401	0.01	Q				V
18+50	0.0402	0.01	Q				V
18+55	0.0402	0.00	Q				V
19+ 0	0.0402	0.00	Q				V
19+ 5	0.0403	0.01	Q				V
19+10	0.0403	0.01	Q				V
19+15	0.0403	0.01	Q				V
19+20	0.0404	0.01	Q				V
19+25	0.0404	0.01	Q				V
19+30	0.0405	0.01	Q				V
19+35	0.0405	0.01	Q				V
19+40	0.0406	0.01	Q				V
19+45	0.0406	0.01	Q				V
19+50	0.0407	0.01	Q				V
19+55	0.0407	0.00	Q				V
20+ 0	0.0407	0.00	Q				V
20+ 5	0.0408	0.01	Q				V
20+10	0.0408	0.01	Q				V
20+15	0.0408	0.01	Q				V
20+20	0.0409	0.01	Q				V
20+25	0.0409	0.01	Q				V
20+30	0.0410	0.01	Q				V
20+35	0.0410	0.01	Q				V
20+40	0.0411	0.01	Q				V
20+45	0.0411	0.01	Q				V
20+50	0.0411	0.01	Q				V
20+55	0.0412	0.00	Q				V
21+ 0	0.0412	0.00	Q				V
21+ 5	0.0412	0.01	Q				V
21+10	0.0413	0.01	Q				V
21+15	0.0413	0.01	Q				V
21+20	0.0413	0.01	Q				V
21+25	0.0414	0.00	Q				V

21+30	0.0414	0.00	Q	|	|	|	V|
21+35	0.0414	0.01	Q	|	|	|	V|
21+40	0.0415	0.01	Q	|	|	|	V|
21+45	0.0415	0.01	Q	|	|	|	V|
21+50	0.0416	0.01	Q	|	|	|	V|
21+55	0.0416	0.00	Q	|	|	|	V|
22+ 0	0.0416	0.00	Q	|	|	|	V|
22+ 5	0.0416	0.01	Q	|	|	|	V|
22+10	0.0417	0.01	Q	|	|	|	V|
22+15	0.0417	0.01	Q	|	|	|	V|
22+20	0.0418	0.01	Q	|	|	|	V|
22+25	0.0418	0.00	Q	|	|	|	V|
22+30	0.0418	0.00	Q	|	|	|	V|
22+35	0.0419	0.00	Q	|	|	|	V|
22+40	0.0419	0.00	Q	|	|	|	V|
22+45	0.0419	0.00	Q	|	|	|	V|
22+50	0.0419	0.00	Q	|	|	|	V|
22+55	0.0420	0.00	Q	|	|	|	V|
23+ 0	0.0420	0.00	Q	|	|	|	V|
23+ 5	0.0420	0.00	Q	|	|	|	V|
23+10	0.0421	0.00	Q	|	|	|	V|
23+15	0.0421	0.00	Q	|	|	|	V|
23+20	0.0421	0.00	Q	|	|	|	V|
23+25	0.0421	0.00	Q	|	|	|	V|
23+30	0.0422	0.00	Q	|	|	|	V|
23+35	0.0422	0.00	Q	|	|	|	V|
23+40	0.0422	0.00	Q	|	|	|	V|
23+45	0.0422	0.00	Q	|	|	|	V|
23+50	0.0423	0.00	Q	|	|	|	V|
23+55	0.0423	0.00	Q	|	|	|	V|
24+ 0	0.0423	0.00	Q	|	|	|	V|
24+ 5	0.0423	0.00	Q	|	|	|	V|
24+10	0.0423	0.00	Q	|	|	|	V|
24+15	0.0423	0.00	Q	|	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 08/30/12 File: nw2410.out

++

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 4010

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Plot Plan Unit Hydrograph
Pre-developed Conditions, North-West Corner, 2.1 ac.
10-yr 24-hr storm event
Nw2410.out eta

Drainage Area = 2.10(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.10(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 540.00(Ft.)
Length along longest watercourse measured to centroid = 200.00(Ft.)
Length along longest watercourse = 0.102 Mi.
Length along longest watercourse measured to centroid = 0.038 Mi.
Difference in elevation = 18.00(Ft.)
Slope along watercourse = 176.0000 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.033 Hr.
Lag time = 1.96 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.78 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
2.10	2.42	5.08

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
2.10	6.28	13.19

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.420(In)
Area Averaged 100-Year Rainfall = 6.280(In)

Point rain (area averaged) = 4.008(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.008(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.100	79.00	0.000

Total Area Entered = 2.10(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
79.0	79.0	0.256	0.000	0.256	1.000	0.256
					Sum (F) =	0.256

Area averaged mean soil loss (F) (In/Hr) = 0.256
Minimum soil loss rate ((In/Hr)) = 0.128
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %		Unit Hydrograph (CFS)
1	0.083	255.055	51.547		1.091
2	0.167	510.111	39.743		0.841
3	0.250	765.166	6.857		0.145
4	0.333	1020.221	1.853		0.039
			Sum = 100.000	Sum=	2.116

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.453)	0.029	0.003
2	0.17	0.07	0.032	(0.452)	0.029	0.003
3	0.25	0.07	0.032	(0.450)	0.029	0.003
4	0.33	0.10	0.048	(0.448)	0.043	0.005
5	0.42	0.10	0.048	(0.446)	0.043	0.005
6	0.50	0.10	0.048	(0.445)	0.043	0.005
7	0.58	0.10	0.048	(0.443)	0.043	0.005
8	0.67	0.10	0.048	(0.441)	0.043	0.005
9	0.75	0.10	0.048	(0.440)	0.043	0.005
10	0.83	0.13	0.064	(0.438)	0.058	0.006
11	0.92	0.13	0.064	(0.436)	0.058	0.006
12	1.00	0.13	0.064	(0.434)	0.058	0.006
13	1.08	0.10	0.048	(0.433)	0.043	0.005
14	1.17	0.10	0.048	(0.431)	0.043	0.005
15	1.25	0.10	0.048	(0.429)	0.043	0.005
16	1.33	0.10	0.048	(0.428)	0.043	0.005
17	1.42	0.10	0.048	(0.426)	0.043	0.005
18	1.50	0.10	0.048	(0.424)	0.043	0.005
19	1.58	0.10	0.048	(0.422)	0.043	0.005
20	1.67	0.10	0.048	(0.421)	0.043	0.005
21	1.75	0.10	0.048	(0.419)	0.043	0.005
22	1.83	0.13	0.064	(0.417)	0.058	0.006
23	1.92	0.13	0.064	(0.416)	0.058	0.006
24	2.00	0.13	0.064	(0.414)	0.058	0.006
25	2.08	0.13	0.064	(0.412)	0.058	0.006
26	2.17	0.13	0.064	(0.411)	0.058	0.006
27	2.25	0.13	0.064	(0.409)	0.058	0.006
28	2.33	0.13	0.064	(0.407)	0.058	0.006
29	2.42	0.13	0.064	(0.406)	0.058	0.006
30	2.50	0.13	0.064	(0.404)	0.058	0.006

31	2.58	0.17	0.080	(0.402)	0.072	0.008
32	2.67	0.17	0.080	(0.401)	0.072	0.008
33	2.75	0.17	0.080	(0.399)	0.072	0.008
34	2.83	0.17	0.080	(0.397)	0.072	0.008
35	2.92	0.17	0.080	(0.396)	0.072	0.008
36	3.00	0.17	0.080	(0.394)	0.072	0.008
37	3.08	0.17	0.080	(0.392)	0.072	0.008
38	3.17	0.17	0.080	(0.391)	0.072	0.008
39	3.25	0.17	0.080	(0.389)	0.072	0.008
40	3.33	0.17	0.080	(0.388)	0.072	0.008
41	3.42	0.17	0.080	(0.386)	0.072	0.008
42	3.50	0.17	0.080	(0.384)	0.072	0.008
43	3.58	0.17	0.080	(0.383)	0.072	0.008
44	3.67	0.17	0.080	(0.381)	0.072	0.008
45	3.75	0.17	0.080	(0.380)	0.072	0.008
46	3.83	0.20	0.096	(0.378)	0.087	0.010
47	3.92	0.20	0.096	(0.376)	0.087	0.010
48	4.00	0.20	0.096	(0.375)	0.087	0.010
49	4.08	0.20	0.096	(0.373)	0.087	0.010
50	4.17	0.20	0.096	(0.372)	0.087	0.010
51	4.25	0.20	0.096	(0.370)	0.087	0.010
52	4.33	0.23	0.112	(0.368)	0.101	0.011
53	4.42	0.23	0.112	(0.367)	0.101	0.011
54	4.50	0.23	0.112	(0.365)	0.101	0.011
55	4.58	0.23	0.112	(0.364)	0.101	0.011
56	4.67	0.23	0.112	(0.362)	0.101	0.011
57	4.75	0.23	0.112	(0.361)	0.101	0.011
58	4.83	0.27	0.128	(0.359)	0.115	0.013
59	4.92	0.27	0.128	(0.357)	0.115	0.013
60	5.00	0.27	0.128	(0.356)	0.115	0.013
61	5.08	0.20	0.096	(0.354)	0.087	0.010
62	5.17	0.20	0.096	(0.353)	0.087	0.010
63	5.25	0.20	0.096	(0.351)	0.087	0.010
64	5.33	0.23	0.112	(0.350)	0.101	0.011
65	5.42	0.23	0.112	(0.348)	0.101	0.011
66	5.50	0.23	0.112	(0.347)	0.101	0.011
67	5.58	0.27	0.128	(0.345)	0.115	0.013
68	5.67	0.27	0.128	(0.344)	0.115	0.013
69	5.75	0.27	0.128	(0.342)	0.115	0.013
70	5.83	0.27	0.128	(0.341)	0.115	0.013
71	5.92	0.27	0.128	(0.339)	0.115	0.013
72	6.00	0.27	0.128	(0.338)	0.115	0.013
73	6.08	0.30	0.144	(0.336)	0.130	0.014
74	6.17	0.30	0.144	(0.335)	0.130	0.014
75	6.25	0.30	0.144	(0.333)	0.130	0.014
76	6.33	0.30	0.144	(0.332)	0.130	0.014
77	6.42	0.30	0.144	(0.330)	0.130	0.014
78	6.50	0.30	0.144	(0.329)	0.130	0.014
79	6.58	0.33	0.160	(0.327)	0.144	0.016
80	6.67	0.33	0.160	(0.326)	0.144	0.016
81	6.75	0.33	0.160	(0.324)	0.144	0.016
82	6.83	0.33	0.160	(0.323)	0.144	0.016
83	6.92	0.33	0.160	(0.321)	0.144	0.016
84	7.00	0.33	0.160	(0.320)	0.144	0.016
85	7.08	0.33	0.160	(0.318)	0.144	0.016
86	7.17	0.33	0.160	(0.317)	0.144	0.016
87	7.25	0.33	0.160	(0.316)	0.144	0.016
88	7.33	0.37	0.176	(0.314)	0.159	0.018
89	7.42	0.37	0.176	(0.313)	0.159	0.018
90	7.50	0.37	0.176	(0.311)	0.159	0.018
91	7.58	0.40	0.192	(0.310)	0.173	0.019
92	7.67	0.40	0.192	(0.308)	0.173	0.019
93	7.75	0.40	0.192	(0.307)	0.173	0.019
94	7.83	0.43	0.208	(0.306)	0.188	0.021
95	7.92	0.43	0.208	(0.304)	0.188	0.021
96	8.00	0.43	0.208	(0.303)	0.188	0.021
97	8.08	0.50	0.240	(0.301)	0.216	0.024

98	8.17	0.50	0.240	(	0.300)		0.216	0.024
99	8.25	0.50	0.240	(	0.299)		0.216	0.024
100	8.33	0.50	0.240	(	0.297)		0.216	0.024
101	8.42	0.50	0.240	(	0.296)		0.216	0.024
102	8.50	0.50	0.240	(	0.294)		0.216	0.024
103	8.58	0.53	0.257	(	0.293)		0.231	0.026
104	8.67	0.53	0.257	(	0.292)		0.231	0.026
105	8.75	0.53	0.257	(	0.290)		0.231	0.026
106	8.83	0.57	0.273	(	0.289)		0.245	0.027
107	8.92	0.57	0.273	(	0.287)		0.245	0.027
108	9.00	0.57	0.273	(	0.286)		0.245	0.027
109	9.08	0.63	0.305	(	0.285)		0.274	0.030
110	9.17	0.63	0.305	(	0.283)		0.274	0.030
111	9.25	0.63	0.305	(	0.282)		0.274	0.030
112	9.33	0.67	0.321		0.281	(	0.289)	0.040
113	9.42	0.67	0.321		0.279	(	0.289)	0.041
114	9.50	0.67	0.321		0.278	(	0.289)	0.043
115	9.58	0.70	0.337		0.277	(	0.303)	0.060
116	9.67	0.70	0.337		0.275	(	0.303)	0.061
117	9.75	0.70	0.337		0.274	(	0.303)	0.063
118	9.83	0.73	0.353		0.273	(	0.317)	0.080
119	9.92	0.73	0.353		0.271	(	0.317)	0.081
120	10.00	0.73	0.353		0.270	(	0.317)	0.083
121	10.08	0.50	0.240	(	0.269)		0.216	0.024
122	10.17	0.50	0.240	(	0.268)		0.216	0.024
123	10.25	0.50	0.240	(	0.266)		0.216	0.024
124	10.33	0.50	0.240	(	0.265)		0.216	0.024
125	10.42	0.50	0.240	(	0.264)		0.216	0.024
126	10.50	0.50	0.240	(	0.262)		0.216	0.024
127	10.58	0.67	0.321		0.261	(	0.289)	0.060
128	10.67	0.67	0.321		0.260	(	0.289)	0.061
129	10.75	0.67	0.321		0.259	(	0.289)	0.062
130	10.83	0.67	0.321		0.257	(	0.289)	0.063
131	10.92	0.67	0.321		0.256	(	0.289)	0.065
132	11.00	0.67	0.321		0.255	(	0.289)	0.066
133	11.08	0.63	0.305		0.253	(	0.274)	0.051
134	11.17	0.63	0.305		0.252	(	0.274)	0.052
135	11.25	0.63	0.305		0.251	(	0.274)	0.054
136	11.33	0.63	0.305		0.250	(	0.274)	0.055
137	11.42	0.63	0.305		0.249	(	0.274)	0.056
138	11.50	0.63	0.305		0.247	(	0.274)	0.057
139	11.58	0.57	0.273	(	0.246)		0.245	0.027
140	11.67	0.57	0.273		0.245	(	0.245)	0.028
141	11.75	0.57	0.273		0.244	(	0.245)	0.029
142	11.83	0.60	0.289		0.242	(	0.260)	0.046
143	11.92	0.60	0.289		0.241	(	0.260)	0.047
144	12.00	0.60	0.289		0.240	(	0.260)	0.049
145	12.08	0.83	0.401		0.239	(	0.361)	0.162
146	12.17	0.83	0.401		0.238	(	0.361)	0.163
147	12.25	0.83	0.401		0.236	(	0.361)	0.164
148	12.33	0.87	0.417		0.235	(	0.375)	0.182
149	12.42	0.87	0.417		0.234	(	0.375)	0.183
150	12.50	0.87	0.417		0.233	(	0.375)	0.184
151	12.58	0.93	0.449		0.232	(	0.404)	0.217
152	12.67	0.93	0.449		0.231	(	0.404)	0.218
153	12.75	0.93	0.449		0.229	(	0.404)	0.220
154	12.83	0.97	0.465		0.228	(	0.418)	0.237
155	12.92	0.97	0.465		0.227	(	0.418)	0.238
156	13.00	0.97	0.465		0.226	(	0.418)	0.239
157	13.08	1.13	0.545		0.225	(	0.491)	0.320
158	13.17	1.13	0.545		0.224	(	0.491)	0.321
159	13.25	1.13	0.545		0.222	(	0.491)	0.323
160	13.33	1.13	0.545		0.221	(	0.491)	0.324
161	13.42	1.13	0.545		0.220	(	0.491)	0.325
162	13.50	1.13	0.545		0.219	(	0.491)	0.326
163	13.58	0.77	0.369		0.218	(	0.332)	0.151
164	13.67	0.77	0.369		0.217	(	0.332)	0.152

165	13.75	0.77	0.369	0.216	(0.332)	0.153
166	13.83	0.77	0.369	0.215	(0.332)	0.154
167	13.92	0.77	0.369	0.214	(0.332)	0.155
168	14.00	0.77	0.369	0.212	(0.332)	0.156
169	14.08	0.90	0.433	0.211	(0.390)	0.221
170	14.17	0.90	0.433	0.210	(0.390)	0.223
171	14.25	0.90	0.433	0.209	(0.390)	0.224
172	14.33	0.87	0.417	0.208	(0.375)	0.209
173	14.42	0.87	0.417	0.207	(0.375)	0.210
174	14.50	0.87	0.417	0.206	(0.375)	0.211
175	14.58	0.87	0.417	0.205	(0.375)	0.212
176	14.67	0.87	0.417	0.204	(0.375)	0.213
177	14.75	0.87	0.417	0.203	(0.375)	0.214
178	14.83	0.83	0.401	0.202	(0.361)	0.199
179	14.92	0.83	0.401	0.201	(0.361)	0.200
180	15.00	0.83	0.401	0.200	(0.361)	0.201
181	15.08	0.80	0.385	0.199	(0.346)	0.186
182	15.17	0.80	0.385	0.198	(0.346)	0.187
183	15.25	0.80	0.385	0.197	(0.346)	0.188
184	15.33	0.77	0.369	0.196	(0.332)	0.173
185	15.42	0.77	0.369	0.195	(0.332)	0.174
186	15.50	0.77	0.369	0.194	(0.332)	0.175
187	15.58	0.63	0.305	0.193	(0.274)	0.112
188	15.67	0.63	0.305	0.192	(0.274)	0.113
189	15.75	0.63	0.305	0.191	(0.274)	0.114
190	15.83	0.63	0.305	0.190	(0.274)	0.115
191	15.92	0.63	0.305	0.189	(0.274)	0.116
192	16.00	0.63	0.305	0.188	(0.274)	0.117
193	16.08	0.13	0.064	(0.187)	0.058	0.006
194	16.17	0.13	0.064	(0.186)	0.058	0.006
195	16.25	0.13	0.064	(0.185)	0.058	0.006
196	16.33	0.13	0.064	(0.184)	0.058	0.006
197	16.42	0.13	0.064	(0.183)	0.058	0.006
198	16.50	0.13	0.064	(0.182)	0.058	0.006
199	16.58	0.10	0.048	(0.181)	0.043	0.005
200	16.67	0.10	0.048	(0.180)	0.043	0.005
201	16.75	0.10	0.048	(0.179)	0.043	0.005
202	16.83	0.10	0.048	(0.178)	0.043	0.005
203	16.92	0.10	0.048	(0.178)	0.043	0.005
204	17.00	0.10	0.048	(0.177)	0.043	0.005
205	17.08	0.17	0.080	(0.176)	0.072	0.008
206	17.17	0.17	0.080	(0.175)	0.072	0.008
207	17.25	0.17	0.080	(0.174)	0.072	0.008
208	17.33	0.17	0.080	(0.173)	0.072	0.008
209	17.42	0.17	0.080	(0.172)	0.072	0.008
210	17.50	0.17	0.080	(0.171)	0.072	0.008
211	17.58	0.17	0.080	(0.171)	0.072	0.008
212	17.67	0.17	0.080	(0.170)	0.072	0.008
213	17.75	0.17	0.080	(0.169)	0.072	0.008
214	17.83	0.13	0.064	(0.168)	0.058	0.006
215	17.92	0.13	0.064	(0.167)	0.058	0.006
216	18.00	0.13	0.064	(0.166)	0.058	0.006
217	18.08	0.13	0.064	(0.166)	0.058	0.006
218	18.17	0.13	0.064	(0.165)	0.058	0.006
219	18.25	0.13	0.064	(0.164)	0.058	0.006
220	18.33	0.13	0.064	(0.163)	0.058	0.006
221	18.42	0.13	0.064	(0.162)	0.058	0.006
222	18.50	0.13	0.064	(0.162)	0.058	0.006
223	18.58	0.10	0.048	(0.161)	0.043	0.005
224	18.67	0.10	0.048	(0.160)	0.043	0.005
225	18.75	0.10	0.048	(0.159)	0.043	0.005
226	18.83	0.07	0.032	(0.158)	0.029	0.003
227	18.92	0.07	0.032	(0.158)	0.029	0.003
228	19.00	0.07	0.032	(0.157)	0.029	0.003
229	19.08	0.10	0.048	(0.156)	0.043	0.005
230	19.17	0.10	0.048	(0.155)	0.043	0.005
231	19.25	0.10	0.048	(0.155)	0.043	0.005

232	19.33	0.13	0.064	(0.154)	0.058	0.006
233	19.42	0.13	0.064	(0.153)	0.058	0.006
234	19.50	0.13	0.064	(0.153)	0.058	0.006
235	19.58	0.10	0.048	(0.152)	0.043	0.005
236	19.67	0.10	0.048	(0.151)	0.043	0.005
237	19.75	0.10	0.048	(0.151)	0.043	0.005
238	19.83	0.07	0.032	(0.150)	0.029	0.003
239	19.92	0.07	0.032	(0.149)	0.029	0.003
240	20.00	0.07	0.032	(0.149)	0.029	0.003
241	20.08	0.10	0.048	(0.148)	0.043	0.005
242	20.17	0.10	0.048	(0.147)	0.043	0.005
243	20.25	0.10	0.048	(0.147)	0.043	0.005
244	20.33	0.10	0.048	(0.146)	0.043	0.005
245	20.42	0.10	0.048	(0.145)	0.043	0.005
246	20.50	0.10	0.048	(0.145)	0.043	0.005
247	20.58	0.10	0.048	(0.144)	0.043	0.005
248	20.67	0.10	0.048	(0.144)	0.043	0.005
249	20.75	0.10	0.048	(0.143)	0.043	0.005
250	20.83	0.07	0.032	(0.142)	0.029	0.003
251	20.92	0.07	0.032	(0.142)	0.029	0.003
252	21.00	0.07	0.032	(0.141)	0.029	0.003
253	21.08	0.10	0.048	(0.141)	0.043	0.005
254	21.17	0.10	0.048	(0.140)	0.043	0.005
255	21.25	0.10	0.048	(0.140)	0.043	0.005
256	21.33	0.07	0.032	(0.139)	0.029	0.003
257	21.42	0.07	0.032	(0.138)	0.029	0.003
258	21.50	0.07	0.032	(0.138)	0.029	0.003
259	21.58	0.10	0.048	(0.137)	0.043	0.005
260	21.67	0.10	0.048	(0.137)	0.043	0.005
261	21.75	0.10	0.048	(0.136)	0.043	0.005
262	21.83	0.07	0.032	(0.136)	0.029	0.003
263	21.92	0.07	0.032	(0.136)	0.029	0.003
264	22.00	0.07	0.032	(0.135)	0.029	0.003
265	22.08	0.10	0.048	(0.135)	0.043	0.005
266	22.17	0.10	0.048	(0.134)	0.043	0.005
267	22.25	0.10	0.048	(0.134)	0.043	0.005
268	22.33	0.07	0.032	(0.133)	0.029	0.003
269	22.42	0.07	0.032	(0.133)	0.029	0.003
270	22.50	0.07	0.032	(0.133)	0.029	0.003
271	22.58	0.07	0.032	(0.132)	0.029	0.003
272	22.67	0.07	0.032	(0.132)	0.029	0.003
273	22.75	0.07	0.032	(0.131)	0.029	0.003
274	22.83	0.07	0.032	(0.131)	0.029	0.003
275	22.92	0.07	0.032	(0.131)	0.029	0.003
276	23.00	0.07	0.032	(0.130)	0.029	0.003
277	23.08	0.07	0.032	(0.130)	0.029	0.003
278	23.17	0.07	0.032	(0.130)	0.029	0.003
279	23.25	0.07	0.032	(0.130)	0.029	0.003
280	23.33	0.07	0.032	(0.129)	0.029	0.003
281	23.42	0.07	0.032	(0.129)	0.029	0.003
282	23.50	0.07	0.032	(0.129)	0.029	0.003
283	23.58	0.07	0.032	(0.129)	0.029	0.003
284	23.67	0.07	0.032	(0.128)	0.029	0.003
285	23.75	0.07	0.032	(0.128)	0.029	0.003
286	23.83	0.07	0.032	(0.128)	0.029	0.003
287	23.92	0.07	0.032	(0.128)	0.029	0.003
288	24.00	0.07	0.032	(0.128)	0.029	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 13.0

Flood volume = Effective rainfall 1.09(In)
times area 2.1(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)

Total soil loss = 2.92(In)
Total soil loss = 0.511(Ac.Ft)
Total rainfall = 4.01(In)
Flood volume = 8281.9 Cubic Feet
Total soil loss = 22271.2 Cubic Feet

Peak flow rate of this hydrograph = 0.689(CFS)

++

24 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0001	0.01	Q				
0+15	0.0001	0.01	Q				
0+20	0.0002	0.01	Q				
0+25	0.0002	0.01	Q				
0+30	0.0003	0.01	Q				
0+35	0.0004	0.01	Q				
0+40	0.0004	0.01	Q				
0+45	0.0005	0.01	Q				
0+50	0.0006	0.01	Q				
0+55	0.0007	0.01	Q				
1+ 0	0.0008	0.01	Q				
1+ 5	0.0009	0.01	Q				
1+10	0.0009	0.01	Q				
1+15	0.0010	0.01	Q				
1+20	0.0011	0.01	Q				
1+25	0.0012	0.01	Q				
1+30	0.0012	0.01	Q				
1+35	0.0013	0.01	Q				
1+40	0.0014	0.01	Q				
1+45	0.0014	0.01	Q				
1+50	0.0015	0.01	Q				
1+55	0.0016	0.01	Q				
2+ 0	0.0017	0.01	Q				
2+ 5	0.0018	0.01	Q				
2+10	0.0019	0.01	Q				
2+15	0.0020	0.01	Q				
2+20	0.0021	0.01	Q				
2+25	0.0022	0.01	Q				
2+30	0.0023	0.01	Q				
2+35	0.0024	0.02	Q				
2+40	0.0025	0.02	Q				
2+45	0.0026	0.02	Q				
2+50	0.0027	0.02	Q				
2+55	0.0028	0.02	Q				
3+ 0	0.0029	0.02	Q				
3+ 5	0.0031	0.02	Q				
3+10	0.0032	0.02	Q				
3+15	0.0033	0.02	Q				
3+20	0.0034	0.02	Q				
3+25	0.0035	0.02	Q				
3+30	0.0036	0.02	Q				
3+35	0.0038	0.02	Q				
3+40	0.0039	0.02	Q				
3+45	0.0040	0.02	Q				
3+50	0.0041	0.02	Q				
3+55	0.0043	0.02	Q				
4+ 0	0.0044	0.02	Q				
4+ 5	0.0045	0.02	Q				
4+10	0.0047	0.02	Q				
4+15	0.0048	0.02	QV				
4+20	0.0050	0.02	QV				
4+25	0.0051	0.02	QV				
4+30	0.0053	0.02	QV				
4+35	0.0055	0.02	QV				
4+40	0.0056	0.02	QV				

4+45	0.0058	0.02	QV				
4+50	0.0060	0.03	QV				
4+55	0.0062	0.03	QV				
5+ 0	0.0063	0.03	QV				
5+ 5	0.0065	0.02	QV				
5+10	0.0066	0.02	QV				
5+15	0.0068	0.02	QV				
5+20	0.0069	0.02	QV				
5+25	0.0071	0.02	QV				
5+30	0.0073	0.02	QV				
5+35	0.0074	0.03	QV				
5+40	0.0076	0.03	QV				
5+45	0.0078	0.03	QV				
5+50	0.0080	0.03	QV				
5+55	0.0082	0.03	QV				
6+ 0	0.0084	0.03	QV				
6+ 5	0.0086	0.03	QV				
6+10	0.0088	0.03	QV				
6+15	0.0090	0.03	QV				
6+20	0.0092	0.03	QV				
6+25	0.0094	0.03	QV				
6+30	0.0096	0.03	Q V				
6+35	0.0098	0.03	Q V				
6+40	0.0101	0.03	Q V				
6+45	0.0103	0.03	Q V				
6+50	0.0105	0.03	Q V				
6+55	0.0108	0.03	Q V				
7+ 0	0.0110	0.03	Q V				
7+ 5	0.0112	0.03	Q V				
7+10	0.0115	0.03	Q V				
7+15	0.0117	0.03	Q V				
7+20	0.0120	0.04	Q V				
7+25	0.0122	0.04	Q V				
7+30	0.0125	0.04	Q V				
7+35	0.0127	0.04	Q V				
7+40	0.0130	0.04	Q V				
7+45	0.0133	0.04	Q V				
7+50	0.0136	0.04	Q V				
7+55	0.0139	0.04	Q V				
8+ 0	0.0142	0.04	Q V				
8+ 5	0.0145	0.05	Q V				
8+10	0.0149	0.05	Q V				
8+15	0.0152	0.05	Q V				
8+20	0.0156	0.05	Q V				
8+25	0.0159	0.05	Q V				
8+30	0.0163	0.05	Q V				
8+35	0.0166	0.05	Q V				
8+40	0.0170	0.05	Q V				
8+45	0.0174	0.05	Q V				
8+50	0.0178	0.06	Q V				
8+55	0.0182	0.06	Q V				
9+ 0	0.0186	0.06	Q V				
9+ 5	0.0190	0.06	Q V				
9+10	0.0194	0.06	Q V				
9+15	0.0199	0.06	Q V				
9+20	0.0204	0.07	Q V				
9+25	0.0210	0.08	Q V				
9+30	0.0216	0.09	Q V				
9+35	0.0223	0.11	Q V				
9+40	0.0232	0.13	Q V				
9+45	0.0241	0.13	Q V				
9+50	0.0251	0.15	Q V				
9+55	0.0263	0.17	Q V				
10+ 0	0.0275	0.17	Q V				
10+ 5	0.0282	0.11	Q V				
10+10	0.0287	0.06	Q V				
10+15	0.0290	0.05	Q V				

```
10+20        0.0294       0.05  Q      V   |          |          |          |
10+25        0.0297       0.05  Q      V   |          |          |          |
10+30        0.0301       0.05  Q      V   |          |          |          |
10+35        0.0307       0.09  Q      V   |          |          |          |
10+40        0.0315       0.12  Q      V   |          |          |          |
10+45        0.0324       0.13  Q      V   |          |          |          |
10+50        0.0333       0.13  Q       V  |          |          |          |
10+55        0.0343       0.14  Q       V  |          |          |          |
11+ 0        0.0352       0.14  Q       V  |          |          |          |
11+ 5        0.0360       0.12  Q       V  |          |          |          |
11+10        0.0368       0.11  Q       V  |          |          |          |
11+15        0.0376       0.11  Q       V  |          |          |          |
11+20        0.0384       0.11  Q        V |          |          |          |
11+25        0.0392       0.12  Q        V |          |          |          |
11+30        0.0400       0.12  Q        V |          |          |          |
11+35        0.0406       0.09  Q        V |          |          |          |
11+40        0.0411       0.06  Q        V |          |          |          |
11+45        0.0415       0.06  Q        V |          |          |          |
11+50        0.0420       0.08  Q        V |          |          |          |
11+55        0.0427       0.10  Q        V |          |          |          |
12+ 0        0.0434       0.10  Q         V|          |          |          |
12+ 5        0.0450       0.23  Q         V|          |          |          |
12+10        0.0472       0.32  |Q        V|          |          |          |
12+15        0.0495       0.34  |Q         V          |          |          |
12+20        0.0521       0.37  |Q         V          |          |          |
12+25        0.0547       0.38  |Q         |V         |          |          |
12+30        0.0574       0.39  |Q         | V        |          |          |
12+35        0.0603       0.43  |Q         | V        |          |          |
12+40        0.0634       0.46  |Q         |  V       |          |          |
12+45        0.0666       0.46  |Q         |   V      |          |          |
12+50        0.0699       0.48  |Q         |   V      |          |          |
12+55        0.0734       0.50  |Q         |    V     |          |          |
13+ 0        0.0769       0.50  | Q        |     V    |          |          |
13+ 5        0.0809       0.59  | Q        |      V   |          |          |
13+10        0.0855       0.66  | Q        |      V   |          |          |
13+15        0.0902       0.68  | Q        |       V  |          |          |
13+20        0.0949       0.68  | Q        |        V|          |          |
13+25        0.0996       0.69  | Q        |         V          |          |
13+30        0.1044       0.69  | Q        |          |V        |          |
13+35        0.1078       0.50  |Q         |          | V       |          |
13+40        0.1102       0.35  |Q         |          |  V      |          |
13+45        0.1125       0.33  |Q         |          |  V      |          |
13+50        0.1148       0.32  |Q         |          |   V     |          |
13+55        0.1170       0.33  |Q         |          |   V     |          |
14+ 0        0.1193       0.33  |Q         |          |    V    |          |
14+ 5        0.1220       0.40  |Q         |          |    V    |          |
14+10        0.1252       0.46  |Q         |          |     V   |          |
14+15        0.1284       0.47  |Q         |          |      V  |          |
14+20        0.1316       0.46  |Q         |          |      V  |          |
14+25        0.1346       0.45  |Q         |          |       V |          |
14+30        0.1377       0.45  |Q         |          |       V |          |
14+35        0.1408       0.45  |Q         |          |        V|          |
14+40        0.1439       0.45  |Q         |          |         V          |
14+45        0.1470       0.45  |Q         |          |         V          |
14+50        0.1500       0.44  |Q         |          |          |V        |
14+55        0.1529       0.43  |Q         |          |          | V       |
15+ 0        0.1559       0.42  |Q         |          |          | V       |
15+ 5        0.1587       0.41  |Q         |          |          |  V      |
15+10        0.1614       0.40  |Q         |          |          |  V      |
15+15        0.1642       0.40  |Q         |          |          |   V     |
15+20        0.1668       0.38  |Q         |          |          |    V    |
15+25        0.1693       0.37  |Q         |          |          |    V    |
15+30        0.1719       0.37  |Q         |          |          |     V   |
15+35        0.1740       0.30  |Q         |          |          |     V   |
15+40        0.1757       0.25  Q          |          |          |     V   |
15+45        0.1773       0.24  Q          |          |          |      V  |
15+50        0.1790       0.24  Q          |          |          |      V  |
```

15+55	0.1807	0.24	Q				V
16+ 0	0.1824	0.25	Q				V
16+ 5	0.1833	0.13	Q				V
16+10	0.1835	0.03	Q				V
16+15	0.1836	0.02	Q				V
16+20	0.1837	0.01	Q				V
16+25	0.1838	0.01	Q				V
16+30	0.1839	0.01	Q				V
16+35	0.1840	0.01	Q				V
16+40	0.1841	0.01	Q				V
16+45	0.1841	0.01	Q				V
16+50	0.1842	0.01	Q				V
16+55	0.1843	0.01	Q				V
17+ 0	0.1843	0.01	Q				V
17+ 5	0.1844	0.01	Q				V
17+10	0.1845	0.02	Q				V
17+15	0.1847	0.02	Q				V
17+20	0.1848	0.02	Q				V
17+25	0.1849	0.02	Q				V
17+30	0.1850	0.02	Q				V
17+35	0.1851	0.02	Q				V
17+40	0.1852	0.02	Q				V
17+45	0.1854	0.02	Q				V
17+50	0.1855	0.02	Q				V
17+55	0.1856	0.01	Q				V
18+ 0	0.1857	0.01	Q				V
18+ 5	0.1857	0.01	Q				V
18+10	0.1858	0.01	Q				V
18+15	0.1859	0.01	Q				V
18+20	0.1860	0.01	Q				V
18+25	0.1861	0.01	Q				V
18+30	0.1862	0.01	Q				V
18+35	0.1863	0.01	Q				V
18+40	0.1864	0.01	Q				V
18+45	0.1864	0.01	Q				V
18+50	0.1865	0.01	Q				V
18+55	0.1865	0.01	Q				V
19+ 0	0.1866	0.01	Q				V
19+ 5	0.1867	0.01	Q				V
19+10	0.1867	0.01	Q				V
19+15	0.1868	0.01	Q				V
19+20	0.1869	0.01	Q				V
19+25	0.1870	0.01	Q				V
19+30	0.1871	0.01	Q				V
19+35	0.1871	0.01	Q				V
19+40	0.1872	0.01	Q				V
19+45	0.1873	0.01	Q				V
19+50	0.1873	0.01	Q				V
19+55	0.1874	0.01	Q				V
20+ 0	0.1874	0.01	Q				V
20+ 5	0.1875	0.01	Q				V
20+10	0.1876	0.01	Q				V
20+15	0.1876	0.01	Q				V
20+20	0.1877	0.01	Q				V
20+25	0.1878	0.01	Q				V
20+30	0.1878	0.01	Q				V
20+35	0.1879	0.01	Q				V
20+40	0.1880	0.01	Q				V
20+45	0.1881	0.01	Q				V
20+50	0.1881	0.01	Q				V
20+55	0.1882	0.01	Q				V
21+ 0	0.1882	0.01	Q				V
21+ 5	0.1883	0.01	Q				V
21+10	0.1883	0.01	Q				V
21+15	0.1884	0.01	Q				V
21+20	0.1885	0.01	Q				V
21+25	0.1885	0.01	Q				V

```
 21+30        0.1886       0.01  Q          |          |          |          V|
 21+35        0.1886       0.01  Q          |          |          |          V|
 21+40        0.1887       0.01  Q          |          |          |          V|
 21+45        0.1888       0.01  Q          |          |          |          V|
 21+50        0.1888       0.01  Q          |          |          |          V|
 21+55        0.1889       0.01  Q          |          |          |          V|
 22+ 0        0.1889       0.01  Q          |          |          |          V|
 22+ 5        0.1890       0.01  Q          |          |          |          V|
 22+10        0.1890       0.01  Q          |          |          |          V|
 22+15        0.1891       0.01  Q          |          |          |          V|
 22+20        0.1892       0.01  Q          |          |          |          V|
 22+25        0.1892       0.01  Q          |          |          |          V|
 22+30        0.1893       0.01  Q          |          |          |          V|
 22+35        0.1893       0.01  Q          |          |          |          V|
 22+40        0.1894       0.01  Q          |          |          |          V|
 22+45        0.1894       0.01  Q          |          |          |          V|
 22+50        0.1894       0.01  Q          |          |          |          V|
 22+55        0.1895       0.01  Q          |          |          |          V|
 23+ 0        0.1895       0.01  Q          |          |          |          V|
 23+ 5        0.1896       0.01  Q          |          |          |          V|
 23+10        0.1896       0.01  Q          |          |          |          V|
 23+15        0.1897       0.01  Q          |          |          |          V|
 23+20        0.1897       0.01  Q          |          |          |          V|
 23+25        0.1898       0.01  Q          |          |          |          V|
 23+30        0.1898       0.01  Q          |          |          |          V|
 23+35        0.1899       0.01  Q          |          |          |          V|
 23+40        0.1899       0.01  Q          |          |          |          V|
 23+45        0.1900       0.01  Q          |          |          |          V|
 23+50        0.1900       0.01  Q          |          |          |          V|
 23+55        0.1901       0.01  Q          |          |          |          V|
 24+ 0        0.1901       0.01  Q          |          |          |          V|
 24+ 5        0.1901       0.00  Q          |          |          |          V|
 24+10        0.1901       0.00  Q          |          |          |          V|
 24+15        0.1901       0.00  Q          |          |          |          V|
-----------------------------------------------------------------------------
```

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 08/30/12 File: NW242.out

++

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 4010

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Plot Plan Unit Hydrograph
POST-developed Conditions, North-West Corner, ~~0.9~~ 0.6 ac.
2-yr 24-hr storm event
Nw242.out eta

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 540.00(Ft.)
Length along longest watercourse measured to centroid = 280.00(Ft.)
Length along longest watercourse = 0.102 Mi.
Length along longest watercourse measured to centroid = 0.053 Mi.
Difference in elevation = 4.00(Ft.)
Slope along watercourse = 39.1111 Ft./Mi.
Average Manning's 'N' = 0.020
Lag time = 0.033 Hr.
Lag time = 1.98 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.79 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	2.42	1.45

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	6.28	3.77

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.420(In)
Area Averaged 100-Year Rainfall = 6.280(In)

Point rain (area averaged) = 2.420(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.420(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.700

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	49.8	0.574	0.700	0.212	1.000	0.212
					Sum (F) =	0.212

Area averaged mean soil loss (F) (In/Hr) = 0.212
Minimum soil loss rate ((In/Hr)) = 0.106
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	252.980	51.282	0.310
2	0.167	505.961	39.870	0.241
3	0.250	758.941	6.923	0.042
4	0.333	1011.921	1.925	0.012
			Sum = 100.000	Sum= 0.605

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.019	(0.376)	0.007	0.013
2	0.17	0.07	0.019	(0.375)	0.007	0.013
3	0.25	0.07	0.019	(0.374)	0.007	0.013
4	0.33	0.10	0.029	(0.372)	0.010	0.019
5	0.42	0.10	0.029	(0.371)	0.010	0.019
6	0.50	0.10	0.029	(0.369)	0.010	0.019
7	0.58	0.10	0.029	(0.368)	0.010	0.019
8	0.67	0.10	0.029	(0.366)	0.010	0.019
9	0.75	0.10	0.029	(0.365)	0.010	0.019
10	0.83	0.13	0.039	(0.363)	0.013	0.026
11	0.92	0.13	0.039	(0.362)	0.013	0.026
12	1.00	0.13	0.039	(0.361)	0.013	0.026
13	1.08	0.10	0.029	(0.359)	0.010	0.019
14	1.17	0.10	0.029	(0.358)	0.010	0.019
15	1.25	0.10	0.029	(0.356)	0.010	0.019
16	1.33	0.10	0.029	(0.355)	0.010	0.019
17	1.42	0.10	0.029	(0.354)	0.010	0.019
18	1.50	0.10	0.029	(0.352)	0.010	0.019
19	1.58	0.10	0.029	(0.351)	0.010	0.019
20	1.67	0.10	0.029	(0.349)	0.010	0.019
21	1.75	0.10	0.029	(0.348)	0.010	0.019
22	1.83	0.13	0.039	(0.346)	0.013	0.026
23	1.92	0.13	0.039	(0.345)	0.013	0.026
24	2.00	0.13	0.039	(0.344)	0.013	0.026
25	2.08	0.13	0.039	(0.342)	0.013	0.026
26	2.17	0.13	0.039	(0.341)	0.013	0.026
27	2.25	0.13	0.039	(0.340)	0.013	0.026
28	2.33	0.13	0.039	(0.338)	0.013	0.026
29	2.42	0.13	0.039	(0.337)	0.013	0.026
30	2.50	0.13	0.039	(0.335)	0.013	0.026

