PRELIMINARY HYDROLOGY STUDY

For:

Public Storage – Moreno Valley

Project Site Location/Address:
Indian Street
Moreno Valley, CA 92553

Prepared For:
Public Storage
701 Western Avenue
Glendale, CA 91201

Lead Agency:
City of Moreno Valley
14177 Frederick Street
Moreno Valley, CA 92553

Prepared by:
DRC Engineering, Inc.
160 S. Old Springs Road, Suite 210
Anaheim, CA 92808
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July 29, 2024

Project No. 24-077
City Record Number: LST24-0030

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Section I Introduction

The following hydrology study has been prepared for the development of the proposed Public Storage Facility. The project consists of a three story 132,000 sf self storage building with adjacent RV storage parking consisting of 52 spaces. The project also includes associated drive aisles, parking and landscaping with shared access from Indian Street to the adjacent property to the south approximately 300' north from the intersection of Alessandro Boulevard and Indian Street. The overall project is approximately 3.0 acres. The general location of the site is illustrated on the Vicinity Map (see Appendix A of this report).

Section II Methodology

The hydrologic analysis was completed assuming the ultimate project condition based on conceptual site plans. For both the existing and proposed conditions, the peak storm discharge for the drainage sub areas were calculated using the Riverside County Hydrology Manual. The CivilDesign Riverside County Unit Hydrograph software was used to develop hydrographs for the existing and proposed 10-year and100-year 24-Hour storm events (see calculations in Appendix C). A detention analysis was performed using Hydraflow Storm Sewers Software for the proposed storm events (see calculations in appendix D). A soil type of A was assigned to the project site based on maps from NRCS Web Soil Survey Data (see portion of map in Appendix A). These soils have a high infiltration rate when thoroughly wet.

Section III Project Description

Existing Site Conditions

The pre development conditions for the site consist of undisturbed, flat land that ultimately surface flows towards an existing concrete v-gutter to the north of the existing shared access drive aisle at the south of the site. Stormwater crosses the drive aisle and flows through an existing parkway drain directly to the south of the existing driveway and into the curb and gutter on Indian Street. From Indian Street stormwater flows merges with the Alessandro Boulevard curb and gutter and flows west. Later downstream stormwater enters the concrete lined Sunnymead Channel and flows south through the Perris Valley Storm Drain, San Jacinto River, Canyon Lake and enters Lake Elsinore.

Proposed Site Conditions

The proposed development will consist of the construction of a 132,000 sf warehouse building along with parking, drive aisle and landscaped areas. Roof drains will surface drain to the parking lot area and flow into proposed drain inlets located around the site. The site will feature private storm drain lines that will flow into an infiltration basin approximately 5,775 sf in area witch arch chambers supporting the parking lot above. This design will include 21,313 cubic feet of storage volume used to mitigate outflows to existing conditions for the 100 year 24 hour storm by detaining runoff and allowing the volume to infiltrate over 48 hours. The storm drain design will include a parkway drain north of the existing driveway on Indian Street that will allow larger storm volumes to outlet into the public street and limit ponding onsite.

Section IV Conclusion

The following tables summarize the data and results for the 10-year 24-hour and 100-year 24-hour storm in the existing and proposed conditions using the Riverside County Unit Hydrograph and Hydraflow Software.

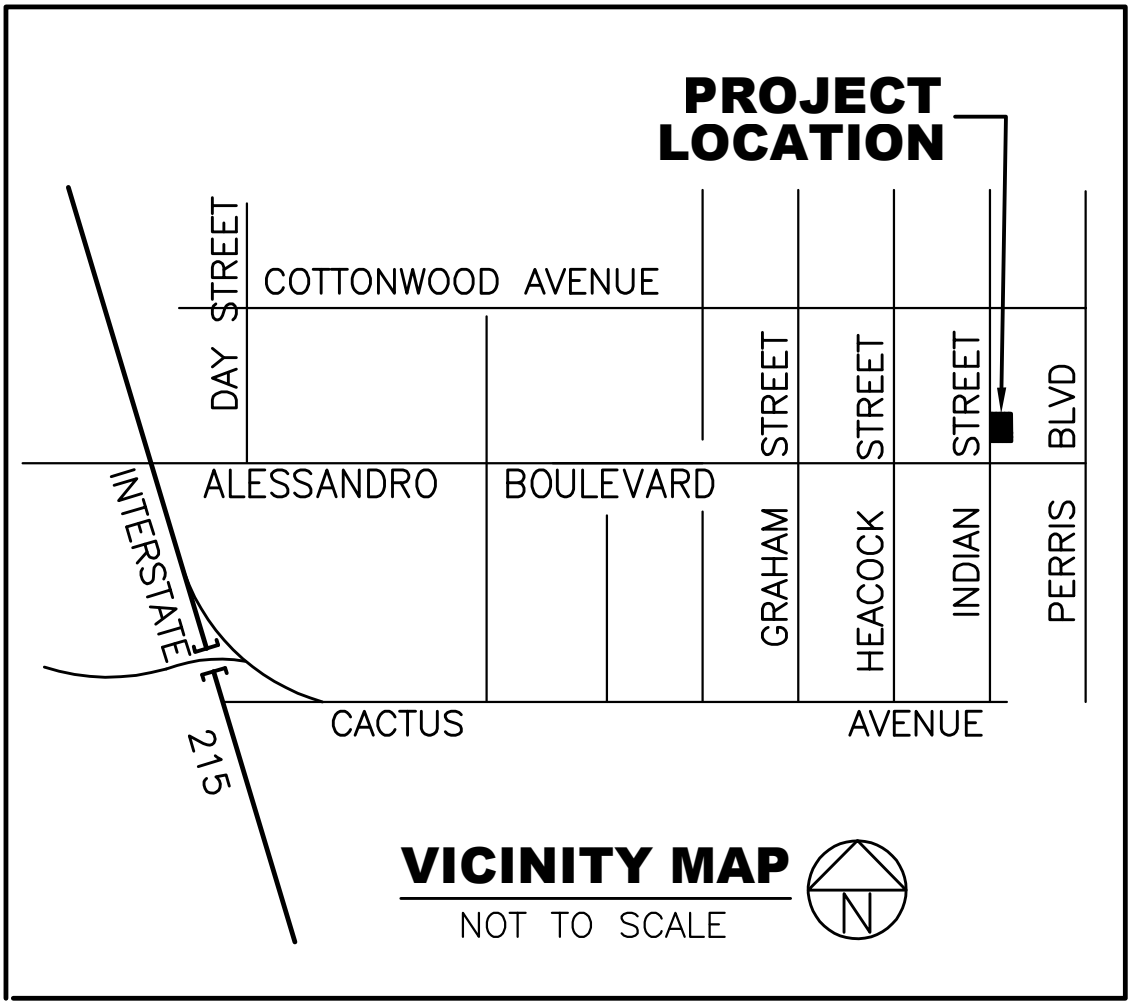
10 YEAR & 100 YEAR STORM OUTFLOW TABLE

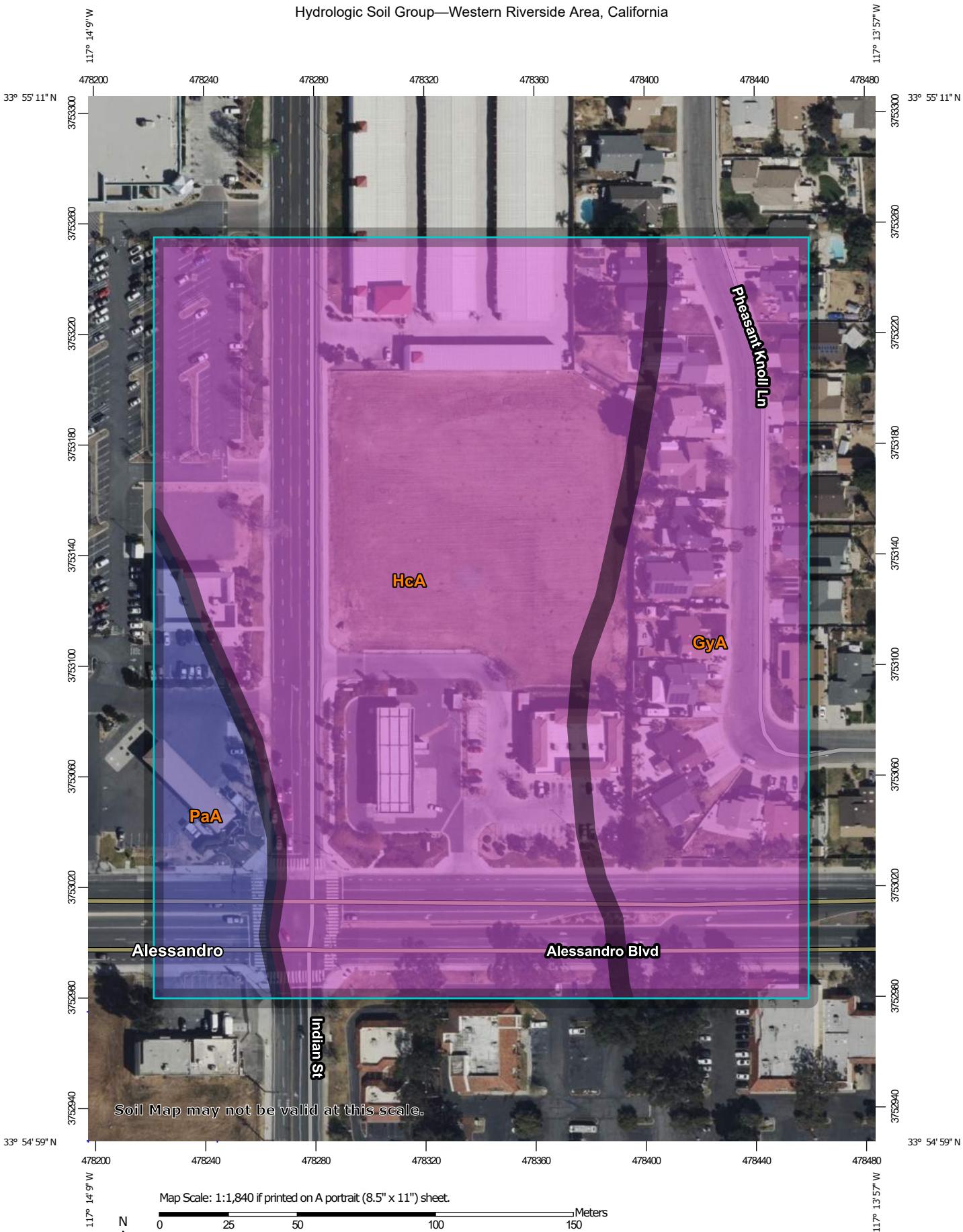
Storm	Existing Peak Flowrate (cfs)	Proposed Peak Flowrate (cfs)	Volume detained (cf)	Flowrate After Detention (cfs)	Notes
10 yr 24 hr	0.417	0.824	21,774	0.000	Entire volume collected in infiltration chamber
100 yr 24 hr	0.950	1.218	32,238	0.889	0.999 is total peak flow in hydraflow. 0.110 cfs being constantly infiltrated, 0.889 outflowing to Indian Street.