31	2.58	0.17	0.048	(0.334)	0.016	0.032
32	2.67	0.17	0.048	(0.333)	0.016	0.032
33	2.75	0.17	0.048	(0.331)	0.016	0.032
34	2.83	0.17	0.048	(0.330)	0.016	0.032
35	2.92	0.17	0.048	(0.329)	0.016	0.032
36	3.00	0.17	0.048	(0.327)	0.016	0.032
37	3.08	0.17	0.048	(0.326)	0.016	0.032
38	3.17	0.17	0.048	(0.324)	0.016	0.032
39	3.25	0.17	0.048	(0.323)	0.016	0.032
40	3.33	0.17	0.048	(0.322)	0.016	0.032
41	3.42	0.17	0.048	(0.320)	0.016	0.032
42	3.50	0.17	0.048	(0.319)	0.016	0.032
43	3.58	0.17	0.048	(0.318)	0.016	0.032
44	3.67	0.17	0.048	(0.316)	0.016	0.032
45	3.75	0.17	0.048	(0.315)	0.016	0.032
46	3.83	0.20	0.058	(0.314)	0.020	0.038
47	3.92	0.20	0.058	(0.312)	0.020	0.038
48	4.00	0.20	0.058	(0.311)	0.020	0.038
49	4.08	0.20	0.058	(0.310)	0.020	0.038
50	4.17	0.20	0.058	(0.309)	0.020	0.038
51	4.25	0.20	0.058	(0.307)	0.020	0.038
52	4.33	0.23	0.068	(0.306)	0.023	0.045
53	4.42	0.23	0.068	(0.305)	0.023	0.045
54	4.50	0.23	0.068	(0.303)	0.023	0.045
55	4.58	0.23	0.068	(0.302)	0.023	0.045
56	4.67	0.23	0.068	(0.301)	0.023	0.045
57	4.75	0.23	0.068	(0.299)	0.023	0.045
58	4.83	0.27	0.077	(0.298)	0.026	0.051
59	4.92	0.27	0.077	(0.297)	0.026	0.051
60	5.00	0.27	0.077	(0.296)	0.026	0.051
61	5.08	0.20	0.058	(0.294)	0.020	0.038
62	5.17	0.20	0.058	(0.293)	0.020	0.038
63	5.25	0.20	0.058	(0.292)	0.020	0.038
64	5.33	0.23	0.068	(0.290)	0.023	0.045
65	5.42	0.23	0.068	(0.289)	0.023	0.045
66	5.50	0.23	0.068	(0.288)	0.023	0.045
67	5.58	0.27	0.077	(0.287)	0.026	0.051
68	5.67	0.27	0.077	(0.285)	0.026	0.051
69	5.75	0.27	0.077	(0.284)	0.026	0.051
70	5.83	0.27	0.077	(0.283)	0.026	0.051
71	5.92	0.27	0.077	(0.282)	0.026	0.051
72	6.00	0.27	0.077	(0.280)	0.026	0.051
73	6.08	0.30	0.087	(0.279)	0.030	0.057
74	6.17	0.30	0.087	(0.278)	0.030	0.057
75	6.25	0.30	0.087	(0.277)	0.030	0.057
76	6.33	0.30	0.087	(0.275)	0.030	0.057
77	6.42	0.30	0.087	(0.274)	0.030	0.057
78	6.50	0.30	0.087	(0.273)	0.030	0.057
79	6.58	0.33	0.097	(0.272)	0.033	0.064
80	6.67	0.33	0.097	(0.270)	0.033	0.064
81	6.75	0.33	0.097	(0.269)	0.033	0.064
82	6.83	0.33	0.097	(0.268)	0.033	0.064
83	6.92	0.33	0.097	(0.267)	0.033	0.064
84	7.00	0.33	0.097	(0.266)	0.033	0.064
85	7.08	0.33	0.097	(0.264)	0.033	0.064
86	7.17	0.33	0.097	(0.263)	0.033	0.064
87	7.25	0.33	0.097	(0.262)	0.033	0.064
88	7.33	0.37	0.106	(0.261)	0.036	0.070
89	7.42	0.37	0.106	(0.260)	0.036	0.070
90	7.50	0.37	0.106	(0.258)	0.036	0.070
91	7.58	0.40	0.116	(0.257)	0.039	0.077
92	7.67	0.40	0.116	(0.256)	0.039	0.077
93	7.75	0.40	0.116	(0.255)	0.039	0.077
94	7.83	0.43	0.126	(0.254)	0.043	0.083
95	7.92	0.43	0.126	(0.252)	0.043	0.083
96	8.00	0.43	0.126	(0.251)	0.043	0.083
97	8.08	0.50	0.145	(0.250)	0.049	0.096

98	8.17	0.50	0.145	(0.249)	0.049	0.096
99	8.25	0.50	0.145	(0.248)	0.049	0.096
100	8.33	0.50	0.145	(0.247)	0.049	0.096
101	8.42	0.50	0.145	(0.246)	0.049	0.096
102	8.50	0.50	0.145	(0.244)	0.049	0.096
103	8.58	0.53	0.155	(0.243)	0.053	0.102
104	8.67	0.53	0.155	(0.242)	0.053	0.102
105	8.75	0.53	0.155	(0.241)	0.053	0.102
106	8.83	0.57	0.165	(0.240)	0.056	0.109
107	8.92	0.57	0.165	(0.239)	0.056	0.109
108	9.00	0.57	0.165	(0.238)	0.056	0.109
109	9.08	0.63	0.184	(0.236)	0.063	0.121
110	9.17	0.63	0.184	(0.235)	0.063	0.121
111	9.25	0.63	0.184	(0.234)	0.063	0.121
112	9.33	0.67	0.194	(0.233)	0.066	0.128
113	9.42	0.67	0.194	(0.232)	0.066	0.128
114	9.50	0.67	0.194	(0.231)	0.066	0.128
115	9.58	0.70	0.203	(0.230)	0.069	0.134
116	9.67	0.70	0.203	(0.229)	0.069	0.134
117	9.75	0.70	0.203	(0.228)	0.069	0.134
118	9.83	0.73	0.213	(0.226)	0.072	0.141
119	9.92	0.73	0.213	(0.225)	0.072	0.141
120	10.00	0.73	0.213	(0.224)	0.072	0.141
121	10.08	0.50	0.145	(0.223)	0.049	0.096
122	10.17	0.50	0.145	(0.222)	0.049	0.096
123	10.25	0.50	0.145	(0.221)	0.049	0.096
124	10.33	0.50	0.145	(0.220)	0.049	0.096
125	10.42	0.50	0.145	(0.219)	0.049	0.096
126	10.50	0.50	0.145	(0.218)	0.049	0.096
127	10.58	0.67	0.194	(0.217)	0.066	0.128
128	10.67	0.67	0.194	(0.216)	0.066	0.128
129	10.75	0.67	0.194	(0.215)	0.066	0.128
130	10.83	0.67	0.194	(0.214)	0.066	0.128
131	10.92	0.67	0.194	(0.213)	0.066	0.128
132	11.00	0.67	0.194	(0.211)	0.066	0.128
133	11.08	0.63	0.184	(0.210)	0.063	0.121
134	11.17	0.63	0.184	(0.209)	0.063	0.121
135	11.25	0.63	0.184	(0.208)	0.063	0.121
136	11.33	0.63	0.184	(0.207)	0.063	0.121
137	11.42	0.63	0.184	(0.206)	0.063	0.121
138	11.50	0.63	0.184	(0.205)	0.063	0.121
139	11.58	0.57	0.165	(0.204)	0.056	0.109
140	11.67	0.57	0.165	(0.203)	0.056	0.109
141	11.75	0.57	0.165	(0.202)	0.056	0.109
142	11.83	0.60	0.174	(0.201)	0.059	0.115
143	11.92	0.60	0.174	(0.200)	0.059	0.115
144	12.00	0.60	0.174	(0.199)	0.059	0.115
145	12.08	0.83	0.242	(0.198)	0.082	0.160
146	12.17	0.83	0.242	(0.197)	0.082	0.160
147	12.25	0.83	0.242	(0.196)	0.082	0.160
148	12.33	0.87	0.252	(0.195)	0.086	0.166
149	12.42	0.87	0.252	(0.194)	0.086	0.166
150	12.50	0.87	0.252	(0.193)	0.086	0.166
151	12.58	0.93	0.271	(0.192)	0.092	0.179
152	12.67	0.93	0.271	(0.191)	0.092	0.179
153	12.75	0.93	0.271	(0.190)	0.092	0.179
154	12.83	0.97	0.281	(0.189)	0.095	0.185
155	12.92	0.97	0.281	(0.188)	0.095	0.185
156	13.00	0.97	0.281	(0.188)	0.095	0.185
157	13.08	1.13	0.329	(0.187)	0.112	0.217
158	13.17	1.13	0.329	(0.186)	0.112	0.217
159	13.25	1.13	0.329	(0.185)	0.112	0.217
160	13.33	1.13	0.329	(0.184)	0.112	0.217
161	13.42	1.13	0.329	(0.183)	0.112	0.217
162	13.50	1.13	0.329	(0.182)	0.112	0.217
163	13.58	0.77	0.223	(0.181)	0.076	0.147
164	13.67	0.77	0.223	(0.180)	0.076	0.147

165	13.75	0.77	0.223	(0.179)	0.076	0.147
166	13.83	0.77	0.223	(0.178)	0.076	0.147
167	13.92	0.77	0.223	(0.177)	0.076	0.147
168	14.00	0.77	0.223	(0.176)	0.076	0.147
169	14.08	0.90	0.261	(0.176)	0.089	0.172
170	14.17	0.90	0.261	(0.175)	0.089	0.172
171	14.25	0.90	0.261	(0.174)	0.089	0.172
172	14.33	0.87	0.252	(0.173)	0.086	0.166
173	14.42	0.87	0.252	(0.172)	0.086	0.166
174	14.50	0.87	0.252	(0.171)	0.086	0.166
175	14.58	0.87	0.252	(0.170)	0.086	0.166
176	14.67	0.87	0.252	(0.169)	0.086	0.166
177	14.75	0.87	0.252	(0.168)	0.086	0.166
178	14.83	0.83	0.242	(0.168)	0.082	0.160
179	14.92	0.83	0.242	(0.167)	0.082	0.160
180	15.00	0.83	0.242	(0.166)	0.082	0.160
181	15.08	0.80	0.232	(0.165)	0.079	0.153
182	15.17	0.80	0.232	(0.164)	0.079	0.153
183	15.25	0.80	0.232	(0.163)	0.079	0.153
184	15.33	0.77	0.223	(0.162)	0.076	0.147
185	15.42	0.77	0.223	(0.162)	0.076	0.147
186	15.50	0.77	0.223	(0.161)	0.076	0.147
187	15.58	0.63	0.184	(0.160)	0.063	0.121
188	15.67	0.63	0.184	(0.159)	0.063	0.121
189	15.75	0.63	0.184	(0.158)	0.063	0.121
190	15.83	0.63	0.184	(0.158)	0.063	0.121
191	15.92	0.63	0.184	(0.157)	0.063	0.121
192	16.00	0.63	0.184	(0.156)	0.063	0.121
193	16.08	0.13	0.039	(0.155)	0.013	0.026
194	16.17	0.13	0.039	(0.154)	0.013	0.026
195	16.25	0.13	0.039	(0.154)	0.013	0.026
196	16.33	0.13	0.039	(0.153)	0.013	0.026
197	16.42	0.13	0.039	(0.152)	0.013	0.026
198	16.50	0.13	0.039	(0.151)	0.013	0.026
199	16.58	0.10	0.029	(0.150)	0.010	0.019
200	16.67	0.10	0.029	(0.150)	0.010	0.019
201	16.75	0.10	0.029	(0.149)	0.010	0.019
202	16.83	0.10	0.029	(0.148)	0.010	0.019
203	16.92	0.10	0.029	(0.147)	0.010	0.019
204	17.00	0.10	0.029	(0.147)	0.010	0.019
205	17.08	0.17	0.048	(0.146)	0.016	0.032
206	17.17	0.17	0.048	(0.145)	0.016	0.032
207	17.25	0.17	0.048	(0.144)	0.016	0.032
208	17.33	0.17	0.048	(0.144)	0.016	0.032
209	17.42	0.17	0.048	(0.143)	0.016	0.032
210	17.50	0.17	0.048	(0.142)	0.016	0.032
211	17.58	0.17	0.048	(0.142)	0.016	0.032
212	17.67	0.17	0.048	(0.141)	0.016	0.032
213	17.75	0.17	0.048	(0.140)	0.016	0.032
214	17.83	0.13	0.039	(0.140)	0.013	0.026
215	17.92	0.13	0.039	(0.139)	0.013	0.026
216	18.00	0.13	0.039	(0.138)	0.013	0.026
217	18.08	0.13	0.039	(0.137)	0.013	0.026
218	18.17	0.13	0.039	(0.137)	0.013	0.026
219	18.25	0.13	0.039	(0.136)	0.013	0.026
220	18.33	0.13	0.039	(0.135)	0.013	0.026
221	18.42	0.13	0.039	(0.135)	0.013	0.026
222	18.50	0.13	0.039	(0.134)	0.013	0.026
223	18.58	0.10	0.029	(0.133)	0.010	0.019
224	18.67	0.10	0.029	(0.133)	0.010	0.019
225	18.75	0.10	0.029	(0.132)	0.010	0.019
226	18.83	0.07	0.019	(0.132)	0.007	0.013
227	18.92	0.07	0.019	(0.131)	0.007	0.013
228	19.00	0.07	0.019	(0.130)	0.007	0.013
229	19.08	0.10	0.029	(0.130)	0.010	0.019
230	19.17	0.10	0.029	(0.129)	0.010	0.019
231	19.25	0.10	0.029	(0.128)	0.010	0.019

232	19.33	0.13	0.039	(0.128)	0.013	0.026
233	19.42	0.13	0.039	(0.127)	0.013	0.026
234	19.50	0.13	0.039	(0.127)	0.013	0.026
235	19.58	0.10	0.029	(0.126)	0.010	0.019
236	19.67	0.10	0.029	(0.126)	0.010	0.019
237	19.75	0.10	0.029	(0.125)	0.010	0.019
238	19.83	0.07	0.019	(0.124)	0.007	0.013
239	19.92	0.07	0.019	(0.124)	0.007	0.013
240	20.00	0.07	0.019	(0.123)	0.007	0.013
241	20.08	0.10	0.029	(0.123)	0.010	0.019
242	20.17	0.10	0.029	(0.122)	0.010	0.019
243	20.25	0.10	0.029	(0.122)	0.010	0.019
244	20.33	0.10	0.029	(0.121)	0.010	0.019
245	20.42	0.10	0.029	(0.121)	0.010	0.019
246	20.50	0.10	0.029	(0.120)	0.010	0.019
247	20.58	0.10	0.029	(0.120)	0.010	0.019
248	20.67	0.10	0.029	(0.119)	0.010	0.019
249	20.75	0.10	0.029	(0.119)	0.010	0.019
250	20.83	0.07	0.019	(0.118)	0.007	0.013
251	20.92	0.07	0.019	(0.118)	0.007	0.013
252	21.00	0.07	0.019	(0.117)	0.007	0.013
253	21.08	0.10	0.029	(0.117)	0.010	0.019
254	21.17	0.10	0.029	(0.116)	0.010	0.019
255	21.25	0.10	0.029	(0.116)	0.010	0.019
256	21.33	0.07	0.019	(0.115)	0.007	0.013
257	21.42	0.07	0.019	(0.115)	0.007	0.013
258	21.50	0.07	0.019	(0.115)	0.007	0.013
259	21.58	0.10	0.029	(0.114)	0.010	0.019
260	21.67	0.10	0.029	(0.114)	0.010	0.019
261	21.75	0.10	0.029	(0.113)	0.010	0.019
262	21.83	0.07	0.019	(0.113)	0.007	0.013
263	21.92	0.07	0.019	(0.113)	0.007	0.013
264	22.00	0.07	0.019	(0.112)	0.007	0.013
265	22.08	0.10	0.029	(0.112)	0.010	0.019
266	22.17	0.10	0.029	(0.111)	0.010	0.019
267	22.25	0.10	0.029	(0.111)	0.010	0.019
268	22.33	0.07	0.019	(0.111)	0.007	0.013
269	22.42	0.07	0.019	(0.110)	0.007	0.013
270	22.50	0.07	0.019	(0.110)	0.007	0.013
271	22.58	0.07	0.019	(0.110)	0.007	0.013
272	22.67	0.07	0.019	(0.109)	0.007	0.013
273	22.75	0.07	0.019	(0.109)	0.007	0.013
274	22.83	0.07	0.019	(0.109)	0.007	0.013
275	22.92	0.07	0.019	(0.109)	0.007	0.013
276	23.00	0.07	0.019	(0.108)	0.007	0.013
277	23.08	0.07	0.019	(0.108)	0.007	0.013
278	23.17	0.07	0.019	(0.108)	0.007	0.013
279	23.25	0.07	0.019	(0.108)	0.007	0.013
280	23.33	0.07	0.019	(0.107)	0.007	0.013
281	23.42	0.07	0.019	(0.107)	0.007	0.013
282	23.50	0.07	0.019	(0.107)	0.007	0.013
283	23.58	0.07	0.019	(0.107)	0.007	0.013
284	23.67	0.07	0.019	(0.107)	0.007	0.013
285	23.75	0.07	0.019	(0.106)	0.007	0.013
286	23.83	0.07	0.019	(0.106)	0.007	0.013
287	23.92	0.07	0.019	(0.106)	0.007	0.013
288	24.00	0.07	0.019	(0.106)	0.007	0.013

(Loss Rate Not Used)

Sum = 100.0 Sum = 19.2

Flood volume = Effective rainfall 1.60(In)
times area 0.6(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)

Total soil loss = 0.82(In)
Total soil loss = 0.041(Ac.Ft)
Total rainfall = 2.42(In)
Flood volume = 3478.7 Cubic Feet
Total soil loss = 1792.1 Cubic Feet

Peak flow rate of this hydrograph = 0.131(CFS)

++

24 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0001	0.01	Q				
0+15	0.0001	0.01	Q				
0+20	0.0002	0.01	Q				
0+25	0.0003	0.01	Q				
0+30	0.0004	0.01	Q				
0+35	0.0004	0.01	Q				
0+40	0.0005	0.01	Q				
0+45	0.0006	0.01	Q				
0+50	0.0007	0.01	Q				
0+55	0.0008	0.02	Q				
1+ 0	0.0009	0.02	Q				
1+ 5	0.0010	0.01	Q				
1+10	0.0011	0.01	Q				
1+15	0.0012	0.01	Q				
1+20	0.0012	0.01	Q				
1+25	0.0013	0.01	Q				
1+30	0.0014	0.01	Q				
1+35	0.0015	0.01	Q				
1+40	0.0015	0.01	Q				
1+45	0.0016	0.01	Q				
1+50	0.0017	0.01	Q				
1+55	0.0018	0.02	Q				
2+ 0	0.0019	0.02	Q				
2+ 5	0.0020	0.02	QV				
2+10	0.0021	0.02	QV				
2+15	0.0023	0.02	QV				
2+20	0.0024	0.02	QV				
2+25	0.0025	0.02	QV				
2+30	0.0026	0.02	QV				
2+35	0.0027	0.02	QV				
2+40	0.0028	0.02	QV				
2+45	0.0030	0.02	QV				
2+50	0.0031	0.02	QV				
2+55	0.0032	0.02	QV				
3+ 0	0.0034	0.02	QV				
3+ 5	0.0035	0.02	QV				
3+10	0.0036	0.02	QV				
3+15	0.0038	0.02	QV				
3+20	0.0039	0.02	QV				
3+25	0.0040	0.02	Q V				
3+30	0.0042	0.02	Q V				
3+35	0.0043	0.02	Q V				
3+40	0.0044	0.02	Q V				
3+45	0.0046	0.02	Q V				
3+50	0.0047	0.02	Q V				
3+55	0.0049	0.02	Q V				
4+ 0	0.0050	0.02	Q V				
4+ 5	0.0052	0.02	Q V				
4+10	0.0053	0.02	Q V				
4+15	0.0055	0.02	Q V				
4+20	0.0057	0.03	Q V				
4+25	0.0059	0.03	Q V				
4+30	0.0060	0.03	Q V				
4+35	0.0062	0.03	Q V				
4+40	0.0064	0.03	Q V				

4+45	0.0066	0.03	Q	V
4+50	0.0068	0.03	Q	V
4+55	0.0070	0.03	Q	V
5+ 0	0.0072	0.03	Q	V
5+ 5	0.0074	0.03	Q	V
5+10	0.0076	0.02	Q	V
5+15	0.0077	0.02	Q	V
5+20	0.0079	0.03	Q	V
5+25	0.0081	0.03	Q	V
5+30	0.0083	0.03	Q	V
5+35	0.0085	0.03	Q	V
5+40	0.0087	0.03	Q	V
5+45	0.0089	0.03	Q	V
5+50	0.0091	0.03	Q	V
5+55	0.0093	0.03	Q	V
6+ 0	0.0095	0.03	Q	V
6+ 5	0.0098	0.03	Q	V
6+10	0.0100	0.03	Q	V
6+15	0.0102	0.03	Q	V
6+20	0.0105	0.03	Q	V
6+25	0.0107	0.03	Q	V
6+30	0.0110	0.03	Q	V
6+35	0.0112	0.04	Q	V
6+40	0.0115	0.04	Q	V
6+45	0.0117	0.04	Q	V
6+50	0.0120	0.04	Q	V
6+55	0.0123	0.04	Q	V
7+ 0	0.0125	0.04	Q	V
7+ 5	0.0128	0.04	Q	V
7+10	0.0131	0.04	Q	V
7+15	0.0133	0.04	Q	V
7+20	0.0136	0.04	Q	V
7+25	0.0139	0.04	Q	V
7+30	0.0142	0.04	Q	V
7+35	0.0145	0.04	Q	V
7+40	0.0148	0.05	Q	V
7+45	0.0151	0.05	Q	V
7+50	0.0155	0.05	Q	V
7+55	0.0158	0.05	Q	V
8+ 0	0.0162	0.05	Q	V
8+ 5	0.0165	0.05	Q	V
8+10	0.0169	0.06	Q	V
8+15	0.0173	0.06	Q	V
8+20	0.0177	0.06	Q	V
8+25	0.0181	0.06	Q	V
8+30	0.0185	0.06	Q	V
8+35	0.0189	0.06	Q	V
8+40	0.0194	0.06	Q	V
8+45	0.0198	0.06	Q	V
8+50	0.0202	0.06	Q	V
8+55	0.0207	0.07	Q	V
9+ 0	0.0211	0.07	Q	V
9+ 5	0.0216	0.07	Q	V
9+10	0.0221	0.07	Q	V
9+15	0.0226	0.07	Q	V
9+20	0.0231	0.08	Q	V
9+25	0.0237	0.08	Q	V
9+30	0.0242	0.08	Q	V
9+35	0.0247	0.08	Q	V
9+40	0.0253	0.08	Q	V
9+45	0.0259	0.08	Q	V
9+50	0.0264	0.08	Q	V
9+55	0.0270	0.08	Q	V
10+ 0	0.0276	0.08	Q	V
10+ 5	0.0281	0.07	Q	V
10+10	0.0285	0.06	Q	V
10+15	0.0289	0.06	Q	V

10+20	0.0293	0.06	Q	
10+25	0.0297	0.06	Q	
10+30	0.0301	0.06	Q	
10+35	0.0306	0.07	Q	
10+40	0.0311	0.08	Q	
10+45	0.0316	0.08	Q	
10+50	0.0322	0.08	Q	
10+55	0.0327	0.08	Q	
11+ 0	0.0332	0.08	Q	
11+ 5	0.0337	0.08	Q	
11+10	0.0343	0.07	Q	
11+15	0.0348	0.07	Q	
11+20	0.0353	0.07	Q	
11+25	0.0358	0.07	Q	
11+30	0.0363	0.07	Q	
11+35	0.0368	0.07	Q	
11+40	0.0372	0.07	Q	
11+45	0.0377	0.07	Q	
11+50	0.0381	0.07	Q	
11+55	0.0386	0.07	Q	
12+ 0	0.0391	0.07	Q	
12+ 5	0.0397	0.08	Q	
12+10	0.0403	0.09	Q	
12+15	0.0410	0.10	Q	
12+20	0.0417	0.10	Q	
12+25	0.0423	0.10	Q	
12+30	0.0430	0.10	Q	
12+35	0.0438	0.10	Q	
12+40	0.0445	0.11	Q	
12+45	0.0452	0.11	Q	
12+50	0.0460	0.11	Q	
12+55	0.0468	0.11	Q	
13+ 0	0.0475	0.11	Q	
13+ 5	0.0484	0.12	Q	
13+10	0.0493	0.13	Q	
13+15	0.0502	0.13	Q	
13+20	0.0511	0.13	Q	
13+25	0.0520	0.13	Q	
13+30	0.0529	0.13	Q	
13+35	0.0536	0.11	Q	
13+40	0.0543	0.09	Q	
13+45	0.0549	0.09	Q	
13+50	0.0555	0.09	Q	
13+55	0.0561	0.09	Q	
14+ 0	0.0567	0.09	Q	
14+ 5	0.0574	0.10	Q	
14+10	0.0581	0.10	Q	
14+15	0.0588	0.10	Q	
14+20	0.0595	0.10	Q	
14+25	0.0602	0.10	Q	
14+30	0.0609	0.10	Q	
14+35	0.0616	0.10	Q	
14+40	0.0623	0.10	Q	
14+45	0.0630	0.10	Q	
14+50	0.0637	0.10	Q	
14+55	0.0643	0.10	Q	
15+ 0	0.0650	0.10	Q	
15+ 5	0.0657	0.09	Q	
15+10	0.0663	0.09	Q	
15+15	0.0669	0.09	Q	
15+20	0.0676	0.09	Q	
15+25	0.0682	0.09	Q	
15+30	0.0688	0.09	Q	
15+35	0.0694	0.08	Q	
15+40	0.0699	0.07	Q	
15+45	0.0704	0.07	Q	
15+50	0.0709	0.07	Q	

15+55	0.0714	0.07	Q				V
16+ 0	0.0719	0.07	Q				V
16+ 5	0.0722	0.04	Q				V
16+10	0.0723	0.02	Q				V
16+15	0.0724	0.02	Q				V
16+20	0.0726	0.02	Q				V
16+25	0.0727	0.02	Q				V
16+30	0.0728	0.02	Q				V
16+35	0.0729	0.01	Q				V
16+40	0.0729	0.01	Q				V
16+45	0.0730	0.01	Q				V
16+50	0.0731	0.01	Q				V
16+55	0.0732	0.01	Q				V
17+ 0	0.0733	0.01	Q				V
17+ 5	0.0734	0.02	Q				V
17+10	0.0735	0.02	Q				V
17+15	0.0736	0.02	Q				V
17+20	0.0738	0.02	Q				V
17+25	0.0739	0.02	Q				V
17+30	0.0740	0.02	Q				V
17+35	0.0742	0.02	Q				V
17+40	0.0743	0.02	Q				V
17+45	0.0744	0.02	Q				V
17+50	0.0745	0.02	Q				V
17+55	0.0747	0.02	Q				V
18+ 0	0.0748	0.02	Q				V
18+ 5	0.0749	0.02	Q				V
18+10	0.0750	0.02	Q				V
18+15	0.0751	0.02	Q				V
18+20	0.0752	0.02	Q				V
18+25	0.0753	0.02	Q				V
18+30	0.0754	0.02	Q				V
18+35	0.0755	0.01	Q				V
18+40	0.0756	0.01	Q				V
18+45	0.0757	0.01	Q				V
18+50	0.0757	0.01	Q				V
18+55	0.0758	0.01	Q				V
19+ 0	0.0758	0.01	Q				V
19+ 5	0.0759	0.01	Q				V
19+10	0.0760	0.01	Q				V
19+15	0.0761	0.01	Q				V
19+20	0.0762	0.01	Q				V
19+25	0.0763	0.02	Q				V
19+30	0.0764	0.02	Q				V
19+35	0.0765	0.01	Q				V
19+40	0.0765	0.01	Q				V
19+45	0.0766	0.01	Q				V
19+50	0.0767	0.01	Q				V
19+55	0.0767	0.01	Q				V
20+ 0	0.0768	0.01	Q				V
20+ 5	0.0769	0.01	Q				V
20+10	0.0769	0.01	Q				V
20+15	0.0770	0.01	Q				V
20+20	0.0771	0.01	Q				V
20+25	0.0772	0.01	Q				V
20+30	0.0773	0.01	Q				V
20+35	0.0773	0.01	Q				V
20+40	0.0774	0.01	Q				V
20+45	0.0775	0.01	Q				V
20+50	0.0776	0.01	Q				V
20+55	0.0776	0.01	Q				V
21+ 0	0.0777	0.01	Q				V
21+ 5	0.0777	0.01	Q				V
21+10	0.0778	0.01	Q				V
21+15	0.0779	0.01	Q				V
21+20	0.0780	0.01	Q				V
21+25	0.0780	0.01	Q				V

```
21+30        0.0781       0.01  Q          |          |          |          V|
21+35        0.0781       0.01  Q          |          |          |          V|
21+40        0.0782       0.01  Q          |          |          |          V|
21+45        0.0783       0.01  Q          |          |          |          V|
21+50        0.0784       0.01  Q          |          |          |          V|
21+55        0.0784       0.01  Q          |          |          |          V|
22+ 0        0.0785       0.01  Q          |          |          |          V|
22+ 5        0.0785       0.01  Q          |          |          |          V|
22+10        0.0786       0.01  Q          |          |          |          V|
22+15        0.0787       0.01  Q          |          |          |          V|
22+20        0.0788       0.01  Q          |          |          |          V|
22+25        0.0788       0.01  Q          |          |          |          V|
22+30        0.0789       0.01  Q          |          |          |          V|
22+35        0.0789       0.01  Q          |          |          |          V|
22+40        0.0790       0.01  Q          |          |          |          V|
22+45        0.0790       0.01  Q          |          |          |          V|
22+50        0.0791       0.01  Q          |          |          |          V|
22+55        0.0791       0.01  Q          |          |          |          V|
23+ 0        0.0792       0.01  Q          |          |          |          V|
23+ 5        0.0792       0.01  Q          |          |          |          V|
23+10        0.0793       0.01  Q          |          |          |          V|
23+15        0.0793       0.01  Q          |          |          |          V|
23+20        0.0794       0.01  Q          |          |          |          V|
23+25        0.0795       0.01  Q          |          |          |          V|
23+30        0.0795       0.01  Q          |          |          |          V|
23+35        0.0796       0.01  Q          |          |          |          V|
23+40        0.0796       0.01  Q          |          |          |          V|
23+45        0.0797       0.01  Q          |          |          |          V|
23+50        0.0797       0.01  Q          |          |          |          V|
23+55        0.0798       0.01  Q          |          |          |          V|
24+ 0        0.0798       0.01  Q          |          |          |          V|
24+ 5        0.0799       0.00  Q          |          |          |          V|
24+10        0.0799       0.00  Q          |          |          |          V|
24+15        0.0799       0.00  Q          |          |          |           V
-----------------------------------------------------------------------------
```

```
      U n i t   H y d r o g r a p h   A n a l y s i s

      Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
            Study date  08/30/12 File: NW2410.out

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
--------------------------------------------------------------------------

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978


Program License Serial Number 4010

--------------------------------------------------------------------
 English (in-lb) Input Units Used
 English Rainfall Data (Inches) Input Values Used

 English Units used in output format



--------------------------------------------------------------------
Plot Plan Unit Hydrograph
POST-developed Conditions, North-West Corner, 0.6 ac.
10-yr 24-hr storm event
Nw2410.out     eta
--------------------------------------------------------------------
Drainage Area =   0.60(Ac.)  =   0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =    0.60(Ac.)  =   0.001 Sq. Mi.
Length along longest watercourse =     540.00(Ft.)
Length along longest watercourse measured to centroid =     280.00(Ft.)
Length along longest watercourse =      0.102 Mi.
Length along longest watercourse measured to centroid =      0.053 Mi.
Difference in elevation =       4.00(Ft.)
Slope along watercourse =     39.1111 Ft./Mi.
Average Manning's 'N' = 0.020
Lag time =    0.033 Hr.
Lag time =     1.98 Min.
25% of lag time =     0.49 Min.
40% of lag time =     0.79 Min.
Unit time =     5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow =     0.00(CFS)

2 YEAR Area rainfall data:


Area(Ac.)[1]        Rainfall(In)[2]       Weighting[1*2]
        0.60          2.42                  1.45

100 YEAR Area rainfall data:


Area(Ac.)[1]        Rainfall(In)[2]       Weighting[1*2]
        0.60          6.28                  3.77

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    2.420(In)
Area Averaged 100-Year Rainfall =    6.280(In)

Point rain (area averaged) =    4.008(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    4.008(In)
```

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.700

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	69.0	0.373	0.700	0.138	1.000	0.138
					Sum (F) =	0.138

Area averaged mean soil loss (F) (In/Hr) = 0.138
Minimum soil loss rate ((In/Hr)) = 0.069
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %		Unit Hydrograph (CFS)
1	0.083	252.980	51.282		0.310
2	0.167	505.961	39.870		0.241
3	0.250	758.941	6.923		0.042
4	0.333	1011.921	1.925		0.012
			Sum = 100.000	Sum=	0.605

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.245)	0.011	0.021
2	0.17	0.07	0.032	(0.244)	0.011	0.021
3	0.25	0.07	0.032	(0.243)	0.011	0.021
4	0.33	0.10	0.048	(0.242)	0.016	0.032
5	0.42	0.10	0.048	(0.241)	0.016	0.032
6	0.50	0.10	0.048	(0.240)	0.016	0.032
7	0.58	0.10	0.048	(0.239)	0.016	0.032
8	0.67	0.10	0.048	(0.238)	0.016	0.032
9	0.75	0.10	0.048	(0.237)	0.016	0.032
10	0.83	0.13	0.064	(0.236)	0.022	0.042
11	0.92	0.13	0.064	(0.235)	0.022	0.042
12	1.00	0.13	0.064	(0.234)	0.022	0.042
13	1.08	0.10	0.048	(0.233)	0.016	0.032
14	1.17	0.10	0.048	(0.232)	0.016	0.032
15	1.25	0.10	0.048	(0.231)	0.016	0.032
16	1.33	0.10	0.048	(0.231)	0.016	0.032
17	1.42	0.10	0.048	(0.230)	0.016	0.032
18	1.50	0.10	0.048	(0.229)	0.016	0.032
19	1.58	0.10	0.048	(0.228)	0.016	0.032
20	1.67	0.10	0.048	(0.227)	0.016	0.032
21	1.75	0.10	0.048	(0.226)	0.016	0.032
22	1.83	0.13	0.064	(0.225)	0.022	0.042
23	1.92	0.13	0.064	(0.224)	0.022	0.042
24	2.00	0.13	0.064	(0.223)	0.022	0.042
25	2.08	0.13	0.064	(0.222)	0.022	0.042
26	2.17	0.13	0.064	(0.221)	0.022	0.042
27	2.25	0.13	0.064	(0.221)	0.022	0.042
28	2.33	0.13	0.064	(0.220)	0.022	0.042
29	2.42	0.13	0.064	(0.219)	0.022	0.042
30	2.50	0.13	0.064	(0.218)	0.022	0.042

31	2.58	0.17	0.080	(0.217)	0.027	0.053
32	2.67	0.17	0.080	(0.216)	0.027	0.053
33	2.75	0.17	0.080	(0.215)	0.027	0.053
34	2.83	0.17	0.080	(0.214)	0.027	0.053
35	2.92	0.17	0.080	(0.213)	0.027	0.053
36	3.00	0.17	0.080	(0.213)	0.027	0.053
37	3.08	0.17	0.080	(0.212)	0.027	0.053
38	3.17	0.17	0.080	(0.211)	0.027	0.053
39	3.25	0.17	0.080	(0.210)	0.027	0.053
40	3.33	0.17	0.080	(0.209)	0.027	0.053
41	3.42	0.17	0.080	(0.208)	0.027	0.053
42	3.50	0.17	0.080	(0.207)	0.027	0.053
43	3.58	0.17	0.080	(0.206)	0.027	0.053
44	3.67	0.17	0.080	(0.206)	0.027	0.053
45	3.75	0.17	0.080	(0.205)	0.027	0.053
46	3.83	0.20	0.096	(0.204)	0.033	0.063
47	3.92	0.20	0.096	(0.203)	0.033	0.063
48	4.00	0.20	0.096	(0.202)	0.033	0.063
49	4.08	0.20	0.096	(0.201)	0.033	0.063
50	4.17	0.20	0.096	(0.200)	0.033	0.063
51	4.25	0.20	0.096	(0.200)	0.033	0.063
52	4.33	0.23	0.112	(0.199)	0.038	0.074
53	4.42	0.23	0.112	(0.198)	0.038	0.074
54	4.50	0.23	0.112	(0.197)	0.038	0.074
55	4.58	0.23	0.112	(0.196)	0.038	0.074
56	4.67	0.23	0.112	(0.195)	0.038	0.074
57	4.75	0.23	0.112	(0.194)	0.038	0.074
58	4.83	0.27	0.128	(0.194)	0.044	0.085
59	4.92	0.27	0.128	(0.193)	0.044	0.085
60	5.00	0.27	0.128	(0.192)	0.044	0.085
61	5.08	0.20	0.096	(0.191)	0.033	0.063
62	5.17	0.20	0.096	(0.190)	0.033	0.063
63	5.25	0.20	0.096	(0.189)	0.033	0.063
64	5.33	0.23	0.112	(0.189)	0.038	0.074
65	5.42	0.23	0.112	(0.188)	0.038	0.074
66	5.50	0.23	0.112	(0.187)	0.038	0.074
67	5.58	0.27	0.128	(0.186)	0.044	0.085
68	5.67	0.27	0.128	(0.185)	0.044	0.085
69	5.75	0.27	0.128	(0.185)	0.044	0.085
70	5.83	0.27	0.128	(0.184)	0.044	0.085
71	5.92	0.27	0.128	(0.183)	0.044	0.085
72	6.00	0.27	0.128	(0.182)	0.044	0.085
73	6.08	0.30	0.144	(0.181)	0.049	0.095
74	6.17	0.30	0.144	(0.180)	0.049	0.095
75	6.25	0.30	0.144	(0.180)	0.049	0.095
76	6.33	0.30	0.144	(0.179)	0.049	0.095
77	6.42	0.30	0.144	(0.178)	0.049	0.095
78	6.50	0.30	0.144	(0.177)	0.049	0.095
79	6.58	0.33	0.160	(0.176)	0.055	0.106
80	6.67	0.33	0.160	(0.176)	0.055	0.106
81	6.75	0.33	0.160	(0.175)	0.055	0.106
82	6.83	0.33	0.160	(0.174)	0.055	0.106
83	6.92	0.33	0.160	(0.173)	0.055	0.106
84	7.00	0.33	0.160	(0.173)	0.055	0.106
85	7.08	0.33	0.160	(0.172)	0.055	0.106
86	7.17	0.33	0.160	(0.171)	0.055	0.106
87	7.25	0.33	0.160	(0.170)	0.055	0.106
88	7.33	0.37	0.176	(0.169)	0.060	0.116
89	7.42	0.37	0.176	(0.169)	0.060	0.116
90	7.50	0.37	0.176	(0.168)	0.060	0.116
91	7.58	0.40	0.192	(0.167)	0.065	0.127
92	7.67	0.40	0.192	(0.166)	0.065	0.127
93	7.75	0.40	0.192	(0.166)	0.065	0.127
94	7.83	0.43	0.208	(0.165)	0.071	0.138
95	7.92	0.43	0.208	(0.164)	0.071	0.138
96	8.00	0.43	0.208	(0.163)	0.071	0.138
97	8.08	0.50	0.240	(0.162)	0.082	0.159

98	8.17	0.50	0.240	(	0.162)		0.082	0.159
99	8.25	0.50	0.240	(	0.161)		0.082	0.159
100	8.33	0.50	0.240	(	0.160)		0.082	0.159
101	8.42	0.50	0.240	(	0.159)		0.082	0.159
102	8.50	0.50	0.240	(	0.159)		0.082	0.159
103	8.58	0.53	0.257	(	0.158)		0.087	0.169
104	8.67	0.53	0.257	(	0.157)		0.087	0.169
105	8.75	0.53	0.257	(	0.156)		0.087	0.169
106	8.83	0.57	0.273	(	0.156)		0.093	0.180
107	8.92	0.57	0.273	(	0.155)		0.093	0.180
108	9.00	0.57	0.273	(	0.154)		0.093	0.180
109	9.08	0.63	0.305	(	0.154)		0.104	0.201
110	9.17	0.63	0.305	(	0.153)		0.104	0.201
111	9.25	0.63	0.305	(	0.152)		0.104	0.201
112	9.33	0.67	0.321	(	0.151)		0.109	0.212
113	9.42	0.67	0.321	(	0.151)		0.109	0.212
114	9.50	0.67	0.321	(	0.150)		0.109	0.212
115	9.58	0.70	0.337	(	0.149)		0.114	0.222
116	9.67	0.70	0.337	(	0.149)		0.114	0.222
117	9.75	0.70	0.337	(	0.148)		0.114	0.222
118	9.83	0.73	0.353	(	0.147)		0.120	0.233
119	9.92	0.73	0.353	(	0.146)		0.120	0.233
120	10.00	0.73	0.353	(	0.146)		0.120	0.233
121	10.08	0.50	0.240	(	0.145)		0.082	0.159
122	10.17	0.50	0.240	(	0.144)		0.082	0.159
123	10.25	0.50	0.240	(	0.144)		0.082	0.159
124	10.33	0.50	0.240	(	0.143)		0.082	0.159
125	10.42	0.50	0.240	(	0.142)		0.082	0.159
126	10.50	0.50	0.240	(	0.141)		0.082	0.159
127	10.58	0.67	0.321	(	0.141)		0.109	0.212
128	10.67	0.67	0.321	(	0.140)		0.109	0.212
129	10.75	0.67	0.321	(	0.139)		0.109	0.212
130	10.83	0.67	0.321	(	0.139)		0.109	0.212
131	10.92	0.67	0.321	(	0.138)		0.109	0.212
132	11.00	0.67	0.321	(	0.137)		0.109	0.212
133	11.08	0.63	0.305	(	0.137)		0.104	0.201
134	11.17	0.63	0.305	(	0.136)		0.104	0.201
135	11.25	0.63	0.305	(	0.135)		0.104	0.201
136	11.33	0.63	0.305	(	0.135)		0.104	0.201
137	11.42	0.63	0.305	(	0.134)		0.104	0.201
138	11.50	0.63	0.305	(	0.133)		0.104	0.201
139	11.58	0.57	0.273	(	0.133)		0.093	0.180
140	11.67	0.57	0.273	(	0.132)		0.093	0.180
141	11.75	0.57	0.273	(	0.131)		0.093	0.180
142	11.83	0.60	0.289	(	0.131)		0.098	0.190
143	11.92	0.60	0.289	(	0.130)		0.098	0.190
144	12.00	0.60	0.289	(	0.129)		0.098	0.190
145	12.08	0.83	0.401		0.129	(	0.136)	0.272
146	12.17	0.83	0.401		0.128	(	0.136)	0.273
147	12.25	0.83	0.401		0.127	(	0.136)	0.273
148	12.33	0.87	0.417		0.127	(	0.142)	0.290
149	12.42	0.87	0.417		0.126	(	0.142)	0.291
150	12.50	0.87	0.417		0.126	(	0.142)	0.291
151	12.58	0.93	0.449		0.125	(	0.153)	0.324
152	12.67	0.93	0.449		0.124	(	0.153)	0.325
153	12.75	0.93	0.449		0.124	(	0.153)	0.325
154	12.83	0.97	0.465		0.123	(	0.158)	0.342
155	12.92	0.97	0.465		0.122	(	0.158)	0.343
156	13.00	0.97	0.465		0.122	(	0.158)	0.343
157	13.08	1.13	0.545		0.121	(	0.185)	0.424
158	13.17	1.13	0.545		0.121	(	0.185)	0.425
159	13.25	1.13	0.545		0.120	(	0.185)	0.425
160	13.33	1.13	0.545		0.119	(	0.185)	0.426
161	13.42	1.13	0.545		0.119	(	0.185)	0.426
162	13.50	1.13	0.545		0.118	(	0.185)	0.427
163	13.58	0.77	0.369		0.118	(	0.125)	0.251
164	13.67	0.77	0.369		0.117	(	0.125)	0.252