The proposed flow rates increased from the existing conditions prior to reaching the detention system. Hydraflow Storm Sewers Software used this hydrograph information to generate peak discharge rates for the proposed storm drain system utilizing the proposed detention system. A 3' wide weir was placed at an invert of 1579.44 to simulate the proposed parkway drain. User defined outflows were added to simulate infiltration from the chambers. In the 100 year storm, utilizing a total volume of 32,238 cf, the proposed flow rate entering Indian Street from the infiltration chamber dropped to 0.889 cfs which is lower than the existing flow of 0.950 cfs. Due to the smaller flow rates in both the 10 year and 100 year storm, the proposed site will not have any negative impacts on downstream receiving storm drains

APPENDIX A

VICINITY MAP


PROJECT LOCATION
DAY STREET
COTTONWOOD AVENUE
STREET
STREET
STREET
BLVD
ALESSANDRO
BOULEVARD
GRAHAM
HEACOCK
INDIAN
PERRIS
INTERSTATE
215
CACTUS
AVENUE
VICINITY MAP
NOT TO SCALE
N



Map Scale: 1:1,840 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 16, Aug 30, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 14, 2022—Mar 17, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GyA	Greenfield sandy loam, 0 to 2 percent slopes	A	4.8	29.6%
HcA	Hanford coarse sandy loam, 0 to 2 percent slopes	A	10.1	62.1%
PaA	Pachappa fine sandy loam, 0 to 2 percent slopes	B	1.4	8.3%
Totals for Area of Interest			**16.2**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

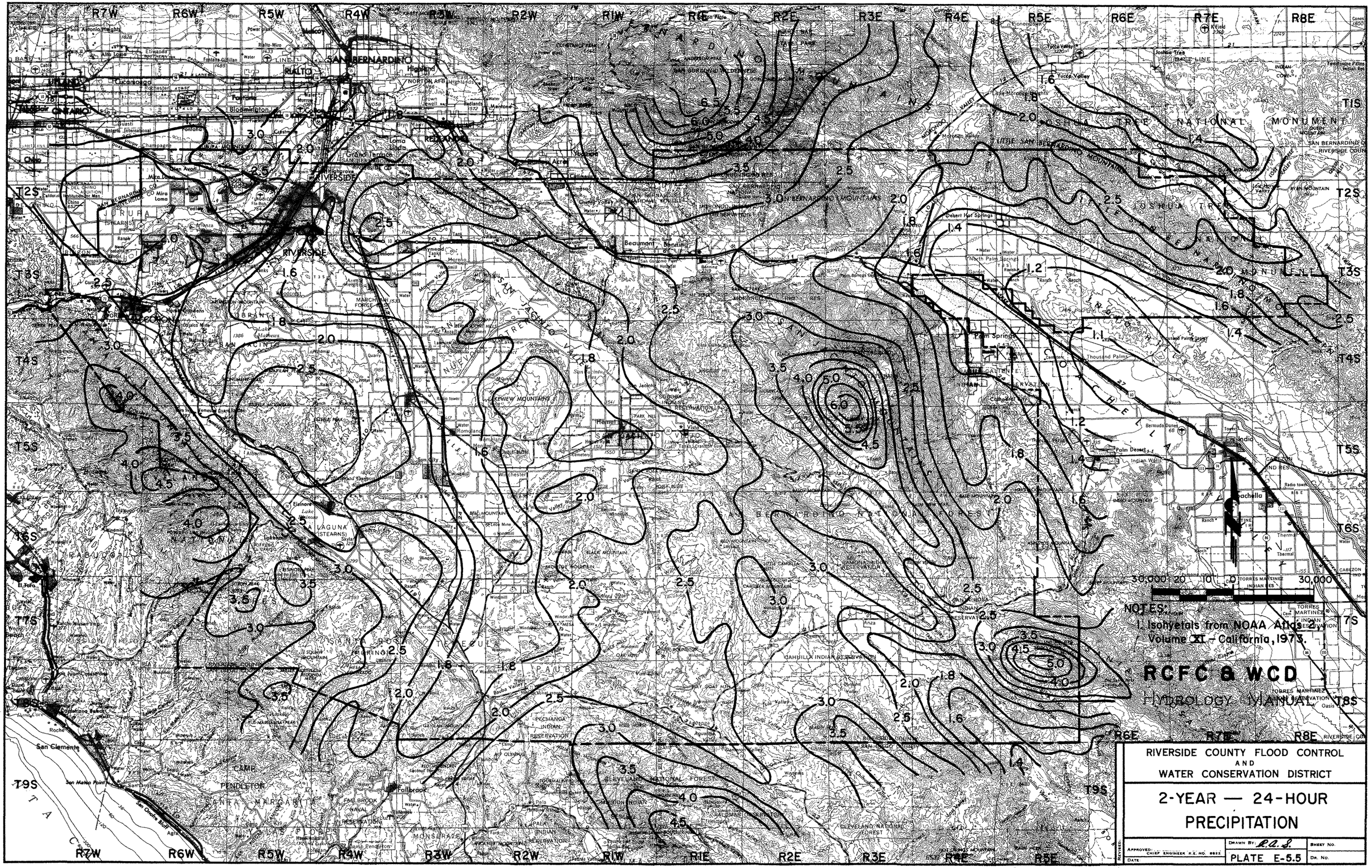
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

2-YEAR — 24-HOUR PRECIPITATION

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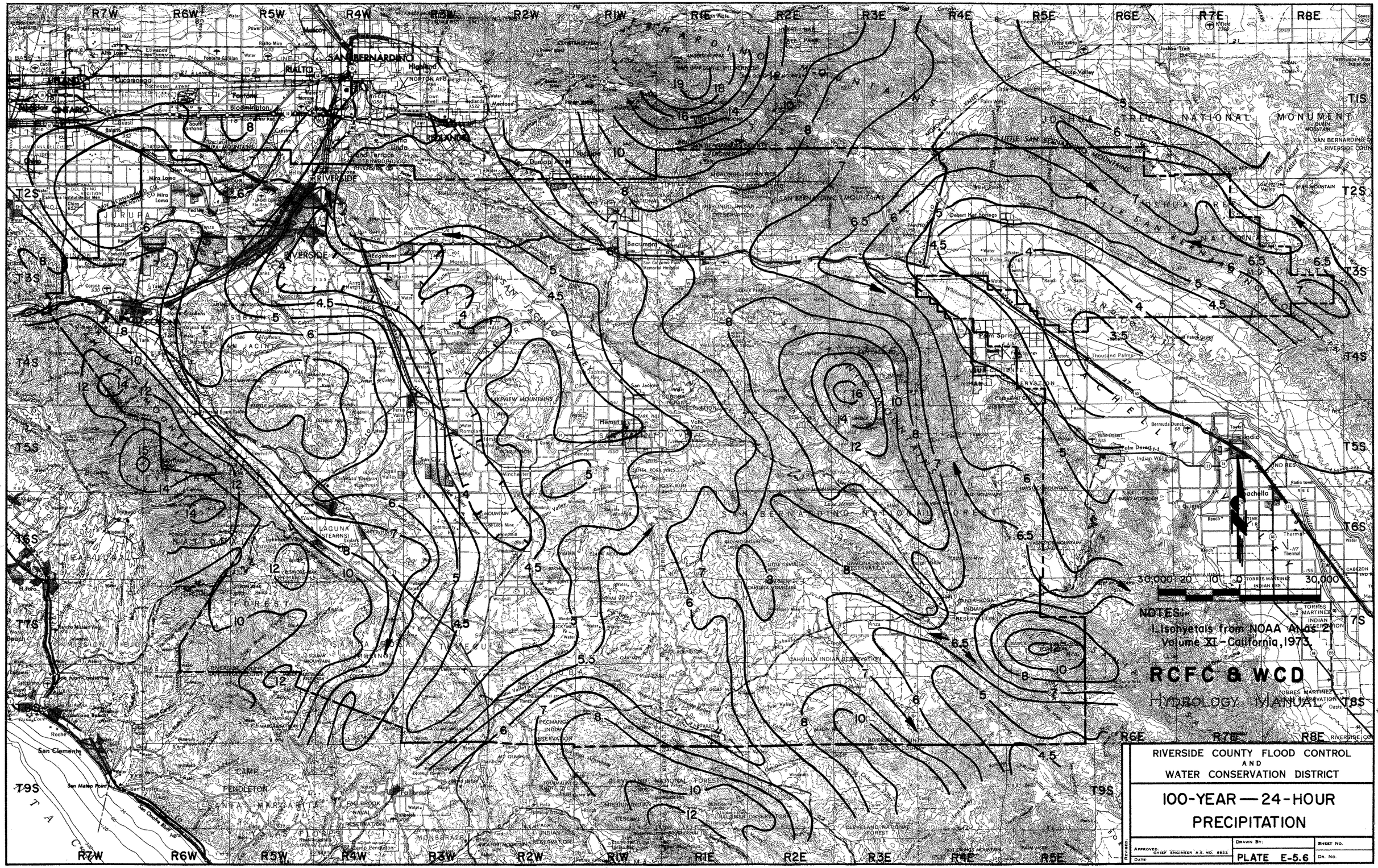
	PLATE E-5.5	DR. NO.



NOTES:
1. Isohyetals from NOAA Atlas 2, Volume XI - California, 1973.

RCFC & WCD
HYDROLOGY MANUAL

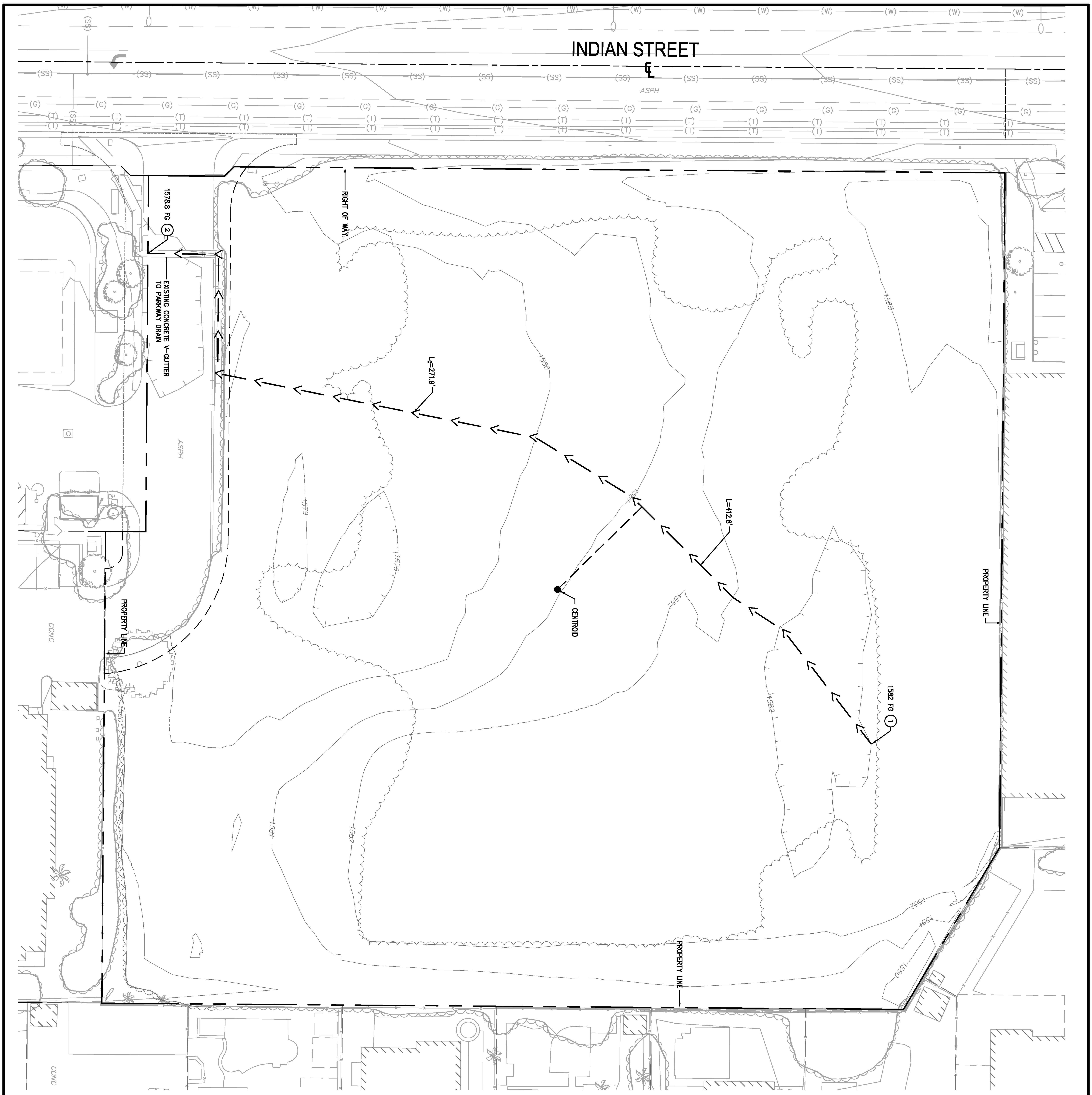
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

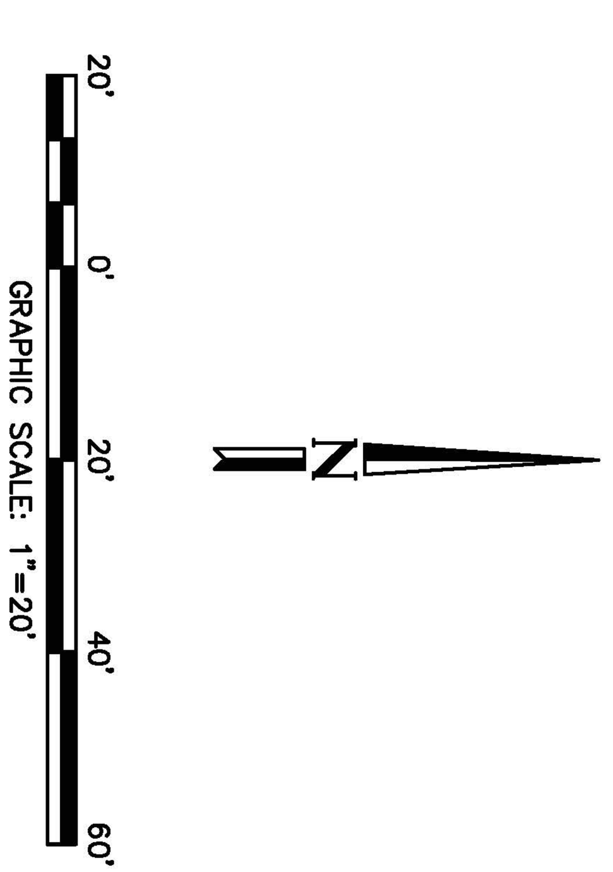
100-YEAR — 24-HOUR PRECIPITATION

APPROVED CHIEF ENGINEER R.E. NO. 6822	DRAWN BY:	SHEET NO.
DATE	PLATE E-5.6	DR. NO.
REVISED		

APPENDIX B

Existing Hydrology Map
Proposed Hydrology Map





LEGEND

- FLOW PATH
- (1) NODE NUMBER
- L=XXX' FLOW DISTANCE

SOIL GROUP:	A [SEE USDA NRCS WEB SOIL SURVEY DATA]
AMC II RUNOFF INDEX NUMBER:	78 [OPEN BRUSH (BARREN GRADED LAND]
IMPERVIOUS PERCENTAGE:	0.0%
LENGTH:	412.8'
LENGTH FROM CENTROID:	271.9'
CHANGE IN ELEVATION:	3.2'
AREA:	3.0 ACRES
AMC:	II [NORMALLY ASSUMED FOR BOTH THE 10 YEAR AND 100 YEAR STORM FREQUENCY FOR DESIGN HYDROLGY USING DISTRICT METHODS PER RIVERSIDE COUNTY HYDROLOGY MANUAL]

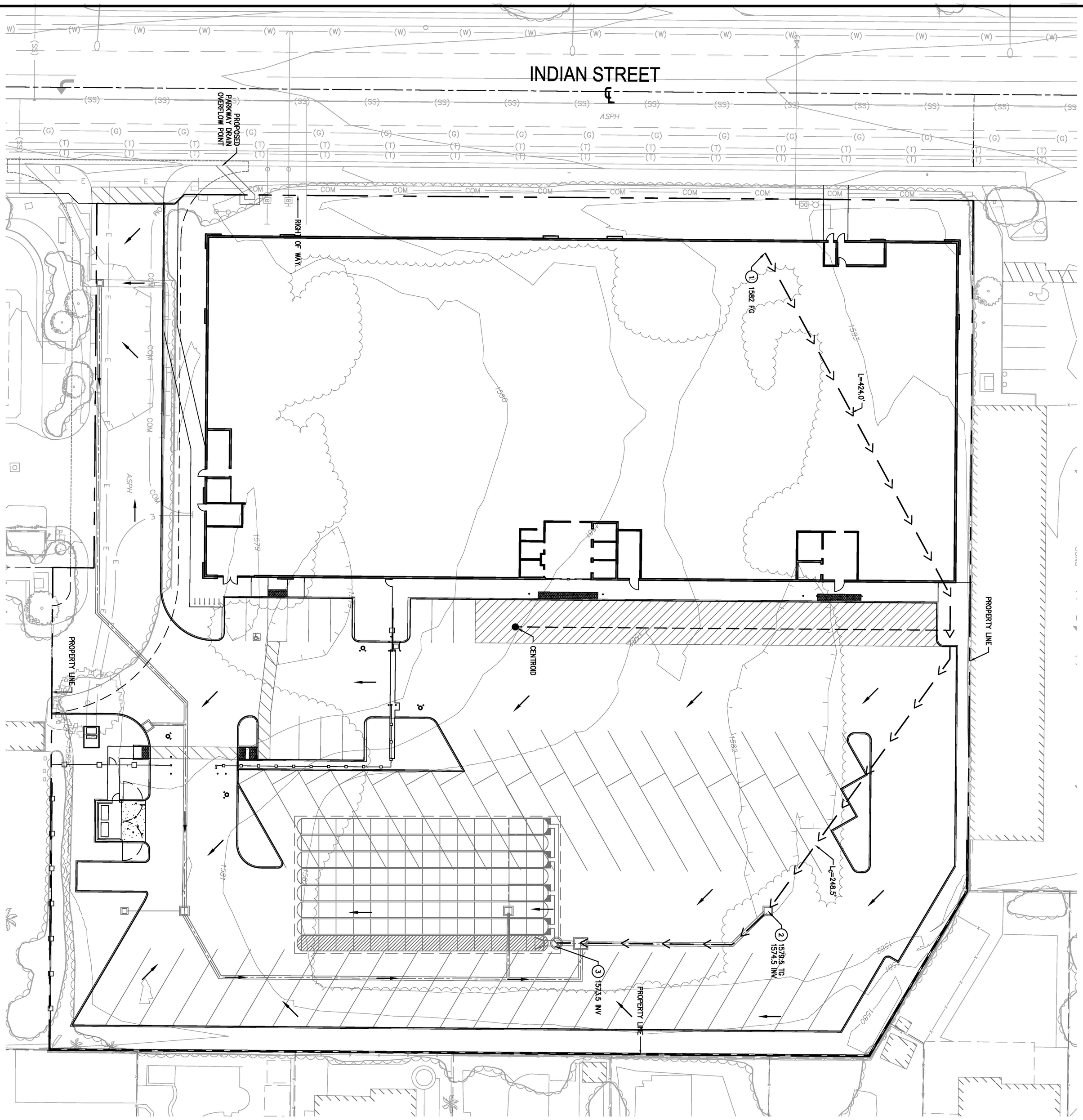
ISSUE:	HYDROLOGY
DATE:	7/23/2024
CHECKED: KH	DRAWN: KH
DRAWING FILE:	
PROJECT NO.:	24-077
SHEET NUMBER:	1
OF	1 SHEETS
SCALE:	AS SHOWN