165	13.75	0.77	0.369	0.116	(0.125)	0.252
166	13.83	0.77	0.369	0.116	(0.125)	0.253
167	13.92	0.77	0.369	0.115	(0.125)	0.254
168	14.00	0.77	0.369	0.115	(0.125)	0.254
169	14.08	0.90	0.433	0.114	(0.147)	0.319
170	14.17	0.90	0.433	0.113	(0.147)	0.319
171	14.25	0.90	0.433	0.113	(0.147)	0.320
172	14.33	0.87	0.417	0.112	(0.142)	0.305
173	14.42	0.87	0.417	0.112	(0.142)	0.305
174	14.50	0.87	0.417	0.111	(0.142)	0.306
175	14.58	0.87	0.417	0.111	(0.142)	0.306
176	14.67	0.87	0.417	0.110	(0.142)	0.307
177	14.75	0.87	0.417	0.109	(0.142)	0.307
178	14.83	0.83	0.401	0.109	(0.136)	0.292
179	14.92	0.83	0.401	0.108	(0.136)	0.293
180	15.00	0.83	0.401	0.108	(0.136)	0.293
181	15.08	0.80	0.385	0.107	(0.131)	0.278
182	15.17	0.80	0.385	0.107	(0.131)	0.278
183	15.25	0.80	0.385	0.106	(0.131)	0.279
184	15.33	0.77	0.369	0.106	(0.125)	0.263
185	15.42	0.77	0.369	0.105	(0.125)	0.264
186	15.50	0.77	0.369	0.104	(0.125)	0.264
187	15.58	0.63	0.305	(0.104)	0.104	0.201
188	15.67	0.63	0.305	0.103	(0.104)	0.201
189	15.75	0.63	0.305	0.103	(0.104)	0.202
190	15.83	0.63	0.305	0.102	(0.104)	0.202
191	15.92	0.63	0.305	0.102	(0.104)	0.203
192	16.00	0.63	0.305	0.101	(0.104)	0.203
193	16.08	0.13	0.064	(0.101)	0.022	0.042
194	16.17	0.13	0.064	(0.100)	0.022	0.042
195	16.25	0.13	0.064	(0.100)	0.022	0.042
196	16.33	0.13	0.064	(0.099)	0.022	0.042
197	16.42	0.13	0.064	(0.099)	0.022	0.042
198	16.50	0.13	0.064	(0.098)	0.022	0.042
199	16.58	0.10	0.048	(0.098)	0.016	0.032
200	16.67	0.10	0.048	(0.097)	0.016	0.032
201	16.75	0.10	0.048	(0.097)	0.016	0.032
202	16.83	0.10	0.048	(0.096)	0.016	0.032
203	16.92	0.10	0.048	(0.096)	0.016	0.032
204	17.00	0.10	0.048	(0.095)	0.016	0.032
205	17.08	0.17	0.080	(0.095)	0.027	0.053
206	17.17	0.17	0.080	(0.094)	0.027	0.053
207	17.25	0.17	0.080	(0.094)	0.027	0.053
208	17.33	0.17	0.080	(0.093)	0.027	0.053
209	17.42	0.17	0.080	(0.093)	0.027	0.053
210	17.50	0.17	0.080	(0.092)	0.027	0.053
211	17.58	0.17	0.080	(0.092)	0.027	0.053
212	17.67	0.17	0.080	(0.092)	0.027	0.053
213	17.75	0.17	0.080	(0.091)	0.027	0.053
214	17.83	0.13	0.064	(0.091)	0.022	0.042
215	17.92	0.13	0.064	(0.090)	0.022	0.042
216	18.00	0.13	0.064	(0.090)	0.022	0.042
217	18.08	0.13	0.064	(0.089)	0.022	0.042
218	18.17	0.13	0.064	(0.089)	0.022	0.042
219	18.25	0.13	0.064	(0.088)	0.022	0.042
220	18.33	0.13	0.064	(0.088)	0.022	0.042
221	18.42	0.13	0.064	(0.088)	0.022	0.042
222	18.50	0.13	0.064	(0.087)	0.022	0.042
223	18.58	0.10	0.048	(0.087)	0.016	0.032
224	18.67	0.10	0.048	(0.086)	0.016	0.032
225	18.75	0.10	0.048	(0.086)	0.016	0.032
226	18.83	0.07	0.032	(0.085)	0.011	0.021
227	18.92	0.07	0.032	(0.085)	0.011	0.021
228	19.00	0.07	0.032	(0.085)	0.011	0.021
229	19.08	0.10	0.048	(0.084)	0.016	0.032
230	19.17	0.10	0.048	(0.084)	0.016	0.032
231	19.25	0.10	0.048	(0.083)	0.016	0.032

232	19.33	0.13	0.064	(0.083)	0.022	0.042
233	19.42	0.13	0.064	(0.083)	0.022	0.042
234	19.50	0.13	0.064	(0.082)	0.022	0.042
235	19.58	0.10	0.048	(0.082)	0.016	0.032
236	19.67	0.10	0.048	(0.082)	0.016	0.032
237	19.75	0.10	0.048	(0.081)	0.016	0.032
238	19.83	0.07	0.032	(0.081)	0.011	0.021
239	19.92	0.07	0.032	(0.080)	0.011	0.021
240	20.00	0.07	0.032	(0.080)	0.011	0.021
241	20.08	0.10	0.048	(0.080)	0.016	0.032
242	20.17	0.10	0.048	(0.079)	0.016	0.032
243	20.25	0.10	0.048	(0.079)	0.016	0.032
244	20.33	0.10	0.048	(0.079)	0.016	0.032
245	20.42	0.10	0.048	(0.078)	0.016	0.032
246	20.50	0.10	0.048	(0.078)	0.016	0.032
247	20.58	0.10	0.048	(0.078)	0.016	0.032
248	20.67	0.10	0.048	(0.077)	0.016	0.032
249	20.75	0.10	0.048	(0.077)	0.016	0.032
250	20.83	0.07	0.032	(0.077)	0.011	0.021
251	20.92	0.07	0.032	(0.076)	0.011	0.021
252	21.00	0.07	0.032	(0.076)	0.011	0.021
253	21.08	0.10	0.048	(0.076)	0.016	0.032
254	21.17	0.10	0.048	(0.076)	0.016	0.032
255	21.25	0.10	0.048	(0.075)	0.016	0.032
256	21.33	0.07	0.032	(0.075)	0.011	0.021
257	21.42	0.07	0.032	(0.075)	0.011	0.021
258	21.50	0.07	0.032	(0.074)	0.011	0.021
259	21.58	0.10	0.048	(0.074)	0.016	0.032
260	21.67	0.10	0.048	(0.074)	0.016	0.032
261	21.75	0.10	0.048	(0.074)	0.016	0.032
262	21.83	0.07	0.032	(0.073)	0.011	0.021
263	21.92	0.07	0.032	(0.073)	0.011	0.021
264	22.00	0.07	0.032	(0.073)	0.011	0.021
265	22.08	0.10	0.048	(0.073)	0.016	0.032
266	22.17	0.10	0.048	(0.072)	0.016	0.032
267	22.25	0.10	0.048	(0.072)	0.016	0.032
268	22.33	0.07	0.032	(0.072)	0.011	0.021
269	22.42	0.07	0.032	(0.072)	0.011	0.021
270	22.50	0.07	0.032	(0.071)	0.011	0.021
271	22.58	0.07	0.032	(0.071)	0.011	0.021
272	22.67	0.07	0.032	(0.071)	0.011	0.021
273	22.75	0.07	0.032	(0.071)	0.011	0.021
274	22.83	0.07	0.032	(0.071)	0.011	0.021
275	22.92	0.07	0.032	(0.071)	0.011	0.021
276	23.00	0.07	0.032	(0.070)	0.011	0.021
277	23.08	0.07	0.032	(0.070)	0.011	0.021
278	23.17	0.07	0.032	(0.070)	0.011	0.021
279	23.25	0.07	0.032	(0.070)	0.011	0.021
280	23.33	0.07	0.032	(0.070)	0.011	0.021
281	23.42	0.07	0.032	(0.070)	0.011	0.021
282	23.50	0.07	0.032	(0.069)	0.011	0.021
283	23.58	0.07	0.032	(0.069)	0.011	0.021
284	23.67	0.07	0.032	(0.069)	0.011	0.021
285	23.75	0.07	0.032	(0.069)	0.011	0.021
286	23.83	0.07	0.032	(0.069)	0.011	0.021
287	23.92	0.07	0.032	(0.069)	0.011	0.021
288	24.00	0.07	0.032	(0.069)	0.011	0.021

(Loss Rate Not Used)

Sum = 100.0 Sum = 33.0

Flood volume = Effective rainfall 2.75(In)
times area 0.6(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 1.26(In)
Total soil loss = 0.063(Ac.Ft)
Total rainfall = 4.01(In)
Flood volume = 5983.5 Cubic Feet
Total soil loss = 2746.0 Cubic Feet

Peak flow rate of this hydrograph = 0.258(CFS)

++

24 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.01	Q				
0+10	0.0001	0.01	Q				
0+15	0.0002	0.01	Q				
0+20	0.0003	0.02	Q				
0+25	0.0005	0.02	Q				
0+30	0.0006	0.02	Q				
0+35	0.0007	0.02	Q				
0+40	0.0008	0.02	Q				
0+45	0.0010	0.02	Q				
0+50	0.0011	0.02	Q				
0+55	0.0013	0.03	Q				
1+ 0	0.0015	0.03	Q				
1+ 5	0.0016	0.02	Q				
1+10	0.0018	0.02	Q				
1+15	0.0019	0.02	Q				
1+20	0.0020	0.02	Q				
1+25	0.0022	0.02	Q				
1+30	0.0023	0.02	Q				
1+35	0.0024	0.02	Q				
1+40	0.0026	0.02	Q				
1+45	0.0027	0.02	Q				
1+50	0.0029	0.02	Q				
1+55	0.0030	0.03	Q				
2+ 0	0.0032	0.03	Q				
2+ 5	0.0034	0.03	Q				
2+10	0.0036	0.03	QV				
2+15	0.0037	0.03	QV				
2+20	0.0039	0.03	QV				
2+25	0.0041	0.03	QV				
2+30	0.0043	0.03	QV				
2+35	0.0045	0.03	QV				
2+40	0.0047	0.03	QV				
2+45	0.0049	0.03	QV				
2+50	0.0051	0.03	QV				
2+55	0.0053	0.03	QV				
3+ 0	0.0056	0.03	QV				
3+ 5	0.0058	0.03	QV				
3+10	0.0060	0.03	QV				
3+15	0.0062	0.03	QV				
3+20	0.0064	0.03	QV				
3+25	0.0067	0.03	QV				
3+30	0.0069	0.03	Q V				
3+35	0.0071	0.03	Q V				
3+40	0.0073	0.03	Q V				
3+45	0.0075	0.03	Q V				
3+50	0.0078	0.04	Q V				
3+55	0.0080	0.04	Q V				
4+ 0	0.0083	0.04	Q V				
4+ 5	0.0086	0.04	Q V				
4+10	0.0088	0.04	Q V				
4+15	0.0091	0.04	Q V				
4+20	0.0094	0.04	Q V				
4+25	0.0097	0.04	Q V				
4+30	0.0100	0.04	Q V				
4+35	0.0103	0.04	Q V				
4+40	0.0106	0.04	Q V				

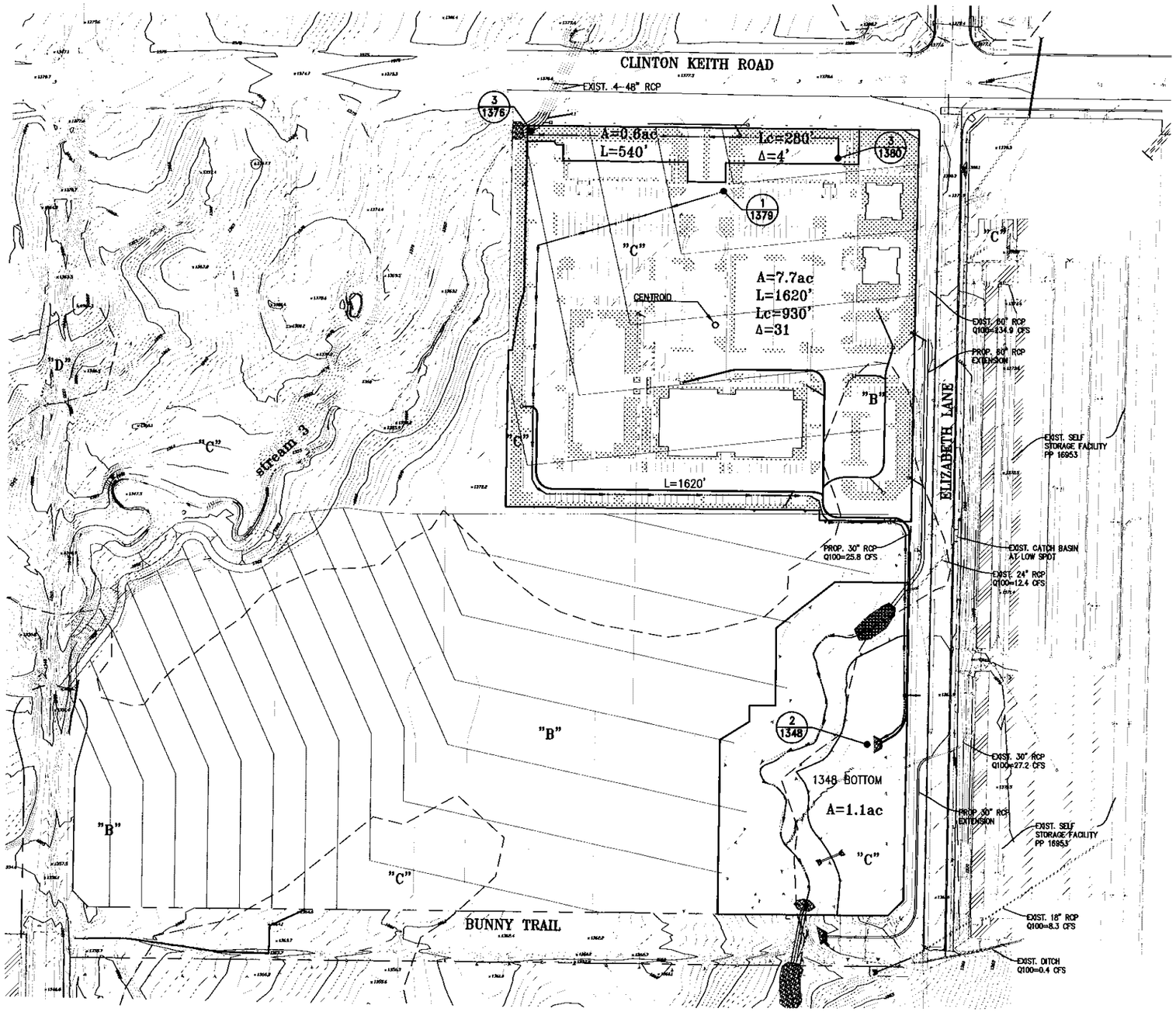
4+45	0.0109	0.04	Q	V
4+50	0.0113	0.05	Q	V
4+55	0.0116	0.05	Q	V
5+ 0	0.0120	0.05	Q	V
5+ 5	0.0123	0.04	Q	V
5+10	0.0125	0.04	Q	V
5+15	0.0128	0.04	Q	V
5+20	0.0131	0.04	Q	V
5+25	0.0134	0.04	Q	V
5+30	0.0137	0.04	Q	V
5+35	0.0140	0.05	Q	V
5+40	0.0144	0.05	Q	V
5+45	0.0147	0.05	Q	V
5+50	0.0151	0.05	Q	V
5+55	0.0154	0.05	Q	V
6+ 0	0.0158	0.05	Q	V
6+ 5	0.0162	0.05	Q	V
6+10	0.0166	0.06	Q	V
6+15	0.0170	0.06	Q	V
6+20	0.0174	0.06	Q	V
6+25	0.0178	0.06	Q	V
6+30	0.0181	0.06	Q	V
6+35	0.0186	0.06	Q	V
6+40	0.0190	0.06	Q	V
6+45	0.0194	0.06	Q	V
6+50	0.0199	0.06	Q	V
6+55	0.0203	0.06	Q	V
7+ 0	0.0208	0.06	Q	V
7+ 5	0.0212	0.06	Q	V
7+10	0.0216	0.06	Q	V
7+15	0.0221	0.06	Q	V
7+20	0.0226	0.07	Q	V
7+25	0.0230	0.07	Q	V
7+30	0.0235	0.07	Q	V
7+35	0.0240	0.07	Q	V
7+40	0.0246	0.08	Q	V
7+45	0.0251	0.08	Q	V
7+50	0.0256	0.08	Q	V
7+55	0.0262	0.08	Q	V
8+ 0	0.0268	0.08	Q	V
8+ 5	0.0274	0.09	Q	V
8+10	0.0280	0.09	Q	V
8+15	0.0287	0.10	Q	V
8+20	0.0294	0.10	Q	V
8+25	0.0300	0.10	Q	V
8+30	0.0307	0.10	Q	V
8+35	0.0314	0.10	Q	V
8+40	0.0321	0.10	Q	V
8+45	0.0328	0.10	Q	V
8+50	0.0335	0.11	Q	V
8+55	0.0343	0.11	Q	V
9+ 0	0.0350	0.11	Q	V
9+ 5	0.0358	0.12	Q	V
9+10	0.0366	0.12	Q	V
9+15	0.0375	0.12	Q	V
9+20	0.0383	0.12	Q	V
9+25	0.0392	0.13	Q	V
9+30	0.0401	0.13	Q	V
9+35	0.0410	0.13	Q	V
9+40	0.0419	0.13	Q	V
9+45	0.0428	0.13	Q	V
9+50	0.0438	0.14	Q	V
9+55	0.0447	0.14	Q	V
10+ 0	0.0457	0.14	Q	V
10+ 5	0.0465	0.12	Q	V
10+10	0.0472	0.10	Q	V
10+15	0.0479	0.10	Q	V

```
10+20        0.0485      0.10  Q          |  V     |          |          |
10+25        0.0492      0.10  Q          |  V     |          |          |
10+30        0.0499      0.10  Q          |  V     |          |          |
10+35        0.0506      0.11  Q          |  V     |          |          |
10+40        0.0515      0.13  Q          |  V     |          |          |
10+45        0.0524      0.13  Q          |   V    |          |          |
10+50        0.0533      0.13  Q          |   V    |          |          |
10+55        0.0541      0.13  Q          |   V    |          |          |
11+ 0        0.0550      0.13  Q          |    V   |          |          |
11+ 5        0.0559      0.12  Q          |    V   |          |          |
11+10        0.0567      0.12  Q          |    V   |          |          |
11+15        0.0576      0.12  Q          |    V   |          |          |
11+20        0.0584      0.12  Q          |     V  |          |          |
11+25        0.0592      0.12  Q          |     V  |          |          |
11+30        0.0601      0.12  Q          |     V  |          |          |
11+35        0.0609      0.12  Q          |     V  |          |          |
11+40        0.0616      0.11  Q          |     V  |          |          |
11+45        0.0624      0.11  Q          |      V |          |          |
11+50        0.0632      0.11  Q          |      V |          |          |
11+55        0.0639      0.11  Q          |      V |          |          |
12+ 0        0.0647      0.12  Q          |      V |          |          |
12+ 5        0.0657      0.14  Q          |       V|          |          |
12+10        0.0668      0.16  Q          |       V|          |          |
12+15        0.0679      0.16  Q          |       V|          |          |
12+20        0.0691      0.17  Q          |        V          |          |
12+25        0.0703      0.17  Q          |        V          |          |
12+30        0.0715      0.18  Q          |        V          |          |
12+35        0.0728      0.19  Q          |         |V        |          |
12+40        0.0741      0.19  Q          |         |V        |          |
12+45        0.0755      0.20  Q          |         |V        |          |
12+50        0.0769      0.20  Q          |         | V       |          |
12+55        0.0783      0.21  Q          |         | V       |          |
13+ 0        0.0797      0.21  Q          |         |  V      |          |
13+ 5        0.0813      0.23  Q          |         |  V      |          |
13+10        0.0831      0.25  |Q         |         |   V     |          |
13+15        0.0848      0.26  |Q         |         |   V     |          |
13+20        0.0866      0.26  |Q         |         |    V    |          |
13+25        0.0884      0.26  |Q         |         |    V    |          |
13+30        0.0902      0.26  |Q         |         |     V   |          |
13+35        0.0916      0.20  Q          |         |     V   |          |
13+40        0.0927      0.16  Q          |         |     V   |          |
13+45        0.0937      0.15  Q          |         |      V  |          |
13+50        0.0948      0.15  Q          |         |      V  |          |
13+55        0.0959      0.15  Q          |         |      V  |          |
14+ 0        0.0969      0.15  Q          |         |       V |          |
14+ 5        0.0981      0.17  Q          |         |       V |          |
14+10        0.0994      0.19  Q          |         |       V |          |
14+15        0.1007      0.19  Q          |         |        V|          |
14+20        0.1020      0.19  Q          |         |        V|          |
14+25        0.1033      0.19  Q          |         |         V          |
14+30        0.1046      0.18  Q          |         |         V          |
14+35        0.1059      0.19  Q          |         |         V          |
14+40        0.1071      0.19  Q          |         |          |V       |
14+45        0.1084      0.19  Q          |         |          |V       |
14+50        0.1097      0.18  Q          |         |          |V       |
14+55        0.1109      0.18  Q          |         |          | V      |
15+ 0        0.1121      0.18  Q          |         |          | V      |
15+ 5        0.1133      0.17  Q          |         |          | V      |
15+10        0.1145      0.17  Q          |         |          |  V     |
15+15        0.1156      0.17  Q          |         |          |  V     |
15+20        0.1168      0.16  Q          |         |          |  V     |
15+25        0.1179      0.16  Q          |         |          |   V    |
15+30        0.1190      0.16  Q          |         |          |   V    |
15+35        0.1199      0.14  Q          |         |          |   V    |
15+40        0.1208      0.13  Q          |         |          |    V   |
15+45        0.1216      0.12  Q          |         |          |    V   |
15+50        0.1225      0.12  Q          |         |          |    V   |
```

15+55	0.1233	0.12	Q				V
16+ 0	0.1242	0.12	Q				V
16+ 5	0.1247	0.07	Q				V
16+10	0.1249	0.03	Q				V
16+15	0.1251	0.03	Q				V
16+20	0.1253	0.03	Q				V
16+25	0.1254	0.03	Q				V
16+30	0.1256	0.03	Q				V
16+35	0.1258	0.02	Q				V
16+40	0.1259	0.02	Q				V
16+45	0.1260	0.02	Q				V
16+50	0.1262	0.02	Q				V
16+55	0.1263	0.02	Q				V
17+ 0	0.1264	0.02	Q				V
17+ 5	0.1266	0.03	Q				V
17+10	0.1268	0.03	Q				V
17+15	0.1270	0.03	Q				V
17+20	0.1273	0.03	Q				V
17+25	0.1275	0.03	Q				V
17+30	0.1277	0.03	Q				V
17+35	0.1279	0.03	Q				V
17+40	0.1281	0.03	Q				V
17+45	0.1284	0.03	Q				V
17+50	0.1286	0.03	Q				V
17+55	0.1287	0.03	Q				V
18+ 0	0.1289	0.03	Q				V
18+ 5	0.1291	0.03	Q				V
18+10	0.1293	0.03	Q				V
18+15	0.1295	0.03	Q				V
18+20	0.1296	0.03	Q				V
18+25	0.1298	0.03	Q				V
18+30	0.1300	0.03	Q				V
18+35	0.1301	0.02	Q				V
18+40	0.1303	0.02	Q				V
18+45	0.1304	0.02	Q				V
18+50	0.1305	0.02	Q				V
18+55	0.1306	0.01	Q				V
19+ 0	0.1307	0.01	Q				V
19+ 5	0.1308	0.02	Q				V
19+10	0.1309	0.02	Q				V
19+15	0.1311	0.02	Q				V
19+20	0.1312	0.02	Q				V
19+25	0.1314	0.03	Q				V
19+30	0.1316	0.03	Q				V
19+35	0.1317	0.02	Q				V
19+40	0.1319	0.02	Q				V
19+45	0.1320	0.02	Q				V
19+50	0.1321	0.02	Q				V
19+55	0.1322	0.01	Q				V
20+ 0	0.1323	0.01	Q				V
20+ 5	0.1324	0.02	Q				V
20+10	0.1325	0.02	Q				V
20+15	0.1327	0.02	Q				V
20+20	0.1328	0.02	Q				V
20+25	0.1329	0.02	Q				V
20+30	0.1331	0.02	Q				V
20+35	0.1332	0.02	Q				V
20+40	0.1333	0.02	Q				V
20+45	0.1334	0.02	Q				V
20+50	0.1336	0.02	Q				V
20+55	0.1336	0.01	Q				V
21+ 0	0.1337	0.01	Q				V
21+ 5	0.1338	0.02	Q				V
21+10	0.1340	0.02	Q				V
21+15	0.1341	0.02	Q				V
21+20	0.1342	0.02	Q				V
21+25	0.1343	0.01	Q				V

21+30	0.1344	0.01	Q	|	|	|	V|
21+35	0.1345	0.02	Q	|	|	|	V|
21+40	0.1346	0.02	Q	|	|	|	V|
21+45	0.1348	0.02	Q	|	|	|	V|
21+50	0.1349	0.02	Q	|	|	|	V|
21+55	0.1350	0.01	Q	|	|	|	V|
22+ 0	0.1351	0.01	Q	|	|	|	V|
22+ 5	0.1352	0.02	Q	|	|	|	V|
22+10	0.1353	0.02	Q	|	|	|	V|
22+15	0.1354	0.02	Q	|	|	|	V|
22+20	0.1355	0.02	Q	|	|	|	V|
22+25	0.1356	0.01	Q	|	|	|	V|
22+30	0.1357	0.01	Q	|	|	|	V|
22+35	0.1358	0.01	Q	|	|	|	V|
22+40	0.1359	0.01	Q	|	|	|	V|
22+45	0.1360	0.01	Q	|	|	|	V|
22+50	0.1361	0.01	Q	|	|	|	V|
22+55	0.1362	0.01	Q	|	|	|	V|
23+ 0	0.1363	0.01	Q	|	|	|	V|
23+ 5	0.1363	0.01	Q	|	|	|	V|
23+10	0.1364	0.01	Q	|	|	|	V|
23+15	0.1365	0.01	Q	|	|	|	V|
23+20	0.1366	0.01	Q	|	|	|	V|
23+25	0.1367	0.01	Q	|	|	|	V|
23+30	0.1368	0.01	Q	|	|	|	V|
23+35	0.1369	0.01	Q	|	|	|	V|
23+40	0.1370	0.01	Q	|	|	|	V|
23+45	0.1370	0.01	Q	|	|	|	V|
23+50	0.1371	0.01	Q	|	|	|	V|
23+55	0.1372	0.01	Q	|	|	|	V|
24+ 0	0.1373	0.01	Q	|	|	|	V|
24+ 5	0.1374	0.01	Q	|	|	|	V|
24+10	0.1374	0.00	Q	|	|	|	V|
24+15	0.1374	0.00	Q	|	|	|	V|

Unit Hydrograph Hydrology Map



LEGEND

———	DRAINAGE BOUNDARY
—·····→	FLOW LINE
L=XXX'	LENGTH OF FLOW
(1 / 1385)	NODE NUMBER / SURFACE ELEVATION
(X.XXAC / X)	DRAINAGE SUBAREA (ACRES) / DRAINAGE SUBAREA DESIGNATION

N W E S

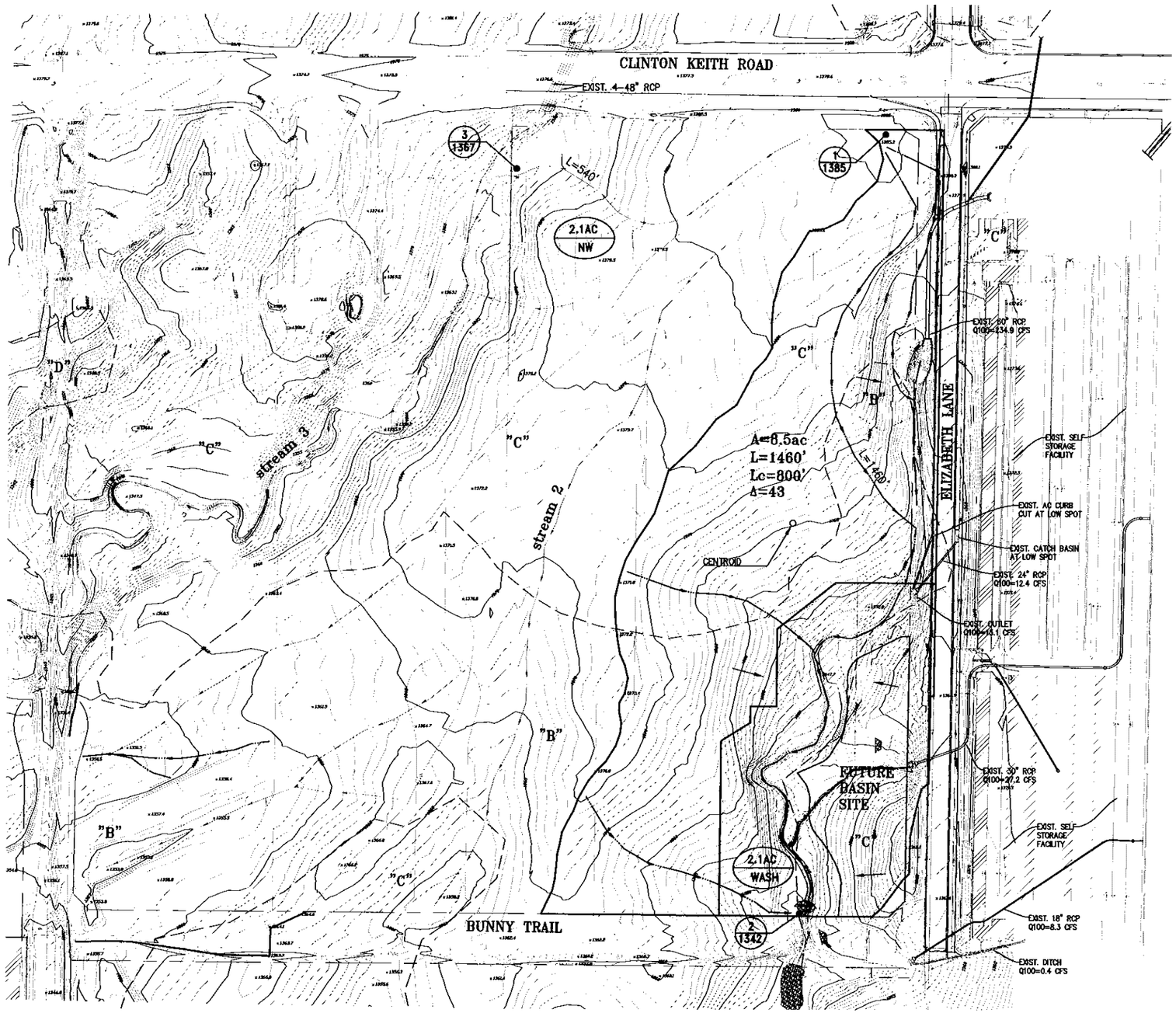
1" = 80'

40 0 80

CITY OF WILDOMAR

RANCON MEDICAL AND EDUCATIONAL CENTER
TPM 36492
PLOT PLAN UNIT HYDROGRAPH HYDROLOGY MAP
POST-DEVELOPED

SCALE: 1"=40'	ALBERT A. WEBB ASSOCIATES — ENGINEERING CONSULTANTS, 3788 McCRAY STREET, RIVERSIDE CA. 92506, PH. (951) 686-1070, FAX (951) 788-1256	W.O. 12-0031	
DATE: 08/01/2012		SHEET 1	
DESIGNED: RRN, ETA		OF 1 SHEETS	
CHECKED: ETA		DWG. NO.	
PLN CK REF:			
F.B.			



LEGEND

———	DRAINAGE BOUNDARY
-·-·-→	FLOW LINE
L=XXX'	LENGTH OF FLOW
(1 / 1385)	NODE NUMBER / SURFACE ELEVATION
(X.XXAC / X)	DRAINAGE SUBAREA (ACRES) / DRAINAGE SUBAREA DESIGNATION
▨	AREA REMAINS UNDEVELOPED

N
W WEBB E
S

1" = 80'
40 0 80

CITY OF WILDOMAR

RANCON MEDICAL AND EDUCATIONAL CENTER
TPM 36492
PLOT PLAN UNIT HYDROGRAPH HYDROLOGY MAP
PRE-DEVELOPED

SCALE: 1"=40'	ALBERT A. WEBB ASSOCIATES	ENGINEERING CONSULTANTS 3788 McGRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	W.O. 12-0031
DATE: 08/01/2012			SHEET 1
DESIGNED: RRN, ETA			OF 1 SHEETS
CHECKED: ETA			DWG. NO.
PLN CK REF:			
F.B.			

SECTION 4 - Basin Routing Calculations

Rancon MC 12-0039

PLOT PLAN DETENTION/WQMP BASIN OUTPUT SUMMARY

STORM	DURATION	Unit Hydrograph Results				Basin Routing Results			
		EXISTING CONDITIONS		DEVELOPED CONDITIONS					
		Flood Volume Ac.Ft.	Peak Flow CFS	Flood Volume Ac.Ft.	Peak Flow CFS	Basin Volume Ac.Ft.	Routed Peak CFS	Basin Depth Ft.	W.S. ELEV. Ft.
2-YEAR	24-HOUR	0.171	0.28	1.366	2.3	1.003	0.28	2.7	1350.70
10-YEAR	24-HOUR	0.622	2.41	2.264	3.8	1.323	2.38	3.4	1351.40
100-YEAR	1-HOUR	-	-	0.990	25.5	0.6' WEIR HEAD BYPASS			1352.00

Basin bottom 1348 feet, Sand Filter
Basin operational depth 3.4 feet - 2 and 10-yr storm event mitigated
100-yr storm event - bypass - additional 0.6 feet of weir head needed
Basin top 1353 feet, Basin freeboard 1'
Total Basin Depth = 5 feet

Rancon MC W.O.12-0031

DETENTION BASINS

OUTLET RATING CURVE

Sand Filtration Rate assumed 1in/hr
Sand Area 12,000 ft^2

No.	WATER SURF. ELEV. - Ft.	BASIN DEPTH - Ft.	BASIN VOLUME Ac.Ft.	Q out/filtration c.f.s.	Q out/6X4.5"orifice c.f.s.	Qout/total c.f.s.
1	1348.0	0.0	0	0	0	0.000
2	1348.5	0.5	0.163	0.280	0	0.280
3	1349.0	1.0	0.337	0.280	0	0.280
4	1349.5	1.5	0.523	0.280	0	0.280
5	1350.0	2.0	0.720	0.280	0	0.280
6	1350.5	2.5	0.930	0.280	0	0.280
7	1350.7	2.7	1.019	0.280	0	0.280
8	1351.0	3.0	1.153	0.280	1.088	1.368
9	1351.5	3.5	1.396	0.280	2.539	2.819
10	1352.0	4.0	1.671	0.280	3.422	3.702

w.o. 2012-0031

Rancon Medical Center Plot Plan

Extended detention Basin with Sand Bottom Filter

ORIFICE CALCULATIONS

10-year event orifice at 1350.7

Diameter (in)	4.5	
DIAMETER (ft)	0.375	
AREA (ft2)=	0.110	ft^2
# of openings	6	

EQUATIONS

Q=CdA(2gh)^0.5		
G	32.2	ft/s^2
h=(H-diameter/2)		
Cd	0.61	

ORIFICE

Elevation	H (ft)	h (ft)	Q (cfs)
1348.0	0.00		
1349.0	0.00		
1350.0	0.00		
1350.5	0.00	0.00	0.0
1350.7	0.00	0.00	0.0
1351.0	0.30	0.113	1.088
1351.5	0.80	0.613	2.539
1352.0	1.30	1.113	3.422

w.o. 2012-0031

Rancon Medical Center Area 3
Extended detention Basin with Sand Bottom Filter
Top of Outlet Structure
100-yr Emergency Weir

EQUATIONS

Q=CL(h)^(3/2)
where
L= 24 ft
C= 3.3

ELEVATION	BASIN DEPTH	WEIR HIGH	Q (WEIR)
Ft	Ft	Ft	CFS
1351.40	3.40	0	0
1351.50	3.50	0.10	1.8
1352.00	**4.00**	**0.60**	**25.8**

Rational Method Q100=25.8 cfs
Init Hydrograph Q100=25.5

Top of Basin 1353 Elevation - 1 foot Freeboard OK!

Project: Rancon MC 12-0031
Basin Description: Area 3 Basin – Plot Plan

Contour Elevation	Contour Area (sq. ft)	Depth (ft)	Incremental Volume Avg. End (cu. ft)	Cumulative Volume Avg. End (cu. ft)	Incremental Volume Conic (cu. ft)	Cumulative Volume Conic (cu. ft)	Total Volume (ac.ft.)
1,348.00	13705	N/A	N/A	0	N/A	0	0
1,348.50	14,666	0.5	7091	7091	7091	7091	0.163
1,349.00	15,673	0.5	7585	14676	7583	14674	0.337
1,349.50	16,705	0.5	8094	22770	8093	22767	0.523
1,350.00	17,761	0.5	8616	31387	8615	31383	0.720
1,350.50	18,843	0.5	9151	40538	9150	40532	0.930
1,351.00	19,949	0.5	9698	50235	9697	50229	1.153
1,351.50	22,385	0.5	10584	60819	10578	60806	1.396
1,352.00	25,529	0.5	11979	72798	11970	72776	1.671
1,352.50	28,250	0.5	13445	86242	13439	86215	1.979

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 08/30/12

2-yr 24-hr basin routing

Program License Serial Number 4010

********** HYDROGRAPH INFORMATION **********

From study/file name: rmec1242.rte
**********HYDROGRAPH DATA**********
Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2.249 (CFS)
Total volume = 1.366 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 292
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.33(Ft.)