PROJECT:
PUBLIC STORAGE
INDIAN STREET
MORENO VALLEY, CA

DRAWING NAME:
EXISTING HYDROLOGY MAP

NO.:	REVISION:	DATE:

DRC Engineering, Inc.
Civil Engineering/Land Surveying/Land Planning
160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860



LEGEND

FLOW PATH

NODE NUMBER

L=XXX' FLOW DISTANCE

SOIL GROUP: A [SEE USDA NRCS WEB SOIL SURVEY DATA]
AMC II RUNOFF INDEX NUMBER: 32 [COMMERCIAL LANDSCAPING]
IMPERVIOUS PERCENTAGE: 0.0%
LENGTH: 424.0'
LENGTH FROM CENTROID: 248.5'
CHANGE IN ELEVATION: 5.1'
AREA: 3.1 ACRES
AMC: II [NORMALLY ASSUMED FOR BOTH THE 10 YEAR AND 100 YEAR STORM FREQUENCY FOR DESIGN HYDROLOGY USING DISTRICT METHODS PER RIVERSIDE COUNTY HYDROLOGY MANUAL]

GRAPHIC SCALE: 1"=20'
20' 0' 20' 40' 60'

N

ISSUE: HYDROLOGY
DATE: 7/23/24
CHECKED: KH DRAWN: KH
DRAWING FILE:
PROJECT NO.: 24-077
SHEET NUMBER: 1
OF 1 SHEETS
SCALE: AS SHOWN

PROJECT: **PUBLIC STORAGE**
INDIAN STREET
MORENO VALLEY, CA

DRAWING NAME: **PROPOSED HYDROLOGY MAP**

NO.:	REVISION:	DATE:

DRC Engineering, Inc.
Civil Engineering/Land Surveying/Land Planning
160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860

FILENAME: M:\2024\24-077 PS Moreno Valley Indian St\HM\CAD\24077 Proposed Hydrology Map.dwg, LAST SAVED ON: Jan 03 2025 6:50am PLOTTED BY: RENA, ON: Jan 03 2025 6:52am, CFG:

APPENDIX C

Existing Condition Hydrograph (Unit Riverside)
Proposed Condition Hydrograph (Unit Riverside)

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

Study date 07/01/24 File: 24077E2410.out

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

Program License Serial Number 6310

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

English Units used in output format

24-077
Existing Condition
10 YEAR STORM

Drainage Area = 3.00(Ac.) = 0.005 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 3.00(Ac.) = 0.005 Sq. Mi.
Length along longest watercourse = 412.80(Ft.)
Length along longest watercourse measured to centroid = 271.90(Ft.)
Length along longest watercourse = 0.078 Mi.
Length along longest watercourse measured to centroid = 0.051 Mi.
Difference in elevation = 3.20(Ft.)
Slope along watercourse = 40.9302 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.19 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
3.00	1.80	5.40

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
3.00	4.00	12.00

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 2.705(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.705(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
3.000	78.00	0.000

Total Area Entered = 3.00(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	228.613	47.946	1.450
2	0.167	457.226	41.420	1.252
3	0.250	685.839	7.739	0.234
4	0.333	914.452	2.895	0.088
		Sum = 100.000	Sum=	3.023

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	0.022	(0.474)		0.019	0.002
2	0.17	0.07	0.022	(0.473)		0.019	0.002
3	0.25	0.07	0.022	(0.471)		0.019	0.002
4	0.33	0.10	0.032	(0.469)		0.029	0.003
5	0.42	0.10	0.032	(0.467)		0.029	0.003
6	0.50	0.10	0.032	(0.465)		0.029	0.003
7	0.58	0.10	0.032	(0.463)		0.029	0.003
8	0.67	0.10	0.032	(0.462)		0.029	0.003
9	0.75	0.10	0.032	(0.460)		0.029	0.003
10	0.83	0.13	0.043	(0.458)		0.039	0.004
11	0.92	0.13	0.043	(0.456)		0.039	0.004
12	1.00	0.13	0.043	(0.454)		0.039	0.004
13	1.08	0.10	0.032	(0.453)		0.029	0.003
14	1.17	0.10	0.032	(0.451)		0.029	0.003
15	1.25	0.10	0.032	(0.449)		0.029	0.003

16	1.33	0.10	0.032	(0.447)	0.029	0.003
17	1.42	0.10	0.032	(0.445)	0.029	0.003
18	1.50	0.10	0.032	(0.444)	0.029	0.003
19	1.58	0.10	0.032	(0.442)	0.029	0.003
20	1.67	0.10	0.032	(0.440)	0.029	0.003
21	1.75	0.10	0.032	(0.438)	0.029	0.003
22	1.83	0.13	0.043	(0.437)	0.039	0.004
23	1.92	0.13	0.043	(0.435)	0.039	0.004
24	2.00	0.13	0.043	(0.433)	0.039	0.004
25	2.08	0.13	0.043	(0.431)	0.039	0.004
26	2.17	0.13	0.043	(0.430)	0.039	0.004
27	2.25	0.13	0.043	(0.428)	0.039	0.004
28	2.33	0.13	0.043	(0.426)	0.039	0.004
29	2.42	0.13	0.043	(0.424)	0.039	0.004
30	2.50	0.13	0.043	(0.423)	0.039	0.004
31	2.58	0.17	0.054	(0.421)	0.049	0.005
32	2.67	0.17	0.054	(0.419)	0.049	0.005
33	2.75	0.17	0.054	(0.417)	0.049	0.005
34	2.83	0.17	0.054	(0.416)	0.049	0.005
35	2.92	0.17	0.054	(0.414)	0.049	0.005
36	3.00	0.17	0.054	(0.412)	0.049	0.005
37	3.08	0.17	0.054	(0.411)	0.049	0.005
38	3.17	0.17	0.054	(0.409)	0.049	0.005
39	3.25	0.17	0.054	(0.407)	0.049	0.005
40	3.33	0.17	0.054	(0.405)	0.049	0.005
41	3.42	0.17	0.054	(0.404)	0.049	0.005
42	3.50	0.17	0.054	(0.402)	0.049	0.005
43	3.58	0.17	0.054	(0.400)	0.049	0.005
44	3.67	0.17	0.054	(0.399)	0.049	0.005
45	3.75	0.17	0.054	(0.397)	0.049	0.005
46	3.83	0.20	0.065	(0.395)	0.058	0.006
47	3.92	0.20	0.065	(0.394)	0.058	0.006
48	4.00	0.20	0.065	(0.392)	0.058	0.006
49	4.08	0.20	0.065	(0.390)	0.058	0.006
50	4.17	0.20	0.065	(0.389)	0.058	0.006
51	4.25	0.20	0.065	(0.387)	0.058	0.006
52	4.33	0.23	0.076	(0.385)	0.068	0.008
53	4.42	0.23	0.076	(0.384)	0.068	0.008
54	4.50	0.23	0.076	(0.382)	0.068	0.008
55	4.58	0.23	0.076	(0.381)	0.068	0.008
56	4.67	0.23	0.076	(0.379)	0.068	0.008
57	4.75	0.23	0.076	(0.377)	0.068	0.008
58	4.83	0.27	0.087	(0.376)	0.078	0.009
59	4.92	0.27	0.087	(0.374)	0.078	0.009
60	5.00	0.27	0.087	(0.372)	0.078	0.009
61	5.08	0.20	0.065	(0.371)	0.058	0.006
62	5.17	0.20	0.065	(0.369)	0.058	0.006
63	5.25	0.20	0.065	(0.368)	0.058	0.006
64	5.33	0.23	0.076	(0.366)	0.068	0.008
65	5.42	0.23	0.076	(0.364)	0.068	0.008
66	5.50	0.23	0.076	(0.363)	0.068	0.008
67	5.58	0.27	0.087	(0.361)	0.078	0.009
68	5.67	0.27	0.087	(0.360)	0.078	0.009
69	5.75	0.27	0.087	(0.358)	0.078	0.009
70	5.83	0.27	0.087	(0.356)	0.078	0.009
71	5.92	0.27	0.087	(0.355)	0.078	0.009
72	6.00	0.27	0.087	(0.353)	0.078	0.009
73	6.08	0.30	0.097	(0.352)	0.088	0.010
74	6.17	0.30	0.097	(0.350)	0.088	0.010
75	6.25	0.30	0.097	(0.349)	0.088	0.010

76	6.33	0.30	0.097	(0.347)	0.088	0.010
77	6.42	0.30	0.097	(0.345)	0.088	0.010
78	6.50	0.30	0.097	(0.344)	0.088	0.010
79	6.58	0.33	0.108	(0.342)	0.097	0.011
80	6.67	0.33	0.108	(0.341)	0.097	0.011
81	6.75	0.33	0.108	(0.339)	0.097	0.011
82	6.83	0.33	0.108	(0.338)	0.097	0.011
83	6.92	0.33	0.108	(0.336)	0.097	0.011
84	7.00	0.33	0.108	(0.335)	0.097	0.011
85	7.08	0.33	0.108	(0.333)	0.097	0.011
86	7.17	0.33	0.108	(0.332)	0.097	0.011
87	7.25	0.33	0.108	(0.330)	0.097	0.011
88	7.33	0.37	0.119	(0.329)	0.107	0.012
89	7.42	0.37	0.119	(0.327)	0.107	0.012
90	7.50	0.37	0.119	(0.326)	0.107	0.012
91	7.58	0.40	0.130	(0.324)	0.117	0.013
92	7.67	0.40	0.130	(0.323)	0.117	0.013
93	7.75	0.40	0.130	(0.321)	0.117	0.013
94	7.83	0.43	0.141	(0.320)	0.127	0.014
95	7.92	0.43	0.141	(0.318)	0.127	0.014
96	8.00	0.43	0.141	(0.317)	0.127	0.014
97	8.08	0.50	0.162	(0.315)	0.146	0.016
98	8.17	0.50	0.162	(0.314)	0.146	0.016
99	8.25	0.50	0.162	(0.312)	0.146	0.016
100	8.33	0.50	0.162	(0.311)	0.146	0.016
101	8.42	0.50	0.162	(0.309)	0.146	0.016
102	8.50	0.50	0.162	(0.308)	0.146	0.016
103	8.58	0.53	0.173	(0.306)	0.156	0.017
104	8.67	0.53	0.173	(0.305)	0.156	0.017
105	8.75	0.53	0.173	(0.304)	0.156	0.017
106	8.83	0.57	0.184	(0.302)	0.166	0.018
107	8.92	0.57	0.184	(0.301)	0.166	0.018
108	9.00	0.57	0.184	(0.299)	0.166	0.018
109	9.08	0.63	0.206	(0.298)	0.185	0.021
110	9.17	0.63	0.206	(0.296)	0.185	0.021
111	9.25	0.63	0.206	(0.295)	0.185	0.021
112	9.33	0.67	0.216	(0.294)	0.195	0.022
113	9.42	0.67	0.216	(0.292)	0.195	0.022
114	9.50	0.67	0.216	(0.291)	0.195	0.022
115	9.58	0.70	0.227	(0.289)	0.205	0.023
116	9.67	0.70	0.227	(0.288)	0.205	0.023
117	9.75	0.70	0.227	(0.287)	0.205	0.023
118	9.83	0.73	0.238	(0.285)	0.214	0.024
119	9.92	0.73	0.238	(0.284)	0.214	0.024
120	10.00	0.73	0.238	(0.283)	0.214	0.024
121	10.08	0.50	0.162	(0.281)	0.146	0.016
122	10.17	0.50	0.162	(0.280)	0.146	0.016
123	10.25	0.50	0.162	(0.278)	0.146	0.016
124	10.33	0.50	0.162	(0.277)	0.146	0.016
125	10.42	0.50	0.162	(0.276)	0.146	0.016
126	10.50	0.50	0.162	(0.274)	0.146	0.016
127	10.58	0.67	0.216	(0.273)	0.195	0.022
128	10.67	0.67	0.216	(0.272)	0.195	0.022
129	10.75	0.67	0.216	(0.270)	0.195	0.022
130	10.83	0.67	0.216	(0.269)	0.195	0.022
131	10.92	0.67	0.216	(0.268)	0.195	0.022
132	11.00	0.67	0.216	(0.266)	0.195	0.022
133	11.08	0.63	0.206	(0.265)	0.185	0.021
134	11.17	0.63	0.206	(0.264)	0.185	0.021
135	11.25	0.63	0.206	(0.263)	0.185	0.021

136	11.33	0.63	0.206	(0.261)	0.185	0.021
137	11.42	0.63	0.206	(0.260)	0.185	0.021
138	11.50	0.63	0.206	(0.259)	0.185	0.021
139	11.58	0.57	0.184	(0.257)	0.166	0.018
140	11.67	0.57	0.184	(0.256)	0.166	0.018
141	11.75	0.57	0.184	(0.255)	0.166	0.018
142	11.83	0.60	0.195	(0.254)	0.175	0.019
143	11.92	0.60	0.195	(0.252)	0.175	0.019
144	12.00	0.60	0.195	(0.251)	0.175	0.019
145	12.08	0.83	0.271	(0.250)	0.243	0.027
146	12.17	0.83	0.271	(0.249)	0.243	0.027
147	12.25	0.83	0.271	(0.247)	0.243	0.027
148	12.33	0.87	0.281	0.246	(0.253)	0.035
149	12.42	0.87	0.281	0.245	(0.253)	0.037
150	12.50	0.87	0.281	0.244	(0.253)	0.038
151	12.58	0.93	0.303	0.242	(0.273)	0.061
152	12.67	0.93	0.303	0.241	(0.273)	0.062
153	12.75	0.93	0.303	0.240	(0.273)	0.063
154	12.83	0.97	0.314	0.239	(0.282)	0.075
155	12.92	0.97	0.314	0.238	(0.282)	0.076
156	13.00	0.97	0.314	0.236	(0.282)	0.077
157	13.08	1.13	0.368	0.235	(0.331)	0.133
158	13.17	1.13	0.368	0.234	(0.331)	0.134
159	13.25	1.13	0.368	0.233	(0.331)	0.135
160	13.33	1.13	0.368	0.232	(0.331)	0.136
161	13.42	1.13	0.368	0.230	(0.331)	0.138
162	13.50	1.13	0.368	0.229	(0.331)	0.139
163	13.58	0.77	0.249	(0.228)	0.224	0.025
164	13.67	0.77	0.249	(0.227)	0.224	0.025
165	13.75	0.77	0.249	(0.226)	0.224	0.025
166	13.83	0.77	0.249	(0.225)	0.224	0.025
167	13.92	0.77	0.249	0.223	(0.224)	0.025
168	14.00	0.77	0.249	0.222	(0.224)	0.027
169	14.08	0.90	0.292	0.221	(0.263)	0.071
170	14.17	0.90	0.292	0.220	(0.263)	0.072
171	14.25	0.90	0.292	0.219	(0.263)	0.073
172	14.33	0.87	0.281	0.218	(0.253)	0.064
173	14.42	0.87	0.281	0.217	(0.253)	0.065
174	14.50	0.87	0.281	0.216	(0.253)	0.066
175	14.58	0.87	0.281	0.214	(0.253)	0.067
176	14.67	0.87	0.281	0.213	(0.253)	0.068
177	14.75	0.87	0.281	0.212	(0.253)	0.069
178	14.83	0.83	0.271	0.211	(0.243)	0.059
179	14.92	0.83	0.271	0.210	(0.243)	0.060
180	15.00	0.83	0.271	0.209	(0.243)	0.062
181	15.08	0.80	0.260	0.208	(0.234)	0.052
182	15.17	0.80	0.260	0.207	(0.234)	0.053
183	15.25	0.80	0.260	0.206	(0.234)	0.054
184	15.33	0.77	0.249	0.205	(0.224)	0.044
185	15.42	0.77	0.249	0.204	(0.224)	0.045
186	15.50	0.77	0.249	0.203	(0.224)	0.046
187	15.58	0.63	0.206	(0.202)	0.185	0.021
188	15.67	0.63	0.206	(0.201)	0.185	0.021
189	15.75	0.63	0.206	(0.200)	0.185	0.021
190	15.83	0.63	0.206	(0.199)	0.185	0.021
191	15.92	0.63	0.206	(0.198)	0.185	0.021
192	16.00	0.63	0.206	(0.197)	0.185	0.021
193	16.08	0.13	0.043	(0.196)	0.039	0.004
194	16.17	0.13	0.043	(0.195)	0.039	0.004
195	16.25	0.13	0.043	(0.194)	0.039	0.004

196	16.33	0.13	0.043	(0.193)	0.039	0.004
197	16.42	0.13	0.043	(0.192)	0.039	0.004
198	16.50	0.13	0.043	(0.191)	0.039	0.004
199	16.58	0.10	0.032	(0.190)	0.029	0.003
200	16.67	0.10	0.032	(0.189)	0.029	0.003
201	16.75	0.10	0.032	(0.188)	0.029	0.003
202	16.83	0.10	0.032	(0.187)	0.029	0.003
203	16.92	0.10	0.032	(0.186)	0.029	0.003
204	17.00	0.10	0.032	(0.185)	0.029	0.003
205	17.08	0.17	0.054	(0.184)	0.049	0.005
206	17.17	0.17	0.054	(0.183)	0.049	0.005
207	17.25	0.17	0.054	(0.182)	0.049	0.005
208	17.33	0.17	0.054	(0.181)	0.049	0.005
209	17.42	0.17	0.054	(0.180)	0.049	0.005
210	17.50	0.17	0.054	(0.179)	0.049	0.005
211	17.58	0.17	0.054	(0.178)	0.049	0.005
212	17.67	0.17	0.054	(0.178)	0.049	0.005
213	17.75	0.17	0.054	(0.177)	0.049	0.005
214	17.83	0.13	0.043	(0.176)	0.039	0.004
215	17.92	0.13	0.043	(0.175)	0.039	0.004
216	18.00	0.13	0.043	(0.174)	0.039	0.004
217	18.08	0.13	0.043	(0.173)	0.039	0.004
218	18.17	0.13	0.043	(0.172)	0.039	0.004
219	18.25	0.13	0.043	(0.172)	0.039	0.004
220	18.33	0.13	0.043	(0.171)	0.039	0.004
221	18.42	0.13	0.043	(0.170)	0.039	0.004
222	18.50	0.13	0.043	(0.169)	0.039	0.004
223	18.58	0.10	0.032	(0.168)	0.029	0.003
224	18.67	0.10	0.032	(0.167)	0.029	0.003
225	18.75	0.10	0.032	(0.167)	0.029	0.003
226	18.83	0.07	0.022	(0.166)	0.019	0.002
227	18.92	0.07	0.022	(0.165)	0.019	0.002
228	19.00	0.07	0.022	(0.164)	0.019	0.002
229	19.08	0.10	0.032	(0.163)	0.029	0.003
230	19.17	0.10	0.032	(0.163)	0.029	0.003
231	19.25	0.10	0.032	(0.162)	0.029	0.003
232	19.33	0.13	0.043	(0.161)	0.039	0.004
233	19.42	0.13	0.043	(0.160)	0.039	0.004
234	19.50	0.13	0.043	(0.160)	0.039	0.004
235	19.58	0.10	0.032	(0.159)	0.029	0.003
236	19.67	0.10	0.032	(0.158)	0.029	0.003
237	19.75	0.10	0.032	(0.157)	0.029	0.003
238	19.83	0.07	0.022	(0.157)	0.019	0.002
239	19.92	0.07	0.022	(0.156)	0.019	0.002
240	20.00	0.07	0.022	(0.155)	0.019	0.002
241	20.08	0.10	0.032	(0.155)	0.029	0.003
242	20.17	0.10	0.032	(0.154)	0.029	0.003
243	20.25	0.10	0.032	(0.153)	0.029	0.003
244	20.33	0.10	0.032	(0.153)	0.029	0.003
245	20.42	0.10	0.032	(0.152)	0.029	0.003
246	20.50	0.10	0.032	(0.151)	0.029	0.003
247	20.58	0.10	0.032	(0.151)	0.029	0.003
248	20.67	0.10	0.032	(0.150)	0.029	0.003
249	20.75	0.10	0.032	(0.150)	0.029	0.003
250	20.83	0.07	0.022	(0.149)	0.019	0.002
251	20.92	0.07	0.022	(0.148)	0.019	0.002
252	21.00	0.07	0.022	(0.148)	0.019	0.002
253	21.08	0.10	0.032	(0.147)	0.029	0.003
254	21.17	0.10	0.032	(0.147)	0.029	0.003
255	21.25	0.10	0.032	(0.146)	0.029	0.003