Initial basin depth = 0.33 (Ft.)
Initial basin storage = 0.11 (Ac.Ft)
Initial basin outflow = 0.18 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.163	0.280	0.162	0.164
1.000	0.337	0.280	0.336	0.338
1.500	0.523	0.280	0.522	0.524
2.000	0.720	0.280	0.719	0.721
2.500	0.930	0.280	0.929	0.931
3.000	1.153	0.280	1.152	1.154
3.500	1.396	0.280	1.395	1.397
4.000	1.671	0.280	1.670	1.672

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.6	1.12	1.69	2.25	Depth (Ft.)
0.083	0.05	0.18	0.106	I O					0.32
0.167	0.11	0.18	0.105	IO					0.32
0.250	0.12	0.18	0.105	IO					0.32
0.333	0.15	0.18	0.104	O					0.32
0.417	0.19	0.18	0.104	O					0.32
0.500	0.19	0.18	0.104	O					0.32
0.583	0.20	0.18	0.105	O					0.32
0.667	0.20	0.18	0.105	O					0.32
0.750	0.20	0.18	0.105	O					0.32
0.833	0.22	0.18	0.105	OI					0.32
0.917	0.25	0.18	0.105	OI					0.32
1.000	0.26	0.18	0.106	OI					0.32
1.083	0.24	0.18	0.106	OI					0.33
1.167	0.21	0.18	0.107	O					0.33
1.250	0.20	0.18	0.107	O					0.33
1.333	0.20	0.18	0.107	O					0.33
1.417	0.20	0.18	0.107	O					0.33
1.500	0.20	0.18	0.107	O					0.33
1.583	0.20	0.18	0.107	O					0.33
1.667	0.20	0.18	0.107	O					0.33
1.750	0.20	0.18	0.107	O					0.33
1.833	0.22	0.18	0.108	OI					0.33
1.917	0.25	0.19	0.108	OI					0.33
2.000	0.26	0.19	0.108	OI					0.33
2.083	0.26	0.19	0.109	OI					0.33
2.167	0.26	0.19	0.110	OI					0.34
2.250	0.26	0.19	0.110	OI					0.34
2.333	0.26	0.19	0.111	OI					0.34
2.417	0.26	0.19	0.111	OI					0.34
2.500	0.26	0.19	0.112	OI					0.34
2.583	0.29	0.19	0.112	O I					0.34
2.667	0.32	0.19	0.113	O I					0.35
2.750	0.33	0.20	0.114	O I					0.35
2.833	0.33	0.20	0.115	O I					0.35
2.917	0.33	0.20	0.116	O I					0.35
3.000	0.33	0.20	0.117	O I					0.36
3.083	0.33	0.20	0.117	O I					0.36
3.167	0.33	0.20	0.118	O I					0.36
3.250	0.33	0.20	0.119	O I					0.37
3.333	0.33	0.21	0.120	O I					0.37
3.417	0.33	0.21	0.121	O I					0.37
3.500	0.33	0.21	0.122	O I					0.37
3.583	0.33	0.21	0.123	O I					0.38
3.667	0.33	0.21	0.123	OI					0.38
3.750	0.33	0.21	0.124	OI					0.38
3.833	0.36	0.21	0.125	O I					0.38
3.917	0.39	0.22	0.126	O I					0.39
4.000	0.39	0.22	0.127	O I					0.39
4.083	0.40	0.22	0.129	O I					0.39
4.167	0.40	0.22	0.130	O I					0.40
4.250	0.40	0.22	0.131	O I					0.40
4.333	0.42	0.23	0.132	O I					0.41
4.417	0.45	0.23	0.134	O I					0.41
4.500	0.46	0.23	0.135	O I					0.41
4.583	0.46	0.23	0.137	O I					0.42
4.667	0.46	0.24	0.138	O I					0.42
4.750	0.46	0.24	0.140	O I					0.43
4.833	0.49	0.24	0.141	O I					0.43
4.917	0.52	0.25	0.143	O I					0.44
5.000	0.52	0.25	0.145	O I					0.45
5.083	0.48	0.25	0.147	O I					0.45

5.167	0.42	0.25	0.148	O I				0.45
5.250	0.41	0.26	0.149	O I				0.46
5.333	0.42	0.26	0.150	O I				0.46
5.417	0.45	0.26	0.152	O I				0.46
5.500	0.46	0.26	0.153	O I				0.47
5.583	0.49	0.27	0.154	O I				0.47
5.667	0.52	0.27	0.156	O I				0.48
5.750	0.52	0.27	0.158	O I				0.48
5.833	0.53	0.27	0.159	O I				0.49
5.917	0.53	0.28	0.161	O I				0.49
6.000	0.53	0.28	0.163	O I				0.50
6.083	0.55	0.28	0.165	O I				0.50
6.167	0.58	0.28	0.167	O I				0.51
6.250	0.59	0.28	0.169	O I				0.52
6.333	0.59	0.28	0.171	O I				0.52
6.417	0.60	0.28	0.173	O I				0.53
6.500	0.60	0.28	0.175	O I				0.54
6.583	0.62	0.28	0.178	O I				0.54
6.667	0.65	0.28	0.180	O I				0.55
6.750	0.66	0.28	0.183	O I				0.56
6.833	0.66	0.28	0.185	O I				0.56
6.917	0.66	0.28	0.188	O I				0.57
7.000	0.66	0.28	0.190	O I				0.58
7.083	0.66	0.28	0.193	O I				0.59
7.167	0.66	0.28	0.196	O I				0.59
7.250	0.66	0.28	0.198	O I				0.60
7.333	0.69	0.28	0.201	O I				0.61
7.417	0.72	0.28	0.204	O I				0.62
7.500	0.72	0.28	0.207	O I				0.63
7.583	0.75	0.28	0.210	O I				0.64
7.667	0.78	0.28	0.213	O I				0.64
7.750	0.79	0.28	0.217	O I				0.65
7.833	0.82	0.28	0.221	O I				0.67
7.917	0.85	0.28	0.224	O I				0.68
8.000	0.86	0.28	0.228	O I				0.69
8.083	0.91	0.28	0.232	O I				0.70
8.167	0.97	0.28	0.237	O I				0.71
8.250	0.98	0.28	0.242	O I				0.73
8.333	0.99	0.28	0.247	O I				0.74
8.417	0.99	0.28	0.252	O I				0.75
8.500	0.99	0.28	0.256	O I				0.77
8.583	1.02	0.28	0.261	O I				0.78
8.667	1.05	0.28	0.267	O I				0.80
8.750	1.05	0.28	0.272	O I				0.81
8.833	1.08	0.28	0.277	O I				0.83
8.917	1.11	0.28	0.283	O I				0.84
9.000	1.12	0.28	0.289	O I				0.86
9.083	1.17	0.28	0.295	O I				0.88
9.167	1.23	0.28	0.301	O I				0.90
9.250	1.25	0.28	0.308	O I				0.92
9.333	1.28	0.28	0.314	O I				0.94
9.417	1.31	0.28	0.321	O I				0.96
9.500	1.32	0.28	0.329	O I				0.98
9.583	1.35	0.28	0.336	O I				1.00
9.667	1.38	0.28	0.343	O I				1.02
9.750	1.38	0.28	0.351	O I				1.04
9.833	1.41	0.28	0.358	O I				1.06
9.917	1.44	0.28	0.366	O I				1.08
10.000	1.45	0.28	0.374	O I				1.10
10.083	1.28	0.28	0.382	O I				1.12
10.167	1.07	0.28	0.388	O I				1.14
10.250	1.02	0.28	0.393	O I				1.15
10.333	1.00	0.28	0.398	O I				1.17
10.417	0.99	0.28	0.403	O I				1.18
10.500	0.99	0.28	0.408	O I				1.19
10.583	1.12	0.28	0.414	O I				1.21
10.667	1.27	0.28	0.420	O I				1.22

```
10.750   1.30   0.28   0.427   | O    |       | I     |       |   1.24
10.833   1.31   0.28   0.434   | O    |       | I     |       |   1.26
10.917   1.32   0.28   0.441   | O    |       | I     |       |   1.28
11.000   1.32   0.28   0.448   | O    |       | I     |       |   1.30
11.083   1.30   0.28   0.455   | O    |       | I     |       |   1.32
11.167   1.27   0.28   0.462   | O    |       | I     |       |   1.34
11.250   1.26   0.28   0.469   | O    |       |I      |       |   1.35
11.333   1.26   0.28   0.476   | O    |       |I      |       |   1.37
11.417   1.26   0.28   0.482   | O    |       |I      |       |   1.39
11.500   1.26   0.28   0.489   | O    |       |I      |       |   1.41
11.583   1.21   0.28   0.496   | O    |       |I      |       |   1.43
11.667   1.15   0.28   0.502   | O    |       I       |       |   1.44
11.750   1.13   0.28   0.508   | O    |       I       |       |   1.46
11.833   1.15   0.28   0.514   | O    |       I       |       |   1.48
11.917   1.18   0.28   0.520   | O    |       I       |       |   1.49
12.000   1.19   0.28   0.526   | O    |       I       |       |   1.51
12.083   1.36   0.28   0.533   | O    |       |  I    |       |   1.53
12.167   1.57   0.28   0.541   | O    |       |     I |       |   1.55
12.250   1.62   0.28   0.550   | O    |       |      I|       |   1.57
12.333   1.67   0.28   0.560   | O    |       |      I|       |   1.59
12.417   1.71   0.28   0.569   | O    |       |       I       |   1.62
12.500   1.72   0.28   0.579   | O    |       |       I       |   1.64
12.583   1.77   0.28   0.589   | O    |       |       |I      |   1.67
12.667   1.83   0.28   0.600   | O    |       |       | I     |   1.69
12.750   1.84   0.28   0.610   | O    |       |       | I     |   1.72
12.833   1.87   0.28   0.621   | O    |       |       | I     |   1.75
12.917   1.91   0.28   0.632   | O    |       |       |  I    |   1.78
13.000   1.91   0.28   0.644   | O    |       |       |  I    |   1.81
13.083   2.04   0.28   0.655   | O    |       |       |    I  |   1.84
13.167   2.19   0.28   0.668   | O    |       |       |      I|   1.87
13.250   2.23   0.28   0.681   | O    |       |       |      I|   1.90
13.333   2.24   0.28   0.695   | O    |       |       |      I|   1.94
13.417   2.25   0.28   0.708   | O    |       |       |       I   1.97
13.500   2.25   0.28   0.722   | O    |       |       |       I   2.00
13.583   1.98   0.28   0.734   | O    |       |       |   I   |   2.03
13.667   1.64   0.28   0.745   | O    |       |      I|       |   2.06
13.750   1.57   0.28   0.754   | O    |       |     I |       |   2.08
13.833   1.54   0.28   0.763   | O    |       |    I  |       |   2.10
13.917   1.52   0.28   0.771   | O    |       |    I  |       |   2.12
14.000   1.52   0.28   0.780   | O    |       |    I  |       |   2.14
14.083   1.62   0.28   0.789   | O    |       |      I|       |   2.16
14.167   1.74   0.28   0.799   | O    |       |       I       |   2.19
14.250   1.77   0.28   0.809   | O    |       |       |I      |   2.21
14.333   1.75   0.28   0.819   | O    |       |       I       |   2.24
14.417   1.73   0.28   0.829   | O    |       |       I       |   2.26
14.500   1.72   0.28   0.839   | O    |       |       I       |   2.28
14.583   1.72   0.28   0.849   | O    |       |       I       |   2.31
14.667   1.72   0.28   0.859   | O    |       |       I       |   2.33
14.750   1.72   0.28   0.869   | O    |       |       I       |   2.35
14.833   1.69   0.28   0.879   | O    |       |       I       |   2.38
14.917   1.66   0.28   0.888   | O    |       |      I|       |   2.40
15.000   1.66   0.28   0.898   | O    |       |      I|       |   2.42
15.083   1.63   0.28   0.907   | O    |       |      I|       |   2.45
15.167   1.60   0.28   0.916   | O    |       |     I |       |   2.47
15.250   1.59   0.28   0.925   | O    |       |     I |       |   2.49
15.333   1.56   0.28   0.934   | O    |       |     I |       |   2.51
15.417   1.53   0.28   0.943   | O    |       |    I  |       |   2.53
15.500   1.53   0.28   0.952   | O    |       |    I  |       |   2.55
15.583   1.42   0.28   0.960   | O    |       |   I   |       |   2.57
15.667   1.30   0.28   0.967   | O    |       | I     |       |   2.58
15.750   1.27   0.28   0.974   | O    |       | I     |       |   2.60
15.833   1.26   0.28   0.981   | O    |       |I      |       |   2.61
15.917   1.26   0.28   0.988   | O    |       |I      |       |   2.63
16.000   1.26   0.28   0.994   | O    |       |I      |       |   2.64
16.083   0.89   0.28   1.000   | O    |   I   |       |       |   2.66
16.167   0.43   0.28   1.003   | O  I |       |       |       |   2.66
16.250   0.33   0.28   1.003   | OI   |       |       |       |   2.66
```

16.333	0.29	0.28	1.003	OI				2.66
16.417	0.26	0.28	1.003	O				2.66
16.500	0.26	0.28	1.003	O				2.66
16.583	0.24	0.28	1.003	O				2.66
16.667	0.21	0.28	1.003	IO				2.66
16.750	0.20	0.28	1.002	IO				2.66
16.833	0.20	0.28	1.002	IO				2.66
16.917	0.20	0.28	1.001	IO				2.66
17.000	0.20	0.28	1.001	IO				2.66
17.083	0.25	0.28	1.000	O				2.66
17.167	0.31	0.28	1.000	OI				2.66
17.250	0.32	0.28	1.000	OI				2.66
17.333	0.33	0.28	1.001	OI				2.66
17.417	0.33	0.28	1.001	OI				2.66
17.500	0.33	0.28	1.001	OI				2.66
17.583	0.33	0.28	1.002	OI				2.66
17.667	0.33	0.28	1.002	OI				2.66
17.750	0.33	0.28	1.002	OI				2.66
17.833	0.31	0.28	1.003	OI				2.66
17.917	0.28	0.28	1.003	O				2.66
18.000	0.27	0.28	1.003	O				2.66
18.083	0.27	0.28	1.003	O				2.66
18.167	0.26	0.28	1.003	O				2.66
18.250	0.26	0.28	1.002	O				2.66
18.333	0.26	0.28	1.002	O				2.66
18.417	0.26	0.28	1.002	O				2.66
18.500	0.26	0.28	1.002	O				2.66
18.583	0.24	0.28	1.002	O				2.66
18.667	0.21	0.28	1.002	IO				2.66
18.750	0.20	0.28	1.001	IO				2.66
18.833	0.18	0.28	1.000	IO				2.66
18.917	0.14	0.28	1.000	IO				2.66
19.000	0.14	0.28	0.999	I O				2.65
19.083	0.16	0.28	0.998	IO				2.65
19.167	0.19	0.28	0.997	IO				2.65
19.250	0.19	0.28	0.996	IO				2.65
19.333	0.22	0.28	0.996	O				2.65
19.417	0.25	0.28	0.996	O				2.65
19.500	0.26	0.28	0.995	O				2.65
19.583	0.24	0.28	0.995	O				2.65
19.667	0.21	0.28	0.995	IO				2.65
19.750	0.20	0.28	0.994	IO				2.64
19.833	0.18	0.28	0.994	IO				2.64
19.917	0.14	0.28	0.993	IO				2.64
20.000	0.14	0.28	0.992	I O				2.64
20.083	0.16	0.28	0.991	IO				2.64
20.167	0.19	0.28	0.990	IO				2.64
20.250	0.19	0.28	0.990	IO				2.63
20.333	0.20	0.28	0.989	IO				2.63
20.417	0.20	0.28	0.988	IO				2.63
20.500	0.20	0.28	0.988	IO				2.63
20.583	0.20	0.28	0.987	IO				2.63
20.667	0.20	0.28	0.987	IO				2.63
20.750	0.20	0.28	0.986	IO				2.63
20.833	0.17	0.28	0.986	IO				2.62
20.917	0.14	0.28	0.985	IO				2.62
21.000	0.14	0.28	0.984	I O				2.62
21.083	0.16	0.28	0.983	IO				2.62
21.167	0.19	0.28	0.982	IO				2.62
21.250	0.19	0.28	0.982	IO				2.62
21.333	0.17	0.28	0.981	IO				2.61
21.417	0.14	0.28	0.980	IO				2.61
21.500	0.14	0.28	0.979	I O				2.61
21.583	0.16	0.28	0.978	IO				2.61
21.667	0.19	0.28	0.977	IO				2.61
21.750	0.19	0.28	0.977	IO				2.60
21.833	0.17	0.28	0.976	IO				2.60

21.917	0.14	0.28	0.975	IO				2.60
22.000	0.14	0.28	0.974	I O				2.60
22.083	0.16	0.28	0.973	IO				2.60
22.167	0.19	0.28	0.973	IO				2.60
22.250	0.19	0.28	0.972	IO				2.59
22.333	0.17	0.28	0.971	IO				2.59
22.417	0.14	0.28	0.971	IO				2.59
22.500	0.14	0.28	0.970	I O				2.59
22.583	0.13	0.28	0.969	I O				2.59
22.667	0.13	0.28	0.968	I O				2.58
22.750	0.13	0.28	0.967	I O				2.58
22.833	0.13	0.28	0.966	I O				2.58
22.917	0.13	0.28	0.965	I O				2.58
23.000	0.13	0.28	0.964	I O				2.58
23.083	0.13	0.28	0.962	I O				2.57
23.167	0.13	0.28	0.961	I O				2.57
23.250	0.13	0.28	0.960	I O				2.57
23.333	0.13	0.28	0.959	I O				2.57
23.417	0.13	0.28	0.958	I O				2.56
23.500	0.13	0.28	0.957	I O				2.56
23.583	0.13	0.28	0.956	I O				2.56
23.667	0.13	0.28	0.955	I O				2.56
23.750	0.13	0.28	0.954	I O				2.55
23.833	0.13	0.28	0.953	I O				2.55
23.917	0.13	0.28	0.952	I O				2.55
24.000	0.13	0.28	0.951	I O				2.55
24.083	0.08	0.28	0.950	I O				2.55
24.167	0.02	0.28	0.949	I O				2.54
24.250	0.01	0.28	0.947	I O				2.54
24.333	0.00	0.28	0.945	I O				2.53
24.417	0.00	0.28	0.943	I O				2.53
24.500	0.00	0.28	0.941	I O				2.52
24.583	0.00	0.28	0.939	I O				2.52
24.667	0.00	0.28	0.937	I O				2.52
24.750	0.00	0.28	0.935	I O				2.51
24.833	0.00	0.28	0.933	I O				2.51
24.917	0.00	0.28	0.931	I O				2.50
25.000	0.00	0.28	0.929	I O				2.50
25.083	0.00	0.28	0.927	I O				2.49
25.167	0.00	0.28	0.926	I O				2.49
25.250	0.00	0.28	0.924	I O				2.48
25.333	0.00	0.28	0.922	I O				2.48
25.417	0.00	0.28	0.920	I O				2.48
25.500	0.00	0.28	0.918	I O				2.47
25.583	0.00	0.28	0.916	I O				2.47
25.667	0.00	0.28	0.914	I O				2.46
25.750	0.00	0.28	0.912	I O				2.46
25.833	0.00	0.28	0.910	I O				2.45
25.917	0.00	0.28	0.908	I O				2.45
26.000	0.00	0.28	0.906	I O				2.44
26.083	0.00	0.28	0.904	I O				2.44
26.167	0.00	0.28	0.902	I O				2.43
26.250	0.00	0.28	0.900	I O				2.43
26.333	0.00	0.28	0.899	I O				2.43
26.417	0.00	0.28	0.897	I O				2.42
26.500	0.00	0.28	0.895	I O				2.42
26.583	0.00	0.28	0.893	I O				2.41
26.667	0.00	0.28	0.891	I O				2.41
26.750	0.00	0.28	0.889	I O				2.40
26.833	0.00	0.28	0.887	I O				2.40
26.917	0.00	0.28	0.885	I O				2.39
27.000	0.00	0.28	0.883	I O				2.39
27.083	0.00	0.28	0.881	I O				2.38
27.167	0.00	0.28	0.879	I O				2.38
27.250	0.00	0.28	0.877	I O				2.37
27.333	0.00	0.28	0.875	I O				2.37
27.417	0.00	0.28	0.874	I O				2.37

27.500	0.00	0.28	0.872	I	O				2.36
27.583	0.00	0.28	0.870	I	O				2.36
27.667	0.00	0.28	0.868	I	O				2.35
27.750	0.00	0.28	0.866	I	O				2.35
27.833	0.00	0.28	0.864	I	O				2.34
27.917	0.00	0.28	0.862	I	O				2.34
28.000	0.00	0.28	0.860	I	O				2.33
28.083	0.00	0.28	0.858	I	O				2.33
28.167	0.00	0.28	0.856	I	O				2.32
28.250	0.00	0.28	0.854	I	O				2.32
28.333	0.00	0.28	0.852	I	O				2.31
28.417	0.00	0.28	0.850	I	O				2.31
28.500	0.00	0.28	0.848	I	O				2.31
28.583	0.00	0.28	0.847	I	O				2.30
28.667	0.00	0.28	0.845	I	O				2.30
28.750	0.00	0.28	0.843	I	O				2.29
28.833	0.00	0.28	0.841	I	O				2.29
28.917	0.00	0.28	0.839	I	O				2.28
29.000	0.00	0.28	0.837	I	O				2.28
29.083	0.00	0.28	0.835	I	O				2.27
29.167	0.00	0.28	0.833	I	O				2.27
29.250	0.00	0.28	0.831	I	O				2.26
29.333	0.00	0.28	0.829	I	O				2.26
29.417	0.00	0.28	0.827	I	O				2.26
29.500	0.00	0.28	0.825	I	O				2.25
29.583	0.00	0.28	0.823	I	O				2.25
29.667	0.00	0.28	0.821	I	O				2.24
29.750	0.00	0.28	0.820	I	O				2.24
29.833	0.00	0.28	0.818	I	O				2.23
29.917	0.00	0.28	0.816	I	O				2.23
30.000	0.00	0.28	0.814	I	O				2.22
30.083	0.00	0.28	0.812	I	O				2.22
30.167	0.00	0.28	0.810	I	O				2.21
30.250	0.00	0.28	0.808	I	O				2.21
30.333	0.00	0.28	0.806	I	O				2.20
30.417	0.00	0.28	0.804	I	O				2.20
30.500	0.00	0.28	0.802	I	O				2.20
30.583	0.00	0.28	0.800	I	O				2.19
30.667	0.00	0.28	0.798	I	O				2.19
30.750	0.00	0.28	0.796	I	O				2.18
30.833	0.00	0.28	0.794	I	O				2.18
30.917	0.00	0.28	0.793	I	O				2.17
31.000	0.00	0.28	0.791	I	O				2.17
31.083	0.00	0.28	0.789	I	O				2.16
31.167	0.00	0.28	0.787	I	O				2.16
31.250	0.00	0.28	0.785	I	O				2.15
31.333	0.00	0.28	0.783	I	O				2.15
31.417	0.00	0.28	0.781	I	O				2.15
31.500	0.00	0.28	0.779	I	O				2.14
31.583	0.00	0.28	0.777	I	O				2.14
31.667	0.00	0.28	0.775	I	O				2.13
31.750	0.00	0.28	0.773	I	O				2.13
31.833	0.00	0.28	0.771	I	O				2.12
31.917	0.00	0.28	0.769	I	O				2.12
32.000	0.00	0.28	0.767	I	O				2.11
32.083	0.00	0.28	0.766	I	O				2.11
32.167	0.00	0.28	0.764	I	O				2.10
32.250	0.00	0.28	0.762	I	O				2.10
32.333	0.00	0.28	0.760	I	O				2.09
32.417	0.00	0.28	0.758	I	O				2.09
32.500	0.00	0.28	0.756	I	O				2.09
32.583	0.00	0.28	0.754	I	O				2.08
32.667	0.00	0.28	0.752	I	O				2.08
32.750	0.00	0.28	0.750	I	O				2.07
32.833	0.00	0.28	0.748	I	O				2.07
32.917	0.00	0.28	0.746	I	O				2.06
33.000	0.00	0.28	0.744	I	O				2.06

33.083	0.00	0.28	0.742	I	O				2.05
33.167	0.00	0.28	0.740	I	O				2.05
33.250	0.00	0.28	0.739	I	O				2.04
33.333	0.00	0.28	0.737	I	O				2.04
33.417	0.00	0.28	0.735	I	O				2.03
33.500	0.00	0.28	0.733	I	O				2.03
33.583	0.00	0.28	0.731	I	O				2.03
33.667	0.00	0.28	0.729	I	O				2.02
33.750	0.00	0.28	0.727	I	O				2.02
33.833	0.00	0.28	0.725	I	O				2.01
33.917	0.00	0.28	0.723	I	O				2.01
34.000	0.00	0.28	0.721	I	O				2.00
34.083	0.00	0.28	0.719	I	O				2.00
34.167	0.00	0.28	0.717	I	O				1.99
34.250	0.00	0.28	0.715	I	O				1.99
34.333	0.00	0.28	0.713	I	O				1.98
34.417	0.00	0.28	0.712	I	O				1.98
34.500	0.00	0.28	0.710	I	O				1.97
34.583	0.00	0.28	0.708	I	O				1.97
34.667	0.00	0.28	0.706	I	O				1.96
34.750	0.00	0.28	0.704	I	O				1.96
34.833	0.00	0.28	0.702	I	O				1.95
34.917	0.00	0.28	0.700	I	O				1.95
35.000	0.00	0.28	0.698	I	O				1.94
35.083	0.00	0.28	0.696	I	O				1.94
35.167	0.00	0.28	0.694	I	O				1.93
35.250	0.00	0.28	0.692	I	O				1.93
35.333	0.00	0.28	0.690	I	O				1.92
35.417	0.00	0.28	0.688	I	O				1.92
35.500	0.00	0.28	0.686	I	O				1.91
35.583	0.00	0.28	0.685	I	O				1.91
35.667	0.00	0.28	0.683	I	O				1.91
35.750	0.00	0.28	0.681	I	O				1.90
35.833	0.00	0.28	0.679	I	O				1.90
35.917	0.00	0.28	0.677	I	O				1.89
36.000	0.00	0.28	0.675	I	O				1.89
36.083	0.00	0.28	0.673	I	O				1.88
36.167	0.00	0.28	0.671	I	O				1.88
36.250	0.00	0.28	0.669	I	O				1.87
36.333	0.00	0.28	0.667	I	O				1.87
36.417	0.00	0.28	0.665	I	O				1.86
36.500	0.00	0.28	0.663	I	O				1.86
36.583	0.00	0.28	0.661	I	O				1.85
36.667	0.00	0.28	0.659	I	O				1.85
36.750	0.00	0.28	0.658	I	O				1.84
36.833	0.00	0.28	0.656	I	O				1.84
36.917	0.00	0.28	0.654	I	O				1.83
37.000	0.00	0.28	0.652	I	O				1.83
37.083	0.00	0.28	0.650	I	O				1.82
37.167	0.00	0.28	0.648	I	O				1.82
37.250	0.00	0.28	0.646	I	O				1.81
37.333	0.00	0.28	0.644	I	O				1.81
37.417	0.00	0.28	0.642	I	O				1.80
37.500	0.00	0.28	0.640	I	O				1.80
37.583	0.00	0.28	0.638	I	O				1.79
37.667	0.00	0.28	0.636	I	O				1.79
37.750	0.00	0.28	0.634	I	O				1.78
37.833	0.00	0.28	0.632	I	O				1.78
37.917	0.00	0.28	0.631	I	O				1.77
38.000	0.00	0.28	0.629	I	O				1.77
38.083	0.00	0.28	0.627	I	O				1.76
38.167	0.00	0.28	0.625	I	O				1.76
38.250	0.00	0.28	0.623	I	O				1.75
38.333	0.00	0.28	0.621	I	O				1.75
38.417	0.00	0.28	0.619	I	O				1.74
38.500	0.00	0.28	0.617	I	O				1.74
38.583	0.00	0.28	0.615	I	O				1.73

38.667	0.00	0.28	0.613	I	O				1.73
38.750	0.00	0.28	0.611	I	O				1.72
38.833	0.00	0.28	0.609	I	O				1.72
38.917	0.00	0.28	0.607	I	O				1.71
39.000	0.00	0.28	0.605	I	O				1.71
39.083	0.00	0.28	0.604	I	O				1.70
39.167	0.00	0.28	0.602	I	O				1.70
39.250	0.00	0.28	0.600	I	O				1.69
39.333	0.00	0.28	0.598	I	O				1.69
39.417	0.00	0.28	0.596	I	O				1.68
39.500	0.00	0.28	0.594	I	O				1.68
39.583	0.00	0.28	0.592	I	O				1.68
39.667	0.00	0.28	0.590	I	O				1.67
39.750	0.00	0.28	0.588	I	O				1.67
39.833	0.00	0.28	0.586	I	O				1.66
39.917	0.00	0.28	0.584	I	O				1.66
40.000	0.00	0.28	0.582	I	O				1.65
40.083	0.00	0.28	0.580	I	O				1.65
40.167	0.00	0.28	0.578	I	O				1.64
40.250	0.00	0.28	0.577	I	O				1.64
40.333	0.00	0.28	0.575	I	O				1.63
40.417	0.00	0.28	0.573	I	O				1.63
40.500	0.00	0.28	0.571	I	O				1.62
40.583	0.00	0.28	0.569	I	O				1.62
40.667	0.00	0.28	0.567	I	O				1.61
40.750	0.00	0.28	0.565	I	O				1.61
40.833	0.00	0.28	0.563	I	O				1.60
40.917	0.00	0.28	0.561	I	O				1.60
41.000	0.00	0.28	0.559	I	O				1.59
41.083	0.00	0.28	0.557	I	O				1.59
41.167	0.00	0.28	0.555	I	O				1.58
41.250	0.00	0.28	0.553	I	O				1.58
41.333	0.00	0.28	0.551	I	O				1.57
41.417	0.00	0.28	0.550	I	O				1.57
41.500	0.00	0.28	0.548	I	O				1.56
41.583	0.00	0.28	0.546	I	O				1.56
41.667	0.00	0.28	0.544	I	O				1.55
41.750	0.00	0.28	0.542	I	O				1.55
41.833	0.00	0.28	0.540	I	O				1.54
41.917	0.00	0.28	0.538	I	O				1.54
42.000	0.00	0.28	0.536	I	O				1.53
42.083	0.00	0.28	0.534	I	O				1.53
42.167	0.00	0.28	0.532	I	O				1.52
42.250	0.00	0.28	0.530	I	O				1.52
42.333	0.00	0.28	0.528	I	O				1.51
42.417	0.00	0.28	0.526	I	O				1.51
42.500	0.00	0.28	0.524	I	O				1.50
42.583	0.00	0.28	0.523	I	O				1.50
42.667	0.00	0.28	0.521	I	O				1.49
42.750	0.00	0.28	0.519	I	O				1.49
42.833	0.00	0.28	0.517	I	O				1.48
42.917	0.00	0.28	0.515	I	O				1.48
43.000	0.00	0.28	0.513	I	O				1.47
43.083	0.00	0.28	0.511	I	O				1.47
43.167	0.00	0.28	0.509	I	O				1.46
43.250	0.00	0.28	0.507	I	O				1.46
43.333	0.00	0.28	0.505	I	O				1.45
43.417	0.00	0.28	0.503	I	O				1.45
43.500	0.00	0.28	0.501	I	O				1.44
43.583	0.00	0.28	0.499	I	O				1.44
43.667	0.00	0.28	0.497	I	O				1.43
43.750	0.00	0.28	0.496	I	O				1.43
43.833	0.00	0.28	0.494	I	O				1.42
43.917	0.00	0.28	0.492	I	O				1.42
44.000	0.00	0.28	0.490	I	O				1.41
44.083	0.00	0.28	0.488	I	O				1.41
44.167	0.00	0.28	0.486	I	O				1.40

44.250	0.00	0.28	0.484	I	O				1.40
44.333	0.00	0.28	0.482	I	O				1.39
44.417	0.00	0.28	0.480	I	O				1.38
44.500	0.00	0.28	0.478	I	O				1.38
44.583	0.00	0.28	0.476	I	O				1.37
44.667	0.00	0.28	0.474	I	O				1.37
44.750	0.00	0.28	0.472	I	O				1.36
44.833	0.00	0.28	0.470	I	O				1.36
44.917	0.00	0.28	0.469	I	O				1.35
45.000	0.00	0.28	0.467	I	O				1.35
45.083	0.00	0.28	0.465	I	O				1.34
45.167	0.00	0.28	0.463	I	O				1.34
45.250	0.00	0.28	0.461	I	O				1.33
45.333	0.00	0.28	0.459	I	O				1.33
45.417	0.00	0.28	0.457	I	O				1.32
45.500	0.00	0.28	0.455	I	O				1.32
45.583	0.00	0.28	0.453	I	O				1.31
45.667	0.00	0.28	0.451	I	O				1.31
45.750	0.00	0.28	0.449	I	O				1.30
45.833	0.00	0.28	0.447	I	O				1.30
45.917	0.00	0.28	0.445	I	O				1.29
46.000	0.00	0.28	0.443	I	O				1.29
46.083	0.00	0.28	0.442	I	O				1.28
46.167	0.00	0.28	0.440	I	O				1.28
46.250	0.00	0.28	0.438	I	O				1.27
46.333	0.00	0.28	0.436	I	O				1.27
46.417	0.00	0.28	0.434	I	O				1.26
46.500	0.00	0.28	0.432	I	O				1.26
46.583	0.00	0.28	0.430	I	O				1.25
46.667	0.00	0.28	0.428	I	O				1.24
46.750	0.00	0.28	0.426	I	O				1.24
46.833	0.00	0.28	0.424	I	O				1.23
46.917	0.00	0.28	0.422	I	O				1.23
47.000	0.00	0.28	0.420	I	O				1.22
47.083	0.00	0.28	0.418	I	O				1.22
47.167	0.00	0.28	0.416	I	O				1.21
47.250	0.00	0.28	0.415	I	O				1.21
47.333	0.00	0.28	0.413	I	O				1.20
47.417	0.00	0.28	0.411	I	O				1.20
47.500	0.00	0.28	0.409	I	O				1.19
47.583	0.00	0.28	0.407	I	O				1.19
47.667	0.00	0.28	0.405	I	O				1.18
47.750	0.00	0.28	0.403	I	O				1.18
47.833	0.00	0.28	0.401	I	O				1.17
47.917	0.00	0.28	0.399	I	O				1.17
48.000	0.00	0.28	0.397	I	O				1.16
48.083	0.00	0.28	0.395	I	O				1.16
48.167	0.00	0.28	0.393	I	O				1.15
48.250	0.00	0.28	0.391	I	O				1.15
48.333	0.00	0.28	0.389	I	O				1.14
48.417	0.00	0.28	0.388	I	O				1.14
48.500	0.00	0.28	0.386	I	O				1.13
48.583	0.00	0.28	0.384	I	O				1.13
48.667	0.00	0.28	0.382	I	O				1.12
48.750	0.00	0.28	0.380	I	O				1.12
48.833	0.00	0.28	0.378	I	O				1.11
48.917	0.00	0.28	0.376	I	O				1.10
49.000	0.00	0.28	0.374	I	O				1.10
49.083	0.00	0.28	0.372	I	O				1.09
49.167	0.00	0.28	0.370	I	O				1.09
49.250	0.00	0.28	0.368	I	O				1.08
49.333	0.00	0.28	0.366	I	O				1.08
49.417	0.00	0.28	0.364	I	O				1.07
49.500	0.00	0.28	0.362	I	O				1.07
49.583	0.00	0.28	0.361	I	O				1.06
49.667	0.00	0.28	0.359	I	O				1.06
49.750	0.00	0.28	0.357	I	O				1.05

49.833	0.00	0.28	0.355	I	O				1.05
49.917	0.00	0.28	0.353	I	O				1.04
50.000	0.00	0.28	0.351	I	O				1.04
50.083	0.00	0.28	0.349	I	O				1.03
50.167	0.00	0.28	0.347	I	O				1.03
50.250	0.00	0.28	0.345	I	O				1.02
50.333	0.00	0.28	0.343	I	O				1.02
50.417	0.00	0.28	0.341	I	O				1.01
50.500	0.00	0.28	0.339	I	O				1.01
50.583	0.00	0.28	0.337	I	O				1.00
50.667	0.00	0.28	0.335	I	O				1.00
50.750	0.00	0.28	0.334	I	O				0.99
50.833	0.00	0.28	0.332	I	O				0.98
50.917	0.00	0.28	0.330	I	O				0.98
51.000	0.00	0.28	0.328	I	O				0.97
51.083	0.00	0.28	0.326	I	O				0.97
51.167	0.00	0.28	0.324	I	O				0.96
51.250	0.00	0.28	0.322	I	O				0.96
51.333	0.00	0.28	0.320	I	O				0.95
51.417	0.00	0.28	0.318	I	O				0.95
51.500	0.00	0.28	0.316	I	O				0.94
51.583	0.00	0.28	0.314	I	O				0.93
51.667	0.00	0.28	0.312	I	O				0.93
51.750	0.00	0.28	0.310	I	O				0.92
51.833	0.00	0.28	0.308	I	O				0.92
51.917	0.00	0.28	0.307	I	O				0.91
52.000	0.00	0.28	0.305	I	O				0.91
52.083	0.00	0.28	0.303	I	O				0.90
52.167	0.00	0.28	0.301	I	O				0.90
52.250	0.00	0.28	0.299	I	O				0.89
52.333	0.00	0.28	0.297	I	O				0.88
52.417	0.00	0.28	0.295	I	O				0.88
52.500	0.00	0.28	0.293	I	O				0.87
52.583	0.00	0.28	0.291	I	O				0.87
52.667	0.00	0.28	0.289	I	O				0.86
52.750	0.00	0.28	0.287	I	O				0.86
52.833	0.00	0.28	0.285	I	O				0.85
52.917	0.00	0.28	0.283	I	O				0.85
53.000	0.00	0.28	0.281	I	O				0.84
53.083	0.00	0.28	0.280	I	O				0.83
53.167	0.00	0.28	0.278	I	O				0.83
53.250	0.00	0.28	0.276	I	O				0.82
53.333	0.00	0.28	0.274	I	O				0.82
53.417	0.00	0.28	0.272	I	O				0.81
53.500	0.00	0.28	0.270	I	O				0.81
53.583	0.00	0.28	0.268	I	O				0.80
53.667	0.00	0.28	0.266	I	O				0.80
53.750	0.00	0.28	0.264	I	O				0.79
53.833	0.00	0.28	0.262	I	O				0.79
53.917	0.00	0.28	0.260	I	O				0.78
54.000	0.00	0.28	0.258	I	O				0.77
54.083	0.00	0.28	0.256	I	O				0.77
54.167	0.00	0.28	0.254	I	O				0.76
54.250	0.00	0.28	0.253	I	O				0.76
54.333	0.00	0.28	0.251	I	O				0.75
54.417	0.00	0.28	0.249	I	O				0.75
54.500	0.00	0.28	0.247	I	O				0.74
54.583	0.00	0.28	0.245	I	O				0.74
54.667	0.00	0.28	0.243	I	O				0.73
54.750	0.00	0.28	0.241	I	O				0.72
54.833	0.00	0.28	0.239	I	O				0.72
54.917	0.00	0.28	0.237	I	O				0.71
55.000	0.00	0.28	0.235	I	O				0.71
55.083	0.00	0.28	0.233	I	O				0.70
55.167	0.00	0.28	0.231	I	O				0.70
55.250	0.00	0.28	0.229	I	O				0.69
55.333	0.00	0.28	0.227	I	O				0.69

55.417	0.00	0.28	0.226	I	O					0.68
55.500	0.00	0.28	0.224	I	O					0.67
55.583	0.00	0.28	0.222	I	O					0.67
55.667	0.00	0.28	0.220	I	O					0.66
55.750	0.00	0.28	0.218	I	O					0.66
55.833	0.00	0.28	0.216	I	O					0.65
55.917	0.00	0.28	0.214	I	O					0.65
56.000	0.00	0.28	0.212	I	O					0.64
56.083	0.00	0.28	0.210	I	O					0.64
56.167	0.00	0.28	0.208	I	O					0.63
56.250	0.00	0.28	0.206	I	O					0.62
56.333	0.00	0.28	0.204	I	O					0.62
56.417	0.00	0.28	0.202	I	O					0.61
56.500	0.00	0.28	0.200	I	O					0.61
56.583	0.00	0.28	0.199	I	O					0.60
56.667	0.00	0.28	0.197	I	O					0.60
56.750	0.00	0.28	0.195	I	O					0.59
56.833	0.00	0.28	0.193	I	O					0.59
56.917	0.00	0.28	0.191	I	O					0.58
57.000	0.00	0.28	0.189	I	O					0.57
57.083	0.00	0.28	0.187	I	O					0.57
57.167	0.00	0.28	0.185	I	O					0.56
57.250	0.00	0.28	0.183	I	O					0.56
57.333	0.00	0.28	0.181	I	O					0.55
57.417	0.00	0.28	0.179	I	O					0.55
57.500	0.00	0.28	0.177	I	O					0.54
57.583	0.00	0.28	0.175	I	O					0.54
57.667	0.00	0.28	0.174	I	O					0.53
57.750	0.00	0.28	0.172	I	O					0.52
57.833	0.00	0.28	0.170	I	O					0.52
57.917	0.00	0.28	0.168	I	O					0.51
58.000	0.00	0.28	0.166	I	O					0.51
58.083	0.00	0.28	0.164	I	O					0.50
58.167	0.00	0.28	0.162	I	O					0.50
58.250	0.00	0.27	0.160	I	O					0.49
58.333	0.00	0.27	0.158	I	O					0.49
58.417	0.00	0.27	0.156	I	O					0.48
58.500	0.00	0.27	0.154	I	O					0.47
58.583	0.00	0.26	0.153	I	O					0.47
58.667	0.00	0.26	0.151	I	O					0.46
58.750	0.00	0.26	0.149	I	O					0.46
58.833	0.00	0.25	0.147	I	O					0.45
58.917	0.00	0.25	0.146	I	O					0.45
59.000	0.00	0.25	0.144	I	O					0.44
59.083	0.00	0.24	0.142	I	O					0.44
59.167	0.00	0.24	0.141	I	O					0.43
59.250	0.00	0.24	0.139	I	O					0.43
59.333	0.00	0.24	0.137	I	O					0.42
59.417	0.00	0.23	0.136	I	O					0.42
59.500	0.00	0.23	0.134	I	O					0.41
59.583	0.00	0.23	0.132	I	O					0.41
59.667	0.00	0.22	0.131	I	O					0.40
59.750	0.00	0.22	0.129	I	O					0.40
59.833	0.00	0.22	0.128	I	O					0.39
59.917	0.00	0.22	0.126	I	O					0.39
60.000	0.00	0.21	0.125	I	O					0.38
60.083	0.00	0.21	0.123	I	O					0.38
60.167	0.00	0.21	0.122	I	O					0.37
60.250	0.00	0.21	0.120	I	O					0.37
60.333	0.00	0.20	0.119	I	O					0.37
60.417	0.00	0.20	0.118	I	O					0.36
60.500	0.00	0.20	0.116	I	O					0.36
60.583	0.00	0.20	0.115	I	O					0.35
60.667	0.00	0.20	0.114	I	O					0.35
60.750	0.00	0.19	0.112	I	O					0.34
60.833	0.00	0.19	0.111	I	O					0.34
60.917	0.00	0.19	0.110	I	O					0.34

61.000	0.00	0.19	0.108	I O				0.33
61.083	0.00	0.18	0.107	I O				0.33
61.167	0.00	0.18	0.106	I O				0.32
61.250	0.00	0.18	0.105	I O				0.32
61.333	0.00	0.18	0.103	I O				0.32
61.417	0.00	0.18	0.102	I O				0.31
61.500	0.00	0.17	0.101	I O				0.31
61.583	0.00	0.17	0.100	I O				0.31
61.667	0.00	0.17	0.099	I O				0.30
61.750	0.00	0.17	0.097	I O				0.30
61.833	0.00	0.17	0.096	I O				0.30
61.917	0.00	0.16	0.095	I O				0.29
62.000	0.00	0.16	0.094	I O				0.29
62.083	0.00	0.16	0.093	I O				0.28
62.167	0.00	0.16	0.092	I O				0.28
62.250	0.00	0.16	0.091	I O				0.28
62.333	0.00	0.15	0.090	I O				0.27
62.417	0.00	0.15	0.089	I O				0.27
62.500	0.00	0.15	0.088	I O				0.27
62.583	0.00	0.15	0.087	I O				0.27
62.667	0.00	0.15	0.085	I O				0.26
62.750	0.00	0.15	0.084	I O				0.26
62.833	0.00	0.14	0.083	I O				0.26
62.917	0.00	0.14	0.083	I O				0.25
63.000	0.00	0.14	0.082	IO				0.25
63.083	0.00	0.14	0.081	IO				0.25
63.167	0.00	0.14	0.080	IO				0.24
63.250	0.00	0.14	0.079	IO				0.24
63.333	0.00	0.13	0.078	IO				0.24
63.417	0.00	0.13	0.077	IO				0.24
63.500	0.00	0.13	0.076	IO				0.23
63.583	0.00	0.13	0.075	IO				0.23
63.667	0.00	0.13	0.074	IO				0.23
63.750	0.00	0.13	0.073	IO				0.22
63.833	0.00	0.12	0.072	IO				0.22
63.917	0.00	0.12	0.072	IO				0.22
64.000	0.00	0.12	0.071	IO				0.22
64.083	0.00	0.12	0.070	IO				0.21
64.167	0.00	0.12	0.069	IO				0.21
64.250	0.00	0.12	0.068	IO				0.21
64.333	0.00	0.12	0.067	IO				0.21
64.417	0.00	0.11	0.067	IO				0.20
64.500	0.00	0.11	0.066	IO				0.20
64.583	0.00	0.11	0.065	IO				0.20
64.667	0.00	0.11	0.064	IO				0.20
64.750	0.00	0.11	0.064	IO				0.20
64.833	0.00	0.11	0.063	IO				0.19
64.917	0.00	0.11	0.062	IO				0.19
65.000	0.00	0.11	0.061	IO				0.19
65.083	0.00	0.10	0.061	IO				0.19
65.167	0.00	0.10	0.060	IO				0.18
65.250	0.00	0.10	0.059	IO				0.18
65.333	0.00	0.10	0.059	IO				0.18
65.417	0.00	0.10	0.058	IO				0.18
65.500	0.00	0.10	0.057	IO				0.18
65.583	0.00	0.10	0.057	IO				0.17
65.667	0.00	0.10	0.056	IO				0.17
65.750	0.00	0.09	0.055	IO				0.17
65.833	0.00	0.09	0.055	IO				0.17
65.917	0.00	0.09	0.054	IO				0.17
66.000	0.00	0.09	0.053	IO				0.16
66.083	0.00	0.09	0.053	IO				0.16
66.167	0.00	0.09	0.052	IO				0.16
66.250	0.00	0.09	0.051	IO				0.16
66.333	0.00	0.09	0.051	IO				0.16
66.417	0.00	0.09	0.050	IO				0.15
66.500	0.00	0.09	0.050	IO				0.15

66.583	0.00	0.08	0.049	IO				0.15
66.667	0.00	0.08	0.048	IO				0.15
66.750	0.00	0.08	0.048	IO				0.15
66.833	0.00	0.08	0.047	IO				0.15
66.917	0.00	0.08	0.047	IO				0.14
67.000	0.00	0.08	0.046	IO				0.14
67.083	0.00	0.08	0.046	IO				0.14
67.167	0.00	0.08	0.045	IO				0.14
67.250	0.00	0.08	0.045	IO				0.14
67.333	0.00	0.08	0.044	IO				0.14
67.417	0.00	0.07	0.044	IO				0.13
67.500	0.00	0.07	0.043	IO				0.13
67.583	0.00	0.07	0.043	IO				0.13
67.667	0.00	0.07	0.042	IO				0.13
67.750	0.00	0.07	0.042	IO				0.13
67.833	0.00	0.07	0.041	IO				0.13
67.917	0.00	0.07	0.041	O				0.12
68.000	0.00	0.07	0.040	O				0.12
68.083	0.00	0.07	0.040	O				0.12
68.167	0.00	0.07	0.039	O				0.12
68.250	0.00	0.07	0.039	O				0.12
68.333	0.00	0.07	0.038	O				0.12
68.417	0.00	0.06	0.038	O				0.12
68.500	0.00	0.06	0.037	O				0.11
68.583	0.00	0.06	0.037	O				0.11
68.667	0.00	0.06	0.036	O				0.11
68.750	0.00	0.06	0.036	O				0.11
68.833	0.00	0.06	0.036	O				0.11
68.917	0.00	0.06	0.035	O				0.11
69.000	0.00	0.06	0.035	O				0.11
69.083	0.00	0.06	0.034	O				0.11
69.167	0.00	0.06	0.034	O				0.10
69.250	0.00	0.06	0.034	O				0.10
69.333	0.00	0.06	0.033	O				0.10
69.417	0.00	0.06	0.033	O				0.10
69.500	0.00	0.06	0.032	O				0.10
69.583	0.00	0.06	0.032	O				0.10
69.667	0.00	0.05	0.032	O				0.10
69.750	0.00	0.05	0.031	O				0.10
69.833	0.00	0.05	0.031	O				0.09
69.917	0.00	0.05	0.031	O				0.09
70.000	0.00	0.05	0.030	O				0.09
70.083	0.00	0.05	0.030	O				0.09
70.167	0.00	0.05	0.029	O				0.09
70.250	0.00	0.05	0.029	O				0.09
70.333	0.00	0.05	0.029	O				0.09
70.417	0.00	0.05	0.028	O				0.09
70.500	0.00	0.05	0.028	O				0.09
70.583	0.00	0.05	0.028	O				0.09
70.667	0.00	0.05	0.027	O				0.08
70.750	0.00	0.05	0.027	O				0.08
70.833	0.00	0.05	0.027	O				0.08
70.917	0.00	0.05	0.026	O				0.08
71.000	0.00	0.04	0.026	O				0.08
71.083	0.00	0.04	0.026	O				0.08
71.167	0.00	0.04	0.026	O				0.08
71.250	0.00	0.04	0.025	O				0.08
71.333	0.00	0.04	0.025	O				0.08
71.417	0.00	0.04	0.025	O				0.08
71.500	0.00	0.04	0.024	O				0.07
71.583	0.00	0.04	0.024	O				0.07
71.667	0.00	0.04	0.024	O				0.07
71.750	0.00	0.04	0.024	O				0.07
71.833	0.00	0.04	0.023	O				0.07
71.917	0.00	0.04	0.023	O				0.07
72.000	0.00	0.04	0.023	O				0.07
72.083	0.00	0.04	0.022	O				0.07