256	21.33	0.07	0.022	(0.145)	0.019	0.002
257	21.42	0.07	0.022	(0.145)	0.019	0.002
258	21.50	0.07	0.022	(0.144)	0.019	0.002
259	21.58	0.10	0.032	(0.144)	0.029	0.003
260	21.67	0.10	0.032	(0.143)	0.029	0.003
261	21.75	0.10	0.032	(0.143)	0.029	0.003
262	21.83	0.07	0.022	(0.142)	0.019	0.002
263	21.92	0.07	0.022	(0.142)	0.019	0.002
264	22.00	0.07	0.022	(0.141)	0.019	0.002
265	22.08	0.10	0.032	(0.141)	0.029	0.003
266	22.17	0.10	0.032	(0.140)	0.029	0.003
267	22.25	0.10	0.032	(0.140)	0.029	0.003
268	22.33	0.07	0.022	(0.139)	0.019	0.002
269	22.42	0.07	0.022	(0.139)	0.019	0.002
270	22.50	0.07	0.022	(0.139)	0.019	0.002
271	22.58	0.07	0.022	(0.138)	0.019	0.002
272	22.67	0.07	0.022	(0.138)	0.019	0.002
273	22.75	0.07	0.022	(0.137)	0.019	0.002
274	22.83	0.07	0.022	(0.137)	0.019	0.002
275	22.92	0.07	0.022	(0.137)	0.019	0.002
276	23.00	0.07	0.022	(0.136)	0.019	0.002
277	23.08	0.07	0.022	(0.136)	0.019	0.002
278	23.17	0.07	0.022	(0.136)	0.019	0.002
279	23.25	0.07	0.022	(0.136)	0.019	0.002
280	23.33	0.07	0.022	(0.135)	0.019	0.002
281	23.42	0.07	0.022	(0.135)	0.019	0.002
282	23.50	0.07	0.022	(0.135)	0.019	0.002
283	23.58	0.07	0.022	(0.135)	0.019	0.002
284	23.67	0.07	0.022	(0.134)	0.019	0.002
285	23.75	0.07	0.022	(0.134)	0.019	0.002
286	23.83	0.07	0.022	(0.134)	0.019	0.002
287	23.92	0.07	0.022	(0.134)	0.019	0.002
288	24.00	0.07	0.022	(0.134)	0.019	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 4.7

Flood volume = Effective rainfall 0.39(In)
times area 3.0(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 2.31(In)
Total soil loss = 0.578(Ac.Ft)
Total rainfall = 2.71(In)
Flood volume = 4261.5 Cubic Feet
Total soil loss = 25196.9 Cubic Feet

Peak flow rate of this hydrograph = 0.417(CFS)

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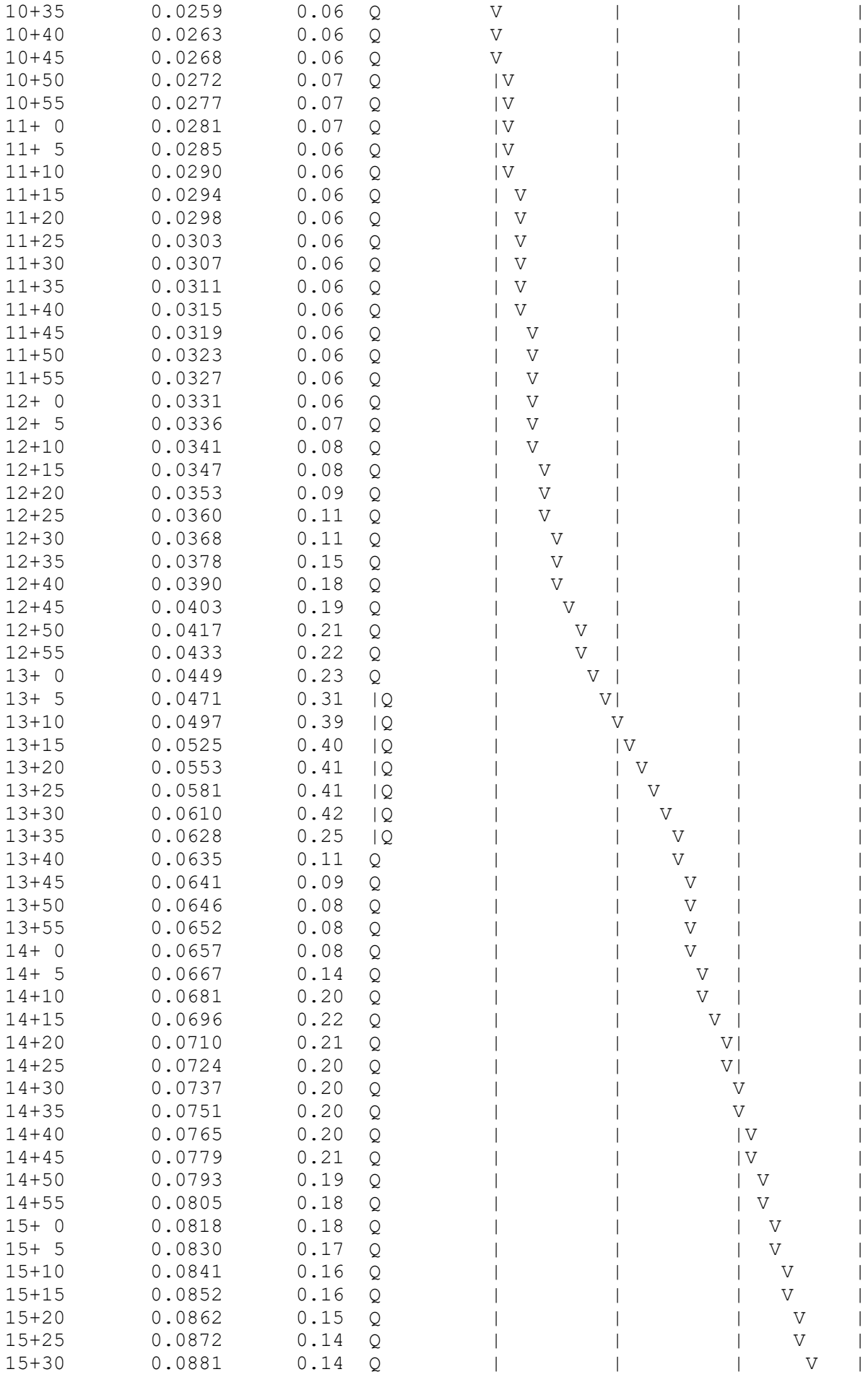
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0008	0.01	Q				
1+10	0.0009	0.01	Q				
1+15	0.0010	0.01	Q				
1+20	0.0010	0.01	Q				
1+25	0.0011	0.01	Q				
1+30	0.0012	0.01	Q				
1+35	0.0012	0.01	Q				
1+40	0.0013	0.01	Q				
1+45	0.0014	0.01	Q				
1+50	0.0015	0.01	Q				
1+55	0.0015	0.01	Q				
2+ 0	0.0016	0.01	Q				
2+ 5	0.0017	0.01	Q				
2+10	0.0018	0.01	Q				
2+15	0.0019	0.01	Q				
2+20	0.0020	0.01	Q				
2+25	0.0021	0.01	Q				
2+30	0.0022	0.01	Q				
2+35	0.0023	0.01	Q				
2+40	0.0024	0.02	Q				
2+45	0.0025	0.02	QV				
2+50	0.0026	0.02	QV				
2+55	0.0027	0.02	QV				
3+ 0	0.0028	0.02	QV				
3+ 5	0.0029	0.02	QV				
3+10	0.0031	0.02	QV				
3+15	0.0032	0.02	QV				
3+20	0.0033	0.02	QV				
3+25	0.0034	0.02	QV				
3+30	0.0035	0.02	QV				
3+35	0.0036	0.02	QV				
3+40	0.0037	0.02	QV				
3+45	0.0038	0.02	QV				
3+50	0.0040	0.02	QV				
3+55	0.0041	0.02	QV				
4+ 0	0.0042	0.02	QV				
4+ 5	0.0044	0.02	QV				
4+10	0.0045	0.02	QV				
4+15	0.0046	0.02	QV				
4+20	0.0048	0.02	QV				
4+25	0.0049	0.02	Q V				
4+30	0.0051	0.02	Q V				
4+35	0.0053	0.02	Q V				
4+40	0.0054	0.02	Q V				
4+45	0.0056	0.02	Q V				
4+50	0.0057	0.02	Q V				
4+55	0.0059	0.03	Q V				
5+ 0	0.0061	0.03	Q V				
5+ 5	0.0063	0.02	Q V				
5+10	0.0064	0.02	Q V				
5+15	0.0065	0.02	Q V				
5+20	0.0067	0.02	Q V				
5+25	0.0068	0.02	Q V				
5+30	0.0070	0.02	Q V				

5+35	0.0072	0.02	Q V	|	|	|	|
5+40	0.0073	0.03	Q V	|	|	|	|
5+45	0.0075	0.03	Q V	|	|	|	|
5+50	0.0077	0.03	Q V	|	|	|	|
5+55	0.0079	0.03	Q V	|	|	|	|
6+ 0	0.0081	0.03	Q V	|	|	|	|
6+ 5	0.0083	0.03	Q V	|	|	|	|
6+10	0.0085	0.03	Q V	|	|	|	|
6+15	0.0087	0.03	Q V	|	|	|	|
6+20	0.0089	0.03	Q V	|	|	|	|
6+25	0.0091	0.03	Q V	|	|	|	|
6+30	0.0093	0.03	Q V	|	|	|	|
6+35	0.0095	0.03	Q V	|	|	|	|
6+40	0.0097	0.03	Q V	|	|	|	|
6+45	0.0099	0.03	Q V	|	|	|	|
6+50	0.0102	0.03	Q V	|	|	|	|
6+55	0.0104	0.03	Q V	|	|	|	|
7+ 0	0.0106	0.03	Q V	|	|	|	|
7+ 5	0.0108	0.03	Q V	|	|	|	|
7+10	0.0111	0.03	Q V	|	|	|	|
7+15	0.0113	0.03	Q V	|	|	|	|
7+20	0.0115	0.03	Q V	|	|	|	|
7+25	0.0118	0.04	Q V	|	|	|	|
7+30	0.0120	0.04	Q V	|	|	|	|
7+35	0.0123	0.04	Q V	|	|	|	|
7+40	0.0125	0.04	Q V	|	|	|	|
7+45	0.0128	0.04	Q V	|	|	|	|
7+50	0.0131	0.04	Q V	|	|	|	|
7+55	0.0134	0.04	Q V	|	|	|	|
8+ 0	0.0137	0.04	Q V	|	|	|	|
8+ 5	0.0140	0.05	Q V	|	|	|	|
8+10	0.0143	0.05	Q V	|	|	|	|
8+15	0.0147	0.05	Q V	|	|	|	|
8+20	0.0150	0.05	Q V	|	|	|	|
8+25	0.0153	0.05	Q V	|	|	|	|
8+30	0.0157	0.05	Q V	|	|	|	|
8+35	0.0160	0.05	Q V	|	|	|	|
8+40	0.0164	0.05	Q V	|	|	|	|
8+45	0.0167	0.05	Q V	|	|	|	|
8+50	0.0171	0.05	Q V	|	|	|	|
8+55	0.0175	0.06	Q V	|	|	|	|
9+ 0	0.0179	0.06	Q V	|	|	|	|
9+ 5	0.0183	0.06	Q V	|	|	|	|
9+10	0.0187	0.06	Q V	|	|	|	|
9+15	0.0191	0.06	Q V	|	|	|	|
9+20	0.0196	0.06	Q V	|	|	|	|
9+25	0.0200	0.07	Q V	|	|	|	|
9+30	0.0205	0.07	Q V	|	|	|	|
9+35	0.0209	0.07	Q V	|	|	|	|
9+40	0.0214	0.07	Q V	|	|	|	|
9+45	0.0219	0.07	Q V	|	|	|	|
9+50	0.0224	0.07	Q V	|	|	|	|
9+55	0.0228	0.07	Q V	|	|	|	|
10+ 0	0.0233	0.07	Q V	|	|	|	|
10+ 5	0.0238	0.06	Q V	|	|	|	|
10+10	0.0241	0.05	Q V	|	|	|	|
10+15	0.0245	0.05	Q V	|	|	|	|
10+20	0.0248	0.05	Q V	|	|	|	|
10+25	0.0251	0.05	Q V	|	|	|	|
10+30	0.0255	0.05	Q V	|	|	|	|



15+35	0.0888	0.10	Q	|	|	|	V |
15+40	0.0893	0.07	Q	|	|	|	V |
15+45	0.0898	0.06	Q	|	|	|	V |
15+50	0.0902	0.06	Q	|	|	|	V |
15+55	0.0906	0.06	Q	|	|	|	V |
16+ 0	0.0911	0.06	Q	|	|	|	V |
16+ 5	0.0913	0.04	Q	|	|	|	V |
16+10	0.0914	0.02	Q	|	|	|	V |
16+15	0.0915	0.01	Q	|	|	|	V |
16+20	0.0916	0.01	Q	|	|	|	V |
16+25	0.0917	0.01	Q	|	|	|	V |
16+30	0.0918	0.01	Q	|	|	|	V |
16+35	0.0919	0.01	Q	|	|	|	V |
16+40	0.0920	0.01	Q	|	|	|	V |
16+45	0.0920	0.01	Q	|	|	|	V |
16+50	0.0921	0.01	Q	|	|	|	V |
16+55	0.0922	0.01	Q	|	|	|	V |
17+ 0	0.0922	0.01	Q	|	|	|	V |
17+ 5	0.0923	0.01	Q	|	|	|	V |
17+10	0.0924	0.02	Q	|	|	|	V |
17+15	0.0925	0.02	Q	|	|	|	V |
17+20	0.0927	0.02	Q	|	|	|	V |
17+25	0.0928	0.02	Q	|	|	|	V |
17+30	0.0929	0.02	Q	|	|	|	V |
17+35	0.0930	0.02	Q	|	|	|	V |
17+40	0.0931	0.02	Q	|	|	|	V |
17+45	0.0932	0.02	Q	|	|	|	V |
17+50	0.0933	0.01	Q	|	|	|	V |
17+55	0.0934	0.01	Q	|	|	|	V |
18+ 0	0.0935	0.01	Q	|	|	|	V |
18+ 5	0.0936	0.01	Q	|	|	|	V |
18+10	0.0937	0.01	Q	|	|	|	V |
18+15	0.0938	0.01	Q	|	|	|	V |
18+20	0.0939	0.01	Q	|	|	|	V |
18+25	0.0940	0.01	Q	|	|	|	V |
18+30	0.0941	0.01	Q	|	|	|	V |
18+35	0.0941	0.01	Q	|	|	|	V |
18+40	0.0942	0.01	Q	|	|	|	V |
18+45	0.0943	0.01	Q	|	|	|	V |
18+50	0.0943	0.01	Q	|	|	|	V |
18+55	0.0944	0.01	Q	|	|	|	V |
19+ 0	0.0944	0.01	Q	|	|	|	V |
19+ 5	0.0945	0.01	Q	|	|	|	V |
19+10	0.0945	0.01	Q	|	|	|	V |
19+15	0.0946	0.01	Q	|	|	|	V |
19+20	0.0947	0.01	Q	|	|	|	V |
19+25	0.0948	0.01	Q	|	|	|	V |
19+30	0.0949	0.01	Q	|	|	|	V |
19+35	0.0949	0.01	Q	|	|	|	V |
19+40	0.0950	0.01	Q	|	|	|	V |
19+45	0.0951	0.01	Q	|	|	|	V |
19+50	0.0951	0.01	Q	|	|	|	V |
19+55	0.0952	0.01	Q	|	|	|	V |
20+ 0	0.0952	0.01	Q	|	|	|	V |
20+ 5	0.0953	0.01	Q	|	|	|	V |
20+10	0.0954	0.01	Q	|	|	|	V |
20+15	0.0954	0.01	Q	|	|	|	V|
20+20	0.0955	0.01	Q	|	|	|	V|
20+25	0.0956	0.01	Q	|	|	|	V|
20+30	0.0956	0.01	Q	|	|	|	V|

20+35	0.0957	0.01	Q	|	|	|	V|
20+40	0.0958	0.01	Q	|	|	|	V|
20+45	0.0958	0.01	Q	|	|	|	V|
20+50	0.0959	0.01	Q	|	|	|	V|
20+55	0.0959	0.01	Q	|	|	|	V|
21+ 0	0.0960	0.01	Q	|	|	|	V|
21+ 5	0.0960	0.01	Q	|	|	|	V|
21+10	0.0961	0.01	Q	|	|	|	V|
21+15	0.0962	0.01	Q	|	|	|	V|
21+20	0.0962	0.01	Q	|	|	|	V|
21+25	0.0963	0.01	Q	|	|	|	V|
21+30	0.0963	0.01	Q	|	|	|	V|
21+35	0.0964	0.01	Q	|	|	|	V|
21+40	0.0964	0.01	Q	|	|	|	V|
21+45	0.0965	0.01	Q	|	|	|	V|
21+50	0.0966	0.01	Q	|	|	|	V|
21+55	0.0966	0.01	Q	|	|	|	V|
22+ 0	0.0967	0.01	Q	|	|	|	V|
22+ 5	0.0967	0.01	Q	|	|	|	V|
22+10	0.0968	0.01	Q	|	|	|	V|
22+15	0.0968	0.01	Q	|	|	|	V|
22+20	0.0969	0.01	Q	|	|	|	V|
22+25	0.0969	0.01	Q	|	|	|	V|
22+30	0.0970	0.01	Q	|	|	|	V|
22+35	0.0970	0.01	Q	|	|	|	V|
22+40	0.0971	0.01	Q	|	|	|	V|
22+45	0.0971	0.01	Q	|	|	|	V|
22+50	0.0972	0.01	Q	|	|	|	V|
22+55	0.0972	0.01	Q	|	|	|	V|
23+ 0	0.0973	0.01	Q	|	|	|	V|
23+ 5	0.0973	0.01	Q	|	|	|	V|
23+10	0.0973	0.01	Q	|	|	|	V|
23+15	0.0974	0.01	Q	|	|	|	V|
23+20	0.0974	0.01	Q	|	|	|	V|
23+25	0.0975	0.01	Q	|	|	|	V|
23+30	0.0975	0.01	Q	|	|	|	V|
23+35	0.0976	0.01	Q	|	|	|	V|
23+40	0.0976	0.01	Q	|	|	|	V|
23+45	0.0977	0.01	Q	|	|	|	V|
23+50	0.0977	0.01	Q	|	|	|	V|
23+55	0.0978	0.01	Q	|	|	|	V|
24+ 0	0.0978	0.01	Q	|	|	|	V|
24+ 5	0.0978	0.00	Q	|	|	|	V|
24+10	0.0978	0.00	Q	|	|	|	V|
24+15	0.0978	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

Study date 07/01/24 File: 24077E24100.out

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

Program License Serial Number 6310

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

English Units used in output format

24-077
EXISTING CONDITIONS
100 YEAR STORM

Drainage Area = 3.00(Ac.) = 0.005 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 3.00(Ac.) = 0.005 Sq. Mi.
Length along longest watercourse = 412.80(Ft.)
Length along longest watercourse measured to centroid = 271.90(Ft.)
Length along longest watercourse = 0.078 Mi.
Length along longest watercourse measured to centroid = 0.051 Mi.
Difference in elevation = 3.20(Ft.)
Slope along watercourse = 40.9302 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.19 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
3.00	1.80	5.40

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
3.00	4.00	12.00

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
3.000	78.00	0.000

Total Area Entered = 3.00(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	228.613	47.946	1.450
2	0.167	457.226	41.420	1.252
3	0.250	685.839	7.739	0.234
4	0.333	914.452	2.895	0.088
		Sum = 100.000	Sum=	3.023

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	(0.474)		0.029	0.003
2	0.17	0.07	0.032	(0.473)		0.029	0.003
3	0.25	0.07	0.032	(0.471)		0.029	0.003
4	0.33	0.10	0.048	(0.469)		0.043	0.005
5	0.42	0.10	0.048	(0.467)		0.043	0.005
6	0.50	0.10	0.048	(0.465)		0.043	0.005
7	0.58	0.10	0.048	(0.463)		0.043	0.005
8	0.67	0.10	0.048	(0.462)		0.043	0.005
9	0.75	0.10	0.048	(0.460)		0.043	0.005
10	0.83	0.13	0.064	(0.458)		0.058	0.006
11	0.92	0.13	0.064	(0.456)		0.058	0.006
12	1.00	0.13	0.064	(0.454)		0.058	0.006
13	1.08	0.10	0.048	(0.453)		0.043	0.005
14	1.17	0.10	0.048	(0.451)		0.043	0.005
15	1.25	0.10	0.048	(0.449)		0.043	0.005