72.167	0.00	0.04	0.022	O				0.07
72.250	0.00	0.04	0.022	O				0.07
72.333	0.00	0.04	0.022	O				0.07
72.417	0.00	0.04	0.021	O				0.07
72.500	0.00	0.04	0.021	O				0.06
72.583	0.00	0.04	0.021	O				0.06
72.667	0.00	0.04	0.021	O				0.06
72.750	0.00	0.04	0.020	O				0.06
72.833	0.00	0.03	0.020	O				0.06
72.917	0.00	0.03	0.020	O				0.06
73.000	0.00	0.03	0.020	O				0.06
73.083	0.00	0.03	0.019	O				0.06
73.167	0.00	0.03	0.019	O				0.06
73.250	0.00	0.03	0.019	O				0.06
73.333	0.00	0.03	0.019	O				0.06
73.417	0.00	0.03	0.019	O				0.06
73.500	0.00	0.03	0.018	O				0.06
73.583	0.00	0.03	0.018	O				0.06
73.667	0.00	0.03	0.018	O				0.06
73.750	0.00	0.03	0.018	O				0.05
73.833	0.00	0.03	0.018	O				0.05
73.917	0.00	0.03	0.017	O				0.05
74.000	0.00	0.03	0.017	O				0.05
74.083	0.00	0.03	0.017	O				0.05
74.167	0.00	0.03	0.017	O				0.05
74.250	0.00	0.03	0.017	O				0.05
74.333	0.00	0.03	0.016	O				0.05
74.417	0.00	0.03	0.016	O				0.05
74.500	0.00	0.03	0.016	O				0.05
74.583	0.00	0.03	0.016	O				0.05
74.667	0.00	0.03	0.016	O				0.05
74.750	0.00	0.03	0.015	O				0.05
74.833	0.00	0.03	0.015	O				0.05
74.917	0.00	0.03	0.015	O				0.05
75.000	0.00	0.03	0.015	O				0.05
75.083	0.00	0.03	0.015	O				0.04
75.167	0.00	0.02	0.014	O				0.04
75.250	0.00	0.02	0.014	O				0.04
75.333	0.00	0.02	0.014	O				0.04
75.417	0.00	0.02	0.014	O				0.04
75.500	0.00	0.02	0.014	O				0.04
75.583	0.00	0.02	0.014	O				0.04
75.667	0.00	0.02	0.014	O				0.04
75.750	0.00	0.02	0.013	O				0.04
75.833	0.00	0.02	0.013	O				0.04
75.917	0.00	0.02	0.013	O				0.04
76.000	0.00	0.02	0.013	O				0.04
76.083	0.00	0.02	0.013	O				0.04
76.167	0.00	0.02	0.013	O				0.04
76.250	0.00	0.02	0.012	O				0.04
76.333	0.00	0.02	0.012	O				0.04
76.417	0.00	0.02	0.012	O				0.04
76.500	0.00	0.02	0.012	O				0.04
76.583	0.00	0.02	0.012	O				0.04
76.667	0.00	0.02	0.012	O				0.04
76.750	0.00	0.02	0.012	O				0.04
76.833	0.00	0.02	0.011	O				0.04
76.917	0.00	0.02	0.011	O				0.03
77.000	0.00	0.02	0.011	O				0.03
77.083	0.00	0.02	0.011	O				0.03
77.167	0.00	0.02	0.011	O				0.03
77.250	0.00	0.02	0.011	O				0.03
77.333	0.00	0.02	0.011	O				0.03
77.417	0.00	0.02	0.011	O				0.03
77.500	0.00	0.02	0.010	O				0.03
77.583	0.00	0.02	0.010	O				0.03
77.667	0.00	0.02	0.010	O				0.03

77.750	0.00	0.02	0.010	O				0.03
77.833	0.00	0.02	0.010	O				0.03
77.917	0.00	0.02	0.010	O				0.03
78.000	0.00	0.02	0.010	O				0.03
78.083	0.00	0.02	0.010	O				0.03
78.167	0.00	0.02	0.009	O				0.03
78.250	0.00	0.02	0.009	O				0.03
78.333	0.00	0.02	0.009	O				0.03
78.417	0.00	0.02	0.009	O				0.03
78.500	0.00	0.02	0.009	O				0.03
78.583	0.00	0.02	0.009	O				0.03
78.667	0.00	0.02	0.009	O				0.03
78.750	0.00	0.01	0.009	O				0.03
78.833	0.00	0.01	0.009	O				0.03
78.917	0.00	0.01	0.009	O				0.03
79.000	0.00	0.01	0.008	O				0.03
79.083	0.00	0.01	0.008	O				0.03
79.167	0.00	0.01	0.008	O				0.03
79.250	0.00	0.01	0.008	O				0.02
79.333	0.00	0.01	0.008	O				0.02
79.417	0.00	0.01	0.008	O				0.02
79.500	0.00	0.01	0.008	O				0.02
79.583	0.00	0.01	0.008	O				0.02
79.667	0.00	0.01	0.008	O				0.02
79.750	0.00	0.01	0.008	O				0.02
79.833	0.00	0.01	0.007	O				0.02
79.917	0.00	0.01	0.007	O				0.02
80.000	0.00	0.01	0.007	O				0.02
80.083	0.00	0.01	0.007	O				0.02
80.167	0.00	0.01	0.007	O				0.02
80.250	0.00	0.01	0.007	O				0.02
80.333	0.00	0.01	0.007	O				0.02
80.417	0.00	0.01	0.007	O				0.02
80.500	0.00	0.01	0.007	O				0.02
80.583	0.00	0.01	0.007	O				0.02
80.667	0.00	0.01	0.007	O				0.02
80.750	0.00	0.01	0.007	O				0.02
80.833	0.00	0.01	0.006	O				0.02
80.917	0.00	0.01	0.006	O				0.02
81.000	0.00	0.01	0.006	O				0.02
81.083	0.00	0.01	0.006	O				0.02
81.167	0.00	0.01	0.006	O				0.02
81.250	0.00	0.01	0.006	O				0.02
81.333	0.00	0.01	0.006	O				0.02
81.417	0.00	0.01	0.006	O				0.02
81.500	0.00	0.01	0.006	O				0.02
81.583	0.00	0.01	0.006	O				0.02
81.667	0.00	0.01	0.006	O				0.02
81.750	0.00	0.01	0.006	O				0.02
81.833	0.00	0.01	0.006	O				0.02
81.917	0.00	0.01	0.006	O				0.02
82.000	0.00	0.01	0.005	O				0.02
82.083	0.00	0.01	0.005	O				0.02
82.167	0.00	0.01	0.005	O				0.02
82.250	0.00	0.01	0.005	O				0.02
82.333	0.00	0.01	0.005	O				0.02
82.417	0.00	0.01	0.005	O				0.02
82.500	0.00	0.01	0.005	O				0.02
82.583	0.00	0.01	0.005	O				0.02
82.667	0.00	0.01	0.005	O				0.02
82.750	0.00	0.01	0.005	O				0.02
82.833	0.00	0.01	0.005	O				0.01
82.917	0.00	0.01	0.005	O				0.01
83.000	0.00	0.01	0.005	O				0.01
83.083	0.00	0.01	0.005	O				0.01
83.167	0.00	0.01	0.005	O				0.01
83.250	0.00	0.01	0.005	O				0.01

83.333	0.00	0.01	0.005	O				0.01
83.417	0.00	0.01	0.004	O				0.01
83.500	0.00	0.01	0.004	O				0.01
83.583	0.00	0.01	0.004	O				0.01
83.667	0.00	0.01	0.004	O				0.01
83.750	0.00	0.01	0.004	O				0.01
83.833	0.00	0.01	0.004	O				0.01
83.917	0.00	0.01	0.004	O				0.01
84.000	0.00	0.01	0.004	O				0.01
84.083	0.00	0.01	0.004	O				0.01
84.167	0.00	0.01	0.004	O				0.01
84.250	0.00	0.01	0.004	O				0.01
84.333	0.00	0.01	0.004	O				0.01
84.417	0.00	0.01	0.004	O				0.01
84.500	0.00	0.01	0.004	O				0.01
84.583	0.00	0.01	0.004	O				0.01
84.667	0.00	0.01	0.004	O				0.01
84.750	0.00	0.01	0.004	O				0.01
84.833	0.00	0.01	0.004	O				0.01
84.917	0.00	0.01	0.004	O				0.01
85.000	0.00	0.01	0.004	O				0.01
85.083	0.00	0.01	0.004	O				0.01
85.167	0.00	0.01	0.004	O				0.01
85.250	0.00	0.01	0.003	O				0.01
85.333	0.00	0.01	0.003	O				0.01
85.417	0.00	0.01	0.003	O				0.01
85.500	0.00	0.01	0.003	O				0.01
85.583	0.00	0.01	0.003	O				0.01
85.667	0.00	0.01	0.003	O				0.01
85.750	0.00	0.01	0.003	O				0.01
85.833	0.00	0.01	0.003	O				0.01
85.917	0.00	0.01	0.003	O				0.01
86.000	0.00	0.01	0.003	O				0.01
86.083	0.00	0.01	0.003	O				0.01
86.167	0.00	0.01	0.003	O				0.01
86.250	0.00	0.01	0.003	O				0.01
86.333	0.00	0.01	0.003	O				0.01
86.417	0.00	0.01	0.003	O				0.01
86.500	0.00	0.00	0.003	O				0.01
86.583	0.00	0.00	0.003	O				0.01
86.667	0.00	0.00	0.003	O				0.01
86.750	0.00	0.00	0.003	O				0.01
86.833	0.00	0.00	0.003	O				0.01
86.917	0.00	0.00	0.003	O				0.01
87.000	0.00	0.00	0.003	O				0.01
87.083	0.00	0.00	0.003	O				0.01
87.167	0.00	0.00	0.003	O				0.01
87.250	0.00	0.00	0.003	O				0.01
87.333	0.00	0.00	0.003	O				0.01
87.417	0.00	0.00	0.003	O				0.01
87.500	0.00	0.00	0.003	O				0.01
87.583	0.00	0.00	0.002	O				0.01
87.667	0.00	0.00	0.002	O				0.01
87.750	0.00	0.00	0.002	O				0.01
87.833	0.00	0.00	0.002	O				0.01
87.917	0.00	0.00	0.002	O				0.01
88.000	0.00	0.00	0.002	O				0.01
88.083	0.00	0.00	0.002	O				0.01
88.167	0.00	0.00	0.002	O				0.01
88.250	0.00	0.00	0.002	O				0.01
88.333	0.00	0.00	0.002	O				0.01
88.417	0.00	0.00	0.002	O				0.01
88.500	0.00	0.00	0.002	O				0.01
88.583	0.00	0.00	0.002	O				0.01
88.667	0.00	0.00	0.002	O				0.01
88.750	0.00	0.00	0.002	O				0.01
88.833	0.00	0.00	0.002	O				0.01

88.917	0.00	0.00	0.002	O				0.01
89.000	0.00	0.00	0.002	O				0.01
89.083	0.00	0.00	0.002	O				0.01
89.167	0.00	0.00	0.002	O				0.01
89.250	0.00	0.00	0.002	O				0.01
89.333	0.00	0.00	0.002	O				0.01
89.417	0.00	0.00	0.002	O				0.01
89.500	0.00	0.00	0.002	O				0.01
89.583	0.00	0.00	0.002	O				0.01
89.667	0.00	0.00	0.002	O				0.01
89.750	0.00	0.00	0.002	O				0.01
89.833	0.00	0.00	0.002	O				0.01
89.917	0.00	0.00	0.002	O				0.01
90.000	0.00	0.00	0.002	O				0.01
90.083	0.00	0.00	0.002	O				0.01
90.167	0.00	0.00	0.002	O				0.01
90.250	0.00	0.00	0.002	O				0.01
90.333	0.00	0.00	0.002	O				0.01
90.417	0.00	0.00	0.002	O				0.01
90.500	0.00	0.00	0.002	O				0.01
90.583	0.00	0.00	0.002	O				0.00
90.667	0.00	0.00	0.002	O				0.00
90.750	0.00	0.00	0.002	O				0.00
90.833	0.00	0.00	0.002	O				0.00
90.917	0.00	0.00	0.002	O				0.00
91.000	0.00	0.00	0.002	O				0.00
91.083	0.00	0.00	0.002	O				0.00
91.167	0.00	0.00	0.001	O				0.00
91.250	0.00	0.00	0.001	O				0.00
91.333	0.00	0.00	0.001	O				0.00
91.417	0.00	0.00	0.001	O				0.00
91.500	0.00	0.00	0.001	O				0.00
91.583	0.00	0.00	0.001	O				0.00
91.667	0.00	0.00	0.001	O				0.00
91.750	0.00	0.00	0.001	O				0.00
91.833	0.00	0.00	0.001	O				0.00
91.917	0.00	0.00	0.001	O				0.00
92.000	0.00	0.00	0.001	O				0.00
92.083	0.00	0.00	0.001	O				0.00
92.167	0.00	0.00	0.001	O				0.00
92.250	0.00	0.00	0.001	O				0.00
92.333	0.00	0.00	0.001	O				0.00
92.417	0.00	0.00	0.001	O				0.00
92.500	0.00	0.00	0.001	O				0.00
92.583	0.00	0.00	0.001	O				0.00
92.667	0.00	0.00	0.001	O				0.00
92.750	0.00	0.00	0.001	O				0.00
92.833	0.00	0.00	0.001	O				0.00
92.917	0.00	0.00	0.001	O				0.00
93.000	0.00	0.00	0.001	O				0.00
93.083	0.00	0.00	0.001	O				0.00
93.167	0.00	0.00	0.001	O				0.00
93.250	0.00	0.00	0.001	O				0.00
93.333	0.00	0.00	0.001	O				0.00
93.417	0.00	0.00	0.001	O				0.00
93.500	0.00	0.00	0.001	O				0.00
93.583	0.00	0.00	0.001	O				0.00
93.667	0.00	0.00	0.001	O				0.00
93.750	0.00	0.00	0.001	O				0.00
93.833	0.00	0.00	0.001	O				0.00
93.917	0.00	0.00	0.001	O				0.00
94.000	0.00	0.00	0.001	O				0.00
94.083	0.00	0.00	0.001	O				0.00
94.167	0.00	0.00	0.001	O				0.00
94.250	0.00	0.00	0.001	O				0.00
94.333	0.00	0.00	0.001	O				0.00
94.417	0.00	0.00	0.001	O				0.00

94.500	0.00	0.00	0.001	O	|	|	|	|	0.00
94.583	0.00	0.00	0.001	O	|	|	|	|	0.00
94.667	0.00	0.00	0.001	O	|	|	|	|	0.00
94.750	0.00	0.00	0.001	O	|	|	|	|	0.00
94.833	0.00	0.00	0.001	O	|	|	|	|	0.00
94.917	0.00	0.00	0.001	O	|	|	|	|	0.00
95.000	0.00	0.00	0.001	O	|	|	|	|	0.00
95.083	0.00	0.00	0.001	O	|	|	|	|	0.00
95.167	0.00	0.00	0.001	O	|	|	|	|	0.00
95.250	0.00	0.00	0.001	O	|	|	|	|	0.00
95.333	0.00	0.00	0.001	O	|	|	|	|	0.00
95.417	0.00	0.00	0.001	O	|	|	|	|	0.00
95.500	0.00	0.00	0.001	O	|	|	|	|	0.00
95.583	0.00	0.00	0.001	O	|	|	|	|	0.00
95.667	0.00	0.00	0.001	O	|	|	|	|	0.00
95.750	0.00	0.00	0.001	O	|	|	|	|	0.00
95.833	0.00	0.00	0.001	O	|	|	|	|	0.00
95.917	0.00	0.00	0.001	O	|	|	|	|	0.00
96.000	0.00	0.00	0.001	O	|	|	|	|	0.00
96.083	0.00	0.00	0.001	O	|	|	|	|	0.00
96.167	0.00	0.00	0.001	O	|	|	|	|	0.00
96.250	0.00	0.00	0.001	O	|	|	|	|	0.00
96.333	0.00	0.00	0.001	O	|	|	|	|	0.00
96.417	0.00	0.00	0.001	O	|	|	|	|	0.00
96.500	0.00	0.00	0.001	O	|	|	|	|	0.00
96.583	0.00	0.00	0.001	O	|	|	|	|	0.00
96.667	0.00	0.00	0.001	O	|	|	|	|	0.00
96.750	0.00	0.00	0.001	O	|	|	|	|	0.00
96.833	0.00	0.00	0.001	O	|	|	|	|	0.00
96.917	0.00	0.00	0.001	O	|	|	|	|	0.00
97.000	0.00	0.00	0.001	O	|	|	|	|	0.00
97.083	0.00	0.00	0.001	O	|	|	|	|	0.00
97.167	0.00	0.00	0.001	O	|	|	|	|	0.00
97.250	0.00	0.00	0.001	O	|	|	|	|	0.00
97.333	0.00	0.00	0.001	O	|	|	|	|	0.00
97.417	0.00	0.00	0.001	O	|	|	|	|	0.00
97.500	0.00	0.00	0.001	O	|	|	|	|	0.00
97.583	0.00	0.00	0.001	O	|	|	|	|	0.00
97.667	0.00	0.00	0.001	O	|	|	|	|	0.00
97.750	0.00	0.00	0.001	O	|	|	|	|	0.00
97.833	0.00	0.00	0.001	O	|	|	|	|	0.00

```
****************************HYDROGRAPH DATA***************************
             Number of intervals =  1174
             Time interval =    5.0 (Min.)
             Maximum/Peak flow rate =        0.280 (CFS)
             Total volume =       1.472 (Ac.Ft)
      Status of hydrographs being held in storage
                 Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
      Peak (CFS)      0.000     0.000     0.000     0.000     0.000
      Vol (Ac.Ft)      0.000     0.000     0.000     0.000     0.000
***********************************************************************

-----------------------------------------------------------------------
```

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 08/30/12

10-yr 24-hr basin routing

Program License Serial Number 4010

********** HYDROGRAPH INFORMATION **********

From study/file name: rmec12410.rte
**********HYDROGRAPH DATA**********
Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 3.763 (CFS)
Total volume = 2.264 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

****

++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 292
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.33(Ft.)

Initial basin depth = 0.33 (Ft.)
Initial basin storage = 0.11 (Ac.Ft)
Initial basin outflow = 0.18 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.163	0.280	0.162	0.164
1.000	0.337	0.280	0.336	0.338
1.500	0.523	0.280	0.522	0.524
2.000	0.720	0.280	0.719	0.721
2.500	0.930	0.280	0.929	0.931
2.700	1.019	0.280	1.018	1.020
3.000	1.153	1.368	1.148	1.158
3.500	1.396	2.819	1.386	1.406
4.000	1.671	3.702	1.658	1.684

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.9	1.88	2.82	3.76	Depth (Ft.)
0.083	0.08	0.18	0.106	IO					0.33
0.167	0.18	0.18	0.106	O					0.32
0.250	0.20	0.18	0.106	O					0.32
0.333	0.25	0.18	0.106	OI					0.33
0.417	0.31	0.18	0.107	OI					0.33
0.500	0.32	0.18	0.108	OI					0.33
0.583	0.33	0.19	0.109	OI					0.33
0.667	0.33	0.19	0.110	OI					0.34
0.750	0.33	0.19	0.110	OI					0.34
0.833	0.37	0.19	0.112	O I					0.34
0.917	0.42	0.19	0.113	O I					0.35
1.000	0.43	0.20	0.115	O I					0.35
1.083	0.39	0.20	0.116	O I					0.36
1.167	0.35	0.20	0.117	OI					0.36
1.250	0.34	0.20	0.118	OI					0.36
1.333	0.33	0.20	0.119	OI					0.37
1.417	0.33	0.21	0.120	OI					0.37
1.500	0.33	0.21	0.121	OI					0.37
1.583	0.33	0.21	0.122	OI					0.37
1.667	0.33	0.21	0.122	OI					0.38
1.750	0.33	0.21	0.123	OI					0.38
1.833	0.37	0.21	0.124	O I					0.38
1.917	0.42	0.22	0.125	O I					0.38
2.000	0.43	0.22	0.127	O I					0.39
2.083	0.44	0.22	0.128	O I					0.39
2.167	0.44	0.22	0.130	O I					0.40
2.250	0.44	0.23	0.131	O I					0.40
2.333	0.44	0.23	0.133	O I					0.41
2.417	0.44	0.23	0.134	O I					0.41
2.500	0.44	0.23	0.136	O I					0.42
2.583	0.48	0.24	0.137	O I					0.42
2.667	0.53	0.24	0.139	O I					0.43
2.750	0.54	0.24	0.141	O I					0.43
2.833	0.54	0.25	0.143	O I					0.44
2.917	0.55	0.25	0.145	O I					0.45
3.000	0.55	0.25	0.147	O I					0.45
3.083	0.55	0.26	0.149	O I					0.46
3.167	0.55	0.26	0.151	O I					0.46
3.250	0.55	0.26	0.153	O I					0.47
3.333	0.55	0.27	0.155	O I					0.48
3.417	0.55	0.27	0.157	O I					0.48
3.500	0.55	0.27	0.159	O I					0.49
3.583	0.55	0.28	0.161	O I					0.49
3.667	0.55	0.28	0.163	O I					0.50
3.750	0.55	0.28	0.165	O I					0.50
3.833	0.59	0.28	0.166	O I					0.51
3.917	0.64	0.28	0.169	O I					0.52
4.000	0.65	0.28	0.171	O I					0.52
4.083	0.65	0.28	0.174	O I					0.53
4.167	0.66	0.28	0.176	O I					0.54
4.250	0.66	0.28	0.179	O I					0.55
4.333	0.70	0.28	0.182	O I					0.55
4.417	0.75	0.28	0.185	O I					0.56
4.500	0.76	0.28	0.188	O I					0.57
4.583	0.76	0.28	0.191	O I					0.58
4.667	0.77	0.28	0.195	O I					0.59
4.750	0.77	0.28	0.198	O I					0.60
4.833	0.81	0.28	0.202	O I					0.61
4.917	0.86	0.28	0.205	O I					0.62
5.000	0.87	0.28	0.209	O I					0.63

5.083	0.79	0.28	0.213	O I	0.64
5.167	0.69	0.28	0.216	O I	0.65
5.250	0.67	0.28	0.219	O I	0.66
5.333	0.70	0.28	0.222	O I	0.67
5.417	0.75	0.28	0.225	O I	0.68
5.500	0.76	0.28	0.228	O I	0.69
5.583	0.81	0.28	0.232	O I	0.70
5.667	0.86	0.28	0.236	O I	0.71
5.750	0.87	0.28	0.240	O I	0.72
5.833	0.87	0.28	0.244	O I	0.73
5.917	0.88	0.28	0.248	O I	0.74
6.000	0.88	0.28	0.252	O I	0.76
6.083	0.92	0.28	0.256	O I	0.77
6.167	0.97	0.28	0.261	O I	0.78
6.250	0.98	0.28	0.265	O I	0.79
6.333	0.98	0.28	0.270	O I	0.81
6.417	0.99	0.28	0.275	O I	0.82
6.500	0.99	0.28	0.280	O I	0.84
6.583	1.03	0.28	0.285	O I	0.85
6.667	1.08	0.28	0.290	O I	0.87
6.750	1.09	0.28	0.296	O I	0.88
6.833	1.09	0.28	0.301	O I	0.90
6.917	1.10	0.28	0.307	O I	0.91
7.000	1.10	0.28	0.313	O I	0.93
7.083	1.10	0.28	0.318	O I	0.95
7.167	1.10	0.28	0.324	O I	0.96
7.250	1.10	0.28	0.329	O I	0.98
7.333	1.14	0.28	0.335	O I	0.99
7.417	1.19	0.28	0.341	O I	1.01
7.500	1.20	0.28	0.348	O I	1.03
7.583	1.24	0.28	0.354	O I	1.05
7.667	1.30	0.28	0.361	O I	1.06
7.750	1.31	0.28	0.368	O I	1.08
7.833	1.35	0.28	0.375	O I	1.10
7.917	1.41	0.28	0.383	O I	1.12
8.000	1.42	0.28	0.391	O I	1.14
8.083	1.50	0.28	0.399	O I	1.17
8.167	1.61	0.28	0.407	O I	1.19
8.250	1.63	0.28	0.417	O I	1.21
8.333	1.64	0.28	0.426	O I	1.24
8.417	1.64	0.28	0.435	O I	1.26
8.500	1.64	0.28	0.445	O I	1.29
8.583	1.68	0.28	0.454	O I	1.32
8.667	1.73	0.28	0.464	O I	1.34
8.750	1.75	0.28	0.474	O I	1.37
8.833	1.79	0.28	0.484	O I	1.40
8.917	1.84	0.28	0.495	O I	1.42
9.000	1.85	0.28	0.506	O I	1.45
9.083	1.94	0.28	0.517	O I	1.48
9.167	2.04	0.28	0.529	O I	1.51
9.250	2.07	0.28	0.541	O I	1.55
9.333	2.12	0.28	0.553	O I	1.58
9.417	2.17	0.28	0.566	O I	1.61
9.500	2.18	0.28	0.579	O I	1.64
9.583	2.23	0.28	0.593	O I	1.68
9.667	2.28	0.28	0.606	O I	1.71
9.750	2.29	0.28	0.620	O I	1.75
9.833	2.34	0.28	0.634	O I	1.78
9.917	2.39	0.28	0.648	O I	1.82
10.000	2.40	0.28	0.663	O I	1.86
10.083	2.12	0.28	0.677	O I	1.89
10.167	1.77	0.28	0.688	O I	1.92
10.250	1.70	0.28	0.698	O I	1.94
10.333	1.66	0.28	0.708	O I	1.97
10.417	1.64	0.28	0.717	O I	1.99
10.500	1.64	0.28	0.727	O I	2.02
10.583	1.85	0.28	0.737	O I	2.04

10.667	2.10	0.28	0.748		2.07
10.750	2.15	0.28	0.761		2.10
10.833	2.18	0.28	0.774		2.13
10.917	2.19	0.28	0.787		2.16
11.000	2.19	0.28	0.800		2.19
11.083	2.15	0.28	0.813		2.22
11.167	2.10	0.28	0.826		2.25
11.250	2.09	0.28	0.839		2.28
11.333	2.08	0.28	0.851		2.31
11.417	2.08	0.28	0.863		2.34
11.500	2.08	0.28	0.876		2.37
11.583	2.00	0.28	0.888		2.40
11.667	1.90	0.28	0.899		2.43
11.750	1.88	0.28	0.910		2.45
11.833	1.91	0.28	0.922		2.48
11.917	1.95	0.28	0.933		2.51
12.000	1.96	0.28	0.944		2.53
12.083	2.26	0.28	0.957		2.56
12.167	2.61	0.28	0.972		2.59
12.250	2.69	0.28	0.988		2.63
12.333	2.76	0.28	1.005		2.67
12.417	2.83	0.31	1.022		2.71
12.500	2.84	0.44	1.039		2.75
12.583	2.93	0.58	1.056		2.78
12.667	3.03	0.71	1.072		2.82
12.750	3.05	0.83	1.087		2.85
12.833	3.10	0.96	1.102		2.89
12.917	3.16	1.07	1.117		2.92
13.000	3.17	1.19	1.131		2.95
13.083	3.38	1.30	1.145		2.98
13.167	3.65	1.41	1.160		3.01
13.250	3.71	1.50	1.175		3.05
13.333	3.74	1.59	1.190		3.08
13.417	3.76	1.68	1.205		3.11
13.500	3.76	1.76	1.219		3.14
13.583	3.30	1.83	1.231		3.16
13.667	2.73	1.88	1.239		3.18
13.750	2.60	1.91	1.244		3.19
13.833	2.55	1.94	1.248		3.20
13.917	2.52	1.96	1.252		3.20
14.000	2.52	1.98	1.256		3.21
14.083	2.68	2.01	1.260		3.22
14.167	2.88	2.04	1.266		3.23
14.250	2.93	2.08	1.271		3.24
14.333	2.91	2.11	1.277		3.26
14.417	2.87	2.14	1.282		3.27
14.500	2.86	2.17	1.287		3.28
14.583	2.85	2.20	1.292		3.29
14.667	2.85	2.22	1.296		3.29
14.750	2.85	2.25	1.300		3.30
14.833	2.81	2.27	1.304		3.31
14.917	2.76	2.29	1.308		3.32
15.000	2.75	2.31	1.311		3.32
15.083	2.70	2.33	1.314		3.33
15.167	2.65	2.34	1.316		3.34
15.250	2.64	2.35	1.318		3.34
15.333	2.59	2.36	1.320		3.34
15.417	2.54	2.37	1.321		3.35
15.500	2.53	2.38	1.322		3.35
15.583	2.36	2.38	1.323		3.35
15.667	2.16	2.38	1.322		3.35
15.750	2.11	2.37	1.320		3.34
15.833	2.09	2.36	1.318		3.34
15.917	2.08	2.34	1.317		3.34
16.000	2.08	2.33	1.315		3.33
16.083	1.47	2.31	1.311		3.33
16.167	0.72	2.26	1.303		3.31

16.250	0.55	2.20	1.292		I			O	3.29
16.333	0.48	2.13	1.280		I			O	3.26
16.417	0.44	2.06	1.269		I			O	3.24
16.500	0.44	2.00	1.258		I		O		3.22
16.583	0.40	1.93	1.248		I		O		3.19
16.667	0.35	1.87	1.237	I			O		3.17
16.750	0.34	1.81	1.227	I			O		3.15
16.833	0.33	1.75	1.217	I		O			3.13
16.917	0.33	1.69	1.207	I		O			3.11
17.000	0.33	1.64	1.198	I		O			3.09
17.083	0.41	1.59	1.189		I	O			3.08
17.167	0.51	1.54	1.182		I	O			3.06
17.250	0.53	1.50	1.175		I	O			3.05
17.333	0.54	1.46	1.168		I	O			3.03
17.417	0.55	1.42	1.162		I	O			3.02
17.500	0.55	1.39	1.156		I	O			3.01
17.583	0.55	1.35	1.151		I	O			2.99
17.667	0.55	1.31	1.145		I	O			2.98
17.750	0.55	1.26	1.140		I	O			2.97
17.833	0.51	1.22	1.135		I	O			2.96
17.917	0.46	1.18	1.130		I	O			2.95
18.000	0.45	1.14	1.125		I	O			2.94
18.083	0.44	1.11	1.121		I	O			2.93
18.167	0.44	1.07	1.116		I	O			2.92
18.250	0.44	1.04	1.112		I	O			2.91
18.333	0.44	1.00	1.108		I	O			2.90
18.417	0.44	0.97	1.104		I	O			2.89
18.500	0.44	0.94	1.101		I	O			2.88
18.583	0.40	0.91	1.097		I	O			2.88
18.667	0.35	0.89	1.094	I		O			2.87
18.750	0.34	0.86	1.090	I		O			2.86
18.833	0.29	0.83	1.086	I		O			2.85
18.917	0.24	0.80	1.082	I		O			2.84
19.000	0.23	0.76	1.079	I		O			2.83
19.083	0.26	0.74	1.075	I		O			2.83
19.167	0.31	0.71	1.072	I		O			2.82
19.250	0.32	0.69	1.070	I	O				2.81
19.333	0.37	0.67	1.067		I O				2.81
19.417	0.42	0.66	1.065		I O				2.80
19.500	0.43	0.64	1.064		I O				2.80
19.583	0.39	0.63	1.062		I O				2.80
19.667	0.35	0.62	1.061	I	O				2.79
19.750	0.34	0.60	1.059	I	O				2.79
19.833	0.29	0.59	1.057	I O					2.78
19.917	0.24	0.57	1.055	I O					2.78
20.000	0.23	0.55	1.052	I	O				2.77
20.083	0.26	0.53	1.050	I O					2.77
20.167	0.31	0.52	1.049	I O					2.77
20.250	0.32	0.51	1.047	I O					2.76
20.333	0.33	0.50	1.046	I O					2.76
20.417	0.33	0.49	1.045	I O					2.76
20.500	0.33	0.48	1.044	I O					2.76
20.583	0.33	0.47	1.043	I O					2.75
20.667	0.33	0.46	1.042	IO					2.75
20.750	0.33	0.46	1.041	IO					2.75
20.833	0.29	0.45	1.040	IO					2.75
20.917	0.24	0.44	1.039	IO					2.74
21.000	0.23	0.43	1.037	I O					2.74
21.083	0.26	0.42	1.036	IO					2.74
21.167	0.31	0.41	1.035	IO					2.74
21.250	0.32	0.41	1.034	IO					2.73
21.333	0.28	0.40	1.034	IO					2.73
21.417	0.24	0.39	1.033	IO					2.73
21.500	0.23	0.38	1.032	I O					2.73
21.583	0.26	0.38	1.031	IO					2.73
21.667	0.31	0.37	1.030	IO					2.73
21.750	0.32	0.37	1.030	IO					2.72

21.833	0.28	0.36	1.029	IO				2.72
21.917	0.24	0.36	1.029	IO				2.72
22.000	0.23	0.35	1.028	IO				2.72
22.083	0.26	0.35	1.027	O				2.72
22.167	0.31	0.34	1.027	O				2.72
22.250	0.32	0.34	1.027	O				2.72
22.333	0.28	0.34	1.026	O				2.72
22.417	0.24	0.34	1.026	O				2.72
22.500	0.23	0.33	1.025	IO				2.71
22.583	0.22	0.32	1.024	IO				2.71
22.667	0.22	0.32	1.024	IO				2.71
22.750	0.22	0.31	1.023	IO				2.71
22.833	0.22	0.31	1.022	IO				2.71
22.917	0.22	0.30	1.022	IO				2.71
23.000	0.22	0.30	1.021	IO				2.71
23.083	0.22	0.29	1.021	IO				2.70
23.167	0.22	0.29	1.020	IO				2.70
23.250	0.22	0.29	1.020	IO				2.70
23.333	0.22	0.28	1.019	IO				2.70
23.417	0.22	0.28	1.019	IO				2.70
23.500	0.22	0.28	1.018	IO				2.70
23.583	0.22	0.28	1.018	IO				2.70
23.667	0.22	0.28	1.018	IO				2.70
23.750	0.22	0.28	1.017	IO				2.70
23.833	0.22	0.28	1.017	IO				2.70
23.917	0.22	0.28	1.016	IO				2.69
24.000	0.22	0.28	1.016	IO				2.69
24.083	0.14	0.28	1.015	IO				2.69
24.167	0.04	0.28	1.014	I O				2.69
24.250	0.01	0.28	1.012	I O				2.68
24.333	0.01	0.28	1.010	I O				2.68
24.417	0.00	0.28	1.008	I O				2.68
24.500	0.00	0.28	1.006	I O				2.67
24.583	0.00	0.28	1.005	I O				2.67
24.667	0.00	0.28	1.003	I O				2.66
24.750	0.00	0.28	1.001	I O				2.66
24.833	0.00	0.28	0.999	I O				2.65
24.917	0.00	0.28	0.997	I O				2.65
25.000	0.00	0.28	0.995	I O				2.65
25.083	0.00	0.28	0.993	I O				2.64
25.167	0.00	0.28	0.991	I O				2.64
25.250	0.00	0.28	0.989	I O				2.63
25.333	0.00	0.28	0.987	I O				2.63
25.417	0.00	0.28	0.985	I O				2.62
25.500	0.00	0.28	0.983	I O				2.62
25.583	0.00	0.28	0.981	I O				2.62
25.667	0.00	0.28	0.979	I O				2.61
25.750	0.00	0.28	0.978	I O				2.61
25.833	0.00	0.28	0.976	I O				2.60
25.917	0.00	0.28	0.974	I O				2.60
26.000	0.00	0.28	0.972	I O				2.59
26.083	0.00	0.28	0.970	I O				2.59
26.167	0.00	0.28	0.968	I O				2.59
26.250	0.00	0.28	0.966	I O				2.58
26.333	0.00	0.28	0.964	I O				2.58
26.417	0.00	0.28	0.962	I O				2.57
26.500	0.00	0.28	0.960	I O				2.57
26.583	0.00	0.28	0.958	I O				2.56
26.667	0.00	0.28	0.956	I O				2.56
26.750	0.00	0.28	0.954	I O				2.55
26.833	0.00	0.28	0.952	I O				2.55
26.917	0.00	0.28	0.951	I O				2.55
27.000	0.00	0.28	0.949	I O				2.54
27.083	0.00	0.28	0.947	I O				2.54
27.167	0.00	0.28	0.945	I O				2.53
27.250	0.00	0.28	0.943	I O				2.53
27.333	0.00	0.28	0.941	I O				2.52

27.417	0.00	0.28	0.939	I	O				2.52
27.500	0.00	0.28	0.937	I	O				2.52
27.583	0.00	0.28	0.935	I	O				2.51
27.667	0.00	0.28	0.933	I	O				2.51
27.750	0.00	0.28	0.931	I	O				2.50
27.833	0.00	0.28	0.929	I	O				2.50
27.917	0.00	0.28	0.927	I	O				2.49
28.000	0.00	0.28	0.925	I	O				2.49
28.083	0.00	0.28	0.924	I	O				2.48
28.167	0.00	0.28	0.922	I	O				2.48
28.250	0.00	0.28	0.920	I	O				2.48
28.333	0.00	0.28	0.918	I	O				2.47
28.417	0.00	0.28	0.916	I	O				2.47
28.500	0.00	0.28	0.914	I	O				2.46
28.583	0.00	0.28	0.912	I	O				2.46
28.667	0.00	0.28	0.910	I	O				2.45
28.750	0.00	0.28	0.908	I	O				2.45
28.833	0.00	0.28	0.906	I	O				2.44
28.917	0.00	0.28	0.904	I	O				2.44
29.000	0.00	0.28	0.902	I	O				2.43
29.083	0.00	0.28	0.900	I	O				2.43
29.167	0.00	0.28	0.898	I	O				2.42
29.250	0.00	0.28	0.897	I	O				2.42
29.333	0.00	0.28	0.895	I	O				2.42
29.417	0.00	0.28	0.893	I	O				2.41
29.500	0.00	0.28	0.891	I	O				2.41
29.583	0.00	0.28	0.889	I	O				2.40
29.667	0.00	0.28	0.887	I	O				2.40
29.750	0.00	0.28	0.885	I	O				2.39
29.833	0.00	0.28	0.883	I	O				2.39
29.917	0.00	0.28	0.881	I	O				2.38
30.000	0.00	0.28	0.879	I	O				2.38
30.083	0.00	0.28	0.877	I	O				2.37
30.167	0.00	0.28	0.875	I	O				2.37
30.250	0.00	0.28	0.873	I	O				2.37
30.333	0.00	0.28	0.871	I	O				2.36
30.417	0.00	0.28	0.870	I	O				2.36
30.500	0.00	0.28	0.868	I	O				2.35
30.583	0.00	0.28	0.866	I	O				2.35
30.667	0.00	0.28	0.864	I	O				2.34
30.750	0.00	0.28	0.862	I	O				2.34
30.833	0.00	0.28	0.860	I	O				2.33
30.917	0.00	0.28	0.858	I	O				2.33
31.000	0.00	0.28	0.856	I	O				2.32
31.083	0.00	0.28	0.854	I	O				2.32
31.167	0.00	0.28	0.852	I	O				2.31
31.250	0.00	0.28	0.850	I	O				2.31
31.333	0.00	0.28	0.848	I	O				2.31
31.417	0.00	0.28	0.846	I	O				2.30
31.500	0.00	0.28	0.844	I	O				2.30
31.583	0.00	0.28	0.843	I	O				2.29
31.667	0.00	0.28	0.841	I	O				2.29
31.750	0.00	0.28	0.839	I	O				2.28
31.833	0.00	0.28	0.837	I	O				2.28
31.917	0.00	0.28	0.835	I	O				2.27
32.000	0.00	0.28	0.833	I	O				2.27
32.083	0.00	0.28	0.831	I	O				2.26
32.167	0.00	0.28	0.829	I	O				2.26
32.250	0.00	0.28	0.827	I	O				2.26
32.333	0.00	0.28	0.825	I	O				2.25
32.417	0.00	0.28	0.823	I	O				2.25
32.500	0.00	0.28	0.821	I	O				2.24
32.583	0.00	0.28	0.819	I	O				2.24
32.667	0.00	0.28	0.817	I	O				2.23
32.750	0.00	0.28	0.816	I	O				2.23
32.833	0.00	0.28	0.814	I	O				2.22
32.917	0.00	0.28	0.812	I	O				2.22

33.000	0.00	0.28	0.810	I O				2.21
33.083	0.00	0.28	0.808	I O				2.21
33.167	0.00	0.28	0.806	I O				2.20
33.250	0.00	0.28	0.804	I O				2.20
33.333	0.00	0.28	0.802	I O				2.20
33.417	0.00	0.28	0.800	I O				2.19
33.500	0.00	0.28	0.798	I O				2.19
33.583	0.00	0.28	0.796	I O				2.18
33.667	0.00	0.28	0.794	I O				2.18
33.750	0.00	0.28	0.792	I O				2.17
33.833	0.00	0.28	0.790	I O				2.17
33.917	0.00	0.28	0.789	I O				2.16
34.000	0.00	0.28	0.787	I O				2.16
34.083	0.00	0.28	0.785	I O				2.15
34.167	0.00	0.28	0.783	I O				2.15
34.250	0.00	0.28	0.781	I O				2.14
34.333	0.00	0.28	0.779	I O				2.14
34.417	0.00	0.28	0.777	I O				2.14
34.500	0.00	0.28	0.775	I O				2.13
34.583	0.00	0.28	0.773	I O				2.13
34.667	0.00	0.28	0.771	I O				2.12
34.750	0.00	0.28	0.769	I O				2.12
34.833	0.00	0.28	0.767	I O				2.11
34.917	0.00	0.28	0.765	I O				2.11
35.000	0.00	0.28	0.763	I O				2.10
35.083	0.00	0.28	0.762	I O				2.10
35.167	0.00	0.28	0.760	I O				2.09
35.250	0.00	0.28	0.758	I O				2.09
35.333	0.00	0.28	0.756	I O				2.09
35.417	0.00	0.28	0.754	I O				2.08
35.500	0.00	0.28	0.752	I O				2.08
35.583	0.00	0.28	0.750	I O				2.07
35.667	0.00	0.28	0.748	I O				2.07
35.750	0.00	0.28	0.746	I O				2.06
35.833	0.00	0.28	0.744	I O				2.06
35.917	0.00	0.28	0.742	I O				2.05
36.000	0.00	0.28	0.740	I O				2.05
36.083	0.00	0.28	0.738	I O				2.04
36.167	0.00	0.28	0.736	I O				2.04
36.250	0.00	0.28	0.735	I O				2.03
36.333	0.00	0.28	0.733	I O				2.03
36.417	0.00	0.28	0.731	I O				2.03
36.500	0.00	0.28	0.729	I O				2.02
36.583	0.00	0.28	0.727	I O				2.02
36.667	0.00	0.28	0.725	I O				2.01
36.750	0.00	0.28	0.723	I O				2.01
36.833	0.00	0.28	0.721	I O				2.00
36.917	0.00	0.28	0.719	I O				2.00
37.000	0.00	0.28	0.717	I O				1.99
37.083	0.00	0.28	0.715	I O				1.99
37.167	0.00	0.28	0.713	I O				1.98
37.250	0.00	0.28	0.711	I O				1.98
37.333	0.00	0.28	0.709	I O				1.97
37.417	0.00	0.28	0.708	I O				1.97
37.500	0.00	0.28	0.706	I O				1.96
37.583	0.00	0.28	0.704	I O				1.96
37.667	0.00	0.28	0.702	I O				1.95
37.750	0.00	0.28	0.700	I O				1.95
37.833	0.00	0.28	0.698	I O				1.94
37.917	0.00	0.28	0.696	I O				1.94
38.000	0.00	0.28	0.694	I O				1.93
38.083	0.00	0.28	0.692	I O				1.93
38.167	0.00	0.28	0.690	I O				1.92
38.250	0.00	0.28	0.688	I O				1.92
38.333	0.00	0.28	0.686	I O				1.91
38.417	0.00	0.28	0.684	I O				1.91
38.500	0.00	0.28	0.682	I O				1.90

38.583	0.00	0.28	0.681	I	O				1.90
38.667	0.00	0.28	0.679	I	O				1.90
38.750	0.00	0.28	0.677	I	O				1.89
38.833	0.00	0.28	0.675	I	O				1.89
38.917	0.00	0.28	0.673	I	O				1.88
39.000	0.00	0.28	0.671	I	O				1.88
39.083	0.00	0.28	0.669	I	O				1.87
39.167	0.00	0.28	0.667	I	O				1.87
39.250	0.00	0.28	0.665	I	O				1.86
39.333	0.00	0.28	0.663	I	O				1.86
39.417	0.00	0.28	0.661	I	O				1.85
39.500	0.00	0.28	0.659	I	O				1.85
39.583	0.00	0.28	0.657	I	O				1.84
39.667	0.00	0.28	0.656	I	O				1.84
39.750	0.00	0.28	0.654	I	O				1.83
39.833	0.00	0.28	0.652	I	O				1.83
39.917	0.00	0.28	0.650	I	O				1.82
40.000	0.00	0.28	0.648	I	O				1.82
40.083	0.00	0.28	0.646	I	O				1.81
40.167	0.00	0.28	0.644	I	O				1.81
40.250	0.00	0.28	0.642	I	O				1.80
40.333	0.00	0.28	0.640	I	O				1.80
40.417	0.00	0.28	0.638	I	O				1.79
40.500	0.00	0.28	0.636	I	O				1.79
40.583	0.00	0.28	0.634	I	O				1.78
40.667	0.00	0.28	0.632	I	O				1.78
40.750	0.00	0.28	0.630	I	O				1.77
40.833	0.00	0.28	0.629	I	O				1.77
40.917	0.00	0.28	0.627	I	O				1.76
41.000	0.00	0.28	0.625	I	O				1.76
41.083	0.00	0.28	0.623	I	O				1.75
41.167	0.00	0.28	0.621	I	O				1.75
41.250	0.00	0.28	0.619	I	O				1.74
41.333	0.00	0.28	0.617	I	O				1.74
41.417	0.00	0.28	0.615	I	O				1.73
41.500	0.00	0.28	0.613	I	O				1.73
41.583	0.00	0.28	0.611	I	O				1.72
41.667	0.00	0.28	0.609	I	O				1.72
41.750	0.00	0.28	0.607	I	O				1.71
41.833	0.00	0.28	0.605	I	O				1.71
41.917	0.00	0.28	0.603	I	O				1.70
42.000	0.00	0.28	0.602	I	O				1.70
42.083	0.00	0.28	0.600	I	O				1.69
42.167	0.00	0.28	0.598	I	O				1.69
42.250	0.00	0.28	0.596	I	O				1.68
42.333	0.00	0.28	0.594	I	O				1.68
42.417	0.00	0.28	0.592	I	O				1.67
42.500	0.00	0.28	0.590	I	O				1.67
42.583	0.00	0.28	0.588	I	O				1.66
42.667	0.00	0.28	0.586	I	O				1.66
42.750	0.00	0.28	0.584	I	O				1.66
42.833	0.00	0.28	0.582	I	O				1.65
42.917	0.00	0.28	0.580	I	O				1.65
43.000	0.00	0.28	0.578	I	O				1.64
43.083	0.00	0.28	0.576	I	O				1.64
43.167	0.00	0.28	0.575	I	O				1.63
43.250	0.00	0.28	0.573	I	O				1.63
43.333	0.00	0.28	0.571	I	O				1.62
43.417	0.00	0.28	0.569	I	O				1.62
43.500	0.00	0.28	0.567	I	O				1.61
43.583	0.00	0.28	0.565	I	O				1.61
43.667	0.00	0.28	0.563	I	O				1.60
43.750	0.00	0.28	0.561	I	O				1.60
43.833	0.00	0.28	0.559	I	O				1.59
43.917	0.00	0.28	0.557	I	O				1.59
44.000	0.00	0.28	0.555	I	O				1.58
44.083	0.00	0.28	0.553	I	O				1.58

44.167	0.00	0.28	0.551	I	O				1.57
44.250	0.00	0.28	0.549	I	O				1.57
44.333	0.00	0.28	0.548	I	O				1.56
44.417	0.00	0.28	0.546	I	O				1.56
44.500	0.00	0.28	0.544	I	O				1.55
44.583	0.00	0.28	0.542	I	O				1.55
44.667	0.00	0.28	0.540	I	O				1.54
44.750	0.00	0.28	0.538	I	O				1.54
44.833	0.00	0.28	0.536	I	O				1.53
44.917	0.00	0.28	0.534	I	O				1.53
45.000	0.00	0.28	0.532	I	O				1.52
45.083	0.00	0.28	0.530	I	O				1.52
45.167	0.00	0.28	0.528	I	O				1.51
45.250	0.00	0.28	0.526	I	O				1.51
45.333	0.00	0.28	0.524	I	O				1.50
45.417	0.00	0.28	0.522	I	O				1.50
45.500	0.00	0.28	0.521	I	O				1.49
45.583	0.00	0.28	0.519	I	O				1.49
45.667	0.00	0.28	0.517	I	O				1.48
45.750	0.00	0.28	0.515	I	O				1.48
45.833	0.00	0.28	0.513	I	O				1.47
45.917	0.00	0.28	0.511	I	O				1.47
46.000	0.00	0.28	0.509	I	O				1.46
46.083	0.00	0.28	0.507	I	O				1.46
46.167	0.00	0.28	0.505	I	O				1.45
46.250	0.00	0.28	0.503	I	O				1.45
46.333	0.00	0.28	0.501	I	O				1.44
46.417	0.00	0.28	0.499	I	O				1.44
46.500	0.00	0.28	0.497	I	O				1.43
46.583	0.00	0.28	0.495	I	O				1.43
46.667	0.00	0.28	0.494	I	O				1.42
46.750	0.00	0.28	0.492	I	O				1.42
46.833	0.00	0.28	0.490	I	O				1.41
46.917	0.00	0.28	0.488	I	O				1.41
47.000	0.00	0.28	0.486	I	O				1.40
47.083	0.00	0.28	0.484	I	O				1.39
47.167	0.00	0.28	0.482	I	O				1.39
47.250	0.00	0.28	0.480	I	O				1.38
47.333	0.00	0.28	0.478	I	O				1.38
47.417	0.00	0.28	0.476	I	O				1.37
47.500	0.00	0.28	0.474	I	O				1.37
47.583	0.00	0.28	0.472	I	O				1.36
47.667	0.00	0.28	0.470	I	O				1.36
47.750	0.00	0.28	0.468	I	O				1.35
47.833	0.00	0.28	0.467	I	O				1.35
47.917	0.00	0.28	0.465	I	O				1.34
48.000	0.00	0.28	0.463	I	O				1.34
48.083	0.00	0.28	0.461	I	O				1.33
48.167	0.00	0.28	0.459	I	O				1.33
48.250	0.00	0.28	0.457	I	O				1.32
48.333	0.00	0.28	0.455	I	O				1.32
48.417	0.00	0.28	0.453	I	O				1.31
48.500	0.00	0.28	0.451	I	O				1.31
48.583	0.00	0.28	0.449	I	O				1.30
48.667	0.00	0.28	0.447	I	O				1.30
48.750	0.00	0.28	0.445	I	O				1.29
48.833	0.00	0.28	0.443	I	O				1.29
48.917	0.00	0.28	0.441	I	O				1.28
49.000	0.00	0.28	0.440	I	O				1.28
49.083	0.00	0.28	0.438	I	O				1.27
49.167	0.00	0.28	0.436	I	O				1.27
49.250	0.00	0.28	0.434	I	O				1.26
49.333	0.00	0.28	0.432	I	O				1.25
49.417	0.00	0.28	0.430	I	O				1.25
49.500	0.00	0.28	0.428	I	O				1.24
49.583	0.00	0.28	0.426	I	O				1.24
49.667	0.00	0.28	0.424	I	O				1.23

49.750	0.00	0.28	0.422	I	O				1.23
49.833	0.00	0.28	0.420	I	O				1.22
49.917	0.00	0.28	0.418	I	O				1.22
50.000	0.00	0.28	0.416	I	O				1.21
50.083	0.00	0.28	0.414	I	O				1.21
50.167	0.00	0.28	0.413	I	O				1.20
50.250	0.00	0.28	0.411	I	O				1.20
50.333	0.00	0.28	0.409	I	O				1.19
50.417	0.00	0.28	0.407	I	O				1.19
50.500	0.00	0.28	0.405	I	O				1.18
50.583	0.00	0.28	0.403	I	O				1.18
50.667	0.00	0.28	0.401	I	O				1.17
50.750	0.00	0.28	0.399	I	O				1.17
50.833	0.00	0.28	0.397	I	O				1.16
50.917	0.00	0.28	0.395	I	O				1.16
51.000	0.00	0.28	0.393	I	O				1.15
51.083	0.00	0.28	0.391	I	O				1.15
51.167	0.00	0.28	0.389	I	O				1.14
51.250	0.00	0.28	0.387	I	O				1.14
51.333	0.00	0.28	0.386	I	O				1.13
51.417	0.00	0.28	0.384	I	O				1.13
51.500	0.00	0.28	0.382	I	O				1.12
51.583	0.00	0.28	0.380	I	O				1.11
51.667	0.00	0.28	0.378	I	O				1.11
51.750	0.00	0.28	0.376	I	O				1.10
51.833	0.00	0.28	0.374	I	O				1.10
51.917	0.00	0.28	0.372	I	O				1.09
52.000	0.00	0.28	0.370	I	O				1.09
52.083	0.00	0.28	0.368	I	O				1.08
52.167	0.00	0.28	0.366	I	O				1.08
52.250	0.00	0.28	0.364	I	O				1.07
52.333	0.00	0.28	0.362	I	O				1.07
52.417	0.00	0.28	0.360	I	O				1.06
52.500	0.00	0.28	0.359	I	O				1.06
52.583	0.00	0.28	0.357	I	O				1.05
52.667	0.00	0.28	0.355	I	O				1.05
52.750	0.00	0.28	0.353	I	O				1.04
52.833	0.00	0.28	0.351	I	O				1.04
52.917	0.00	0.28	0.349	I	O				1.03
53.000	0.00	0.28	0.347	I	O				1.03
53.083	0.00	0.28	0.345	I	O				1.02
53.167	0.00	0.28	0.343	I	O				1.02
53.250	0.00	0.28	0.341	I	O				1.01
53.333	0.00	0.28	0.339	I	O				1.01
53.417	0.00	0.28	0.337	I	O				1.00
53.500	0.00	0.28	0.335	I	O				1.00
53.583	0.00	0.28	0.333	I	O				0.99
53.667	0.00	0.28	0.332	I	O				0.98
53.750	0.00	0.28	0.330	I	O				0.98
53.833	0.00	0.28	0.328	I	O				0.97
53.917	0.00	0.28	0.326	I	O				0.97
54.000	0.00	0.28	0.324	I	O				0.96
54.083	0.00	0.28	0.322	I	O				0.96
54.167	0.00	0.28	0.320	I	O				0.95
54.250	0.00	0.28	0.318	I	O				0.95
54.333	0.00	0.28	0.316	I	O				0.94
54.417	0.00	0.28	0.314	I	O				0.93
54.500	0.00	0.28	0.312	I	O				0.93
54.583	0.00	0.28	0.310	I	O				0.92
54.667	0.00	0.28	0.308	I	O				0.92
54.750	0.00	0.28	0.306	I	O				0.91
54.833	0.00	0.28	0.305	I	O				0.91
54.917	0.00	0.28	0.303	I	O				0.90
55.000	0.00	0.28	0.301	I	O				0.90
55.083	0.00	0.28	0.299	I	O				0.89
55.167	0.00	0.28	0.297	I	O				0.88
55.250	0.00	0.28	0.295	I	O				0.88

55.333	0.00	0.28	0.293	I	O				0.87
55.417	0.00	0.28	0.291	I	O				0.87
55.500	0.00	0.28	0.289	I	O				0.86
55.583	0.00	0.28	0.287	I	O				0.86
55.667	0.00	0.28	0.285	I	O				0.85
55.750	0.00	0.28	0.283	I	O				0.85
55.833	0.00	0.28	0.281	I	O				0.84
55.917	0.00	0.28	0.279	I	O				0.83
56.000	0.00	0.28	0.278	I	O				0.83
56.083	0.00	0.28	0.276	I	O				0.82
56.167	0.00	0.28	0.274	I	O				0.82
56.250	0.00	0.28	0.272	I	O				0.81
56.333	0.00	0.28	0.270	I	O				0.81
56.417	0.00	0.28	0.268	I	O				0.80
56.500	0.00	0.28	0.266	I	O				0.80
56.583	0.00	0.28	0.264	I	O				0.79
56.667	0.00	0.28	0.262	I	O				0.78
56.750	0.00	0.28	0.260	I	O				0.78
56.833	0.00	0.28	0.258	I	O				0.77
56.917	0.00	0.28	0.256	I	O				0.77
57.000	0.00	0.28	0.254	I	O				0.76
57.083	0.00	0.28	0.252	I	O				0.76
57.167	0.00	0.28	0.251	I	O				0.75
57.250	0.00	0.28	0.249	I	O				0.75
57.333	0.00	0.28	0.247	I	O				0.74
57.417	0.00	0.28	0.245	I	O				0.73
57.500	0.00	0.28	0.243	I	O				0.73
57.583	0.00	0.28	0.241	I	O				0.72
57.667	0.00	0.28	0.239	I	O				0.72
57.750	0.00	0.28	0.237	I	O				0.71
57.833	0.00	0.28	0.235	I	O				0.71
57.917	0.00	0.28	0.233	I	O				0.70
58.000	0.00	0.28	0.231	I	O				0.70
58.083	0.00	0.28	0.229	I	O				0.69
58.167	0.00	0.28	0.227	I	O				0.69
58.250	0.00	0.28	0.225	I	O				0.68
58.333	0.00	0.28	0.224	I	O				0.67
58.417	0.00	0.28	0.222	I	O				0.67
58.500	0.00	0.28	0.220	I	O				0.66
58.583	0.00	0.28	0.218	I	O				0.66
58.667	0.00	0.28	0.216	I	O				0.65
58.750	0.00	0.28	0.214	I	O				0.65
58.833	0.00	0.28	0.212	I	O				0.64
58.917	0.00	0.28	0.210	I	O				0.64
59.000	0.00	0.28	0.208	I	O				0.63
59.083	0.00	0.28	0.206	I	O				0.62
59.167	0.00	0.28	0.204	I	O				0.62
59.250	0.00	0.28	0.202	I	O				0.61
59.333	0.00	0.28	0.200	I	O				0.61
59.417	0.00	0.28	0.198	I	O				0.60
59.500	0.00	0.28	0.197	I	O				0.60
59.583	0.00	0.28	0.195	I	O				0.59
59.667	0.00	0.28	0.193	I	O				0.59
59.750	0.00	0.28	0.191	I	O				0.58
59.833	0.00	0.28	0.189	I	O				0.57
59.917	0.00	0.28	0.187	I	O				0.57
60.000	0.00	0.28	0.185	I	O				0.56
60.083	0.00	0.28	0.183	I	O				0.56
60.167	0.00	0.28	0.181	I	O				0.55
60.250	0.00	0.28	0.179	I	O				0.55
60.333	0.00	0.28	0.177	I	O				0.54
60.417	0.00	0.28	0.175	I	O				0.54
60.500	0.00	0.28	0.173	I	O				0.53
60.583	0.00	0.28	0.171	I	O				0.52
60.667	0.00	0.28	0.170	I	O				0.52
60.750	0.00	0.28	0.168	I	O				0.51
60.833	0.00	0.28	0.166	I	O				0.51

60.917	0.00	0.28	0.164	I O				0.50
61.000	0.00	0.28	0.162	I O				0.50
61.083	0.00	0.27	0.160	I O				0.49
61.167	0.00	0.27	0.158	I O				0.48
61.250	0.00	0.27	0.156	I O				0.48
61.333	0.00	0.27	0.154	I O				0.47
61.417	0.00	0.26	0.153	I O				0.47
61.500	0.00	0.26	0.151	I O				0.46
61.583	0.00	0.26	0.149	I O				0.46
61.667	0.00	0.25	0.147	I O				0.45
61.750	0.00	0.25	0.145	I O				0.45
61.833	0.00	0.25	0.144	I O				0.44
61.917	0.00	0.24	0.142	I O				0.44
62.000	0.00	0.24	0.140	I O				0.43
62.083	0.00	0.24	0.139	I O				0.43
62.167	0.00	0.24	0.137	I O				0.42
62.250	0.00	0.23	0.136	IO				0.42
62.333	0.00	0.23	0.134	IO				0.41
62.417	0.00	0.23	0.132	IO				0.41
62.500	0.00	0.22	0.131	IO				0.40
62.583	0.00	0.22	0.129	IO				0.40
62.667	0.00	0.22	0.128	IO				0.39
62.750	0.00	0.22	0.126	IO				0.39
62.833	0.00	0.21	0.125	IO				0.38
62.917	0.00	0.21	0.123	IO				0.38
63.000	0.00	0.21	0.122	IO				0.37
63.083	0.00	0.21	0.120	IO				0.37
63.167	0.00	0.20	0.119	IO				0.37
63.250	0.00	0.20	0.118	IO				0.36
63.333	0.00	0.20	0.116	IO				0.36
63.417	0.00	0.20	0.115	IO				0.35
63.500	0.00	0.19	0.113	IO				0.35
63.583	0.00	0.19	0.112	IO				0.34
63.667	0.00	0.19	0.111	IO				0.34
63.750	0.00	0.19	0.110	IO				0.34
63.833	0.00	0.19	0.108	IO				0.33
63.917	0.00	0.18	0.107	IO				0.33
64.000	0.00	0.18	0.106	IO				0.32
64.083	0.00	0.18	0.104	IO				0.32
64.167	0.00	0.18	0.103	IO				0.32
64.250	0.00	0.18	0.102	IO				0.31
64.333	0.00	0.17	0.101	IO				0.31
64.417	0.00	0.17	0.100	IO				0.31
64.500	0.00	0.17	0.098	IO				0.30
64.583	0.00	0.17	0.097	IO				0.30
64.667	0.00	0.17	0.096	IO				0.29
64.750	0.00	0.16	0.095	IO				0.29
64.833	0.00	0.16	0.094	IO				0.29
64.917	0.00	0.16	0.093	IO				0.28
65.000	0.00	0.16	0.092	IO				0.28
65.083	0.00	0.16	0.091	IO				0.28
65.167	0.00	0.15	0.090	IO				0.27
65.250	0.00	0.15	0.089	IO				0.27
65.333	0.00	0.15	0.087	IO				0.27
65.417	0.00	0.15	0.086	IO				0.27
65.500	0.00	0.15	0.085	IO				0.26
65.583	0.00	0.15	0.084	IO				0.26
65.667	0.00	0.14	0.083	IO				0.26
65.750	0.00	0.14	0.082	IO				0.25
65.833	0.00	0.14	0.081	IO				0.25
65.917	0.00	0.14	0.081	IO				0.25
66.000	0.00	0.14	0.080	IO				0.24
66.083	0.00	0.14	0.079	IO				0.24
66.167	0.00	0.13	0.078	IO				0.24
66.250	0.00	0.13	0.077	IO				0.24
66.333	0.00	0.13	0.076	IO				0.23
66.417	0.00	0.13	0.075	IO				0.23

66.500	0.00	0.13	0.074	IO				0.23
66.583	0.00	0.13	0.073	IO				0.22
66.667	0.00	0.12	0.072	IO				0.22
66.750	0.00	0.12	0.072	IO				0.22
66.833	0.00	0.12	0.071	IO				0.22
66.917	0.00	0.12	0.070	IO				0.21
67.000	0.00	0.12	0.069	IO				0.21
67.083	0.00	0.12	0.068	O				0.21
67.167	0.00	0.12	0.067	O				0.21
67.250	0.00	0.11	0.067	O				0.20
67.333	0.00	0.11	0.066	O				0.20
67.417	0.00	0.11	0.065	O				0.20
67.500	0.00	0.11	0.064	O				0.20
67.583	0.00	0.11	0.064	O				0.19
67.667	0.00	0.11	0.063	O				0.19
67.750	0.00	0.11	0.062	O				0.19
67.833	0.00	0.11	0.061	O				0.19
67.917	0.00	0.10	0.061	O				0.19
68.000	0.00	0.10	0.060	O				0.18
68.083	0.00	0.10	0.059	O				0.18
68.167	0.00	0.10	0.059	O				0.18
68.250	0.00	0.10	0.058	O				0.18
68.333	0.00	0.10	0.057	O				0.18
68.417	0.00	0.10	0.056	O				0.17
68.500	0.00	0.10	0.056	O				0.17
68.583	0.00	0.09	0.055	O				0.17
68.667	0.00	0.09	0.055	O				0.17
68.750	0.00	0.09	0.054	O				0.17
68.833	0.00	0.09	0.053	O				0.16
68.917	0.00	0.09	0.053	O				0.16
69.000	0.00	0.09	0.052	O				0.16
69.083	0.00	0.09	0.051	O				0.16
69.167	0.00	0.09	0.051	O				0.16
69.250	0.00	0.09	0.050	O				0.15
69.333	0.00	0.09	0.050	O				0.15
69.417	0.00	0.08	0.049	O				0.15
69.500	0.00	0.08	0.048	O				0.15
69.583	0.00	0.08	0.048	O				0.15
69.667	0.00	0.08	0.047	O				0.15
69.750	0.00	0.08	0.047	O				0.14
69.833	0.00	0.08	0.046	O				0.14
69.917	0.00	0.08	0.046	O				0.14
70.000	0.00	0.08	0.045	O				0.14
70.083	0.00	0.08	0.045	O				0.14
70.167	0.00	0.08	0.044	O				0.14
70.250	0.00	0.07	0.044	O				0.13
70.333	0.00	0.07	0.043	O				0.13
70.417	0.00	0.07	0.043	O				0.13
70.500	0.00	0.07	0.042	O				0.13
70.583	0.00	0.07	0.042	O				0.13
70.667	0.00	0.07	0.041	O				0.13
70.750	0.00	0.07	0.041	O				0.12
70.833	0.00	0.07	0.040	O				0.12
70.917	0.00	0.07	0.040	O				0.12
71.000	0.00	0.07	0.039	O				0.12
71.083	0.00	0.07	0.039	O				0.12
71.167	0.00	0.07	0.038	O				0.12
71.250	0.00	0.06	0.038	O				0.12
71.333	0.00	0.06	0.037	O				0.11
71.417	0.00	0.06	0.037	O				0.11
71.500	0.00	0.06	0.036	O				0.11
71.583	0.00	0.06	0.036	O				0.11
71.667	0.00	0.06	0.036	O				0.11
71.750	0.00	0.06	0.035	O				0.11
71.833	0.00	0.06	0.035	O				0.11
71.917	0.00	0.06	0.034	O				0.11
72.000	0.00	0.06	0.034	O				0.10

72.083	0.00	0.06	0.034	O				0.10
72.167	0.00	0.06	0.033	O				0.10
72.250	0.00	0.06	0.033	O				0.10
72.333	0.00	0.06	0.032	O				0.10
72.417	0.00	0.05	0.032	O				0.10
72.500	0.00	0.05	0.032	O				0.10
72.583	0.00	0.05	0.031	O				0.10
72.667	0.00	0.05	0.031	O				0.09
72.750	0.00	0.05	0.031	O				0.09
72.833	0.00	0.05	0.030	O				0.09
72.917	0.00	0.05	0.030	O				0.09
73.000	0.00	0.05	0.029	O				0.09
73.083	0.00	0.05	0.029	O				0.09
73.167	0.00	0.05	0.029	O				0.09
73.250	0.00	0.05	0.028	O				0.09
73.333	0.00	0.05	0.028	O				0.09
73.417	0.00	0.05	0.028	O				0.09
73.500	0.00	0.05	0.027	O				0.08
73.583	0.00	0.05	0.027	O				0.08
73.667	0.00	0.05	0.027	O				0.08
73.750	0.00	0.05	0.026	O				0.08
73.833	0.00	0.04	0.026	O				0.08
73.917	0.00	0.04	0.026	O				0.08
74.000	0.00	0.04	0.026	O				0.08
74.083	0.00	0.04	0.025	O				0.08
74.167	0.00	0.04	0.025	O				0.08
74.250	0.00	0.04	0.025	O				0.08
74.333	0.00	0.04	0.024	O				0.07
74.417	0.00	0.04	0.024	O				0.07
74.500	0.00	0.04	0.024	O				0.07
74.583	0.00	0.04	0.024	O				0.07
74.667	0.00	0.04	0.023	O				0.07
74.750	0.00	0.04	0.023	O				0.07
74.833	0.00	0.04	0.023	O				0.07
74.917	0.00	0.04	0.022	O				0.07
75.000	0.00	0.04	0.022	O				0.07
75.083	0.00	0.04	0.022	O				0.07
75.167	0.00	0.04	0.022	O				0.07
75.250	0.00	0.04	0.021	O				0.07
75.333	0.00	0.04	0.021	O				0.06
75.417	0.00	0.04	0.021	O				0.06
75.500	0.00	0.04	0.021	O				0.06
75.583	0.00	0.04	0.020	O				0.06
75.667	0.00	0.03	0.020	O				0.06
75.750	0.00	0.03	0.020	O				0.06
75.833	0.00	0.03	0.020	O				0.06
75.917	0.00	0.03	0.019	O				0.06
76.000	0.00	0.03	0.019	O				0.06
76.083	0.00	0.03	0.019	O				0.06
76.167	0.00	0.03	0.019	O				0.06
76.250	0.00	0.03	0.019	O				0.06
76.333	0.00	0.03	0.018	O				0.06
76.417	0.00	0.03	0.018	O				0.06
76.500	0.00	0.03	0.018	O				0.05
76.583	0.00	0.03	0.018	O				0.05
76.667	0.00	0.03	0.018	O				0.05
76.750	0.00	0.03	0.017	O				0.05
76.833	0.00	0.03	0.017	O				0.05
76.917	0.00	0.03	0.017	O				0.05
77.000	0.00	0.03	0.017	O				0.05
77.083	0.00	0.03	0.016	O				0.05
77.167	0.00	0.03	0.016	O				0.05
77.250	0.00	0.03	0.016	O				0.05
77.333	0.00	0.03	0.016	O				0.05
77.417	0.00	0.03	0.016	O				0.05
77.500	0.00	0.03	0.016	O				0.05
77.583	0.00	0.03	0.015	O				0.05

77.667	0.00	0.03	0.015	O				0.05
77.750	0.00	0.03	0.015	O				0.05
77.833	0.00	0.03	0.015	O				0.05
77.917	0.00	0.03	0.015	O				0.04
78.000	0.00	0.02	0.014	O				0.04
78.083	0.00	0.02	0.014	O				0.04
78.167	0.00	0.02	0.014	O				0.04
78.250	0.00	0.02	0.014	O				0.04
78.333	0.00	0.02	0.014	O				0.04
78.417	0.00	0.02	0.014	O				0.04
78.500	0.00	0.02	0.013	O				0.04
78.583	0.00	0.02	0.013	O				0.04
78.667	0.00	0.02	0.013	O				0.04
78.750	0.00	0.02	0.013	O				0.04
78.833	0.00	0.02	0.013	O				0.04
78.917	0.00	0.02	0.013	O				0.04
79.000	0.00	0.02	0.013	O				0.04
79.083	0.00	0.02	0.012	O				0.04
79.167	0.00	0.02	0.012	O				0.04
79.250	0.00	0.02	0.012	O				0.04
79.333	0.00	0.02	0.012	O				0.04
79.417	0.00	0.02	0.012	O				0.04
79.500	0.00	0.02	0.012	O				0.04
79.583	0.00	0.02	0.012	O				0.04
79.667	0.00	0.02	0.011	O				0.04
79.750	0.00	0.02	0.011	O				0.03
79.833	0.00	0.02	0.011	O				0.03
79.917	0.00	0.02	0.011	O				0.03
80.000	0.00	0.02	0.011	O				0.03
80.083	0.00	0.02	0.011	O				0.03
80.167	0.00	0.02	0.011	O				0.03
80.250	0.00	0.02	0.011	O				0.03
80.333	0.00	0.02	0.010	O				0.03
80.417	0.00	0.02	0.010	O				0.03
80.500	0.00	0.02	0.010	O				0.03
80.583	0.00	0.02	0.010	O				0.03
80.667	0.00	0.02	0.010	O				0.03
80.750	0.00	0.02	0.010	O				0.03
80.833	0.00	0.02	0.010	O				0.03
80.917	0.00	0.02	0.010	O				0.03
81.000	0.00	0.02	0.009	O				0.03
81.083	0.00	0.02	0.009	O				0.03
81.167	0.00	0.02	0.009	O				0.03
81.250	0.00	0.02	0.009	O				0.03
81.333	0.00	0.02	0.009	O				0.03
81.417	0.00	0.02	0.009	O				0.03
81.500	0.00	0.02	0.009	O				0.03
81.583	0.00	0.01	0.009	O				0.03
81.667	0.00	0.01	0.009	O				0.03
81.750	0.00	0.01	0.009	O				0.03
81.833	0.00	0.01	0.008	O				0.03
81.917	0.00	0.01	0.008	O				0.03
82.000	0.00	0.01	0.008	O				0.03
82.083	0.00	0.01	0.008	O				0.02
82.167	0.00	0.01	0.008	O				0.02
82.250	0.00	0.01	0.008	O				0.02
82.333	0.00	0.01	0.008	O				0.02
82.417	0.00	0.01	0.008	O				0.02
82.500	0.00	0.01	0.008	O				0.02
82.583	0.00	0.01	0.008	O				0.02
82.667	0.00	0.01	0.007	O				0.02
82.750	0.00	0.01	0.007	O				0.02
82.833	0.00	0.01	0.007	O				0.02
82.917	0.00	0.01	0.007	O				0.02
83.000	0.00	0.01	0.007	O				0.02
83.083	0.00	0.01	0.007	O				0.02
83.167	0.00	0.01	0.007	O				0.02

83.250	0.00	0.01	0.007	O				0.02
83.333	0.00	0.01	0.007	O				0.02
83.417	0.00	0.01	0.007	O				0.02
83.500	0.00	0.01	0.007	O				0.02
83.583	0.00	0.01	0.007	O				0.02
83.667	0.00	0.01	0.006	O				0.02
83.750	0.00	0.01	0.006	O				0.02
83.833	0.00	0.01	0.006	O				0.02
83.917	0.00	0.01	0.006	O				0.02
84.000	0.00	0.01	0.006	O				0.02
84.083	0.00	0.01	0.006	O				0.02
84.167	0.00	0.01	0.006	O				0.02
84.250	0.00	0.01	0.006	O				0.02
84.333	0.00	0.01	0.006	O				0.02
84.417	0.00	0.01	0.006	O				0.02
84.500	0.00	0.01	0.006	O				0.02
84.583	0.00	0.01	0.006	O				0.02
84.667	0.00	0.01	0.006	O				0.02
84.750	0.00	0.01	0.006	O				0.02
84.833	0.00	0.01	0.005	O				0.02
84.917	0.00	0.01	0.005	O				0.02
85.000	0.00	0.01	0.005	O				0.02
85.083	0.00	0.01	0.005	O				0.02
85.167	0.00	0.01	0.005	O				0.02
85.250	0.00	0.01	0.005	O				0.02
85.333	0.00	0.01	0.005	O				0.02
85.417	0.00	0.01	0.005	O				0.02
85.500	0.00	0.01	0.005	O				0.02
85.583	0.00	0.01	0.005	O				0.02
85.667	0.00	0.01	0.005	O				0.01
85.750	0.00	0.01	0.005	O				0.01
85.833	0.00	0.01	0.005	O				0.01
85.917	0.00	0.01	0.005	O				0.01
86.000	0.00	0.01	0.005	O				0.01
86.083	0.00	0.01	0.005	O				0.01
86.167	0.00	0.01	0.005	O				0.01
86.250	0.00	0.01	0.004	O				0.01
86.333	0.00	0.01	0.004	O				0.01
86.417	0.00	0.01	0.004	O				0.01
86.500	0.00	0.01	0.004	O				0.01
86.583	0.00	0.01	0.004	O				0.01
86.667	0.00	0.01	0.004	O				0.01
86.750	0.00	0.01	0.004	O				0.01
86.833	0.00	0.01	0.004	O				0.01
86.917	0.00	0.01	0.004	O				0.01
87.000	0.00	0.01	0.004	O				0.01
87.083	0.00	0.01	0.004	O				0.01
87.167	0.00	0.01	0.004	O				0.01
87.250	0.00	0.01	0.004	O				0.01
87.333	0.00	0.01	0.004	O				0.01
87.417	0.00	0.01	0.004	O				0.01
87.500	0.00	0.01	0.004	O				0.01
87.583	0.00	0.01	0.004	O				0.01
87.667	0.00	0.01	0.004	O				0.01
87.750	0.00	0.01	0.004	O				0.01
87.833	0.00	0.01	0.004	O				0.01
87.917	0.00	0.01	0.004	O				0.01
88.000	0.00	0.01	0.004	O				0.01
88.083	0.00	0.01	0.003	O				0.01
88.167	0.00	0.01	0.003	O				0.01
88.250	0.00	0.01	0.003	O				0.01
88.333	0.00	0.01	0.003	O				0.01
88.417	0.00	0.01	0.003	O				0.01
88.500	0.00	0.01	0.003	O				0.01
88.583	0.00	0.01	0.003	O				0.01
88.667	0.00	0.01	0.003	O				0.01
88.750	0.00	0.01	0.003	O				0.01

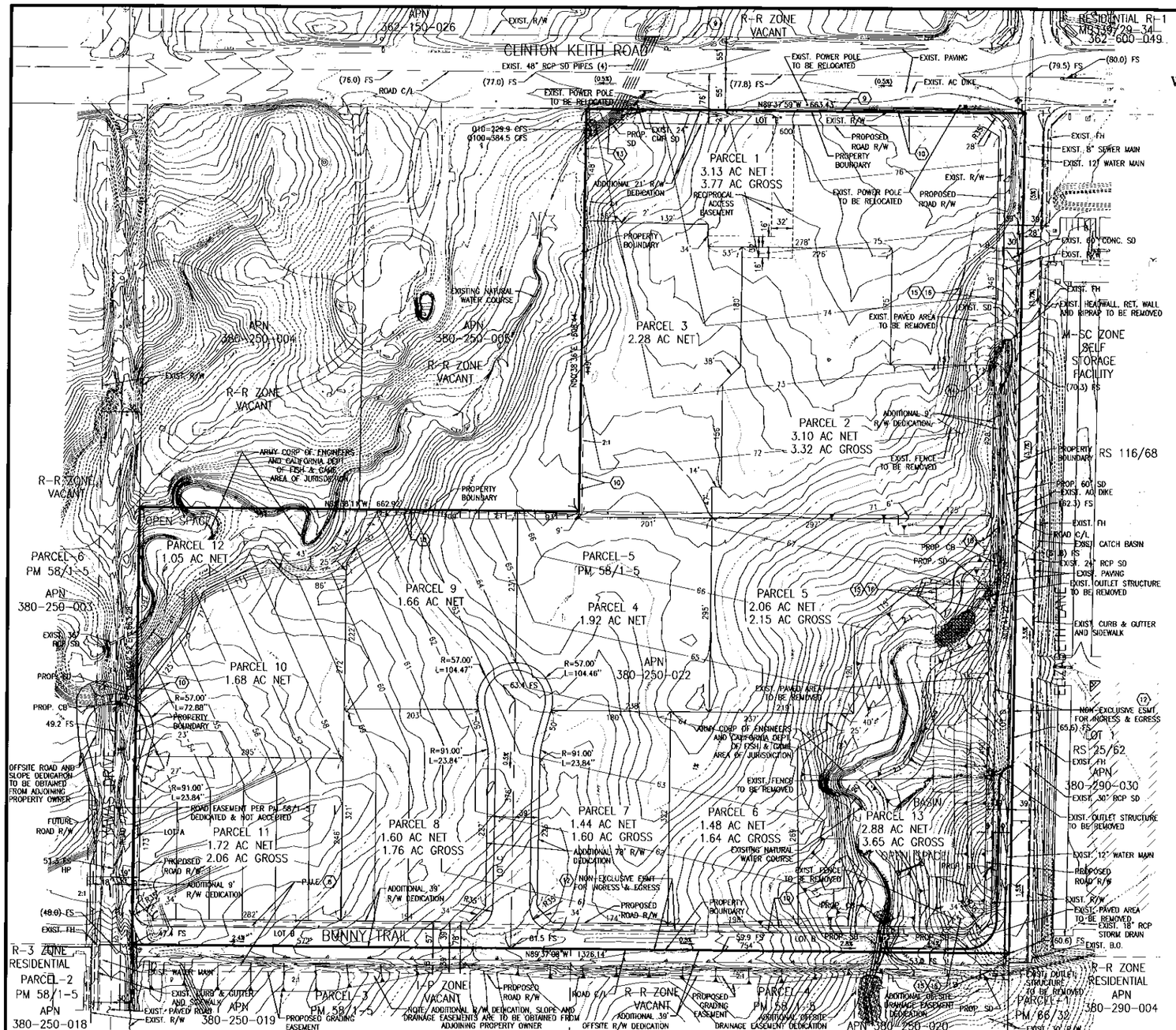
88.833	0.00	0.01	0.003	O				0.01
88.917	0.00	0.01	0.003	O				0.01
89.000	0.00	0.01	0.003	O				0.01
89.083	0.00	0.01	0.003	O				0.01
89.167	0.00	0.01	0.003	O				0.01
89.250	0.00	0.01	0.003	O				0.01
89.333	0.00	0.00	0.003	O				0.01
89.417	0.00	0.00	0.003	O				0.01
89.500	0.00	0.00	0.003	O				0.01
89.583	0.00	0.00	0.003	O				0.01
89.667	0.00	0.00	0.003	O				0.01
89.750	0.00	0.00	0.003	O				0.01
89.833	0.00	0.00	0.003	O				0.01
89.917	0.00	0.00	0.003	O				0.01
90.000	0.00	0.00	0.003	O				0.01
90.083	0.00	0.00	0.003	O				0.01
90.167	0.00	0.00	0.003	O				0.01
90.250	0.00	0.00	0.003	O				0.01
90.333	0.00	0.00	0.003	O				0.01
90.417	0.00	0.00	0.002	O				0.01
90.500	0.00	0.00	0.002	O				0.01
90.583	0.00	0.00	0.002	O				0.01
90.667	0.00	0.00	0.002	O				0.01
90.750	0.00	0.00	0.002	O				0.01
90.833	0.00	0.00	0.002	O				0.01
90.917	0.00	0.00	0.002	O				0.01
91.000	0.00	0.00	0.002	O				0.01
91.083	0.00	0.00	0.002	O				0.01
91.167	0.00	0.00	0.002	O				0.01
91.250	0.00	0.00	0.002	O				0.01
91.333	0.00	0.00	0.002	O				0.01
91.417	0.00	0.00	0.002	O				0.01
91.500	0.00	0.00	0.002	O				0.01
91.583	0.00	0.00	0.002	O				0.01
91.667	0.00	0.00	0.002	O				0.01
91.750	0.00	0.00	0.002	O				0.01
91.833	0.00	0.00	0.002	O				0.01
91.917	0.00	0.00	0.002	O				0.01
92.000	0.00	0.00	0.002	O				0.01
92.083	0.00	0.00	0.002	O				0.01
92.167	0.00	0.00	0.002	O				0.01
92.250	0.00	0.00	0.002	O				0.01
92.333	0.00	0.00	0.002	O				0.01
92.417	0.00	0.00	0.002	O				0.01
92.500	0.00	0.00	0.002	O				0.01
92.583	0.00	0.00	0.002	O				0.01
92.667	0.00	0.00	0.002	O				0.01
92.750	0.00	0.00	0.002	O				0.01
92.833	0.00	0.00	0.002	O				0.01
92.917	0.00	0.00	0.002	O				0.01
93.000	0.00	0.00	0.002	O				0.01
93.083	0.00	0.00	0.002	O				0.01
93.167	0.00	0.00	0.002	O				0.01
93.250	0.00	0.00	0.002	O				0.01
93.333	0.00	0.00	0.002	O				0.01
93.417	0.00	0.00	0.002	O				0.00
93.500	0.00	0.00	0.002	O				0.00
93.583	0.00	0.00	0.002	O				0.00
93.667	0.00	0.00	0.002	O				0.00
93.750	0.00	0.00	0.002	O				0.00
93.833	0.00	0.00	0.002	O				0.00
93.917	0.00	0.00	0.002	O				0.00
94.000	0.00	0.00	0.001	O				0.00
94.083	0.00	0.00	0.001	O				0.00
94.167	0.00	0.00	0.001	O				0.00
94.250	0.00	0.00	0.001	O				0.00
94.333	0.00	0.00	0.001	O				0.00

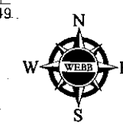
94.417	0.00	0.00	0.001	O				0.00
94.500	0.00	0.00	0.001	O				0.00
94.583	0.00	0.00	0.001	O				0.00
94.667	0.00	0.00	0.001	O				0.00
94.750	0.00	0.00	0.001	O				0.00
94.833	0.00	0.00	0.001	O				0.00
94.917	0.00	0.00	0.001	O				0.00
95.000	0.00	0.00	0.001	O				0.00
95.083	0.00	0.00	0.001	O				0.00
95.167	0.00	0.00	0.001	O				0.00
95.250	0.00	0.00	0.001	O				0.00
95.333	0.00	0.00	0.001	O				0.00
95.417	0.00	0.00	0.001	O				0.00
95.500	0.00	0.00	0.001	O				0.00
95.583	0.00	0.00	0.001	O				0.00
95.667	0.00	0.00	0.001	O				0.00
95.750	0.00	0.00	0.001	O				0.00
95.833	0.00	0.00	0.001	O				0.00
95.917	0.00	0.00	0.001	O				0.00
96.000	0.00	0.00	0.001	O				0.00
96.083	0.00	0.00	0.001	O				0.00
96.167	0.00	0.00	0.001	O				0.00
96.250	0.00	0.00	0.001	O				0.00
96.333	0.00	0.00	0.001	O				0.00
96.417	0.00	0.00	0.001	O				0.00
96.500	0.00	0.00	0.001	O				0.00
96.583	0.00	0.00	0.001	O				0.00
96.667	0.00	0.00	0.001	O				0.00
96.750	0.00	0.00	0.001	O				0.00
96.833	0.00	0.00	0.001	O				0.00
96.917	0.00	0.00	0.001	O				0.00
97.000	0.00	0.00	0.001	O				0.00
97.083	0.00	0.00	0.001	O				0.00
97.167	0.00	0.00	0.001	O				0.00
97.250	0.00	0.00	0.001	O				0.00
97.333	0.00	0.00	0.001	O				0.00
97.417	0.00	0.00	0.001	O				0.00
97.500	0.00	0.00	0.001	O				0.00
97.583	0.00	0.00	0.001	O				0.00
97.667	0.00	0.00	0.001	O				0.00
97.750	0.00	0.00	0.001	O				0.00
97.833	0.00	0.00	0.001	O				0.00
97.917	0.00	0.00	0.001	O				0.00
98.000	0.00	0.00	0.001	O				0.00
98.083	0.00	0.00	0.001	O				0.00
98.167	0.00	0.00	0.001	O				0.00
98.250	0.00	0.00	0.001	O				0.00
98.333	0.00	0.00	0.001	O				0.00
98.417	0.00	0.00	0.001	O				0.00
98.500	0.00	0.00	0.001	O				0.00
98.583	0.00	0.00	0.001	O				0.00
98.667	0.00	0.00	0.001	O				0.00
98.750	0.00	0.00	0.001	O				0.00
98.833	0.00	0.00	0.001	O				0.00
98.917	0.00	0.00	0.001	O				0.00
99.000	0.00	0.00	0.001	O				0.00
99.083	0.00	0.00	0.001	O				0.00
99.167	0.00	0.00	0.001	O				0.00
99.250	0.00	0.00	0.001	O				0.00
99.333	0.00	0.00	0.001	O				0.00
99.417	0.00	0.00	0.001	O				0.00
99.500	0.00	0.00	0.001	O				0.00
99.583	0.00	0.00	0.001	O				0.00
99.667	0.00	0.00	0.001	O				0.00
99.750	0.00	0.00	0.001	O				0.00
99.833	0.00	0.00	0.001	O				0.00
99.917	0.00	0.00	0.001	O				0.00

```
100.000    0.00    0.00      0.001  O       |       |       |       |     0.00
100.083    0.00    0.00      0.001  O       |       |       |       |     0.00
100.167    0.00    0.00      0.001  O       |       |       |       |     0.00
100.250    0.00    0.00      0.001  O       |       |       |       |     0.00
100.333    0.00    0.00      0.001  O       |       |       |       |     0.00
100.417    0.00    0.00      0.001  O       |       |       |       |     0.00
100.500    0.00    0.00      0.001  O       |       |       |       |     0.00
100.583    0.00    0.00      0.001  O       |       |       |       |     0.00
100.667    0.00    0.00      0.001  O       |       |       |       |     0.00

****************************HYDROGRAPH DATA****************************
             Number of intervals =  1208
             Time interval =    5.0 (Min.)
             Maximum/Peak flow rate =        2.381 (CFS)
             Total volume =       2.370 (Ac.Ft)
      Status of hydrographs being held in storage
                  Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
      Peak (CFS)      0.000     0.000     0.000     0.000     0.000
      Vol (Ac.Ft)      0.000     0.000     0.000     0.000     0.000
***********************************************************************

-----------------------------------------------------------------------
```

SECTION 5 - Reference Plans and exhibits

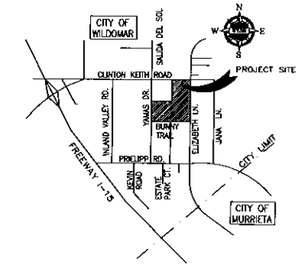
Tentative Parcel Map and Plot Plan for Parcels 1,2,3 and 13





NOTES:

1. THE PROPERTY IS NOT WITHIN A SPECIFIC PLAN OR A SPECIAL STUDIES ZONE.
2. THE PROPERTY IS NOT SUBJECT TO OVERFLOW, INUNDATION OR FLOOD HAZARD.
3. THE PROPERTY DOES NOT CONTAIN ANY FLAMMABLE/ COMBUSTIBLE OR WASTE.
4. NO ABOVE/UNDERGROUND TANKS ARE PROVIDED.
5. PROPERTY IS NOT WITHIN ANY FAULT ZONES.
6. THERE IS NO WELL ON SITE OR WITHIN 200' OF THE PROPERTY BOUNDARY.
7. THE TENTATIVE PARCEL MAP INCLUDES THE ENTIRE CONTIGUOUS OWNERSHIP OF THE SUBDIVIDER.
8. THE PROPERTY IS SUBJECT TO MODERATE LIQUIFICATION.
9. THE PROPERTY IS NOT WITHIN A HIGH FIRE AREA.
10. THERE IS NO ABOVE OR UNDERGROUND FUEL TANKS, WASTE OIL, LPG AND CHEMICAL TANK EXIST ON SITE.
11. THERE WILL BE SAND FILTRATION TRENCHES AND BASIN ON SITE TO ADDRESS WATER QUALITY.
12. FOR PARCELS 4 THRU 11, WQMP WILL BE ONSITE.
13. EXISTING TOPOGRAPHY OF PROPERTY IS BASED ON AERIAL SURVEY PREPARED BY INLAND AERIAL SURVEYS, INC. ON OCTOBER 14, 2011.
14. THERE IS NO EXISTING OR PROPOSED SEPTIC SEWAGE DISPOSAL TANK ON SITE.
15. THERE IS NO EXISTING OR PROPOSED MOBILE HOME AND RECREATIONAL AREAS ON SITE.
16. THERE IS NO EXISTING BUILDING, DWELLINGS OR OTHER STRUCTURES ON SITE.
17. THERE IS NO PROPOSED RESIDENTIAL UNITS ON SITE.



VICINITY MAP
2010 THOMAS BROS. MAP BOOK
PAGE 927, G80 G1, H1
N.T.S.

EASEMENTS

(8) RESERVED PUBLIC UTILITY EASEMENT PER INST. #2007-619517.
(9) RESTRICTED ACCESS RIGHTS PER PM 9637, PM8 58/1-5.
(10) EASEMENT FOR ELECTRICAL AND COMMUNICATION SYSTEMS TO SOUTHERN CALIFORNIA EDISON PER INST. #1978-261602 (TO BE QUITCLAIMED).
(12) NON-EXCLUSIVE EASEMENT FOR INGRESS & EGRESS PURPOSES ACROSS AND UNDER THE EASTERLY 30 FEET AND THE SOUTHERLY 30 FEET OF PARCEL 5, PM 58/1-5, PER INST. #1982-125464.
(13) ROAD EASEMENT PER INST. #1991-193576.
(14) DRAINAGE EASEMENT PER INST. #2002-562594 (TO BE VACATED).
(15) DRAINAGE & ACCESS EASEMENT PER INST. #2004-049328 (TO BE VACATED).
(16) DRAINAGE & ACCESS EASEMENT PER INST. #2004-091304 (TO BE VACATED).

NOTE:

LOCATED IN FLOOD ZONE X, "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN" AS SHOWN IN FIRM PANEL 06065C 27050, DATED AUGUST 28, 2008.

UTILITIES

SEWER
ELSINORE VALLEY MUNICIPAL WATER DISTRICT
31315 CHANEY STREET
LAKE ELSINORE, CA 92531
PHONE: 951-674-3146

ELECTRIC
SOUTHERN CALIFORNIA EDISON
26100 MENIFEE RD.
ROMOLAND, CA 92585
PHONE: 951-928-8290

GAS
SOUTHERN CALIFORNIA GAS COMPANY
26528 KELVIN COURT
MURRIETA, CA 92562
PHONE: 951-304-0093

TELEPHONE
VERIZON
150 S.JUANITA ST.
HEMET, CA 92543
PHONE: 951-929-9464

CABLE TELEVISION
COMCAST CABLEVISION
556 BIRCH ST.
LAKE ELSINORE, CA 92530
PHONE: 888-255-5789

SCHOOL DISTRICT
LAKE ELSINORE UNIFIED SCHOOL DISTRICT
545 CHANEY STREET
LAKE ELSINORE, CA 92530
PHONE: 951-253-7000

WATER DISTRICT
ELSINORE VALLEY MUNICIPAL WATER DISTRICT
31315 CHANEY STREET
LAKE ELSINORE, CA 92531
PHONE: 951-674-3146

OWNER:
RANCON MEDICAL AND EDUCATION CENTER, LLC
41391 KALMIA STREET, SUITE 200
MURRIETA, CA 92562
PHONE 951-696-0600
FAX 951-834-9801
CONTACT: FRANK IGO
EMAIL: FIGO@RANCONGROUP.COM
WILL STOUT
EMAIL: WSTOUT@RANCONGROUP.COM

APPLICANT:
RANCON MEDICAL AND EDUCATION CENTER, LLC
41391 KALMIA STREET, SUITE 200
MURRIETA, CA 92562
PHONE 951-696-0600
FAX 951-834-9801
CONTACT: FRANK IGO
EMAIL: FIGO@RANCONGROUP.COM
WILL STOUT
EMAIL: WSTOUT@RANCONGROUP.COM

CIVIL ENGINEER:
ALBERT A. WEBB ASSOCIATES
3788 MCCRAY STREET
RIVERSIDE, CA 92506
PHONE 951-686-1070
FAX 951-788-1256
CONTACT: SAM FARUQ
EMAIL: SAM.FARUQ@WEBBASSOCIATES.COM

PLAN IDENTIFICATION

ASSESSORS PARCEL NO.
380-250-022

THOMAS BROTHERS MAP
PAGE 927, PARCELS G1 & H1, RIVERSIDE COUNTY, 2010 EDITION

LEGAL DESCRIPTION:
IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA BEING ALL OF PARCEL 5, OF PARCEL MAP NO. 9637 AS SHOWN BY MAP ON FILE IN BOOK 58 PAGES 1 THROUGH 5, INCLUSIVE OF PARCEL MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA. LOCATED IN SECTION 6, T 7S, R 3W, S.B.M.

ZONING:
EXISTING ZONING I-P (INDUSTRIAL PARK)
PROPOSED ZONING I-P (INDUSTRIAL PARK)

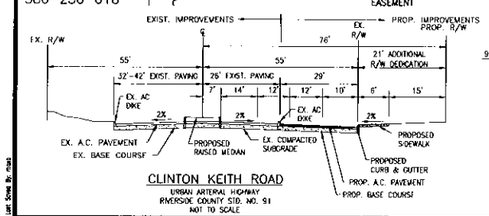
LANDUSE:
EXISTING LAND USE VACANT
PROPOSED LAND USE COMMERCIAL BUILDINGS/MEDICAL OFFICE BUILDINGS

GROSS AND NET AREAS:
GROSS AREA 29.46 AC
NET AREA 25.99 AC

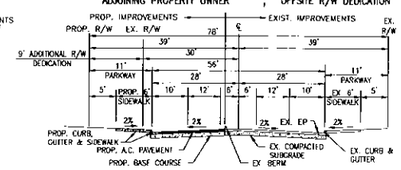
NUMBER OF PARCELS:
11 PARCELS
2 OPEN SPACE PARCELS

LEGEND

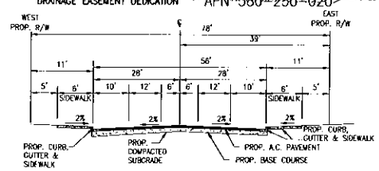
CB	CATCH BASIN
CL	CENTERLINE
C&G	CURB & GUTTER
CONC	CONCRETE
EG	EXISTING GRADE
EOP	EDGE OF PAVEMENT
EX.	EXISTING
FH	FIRE HYDRANT
FL	FLOW LINE
FS	FINISHED SURFACE
PL	PROPERTY LINE
PROP.	PROPOSED
R/W	RIGHT OF WAY
SD	STORM DRAIN
S/W	SIDEWALK
TC	TOP OF CURB



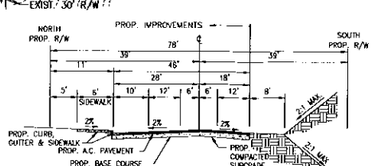
CLINTON KEITH ROAD
URBAN ARTERIAL HIGHWAY
RIVERSIDE COUNTY STD. NO. 91
NOT TO SCALE



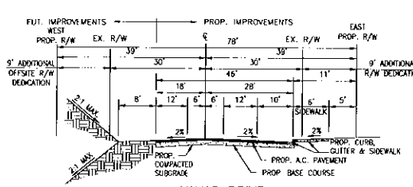
ELIZABETH LANE
INDUSTRIAL COLLECTOR STREET
RIVERSIDE COUNTY STD. NO. 111
NOT TO SCALE



LOT C
INDUSTRIAL COLLECTOR STREET
RIVERSIDE COUNTY STD. NO. 111
NOT TO SCALE



BUNNY TRAIL
INDUSTRIAL COLLECTOR STREET
RIVERSIDE COUNTY STD. NO. 111
NOT TO SCALE



YAMAS DRIVE
INDUSTRIAL COLLECTOR STREET
RIVERSIDE COUNTY STD. NO. 111
NOT TO SCALE

1" = 80'
40 0 80

SYMBOLS

(1001.01)	EXISTING ELEVATION
	PROPERTY BOUNDARY
	PROPOSED R/W
	CATCH BASIN
	FLOWLINE
2500	EXISTING GROUND CONTOUR
	EXISTING WATER LINE
	EXISTING SEWER LINE
	EXISTING UTILITY LINE

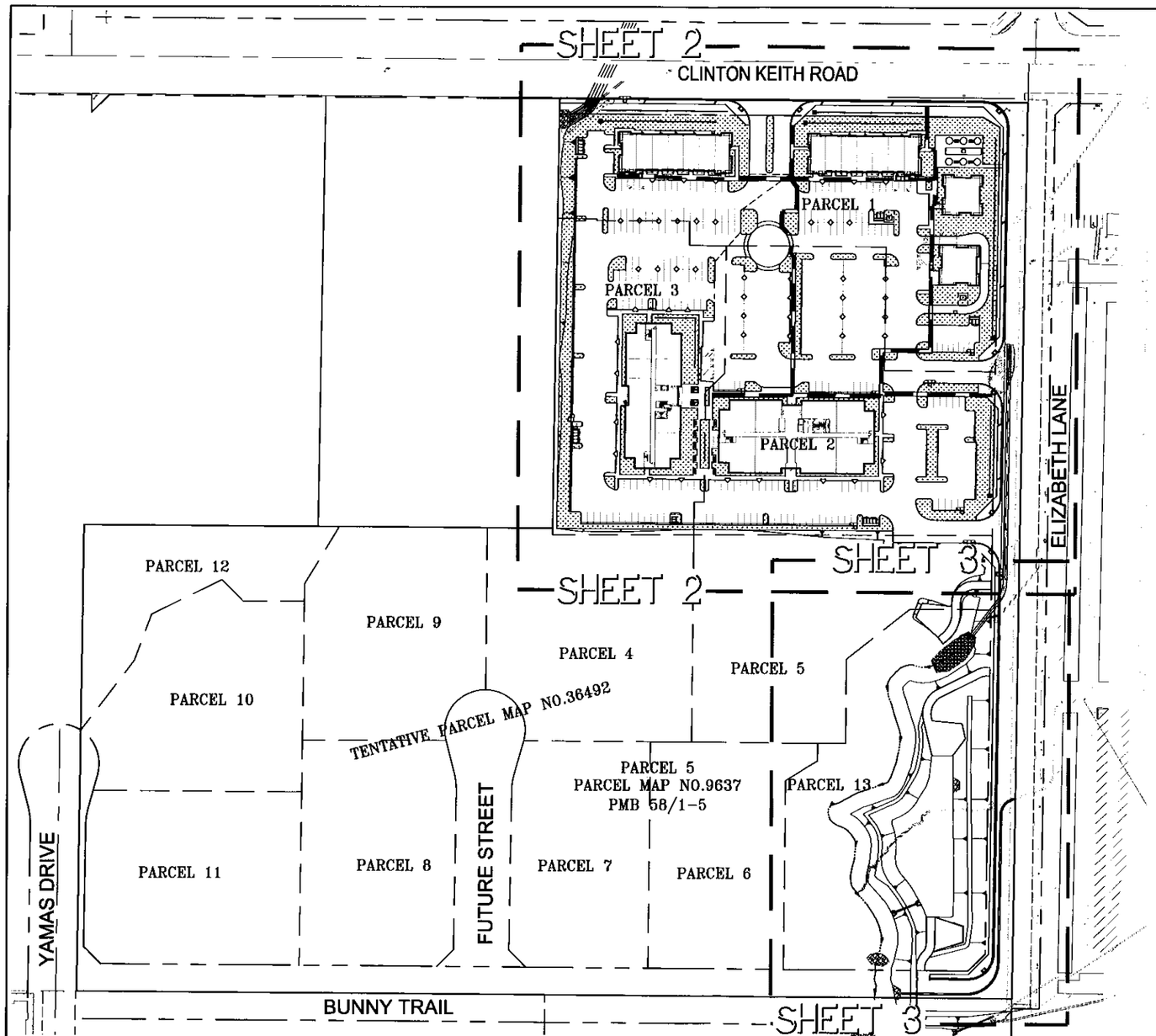
REVISIONS	DATE	BY

IN THE CITY OF WILDOMAR
TENTATIVE PARCEL MAP NO. 36492
SCHEDULE "E"

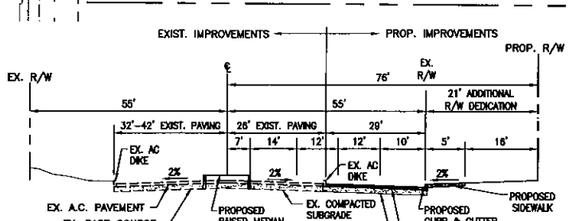
IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA BEING ALL OF PARCEL 5, OF PARCEL MAP NO. 9637 AS SHOWN BY MAP ON FILE IN BOOK 58 PAGES 1 THROUGH 5, INCLUSIVE OF PARCEL MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA LYING IN TOWNSHIP 7S, RANGE 3W, SECTION 6 SAN BERNARDINO MERIDIAN.

SCALE: 1"=80'	ALBERT A. WEBB ASSOCIATES ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	W.O.	WO
DATE: 07/10/2017		SHEET	1
DESIGNED: MM		OF 1	SHEETS
CHECKED: RLS		DWG. NO.	
PLN CK REF: REF			
F.B. F.B.			

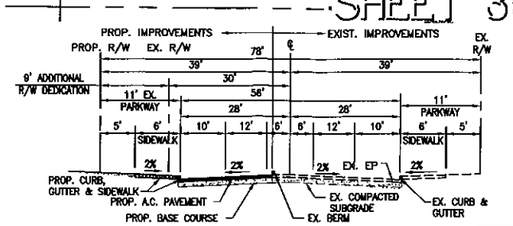
G:\2012\12-0031\DWG\PROJ\12-0031-C-PM.dwg 9/4/2012 9:55 AM



INDEX MAP
SCALE 1"=80'



CLINTON KEITH ROAD
URBAN ARTERIAL HIGHWAY
RIVERSIDE COUNTY STD. NO. 91
NOT TO SCALE



ELIZABETH LANE
INDUSTRIAL COLLECTOR STREET
RIVERSIDE COUNTY STD. NO. 111
NOT TO SCALE

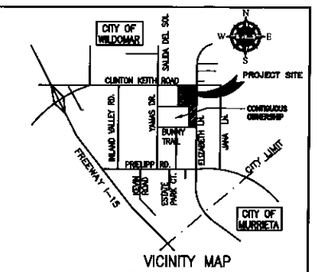
N
W WEBB E
S

1" = 80'
40 0 80

OWNER:
RANCON MEDICAL AND EDUCATION CENTER, LLC
41391 KALMIA STREET, SUITE 200
MURRIETA, CA 92562
PHONE 951-696-0600
FAX 951-834-9801
CONTACT: FRANK IGO
EMAIL: FIGO@RANCONGROUP.COM
WILL STOUT
EMAIL: WSTOUT@RANCONGROUP.COM

APPLICANT:
RANCON MEDICAL AND EDUCATION CENTER, LLC
41391 KALMIA STREET, SUITE 200
MURRIETA, CA 92562
PHONE 951-696-0600
FAX 951-834-9801
CONTACT: FRANK IGO
EMAIL: FIGO@RANCONGROUP.COM
WILL STOUT
EMAIL: WSTOUT@RANCONGROUP.COM

CIVIL ENGINEER:
ALBERT A. WEBB ASSOCIATES
3788 MCCRAY STREET
RIVERSIDE, CA 92506
PHONE 951-686-1070
FAX 951-788-1256
CONTACT: SAM FARJO
EMAIL: SAM.FARJO@WEBBASSOCIATES.COM



VICINITY MAP
2010 THOMAS BROS. MAP BOOK
PAGE 927, GRID G1, H1
N.T.S.

PLAN IDENTIFICATION

ASSESSORS PARCEL NO. 380-250-022

THOMAS BROTHERS MAP
PAGE 927, PARCELS G1 & H1, RIVERSIDE COUNTY, 2010 EDITION

LEGAL DESCRIPTION:
IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA BEING ALL OF PARCEL 5, OF PARCEL MAP NO. 9637 AS SHOWN BY MAP ON FILE IN BOOK 58 PAGES 1 THROUGH 5, INCLUSIVE OF PARCEL MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA. LOCATED IN SECTION 6, T.7S, R.3W, S.B.M.

ZONING:
EXISTING ZONING I-P (INDUSTRIAL PARK)
PROPOSED ZONING I-P (INDUSTRIAL PARK)

LAND USE:
EXISTING LAND USE: VACANT
PROPOSED LAND USE: COMMERCIAL BUILDINGS/MEDICAL OFFICE BUILDINGS

GROSS AND NET AREAS:
GROSS AREA 11.62 AC
NET AREA 10.07 AC

EASEMENTS

(8) RESERVED PUBLIC UTILITY EASEMENT PER INST. #2007-619517.

(9) RESTRICTED ACCESS RIGHTS.

(10) EASEMENT FOR ELECTRICAL AND COMMUNICATION SYSTEMS TO SOUTHERN CALIFORNIA EDISON PER INST. #1978-261602. (TO BE QUIT CLAIMED)

(12) NON-EXCLUSIVE EASEMENT FOR INGRESS & EGRESS PURPOSES ACROSS AND UNDER THE EASTERLY 30 FEET AND THE SOUTHERLY 30 FEET OF PARCEL 5, PM 58/1-5, PER INST. #1982-125484.

(13) ROAD EASEMENT PER INST. #1991-193576.

(14) DRAINAGE EASEMENT PER INST. #2002-562594. (TO BE VACATED)

(15) DRAINAGE & ACCESS EASEMENT PER INST. #2004-049328. (TO BE VACATED)

(16) DRAINAGE & ACCESS EASEMENT PER INST. #2004-091304. (TO BE VACATED)

NOTES:

1. THE PROPERTY IS NOT WITHIN A SPECIFIC PLAN, OR A SPECIAL STUDIES ZONE.
2. THE PROPERTY IS NOT SUBJECT TO OVERFLOW, INUNDATION OR FLOOD HAZARD.
3. THE PROPERTY DOES NOT CONTAIN ANY FLAMMABLE/ COMBUSTIBLE OR WASTE.
4. NO ABOVE/UNDERGROUND TANKS ARE PROVIDED.
5. PROPERTY IS NOT WITHIN ANY FAULT ZONES.
6. THERE IS NO WELL ON SITE OR WITHIN 200' OF THE PROPERTY BOUNDARY.
7. THE PLOT PLAN DOES NOT INCLUDE THE ENTIRE CONTIGUOUS OWNERSHIP OF THE SUBDIVIDER.
8. THE PROPERTY IS SUBJECT TO MODERATE LIQUEFACTION.
9. THE PROPERTY IS NOT WITHIN A HIGH FIRE AREA.
10. THERE IS NO ABOVE OR UNDERGROUND FUEL TANKS, WASTE OIL, LPG AND CHEMICAL TANK EXIST ON SITE.
11. THERE WILL BE THREE DETENTION PONDS ON SITE TO ADDRESS WATER QUALITY.
12. EXISTING TOPOGRAPHY OF PROPERTY IS BASED ON AERIAL SURVEY PREPARED BY INLAND AERIAL SURVEYS, INC. ON OCTOBER 14, 2011.
13. THERE IS NO EXISTING OR PROPOSED SEPTIC SEWAGE DISPOSAL TANK ON SITE.
14. THERE IS NO EXISTING OR PROPOSED MOBILE HOME AND RECREATIONAL AREAS ON SITE.
15. THERE IS NO EXISTING BUILDING, DWELLINGS OR OTHER STRUCTURES ON SITE.
16. THERE IS NO PROPOSED RESIDENTIAL UNITS ON SITE.

PROJECT DESCRIPTION:

THE PROPERTY AREA TO BE DEVELOPED IS 11.62 ACRES BEING ALL OF PARCELS 1,2,3 AND A PORTION OF PARCEL 5 AND 13 OF TENTATIVE PARCEL MAP 36492 LOCATED AT THE SOUTHWEST CORNER OF CLINTON KEITH ROAD AND ELIZABETH LANE, APPROXIMATELY 1½ MILES EAST OF THE I-15 FREEWAY OFF RAMP. THE REMAINING PARCELS OF PROPOSED TENTATIVE PARCEL MAP NO. 36492 ARE NOT BEING DEVELOPED AS A PART OF THIS PLOT PLAN AT THIS TIME.

THE PROPOSED DEVELOPMENT IS FOR 6 BUILDINGS FOR MIXED USE BUSINESS PARK WHICH INCLUDES COMMERCIAL RETAIL, FAST FOOD, OFFICE AND MEDICAL OFFICE. THE OCCUPANCY CLASSIFICATION FOR THE OFFICE AREA IS B AND THE SERVICE RETAIL SPACE IS M. THE NUMBER OF DAILY VEHICLE TRIPS PROVIDED BY THIS PROJECT WILL BE CONSISTENT WITH CUSTOMARY MIXED USE DEVELOPMENTS.

THERE WILL BE NO VEHICLE OR EQUIPMENT MAINTENANCE PERFORMED ON THE PROPERTY.

LEGEND

CB	CATCH BASIN
CL	CENTERLINE
C&G	CURB & GUTTER
CONC.	CONCRETE
EG	EXISTING GRADE
EOP	EDGE OF PAVEMENT
EX.	EXISTING
FH	FIRE HYDRANT
FL	FLOW LINE
FS	FINISHED SURFACE
PL	PROPERTY LINE
PROP.	PROPOSED
R/W	RIGHT OF WAY
SD	STORM DRAIN
S/W	SIDEWALK
TC	TOP OF CURB

UTILITIES

SEWER
ELSINORE VALLEY MUNICIPAL WATER DISTRICT
31315 CHANEY STREET
LAKE ELSINORE, CA 92531
PHONE: 951-674-3146

ELECTRIC
SOUTHERN CALIFORNIA EDISON
26100 MENIFEE RD.
ROMOLAND, CA 92585
PHONE: 951-928-8290

GAS
SOUTHERN CALIFORNIA GAS COMPANY
26528 KELVIN COURT
MURRIETA, CA 92562
PHONE: 951-304-0093

TELEPHONE
VERIZON
150 S.JUANITA ST.
HEMET, CA 92543
PHONE: 951-929-9464

CABLE TELEVISION
COMCAST CABLEVISION
556 BIRCH ST.
LAKE ELSINORE, CA 92530
PHONE: 888-255-5789

SCHOOL DISTRICT
LAKE ELSINORE UNIFIED SCHOOL DISTRICT
545 CHANEY STREET
LAKE ELSINORE, CA 92530
PHONE: (951)-253-7000

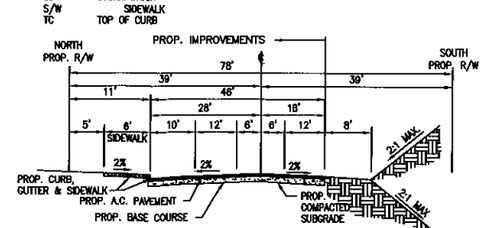
WATER
ELSINORE VALLEY MUNICIPAL WATER DISTRICT
31315 CHANEY STREET
LAKE ELSINORE, CA 92531
PHONE: 951-674-3146

NOTE:

LOCATED IN FLOOD ZONE X, "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN" AS SHOWN ON FIRM PANEL 06065C 2705G, DATED AUGUST 28, 2008.

SYMBOLS

(1001.01)	EXISTING ELEVATION
	PROPERTY BOUNDARY
	PROPOSED R/W
	BERM
	CATCH BASIN
XXX.XX TC	= PROPOSED TOP OF CURB ELEVATION
XXX.XX FS	= PROPOSED FINISH SURFACE ELEVATION
XXX.XX FL	= PROPOSED FLOW LINE
	PROPOSED LANDSCAPE AREA
2500	EXISTING GROUND CONTOUR
W	EXISTING WATER LINE
SS	EXISTING SEWER LINE
T	EXISTING UTILITY LINE
	HANDICAPPED ACCESSIBLE ROUTE



BUNNY TRAIL
INDUSTRIAL COLLECTOR STREET
RIVERSIDE COUNTY STD. NO. 111
NOT TO SCALE

REVISIONS	DATE	BY

SCALE:
DATE: 07/16/12
DESIGNED: MB
CHECKED:
PLN CK RD:
F.B.

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

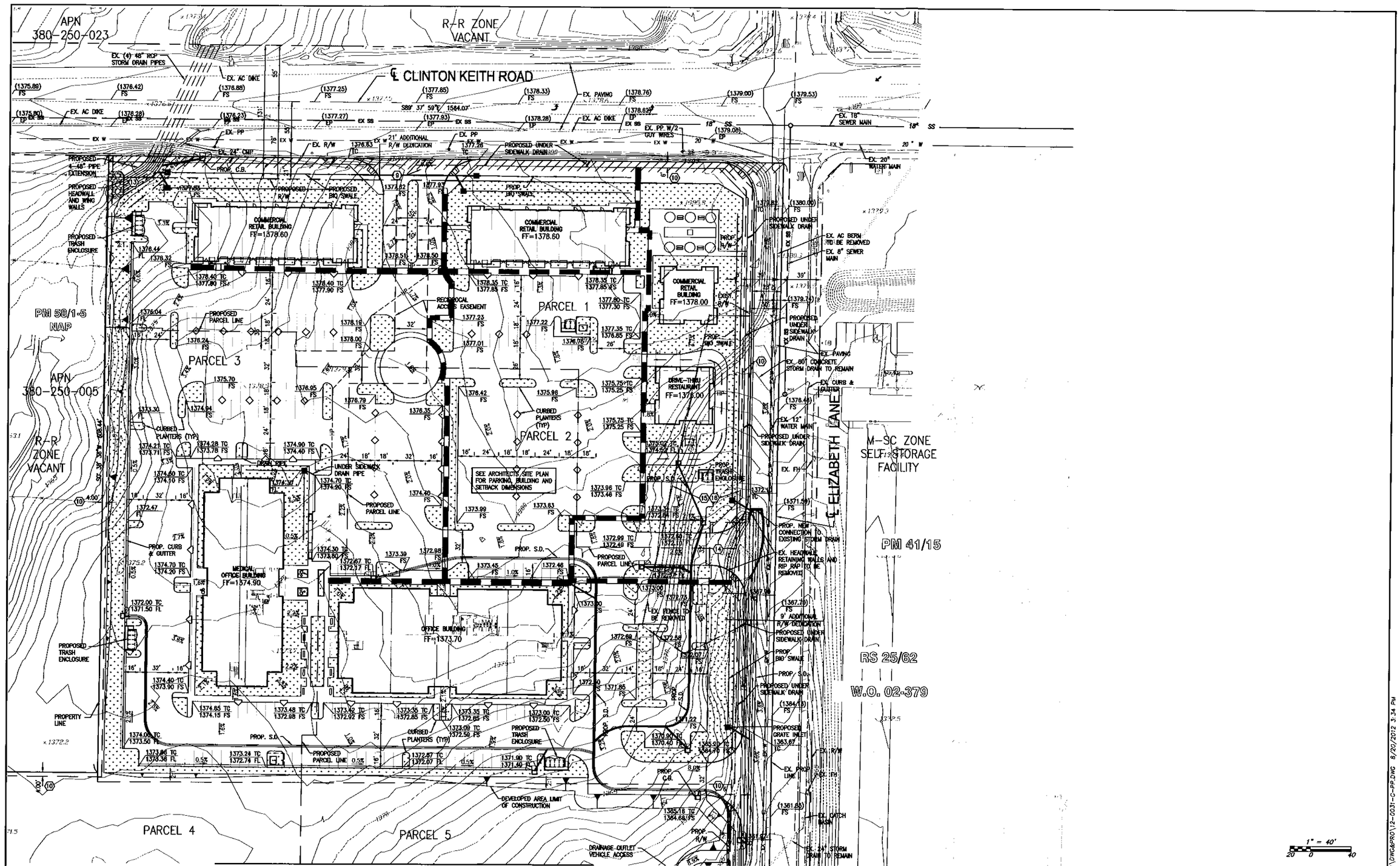
G:\2012\12-0031\DWG&PRO\12-0031-C-PP.dwg
PLOT DATE: 3-Sep-12

PLOT PLAN
CITY OF WILDOMAR
PRELIMINARY GRADING PLAN
TENTATIVE PARCEL MAP NO. 36492

RANCON MEDICAL & EDUCATIONAL CENTER

W.O. 12-0031
SHEET 1 OF 3 SHEETS
DWG. NO.

G:\2012\12-0031\DWG&PRO\12-0031-C-PP.DWG 8/20/2012 3:34 PM



SEE SHEET 3 FOR CONTINUATION

REVISIONS	DATE	BY

SCALE: 1"=40'
DATE: 07/16/12
DESIGNED: MB
CHECKED:
PLN CK REF:
F.B.

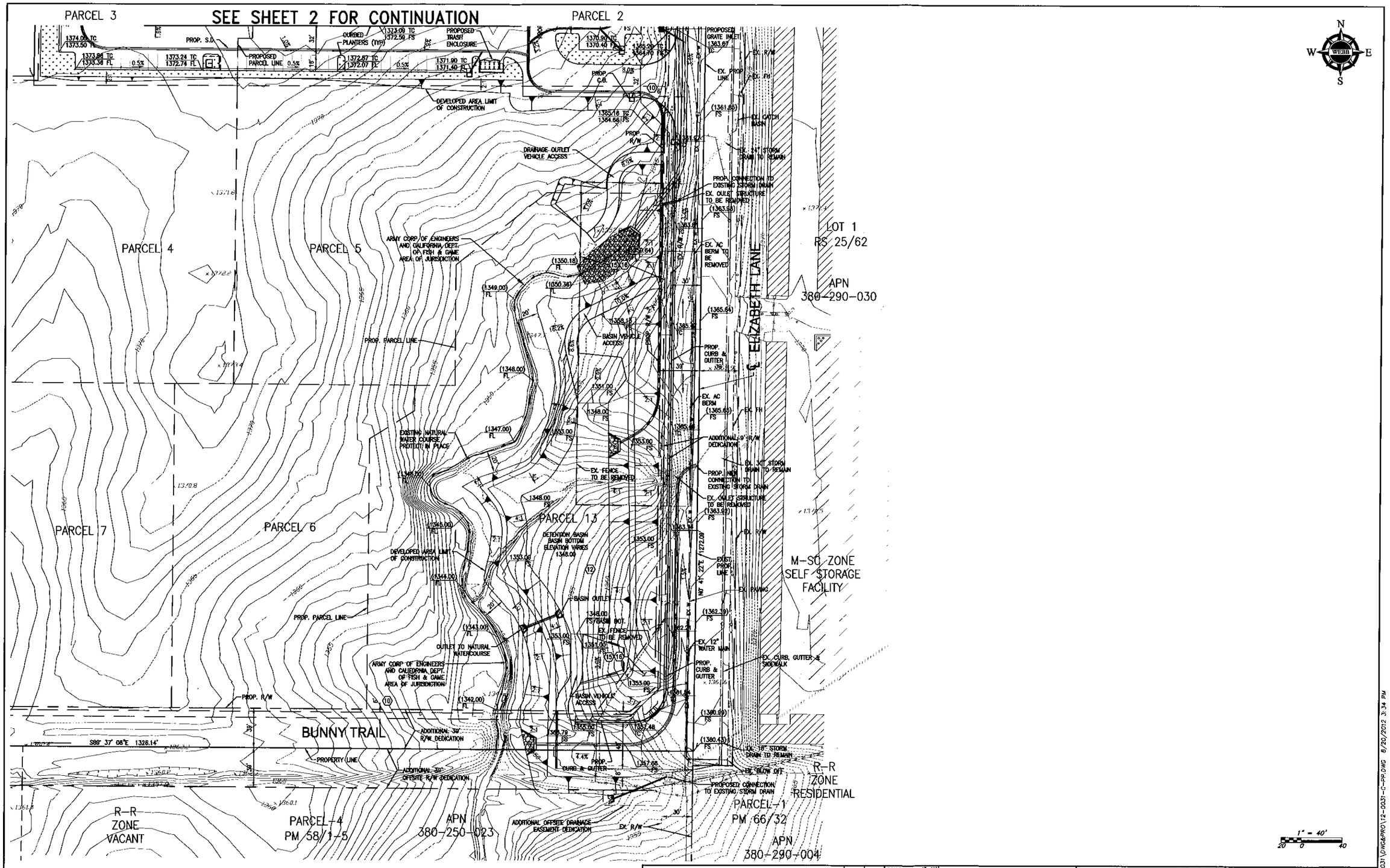
ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256
G:\2012\12-0031\PLN12-0031-C-PP.dwg
PLOT DATE: 3-Sep-12

PLOT PLAN
CITY OF WILDOMAR
PRELIMINARY GRADING PLAN
TENTATIVE PARCEL MAP NO. 36492

RANCON MEDICAL & EDUCATIONAL CENTER

W.O. 12-0031
SHEET 2 OF 3 SHEETS
DWG. NO.

G:\2012\12-0031\DWG&PRO\12-0031-C-PP.DWG 8/20/2012 3:34 PM



REVISIONS	DATE	BY

SCALE: 1"=40'
DATE: 07/16/12
DESIGNED: MB
CHECKED:
PLN CK REF:
F.B.

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA 92506
PH. (951) 686-1070
FAX (951) 788-1256

G:\2012\12-0031\PROJ\12-0031-C-PP.dwg
PLOT DATE: 3-Sep-12

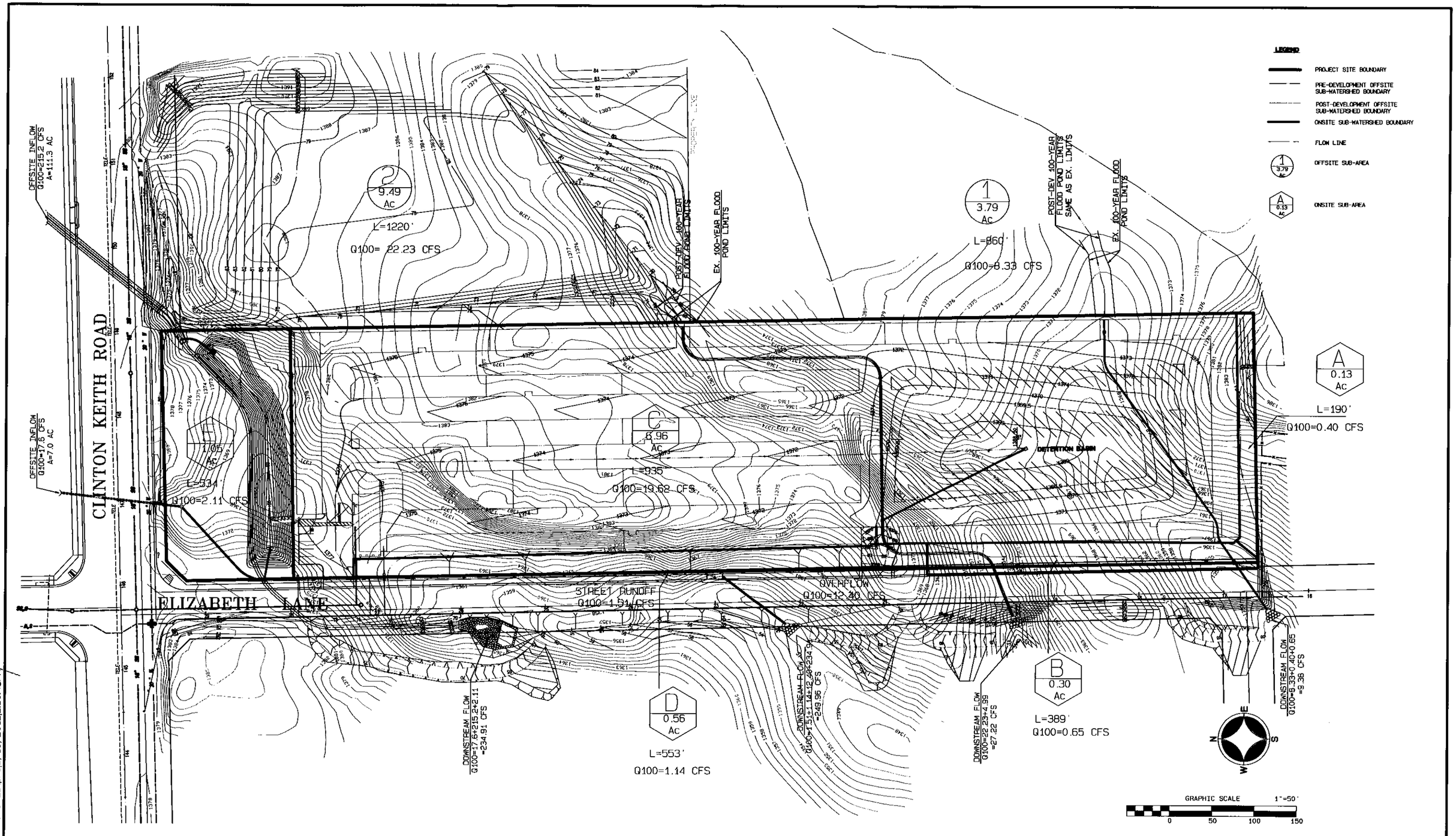
PLOT PLAN
EDUCATIONAL CENTER
PRELIMINARY GRADING PLAN
TENTATIVE PARCEL MAP NO. 36492

RANCON MEDICAL & EDUCATIONAL CENTER

W.O. 12-0031
SHEET 3 OF 3 SHEETS
DWG. NO.

G:\2012\12-0031\DWG&PRO\12-0031-C-PP.DWG 8/20/2012 3:34 PM

PP 16953, Clinton Keith Self Storage, Onsite Hydrology Map



G:\2002\02-0379\02-379FLD.prol8/15/2012|2:50:45PM

DIGALERT
CALL BEFORE YOU DIG. TWO WORKING DAYS BEFORE YOU DIG. TOLL FREE 1-800-227-2600
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 McCRAY ST.
RIVERSIDE CA. 92506
PH. (909) 686-1070
FAX (909) 788-1256

REVISIONS

NO.	DATE	INITIAL	DESCRIPTION	APP'VD / DATE

REGISTERED PROFESSIONAL ENGINEER BRUCE A. DAVIS NO. C47200 CIVIL STATE OF CALIFORNIA

APPROVED BY:

BRUCE A. DAVIS C47200 EXP. 12-31-03 DATE

REFERENCES

RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

CIVIL ENGINEER OF SUBDIVISIONS DATE

APPROVALS

	INITIAL	DATE
PROJ. ENG		
INSPECTION		
SWL OPERATIONS		

		DATE
DESIGNED	L.Z.	04/23/03
DRAWN	L.Z.	04/23/03
TRACED		
CHECKED	B.A.D.	
SUBMITTED		

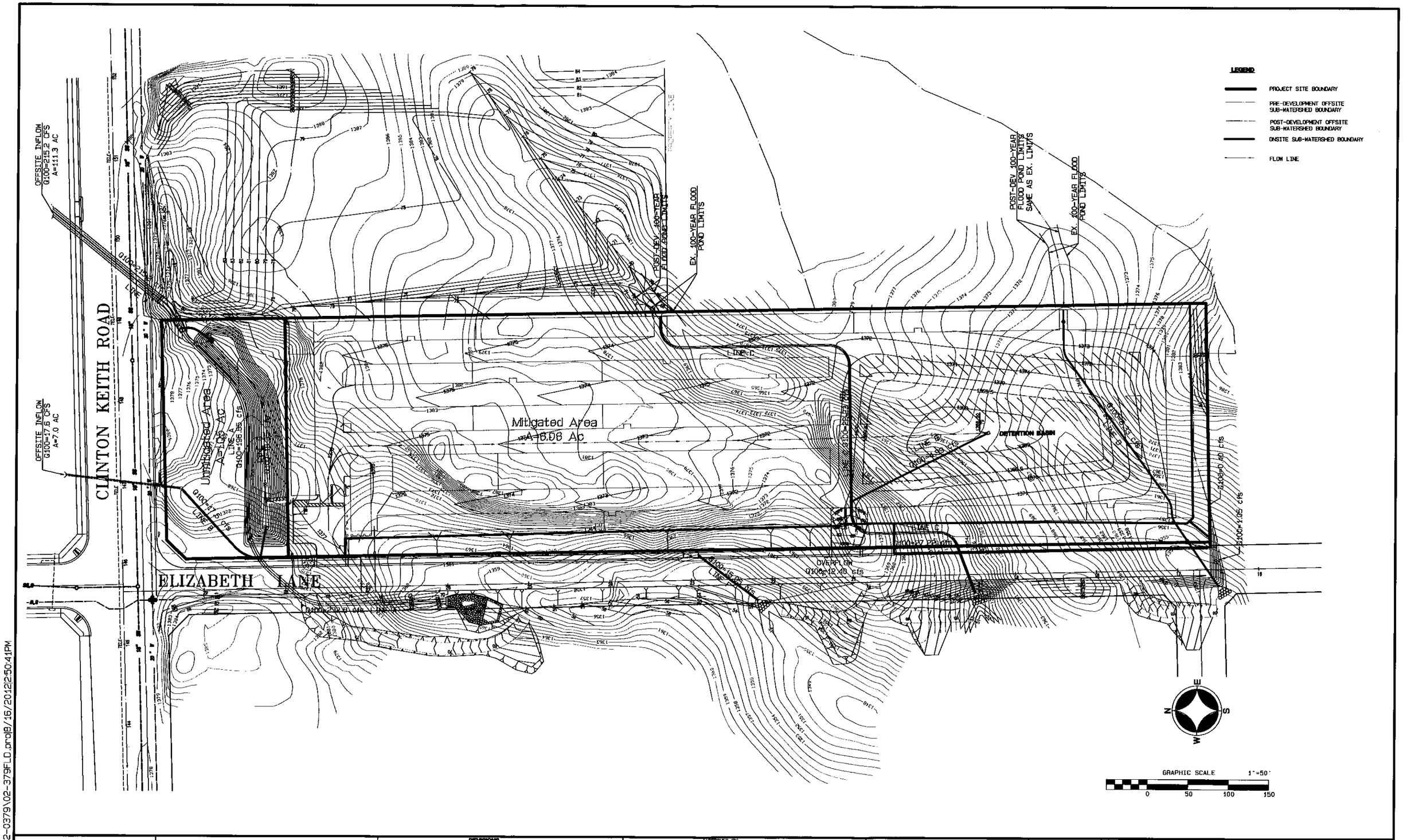
RIVERSIDE COUNTY, CALIFORNIA

ONSITE HYDROLOGY MAP
DEVELOPED CONDITIONS
CLINTON KEITH SELF STORAGE
PP 18953

FOR: RIVERSIDE COUNTY FLOOD CONTROL

WO: 02-0379

SHEET 2 OF 3 SHEETS



G:\2002\02-0379\02-379FLD.proj8/16/2012 2:50:41PM

DIGALERT
CALL BEFORE YOU DIG TOLL FREE
TWO WORKING DAYS BEFORE YOU DIG
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT 1-800-227-2600

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 McCRAY ST.
RIVERSIDE CA. 92506
PH. (909) 686-1070
FAX (909) 788-1256

REVISIONS

NO.	DATE	INITIAL	DESCRIPTION	APP'VD / DATE

REGISTERED PROFESSIONAL ENGINEER BRUCE A. DAVIS NO. C47200 CIVIL STATE OF CALIFORNIA

APPROVED BY:
BRUCE A. DAVIS C47200 EXP. 12-31-03 DATE

REFERENCES

RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

CIVIL ENGINEER OF SUBDIVISIONS DATE

APPROVALS

	INITIAL	DATE
PROJ. ENG		
INSPECTION		
SMA. OPERATIONS		

		DATE
DESIGNED	L.Z.	04/23/03
DRAWN	L.Z.	04/23/03
TRACED		
CHECKED	B.A.D.	
SUBMITTED		

RIVERSIDE COUNTY, CALIFORNIA

DRAINAGE AND MITIGATION PLAN

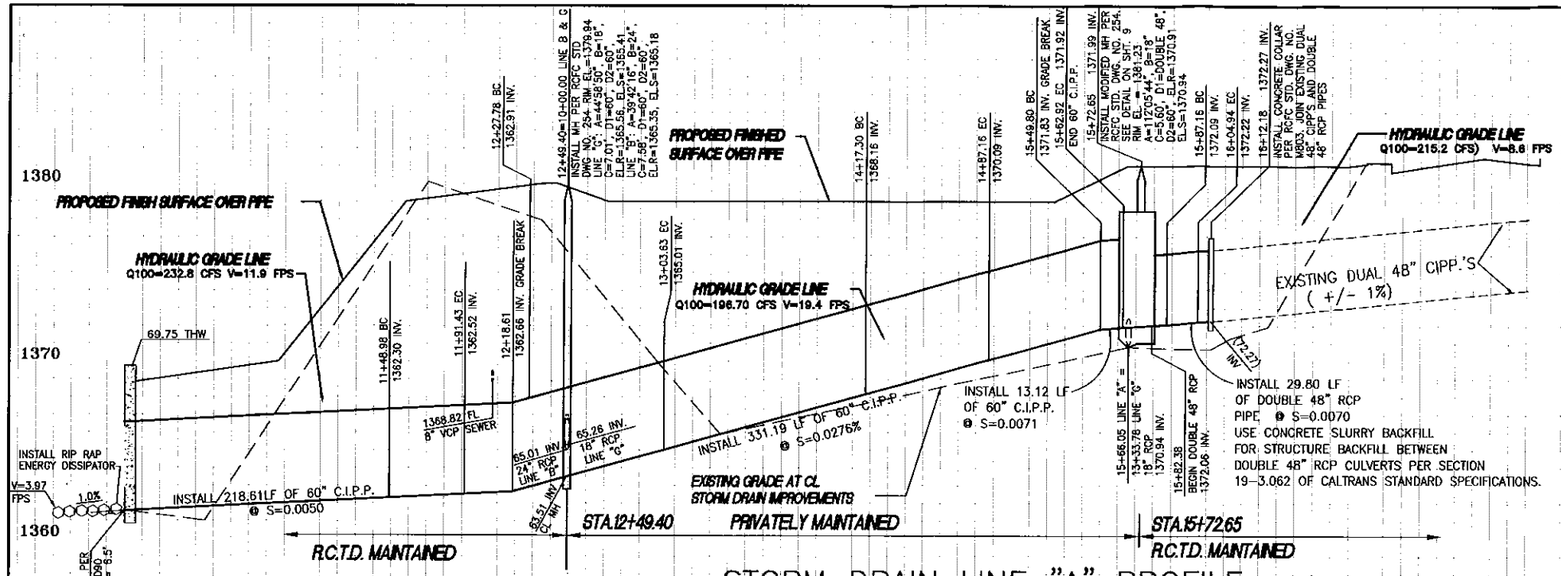
CLINTON KEITH SELF STORAGE
PP 19953

FOR: RIVERSIDE COUNTY FLOOD CONTROL

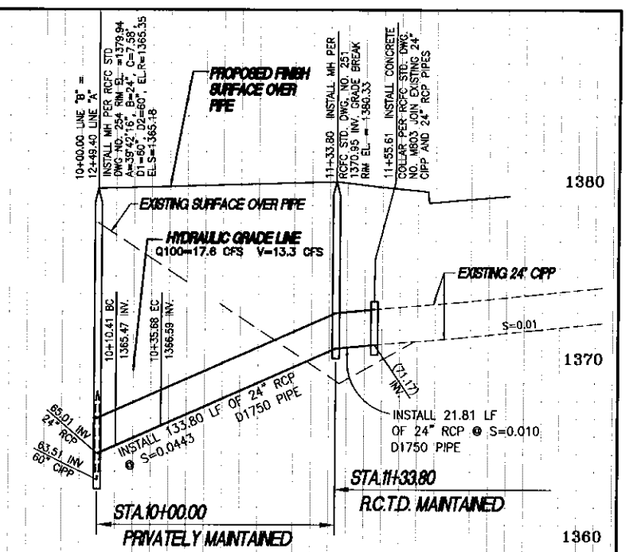
NO: 02-0379

SHEET 3 OF 3 SHEETS

PP 16953, Clinton Keith Self Storage, Storm Drain Improvement Plans



STORM DRAIN LINE "A" PROFILE



STORM DRAIN LINE "B" PROFILE

NOTE:
C.I.P.P. = CAST IN PLACE PIPE

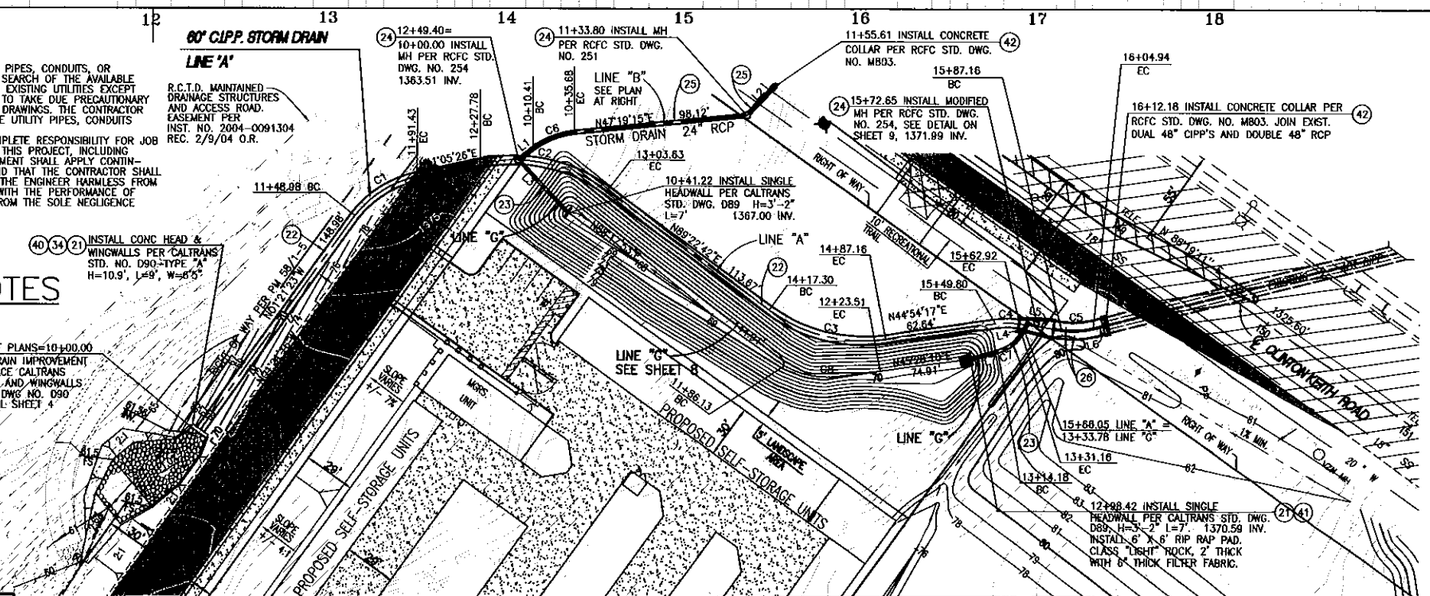
CAST IN PLACE PIPE NOTE:
IF CAST IN PLACE PIPE IS SPECIFIED FOR DESIGN VELOCITIES GREATER THAN 20 FPS AND LESS THAN 30 FPS, INVERT THICKNESS SHALL BE INCREASED 2" OVER THE LOWER 120° OF THE PIPE. FOR VELOCITIES GREATER THAN 30 FPS A 4" THICKENED INVERT SHALL BE CONSTRUCTED. THE CONCRETE DESIGN STRENGTH IN THESE REACHES SHALL BE fc' 4000 PSI.

NOTE:
CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE PROPOSED STORM DRAIN AND CHANNEL UNLESS OTHERWISE NOTED.

PROFILE SCALE
VERT: 1 in = 4 ft
HORZ: 1 in = 40 ft

PRIVATE ENGINEER'S NOTE TO CONTRACTORS:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN OR NOT SHOWN ON THESE PLANS.
CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, THE OWNERS, AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED , IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER



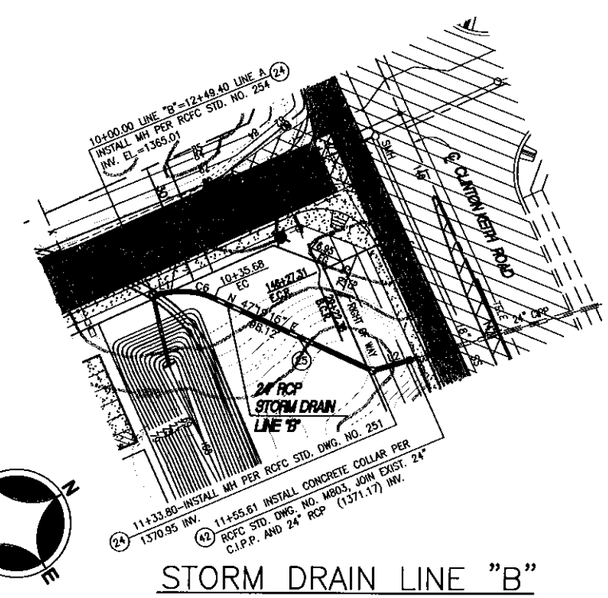
CONSTRUCTION NOTES

(21) INSTALL RIP RAP ENERGY DISSIPATOR AS SHOWN
(22) INSTALL 60" C.I.P.P. STORM DRAIN AS SHOWN
(23) INSTALL 18" RCP STORM DRAIN
(24) INSTALL STORM MH PER RCFC STD. AS SHOWN
(25) INSTALL 24" R.C.P. STORM DRAIN
(26) INSTALL 48" R.C.P. STORM DRAIN
(34) INSTALL 2' DEEP CUT OFF WALL.
(40) CONSTRUCT CALTRANS HEADWALL AND WINGWALLS PER STD. DWG. NO. D90-TYPE A.
(41) CONSTRUCT CALTRANS SINGLE HEADWALL PER STD. DWG. NO. D89.
(42) INSTALL CONCRETE COLLAR PER RCFC STD. DWG. NO. M803.

STORM DRAIN LINE "A"

CURVE TABLE				
CURVE	DELTA	LENGTH	RADIUS	TAN
C1	40°31'59"	42.45	60.00	22.15
C2	48°17'16"	75.85	90.00	40.34
C3	44°28'25"	69.86	90.00	36.80
C4	16°42'13"	13.12	45.00	6.61
C5	22°38'33"	17.78	45.00	9.01
C6	32°10'12"	25.27	45.00	12.98
C7	43°14'38"	16.98	22.50	8.92
C8	42°49'43"	37.38	50.00	19.61

LINE TABLE		
LINE	LENGTH	BEARING
L1	10.41	N15°09'03"E
L2	21.81	N06°30'55"E
L3	41.22	N80°09'51"E
L4	2.62	N06°17'46"W
L5	24.24	N61°36'30"E
L6	7.24	N38°57'57"E
L7	15.76	N36°56'52"E



STORM DRAIN LINE "B"

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT HAS BEEN ISSUED

DIGALERT — CALL BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU DIG — TOLL FREE — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT 1-800-227-2600

NOTE:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.

THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE DESIGN HEREON. IN THE EVENT OF DISCREPANCIES ARISING AFTER COUNTY APPROVAL OR DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE COUNTY.

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				COUNTY	

SEAL—COUNTY

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVED BY:
KHALED A. OTHMAN, P.E. — DATE
R.C.E. 33950 EXP. 6-30-08
RECOMMENDED: BOYLE ENGINEERING — DATE

SEAL—ENGINEER

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 McCRAY ST. RIVERSIDE, CA. 92506
PH. (909) 686-1070 FX. (909) 788-1256
PREPARED BY:
R.C.E. NO. C47200
EXP. DATE 12-31-05

BENCHMARK
DESCRIPTION: BRASS DISK IN DRILL HOLE SET BASE AT THE WILDOMAR SCHOOL BELL TOWER 6' WEST OF THE NW CORNER OF THE TOWER. AT WILDOMAR IN THE SW CORNER OF THE INT. OF CENTRAL ST. & PALOMAR ST, 55' SO. THE CL OF CENTRAL, 79' W OF CL PALOMAR, 142' NE OF THE WILDOMAR SCHOOL, 125' SO. OF THE POST OFFICE
U.S.C.& G.S. DESIGNATION 1254 (RESET IN 1964)
RIVERSIDE COUNTY DESIGNATION E-21
ELEV. = 1255.326

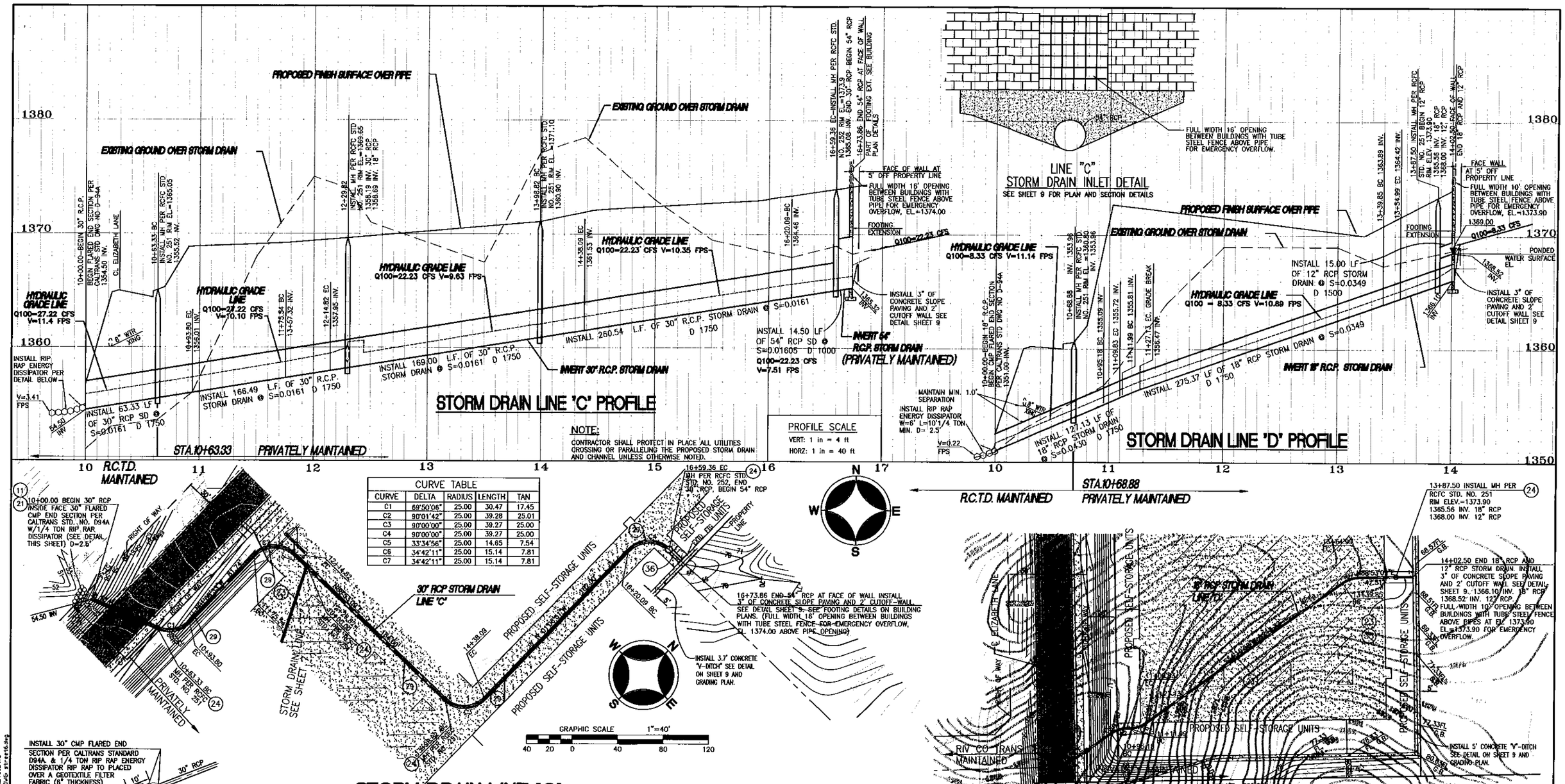
SCALE: H: AS NOTED V: AS NOTED

PLOT PLAN 16963 — I.P. NO. 010128
COUNTY OF RIVERSIDE
STORM DRAIN IMPROVEMENT PLAN
LINE "A" AND LINE "B"
STORM DRAIN PLAN AND PROFILE

SHEET NO. 5 OF 9 SHEETS

FOR: CLINTON KEITH SELF STORAGE — W.O. 02-379 — COUNTY FILE NO.

G:\2002\02-0379/CALIFORNIA REGIONAL ENGINEERS/STREET/STREET5.DWG XREF: CK-BASE, CK-PAVING, CK-TOPO Mattsun 12/10/04 15:09:54 EUS: street5.cfg



PROFILE SCALE
VERT: 1 in = 4 ft
HORZ: 1 in = 40 ft

NOTE:
CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE PROPOSED STORM DRAIN AND CHANNEL UNLESS OTHERWISE NOTED.

CURVE TABLE				
CURVE	DELTA	RADIUS	LENGTH	TAN
C1	69°50'06"	25.00	30.47	17.45
C2	90°01'42"	25.00	39.28	25.01
C3	90°00'00"	25.00	39.27	25.00
C4	90°00'00"	25.00	39.27	25.00
C5	33°34'56"	25.00	14.65	7.54
C6	34°42'11"	25.00	15.14	7.81
C7	34°42'11"	25.00	15.14	7.81

LINE TABLE		
LINE	LENGTH	BEARING
L1	14.50	N88°53'09"E
L2	2.16	S88°53'09"W

CONSTRUCTION NOTES

11 INSTALL 18",24" OR 30" (AS NOTED) CMP FLARED END SECTION PER CALTRANS STD. DWG. D94A.
21 INSTALL RIP RAP ENERGY DISSIPATOR AS SHOWN
23 INSTALL 18" R.C.P. STORM DRAIN
24 INSTALL STORM DRAIN MH PER RCFC STD. AS SHOWN
29 INSTALL 30" R.C.P. STORM DRAIN
35 INSTALL 12" R.C.P. STORM DRAIN
36 INSTALL 54" R.C.P. STORM DRAIN (BEDDING PER R.C.F.C.D. STD. DWG M815)

PRIVATE ENGINEER'S NOTE TO CONTRACTORS:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN OR NOT SHOWN ON THESE PLANS
CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, THE OWNERS, AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED , IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER

DIGALERT
DIAL BEFORE YOU DIG TOLL FREE
TWO WORKING DAYS BEFORE YOU DIG
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT 1-800-227-2600

NOTE:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.

THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE DESIGN HEREON. IN THE EVENT OF DISCREPANCIES ARISING AFTER COUNTY APPROVAL OR DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE COUNTY.

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				COUNTY	

SEAL–COUNTY

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVED BY:
KHALED A. OTHMAN, P.E. — DATE
R.C.E. 33950 EXP. 6-30-06
RECOMMENDED: BOYLE ENGINEERING — DATE

SEAL–ENGINEER

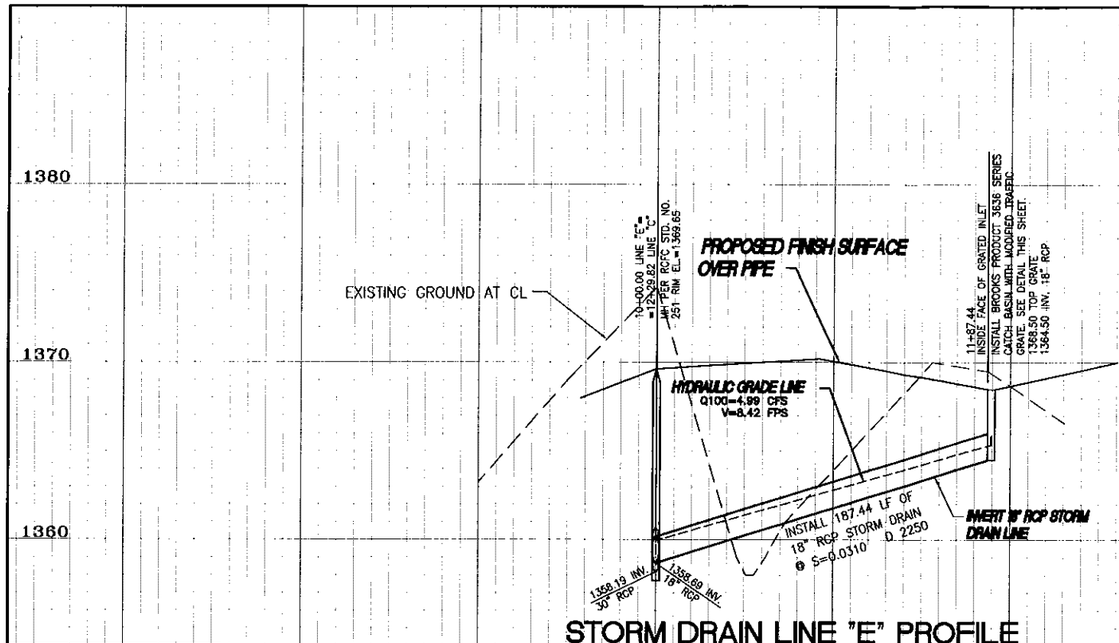
ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 McCRAY ST. RIVERSIDE, CA. 92506
PH. (909) 686-1070 FX. (909) 788-1256
PREPARED BY:
R.C.E. NO. C47200
EXP. DATE 12-31-05

BENCHMARK
DESCRIPTION: BRASS DISK IN DRILL HOLE SET BASE AT THE WILDOMAR SCHOOL BELL TOWER 6' WEST OF THE NW CORNER OF THE TOWER. AT WILDOMAR IN THE SW CORNER OF THE INT. OF CENTRAL ST. & PALOMAR ST. 55' SO. THE CL OF CENTRAL, 79' W OF CL PALOMAR, 142' NE OF THE WILDOMAR SCHOOL, 125' SO. OF THE POST OFFICE
U.S.C.& G.S. DESIGNATION 1254 (RESET IN 1964)
RIVERSIDE COUNTY DESIGNATION E-21
ELEV. = 1255.326

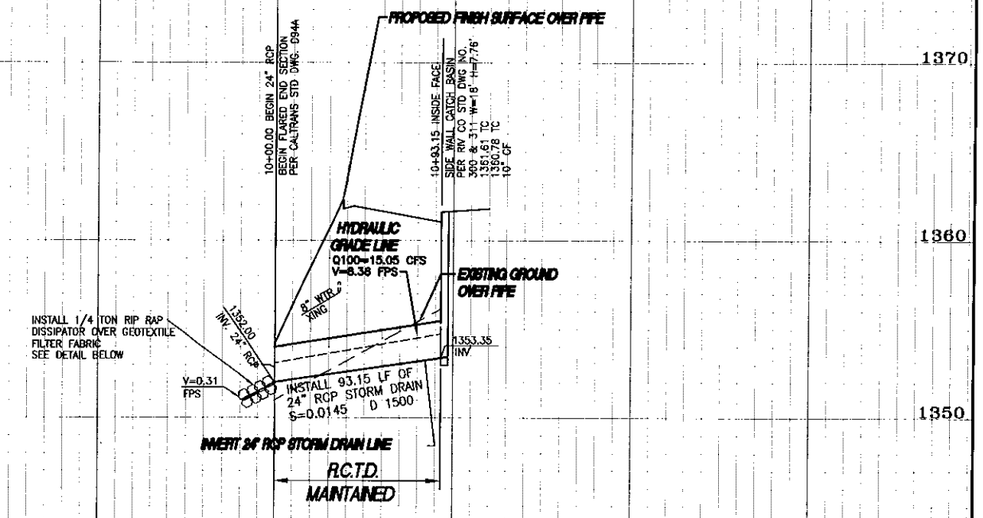
SCALE: H: AS NOTED V: AS NOTED

PLOT PLAN 19953 — I.P. NO. 010128
COUNTY OF RIVERSIDE
STORM DRAIN IMPROVEMENT PLAN
LINE "C" AND LINE "D"
STORM DRAIN PLAN AND PROFILE
SHEET NO. 6 OF 9 SHEETS
FOR: CLINTON KEITH SELF STORAGE
W.O. 02-379
COUNTY FILE NO.

G:\2002\02-0379/CALIFORNIA REGIONAL ENGINEERS/STREET/STREET6.DWG
XREF: CK-BASE CK-PAVING CK-TOPO Plotted: 12/12/04 13:41:47 DWG: street6.dwg



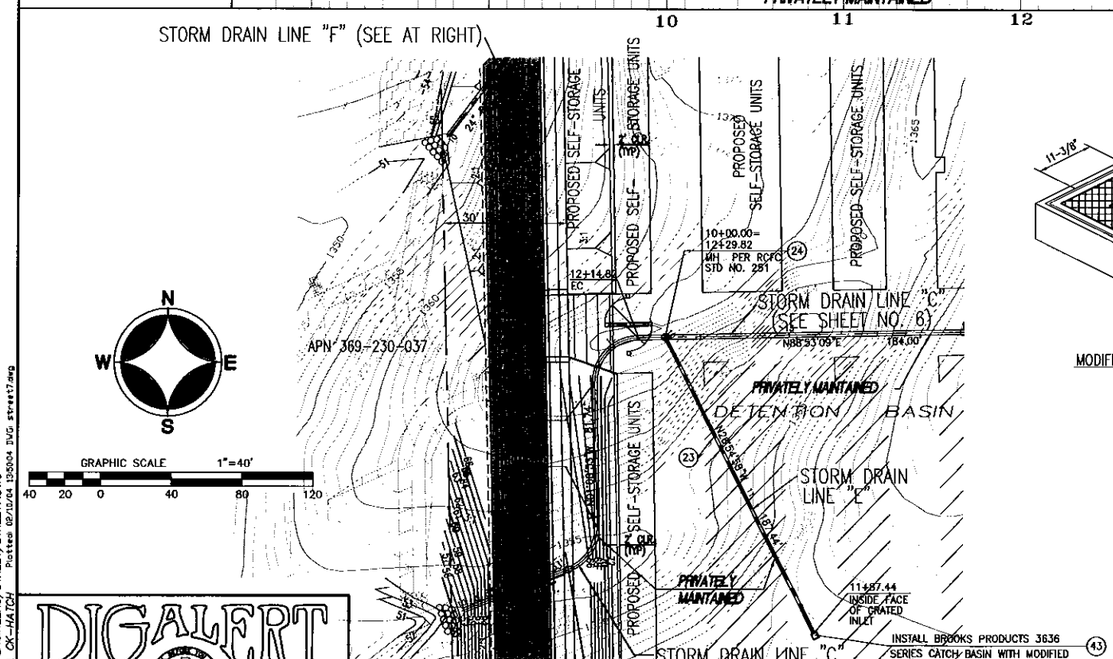
STORM DRAIN LINE "E" PROFILE



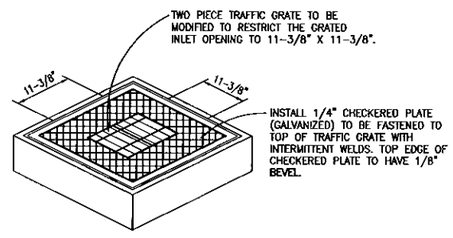
STORM DRAIN LINE "F" PROFILE

PROFILE SCALE
VERT: 1 in = 4 ft
HORZ: 1 in = 40 ft

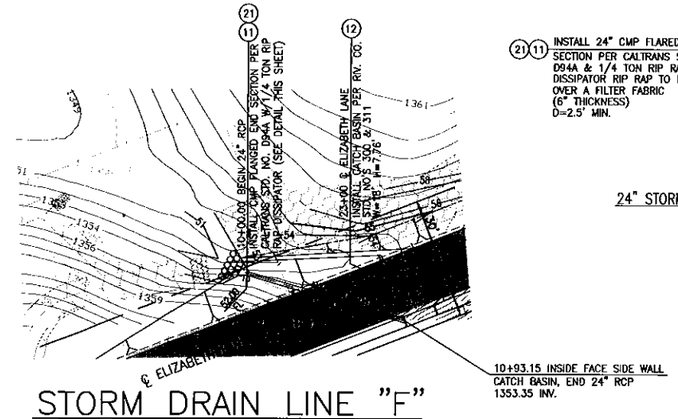
NOTE:
CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE PROPOSED STORM DRAIN AND CHANNEL UNLESS OTHERWISE NOTED.



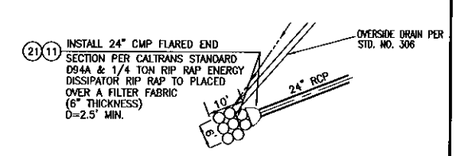
STORM DRAIN LINE "E"



LINE"E"
MODIFIED GRATED INLET
N.T.S.



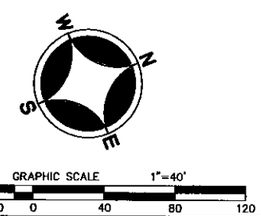
STORM DRAIN LINE "F"



LINE"F"
24" STORM DRAIN OUTLET DETAIL
N.T.S.

PRIVATE ENGINEER'S NOTE TO CONTRACTORS:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN OR NOT SHOWN ON THESE PLANS
CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, THE OWNERS, AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED , IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER



CONSTRUCTION NOTES

- (11) INSTALL 18", 24" OR 30" (AS NOTED) CMP FLARED END SECTION PER CALTRANS STD. DWG. NO. D94A.
- (12) INSTALL CATCH BASIN AND LOCAL DEPRESSION PER RIVERSIDE COUNTY STD. DWG. NO.'S 300 & 311
- (21) INSTALL RIP RAP ENERGY DISSIPATOR AS SHOWN
- (23) INSTALL 18" RCP STORM DRAIN
- (24) INSTALL STORM MH PER RCFC STD. AS SHOWN
- (25) INSTALL 24" RCP STORM DRAIN
- (43) INSTALL BROOKS PRODUCTS 3636 SERIES CATCH BASIN WITH MODIFIED TRAFFIC GRATE SEE DETAIL SHEET 7.

DIGALERT
CALL BEFORE YOU DIG
TWO WORKING DAYS BEFORE YOU DIG
TOLL FREE 1-800-227-2600
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

NOTE:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.

THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE DESIGN HEREON. IN THE EVENT OF DISCREPANCIES ARISING AFTER COUNTY APPROVAL OR DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE COUNTY.

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				COUNTY	

SEAL-COUNTY

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVED BY:
KHALED A. OTHMAN, P.E. — DATE
R.C.E. 33950 EXP. 6-30-06
RECOMMENDED: BOYLE ENGINEERING — DATE

SEAL-ENGINEER

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 McCRAY ST. RIVERSIDE, CA. 92506
PH. (909) 686-1070 FX. (909) 788-1256
PREPARED BY: R.C.E. NO. C47200
EXP. DATE 12-31-05

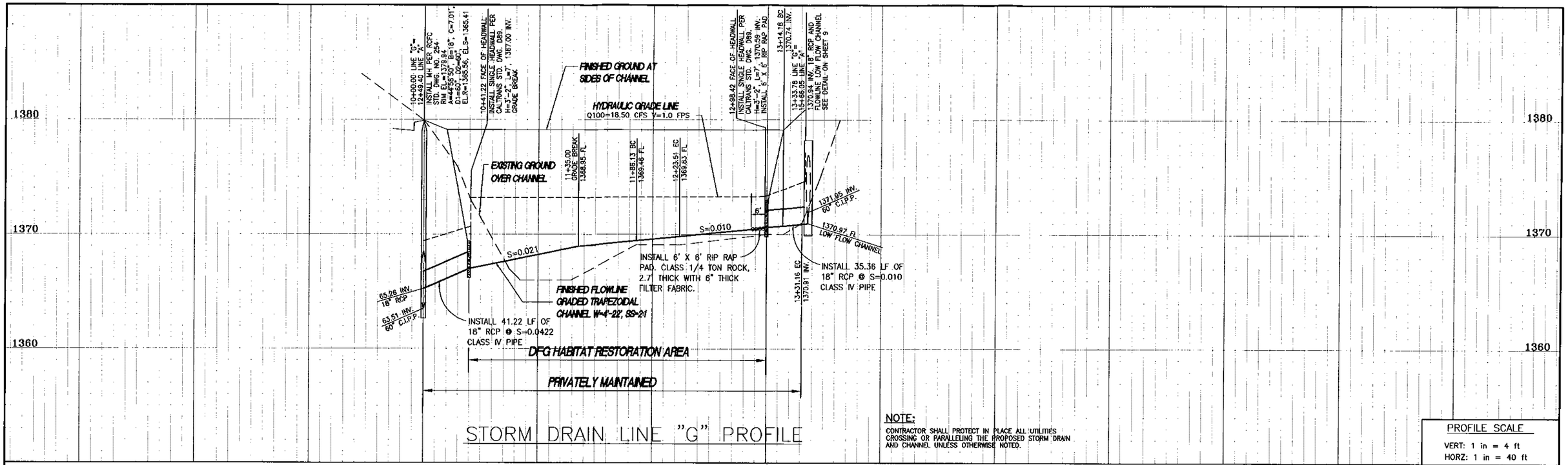
BENCHMARK
DESCRIPTION: BRASS DISK IN DRILL HOLE SET BASE AT THE WILDOMAR SCHOOL BELL TOWER 6' WEST OF THE NW CORNER OF THE TOWER. AT WILDOMAR IN THE SW CORNER OF THE INT. OF CENTRAL ST. & PALOMAR ST. 55' SO. THE CL OF CENTRAL, 79' W OF CL PALOMAR, 142' NE OF THE WILDOMAR SCHOOL, 125' SO. OF THE POST OFFICE
U.S.C.& G.S. DESIGNATION 1254 (RESET IN 1964)
RIVERSIDE COUNTY DESIGNATION E-21
ELEV. = 1255.326
SCALE: H: AS NOTED V: AS NOTED

PLOT PLAN 16953 — I.P. NO. 010128
COUNTY OF RIVERSIDE
STORM DRAIN IMPROVEMENT PLAN
LINE "E" AND LINE "F"
STORM DRAIN PLAN AND PROFILE

SHEET NO. 7 OF 9 SHEETS

FOR: CLINTON KEITH SELF STORAGE — W.O. 02-379 — COUNTY FILE NO.

G:\2002\02-0379/CALIFORNIA REGIONAL ENGINEERS/STREET/STREET7.DWG
XREF: CK-BASE, CK-PAVING, CK-TOPO, CK-HATCH Plotted 10/10/04 135004 DWG street7.dwg



STORM DRAIN LINE "G" PROFILE

NOTE:
CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE PROPOSED STORM DRAIN AND CHANNEL UNLESS OTHERWISE NOTED.

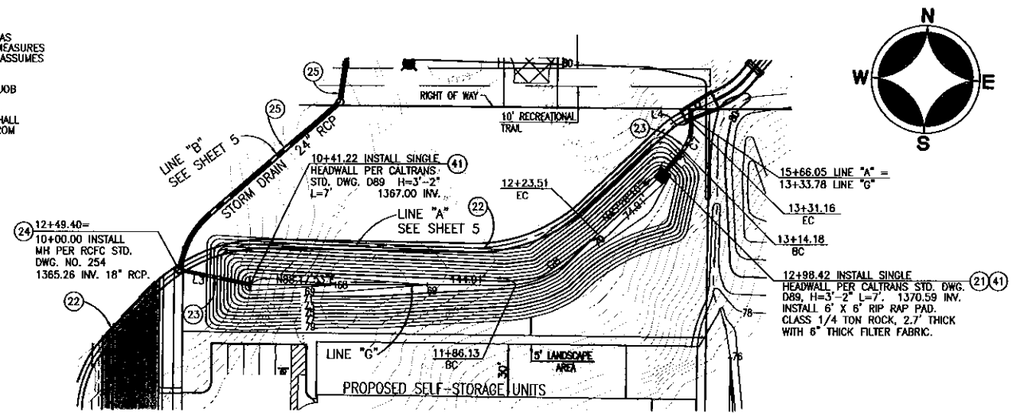
PROFILE SCALE
VERT: 1 in = 4 ft
HORZ: 1 in = 40 ft

PRIVATE ENGINEER'S NOTE TO CONTRACTORS:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN OR NOT SHOWN ON THESE PLANS
CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, THE OWNERS, AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED , IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER

CONSTRUCTION NOTES

(21) INSTALL RIP RAP ENERGY DISSIPATOR AS SHOWN
(22) INSTALL 60" C.I.P.P. STORM DRAIN AS SHOWN
(23) INSTALL 18" RCP STORM DRAIN
(24) INSTALL STORM MH PER RCFC STD. AS SHOWN
(25) INSTALL 24" R.C.P. STORM DRAIN
(41) CONSTRUCT CALTRANS SINGLE HEADWALL PER STD. DWG. NO. D89.



STORM DRAIN LINE "G"

CURVE TABLE				
CURVE	DELTA	LENGTH	RADIUS	TAN
C7	43°14'38"	16.98	22.50	8.92
C8	42°49'43"	37.38	50.00	19.61

LINE TABLE		
LINE	LENGTH	BEARING
L3	41.22	N80°09'51"E
L4	2.62	N06°17'46"W
L7	15.76	N36°56'52"E

GRAPHIC SCALE 1"=40'
40 20 0 40 80 120

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT HAS BEEN ISSUED

DIGALERT
TWO WORKING DAYS BEFORE YOU DIG
TOLL FREE 1-800-227-2600
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

NOTE:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.

THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE DESIGN HEREON. IN THE EVENT OF DISCREPANCIES ARISING AFTER COUNTY APPROVAL OR DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE COUNTY.

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				COUNTY	

SEAL–COUNTY

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
APPROVED BY:
KHALED A. OTHMAN, P.E. R.C.E. 33950 EXP. 6-30-06 — DATE
RECOMMENDED: BOYLE ENGINEERING — DATE

SEAL–ENGINEER

ALBERT A. WEBB ASSOCIATES
CIVIL ENGINEERS
3788 McCRAY ST. RIVERSIDE, CA. 92506
PH. (909) 686-1070 FX. (909) 788-1256
PREPARED BY:
R.C.E. NO. C47200
EXP. DATE 12-31-05

BENCHMARK
DESCRIPTION: BRASS DISK IN DRILL HOLE SET BASE AT THE WILDOMAR SCHOOL BELL TOWER 6' WEST OF THE NW CORNER OF THE TOWER. AT WILDOMAR IN THE SW CORNER OF THE INT. OF CENTRAL ST. & PALOMAR ST. 55' SO. THE CL OF CENTRAL, 79' W OF CL PALOMAR, 142' NE OF THE WILDOMAR SCHOOL, 125' SO. OF THE POST OFFICE
U.S.C.& G.S. DESIGNATION 1254 (RESET IN 1964)
RIVERSIDE COUNTY DESIGNATION E-21
ELEV. = 1255.326

SCALE: H: AS NOTED V: AS NOTED

PLOT PLAN 16953 I.P. NO. 010128
COUNTY OF RIVERSIDE
STORM DRAIN IMPROVEMENT PLAN
LINE "G"
STORM DRAIN PLAN AND PROFILE
FOR: CLINTON KEITH SELF STORAGE
W.O. 02-379
COUNTY FILE NO.
SHEET NO. 8 OF 9 SHEETS

G:\2002\02-379/CALIFORNIA REGIONAL ENGINEERS/STREET/STREET8.DWG
XREF: CK-BASE, CK-PLANS, CK-TOPO Plotted: 12/13/04 1:51:52 By:G: s:r=s48.ctb