16	1.33	0.10	0.048	(0.447)	0.043	0.005
17	1.42	0.10	0.048	(0.445)	0.043	0.005
18	1.50	0.10	0.048	(0.444)	0.043	0.005
19	1.58	0.10	0.048	(0.442)	0.043	0.005
20	1.67	0.10	0.048	(0.440)	0.043	0.005
21	1.75	0.10	0.048	(0.438)	0.043	0.005
22	1.83	0.13	0.064	(0.437)	0.058	0.006
23	1.92	0.13	0.064	(0.435)	0.058	0.006
24	2.00	0.13	0.064	(0.433)	0.058	0.006
25	2.08	0.13	0.064	(0.431)	0.058	0.006
26	2.17	0.13	0.064	(0.430)	0.058	0.006
27	2.25	0.13	0.064	(0.428)	0.058	0.006
28	2.33	0.13	0.064	(0.426)	0.058	0.006
29	2.42	0.13	0.064	(0.424)	0.058	0.006
30	2.50	0.13	0.064	(0.423)	0.058	0.006
31	2.58	0.17	0.080	(0.421)	0.072	0.008
32	2.67	0.17	0.080	(0.419)	0.072	0.008
33	2.75	0.17	0.080	(0.417)	0.072	0.008
34	2.83	0.17	0.080	(0.416)	0.072	0.008
35	2.92	0.17	0.080	(0.414)	0.072	0.008
36	3.00	0.17	0.080	(0.412)	0.072	0.008
37	3.08	0.17	0.080	(0.411)	0.072	0.008
38	3.17	0.17	0.080	(0.409)	0.072	0.008
39	3.25	0.17	0.080	(0.407)	0.072	0.008
40	3.33	0.17	0.080	(0.405)	0.072	0.008
41	3.42	0.17	0.080	(0.404)	0.072	0.008
42	3.50	0.17	0.080	(0.402)	0.072	0.008
43	3.58	0.17	0.080	(0.400)	0.072	0.008
44	3.67	0.17	0.080	(0.399)	0.072	0.008
45	3.75	0.17	0.080	(0.397)	0.072	0.008
46	3.83	0.20	0.096	(0.395)	0.086	0.010
47	3.92	0.20	0.096	(0.394)	0.086	0.010
48	4.00	0.20	0.096	(0.392)	0.086	0.010
49	4.08	0.20	0.096	(0.390)	0.086	0.010
50	4.17	0.20	0.096	(0.389)	0.086	0.010
51	4.25	0.20	0.096	(0.387)	0.086	0.010
52	4.33	0.23	0.112	(0.385)	0.101	0.011
53	4.42	0.23	0.112	(0.384)	0.101	0.011
54	4.50	0.23	0.112	(0.382)	0.101	0.011
55	4.58	0.23	0.112	(0.381)	0.101	0.011
56	4.67	0.23	0.112	(0.379)	0.101	0.011
57	4.75	0.23	0.112	(0.377)	0.101	0.011
58	4.83	0.27	0.128	(0.376)	0.115	0.013
59	4.92	0.27	0.128	(0.374)	0.115	0.013
60	5.00	0.27	0.128	(0.372)	0.115	0.013
61	5.08	0.20	0.096	(0.371)	0.086	0.010
62	5.17	0.20	0.096	(0.369)	0.086	0.010
63	5.25	0.20	0.096	(0.368)	0.086	0.010
64	5.33	0.23	0.112	(0.366)	0.101	0.011
65	5.42	0.23	0.112	(0.364)	0.101	0.011
66	5.50	0.23	0.112	(0.363)	0.101	0.011
67	5.58	0.27	0.128	(0.361)	0.115	0.013
68	5.67	0.27	0.128	(0.360)	0.115	0.013
69	5.75	0.27	0.128	(0.358)	0.115	0.013
70	5.83	0.27	0.128	(0.356)	0.115	0.013
71	5.92	0.27	0.128	(0.355)	0.115	0.013
72	6.00	0.27	0.128	(0.353)	0.115	0.013
73	6.08	0.30	0.144	(0.352)	0.130	0.014
74	6.17	0.30	0.144	(0.350)	0.130	0.014
75	6.25	0.30	0.144	(0.349)	0.130	0.014

76	6.33	0.30	0.144	(0.347)		0.130	0.014
77	6.42	0.30	0.144	(0.345)		0.130	0.014
78	6.50	0.30	0.144	(0.344)		0.130	0.014
79	6.58	0.33	0.160	(0.342)		0.144	0.016
80	6.67	0.33	0.160	(0.341)		0.144	0.016
81	6.75	0.33	0.160	(0.339)		0.144	0.016
82	6.83	0.33	0.160	(0.338)		0.144	0.016
83	6.92	0.33	0.160	(0.336)		0.144	0.016
84	7.00	0.33	0.160	(0.335)		0.144	0.016
85	7.08	0.33	0.160	(0.333)		0.144	0.016
86	7.17	0.33	0.160	(0.332)		0.144	0.016
87	7.25	0.33	0.160	(0.330)		0.144	0.016
88	7.33	0.37	0.176	(0.329)		0.158	0.018
89	7.42	0.37	0.176	(0.327)		0.158	0.018
90	7.50	0.37	0.176	(0.326)		0.158	0.018
91	7.58	0.40	0.192	(0.324)		0.173	0.019
92	7.67	0.40	0.192	(0.323)		0.173	0.019
93	7.75	0.40	0.192	(0.321)		0.173	0.019
94	7.83	0.43	0.208	(0.320)		0.187	0.021
95	7.92	0.43	0.208	(0.318)		0.187	0.021
96	8.00	0.43	0.208	(0.317)		0.187	0.021
97	8.08	0.50	0.240	(0.315)		0.216	0.024
98	8.17	0.50	0.240	(0.314)		0.216	0.024
99	8.25	0.50	0.240	(0.312)		0.216	0.024
100	8.33	0.50	0.240	(0.311)		0.216	0.024
101	8.42	0.50	0.240	(0.309)		0.216	0.024
102	8.50	0.50	0.240	(0.308)		0.216	0.024
103	8.58	0.53	0.256	(0.306)		0.230	0.026
104	8.67	0.53	0.256	(0.305)		0.230	0.026
105	8.75	0.53	0.256	(0.304)		0.230	0.026
106	8.83	0.57	0.272	(0.302)		0.245	0.027
107	8.92	0.57	0.272	(0.301)		0.245	0.027
108	9.00	0.57	0.272	(0.299)		0.245	0.027
109	9.08	0.63	0.304	(0.298)		0.274	0.030
110	9.17	0.63	0.304	(0.296)		0.274	0.030
111	9.25	0.63	0.304	(0.295)		0.274	0.030
112	9.33	0.67	0.320	(0.294)		0.288	0.032
113	9.42	0.67	0.320	(0.292)		0.288	0.032
114	9.50	0.67	0.320	(0.291)		0.288	0.032
115	9.58	0.70	0.336	0.289	(0.302)		0.047
116	9.67	0.70	0.336	0.288	(0.302)		0.048
117	9.75	0.70	0.336	0.287	(0.302)		0.049
118	9.83	0.73	0.352	0.285	(0.317)		0.067
119	9.92	0.73	0.352	0.284	(0.317)		0.068
120	10.00	0.73	0.352	0.283	(0.317)		0.069
121	10.08	0.50	0.240	(0.281)		0.216	0.024
122	10.17	0.50	0.240	(0.280)		0.216	0.024
123	10.25	0.50	0.240	(0.278)		0.216	0.024
124	10.33	0.50	0.240	(0.277)		0.216	0.024
125	10.42	0.50	0.240	(0.276)		0.216	0.024
126	10.50	0.50	0.240	(0.274)		0.216	0.024
127	10.58	0.67	0.320	0.273	(0.288)		0.047
128	10.67	0.67	0.320	0.272	(0.288)		0.048
129	10.75	0.67	0.320	0.270	(0.288)		0.050
130	10.83	0.67	0.320	0.269	(0.288)		0.051
131	10.92	0.67	0.320	0.268	(0.288)		0.052
132	11.00	0.67	0.320	0.266	(0.288)		0.054
133	11.08	0.63	0.304	0.265	(0.274)		0.039
134	11.17	0.63	0.304	0.264	(0.274)		0.040
135	11.25	0.63	0.304	0.263	(0.274)		0.041

136	11.33	0.63	0.304	0.261	(0.274)	0.043
137	11.42	0.63	0.304	0.260	(0.274)	0.044
138	11.50	0.63	0.304	0.259	(0.274)	0.045
139	11.58	0.57	0.272	(0.257)	0.245	0.027
140	11.67	0.57	0.272	(0.256)	0.245	0.027
141	11.75	0.57	0.272	(0.255)	0.245	0.027
142	11.83	0.60	0.288	0.254	(0.259)	0.034
143	11.92	0.60	0.288	0.252	(0.259)	0.036
144	12.00	0.60	0.288	0.251	(0.259)	0.037
145	12.08	0.83	0.400	0.250	(0.360)	0.150
146	12.17	0.83	0.400	0.249	(0.360)	0.151
147	12.25	0.83	0.400	0.247	(0.360)	0.153
148	12.33	0.87	0.416	0.246	(0.374)	0.170
149	12.42	0.87	0.416	0.245	(0.374)	0.171
150	12.50	0.87	0.416	0.244	(0.374)	0.172
151	12.58	0.93	0.448	0.242	(0.403)	0.206
152	12.67	0.93	0.448	0.241	(0.403)	0.207
153	12.75	0.93	0.448	0.240	(0.403)	0.208
154	12.83	0.97	0.464	0.239	(0.418)	0.225
155	12.92	0.97	0.464	0.238	(0.418)	0.226
156	13.00	0.97	0.464	0.236	(0.418)	0.228
157	13.08	1.13	0.544	0.235	(0.490)	0.309
158	13.17	1.13	0.544	0.234	(0.490)	0.310
159	13.25	1.13	0.544	0.233	(0.490)	0.311
160	13.33	1.13	0.544	0.232	(0.490)	0.312
161	13.42	1.13	0.544	0.230	(0.490)	0.314
162	13.50	1.13	0.544	0.229	(0.490)	0.315
163	13.58	0.77	0.368	0.228	(0.331)	0.140
164	13.67	0.77	0.368	0.227	(0.331)	0.141
165	13.75	0.77	0.368	0.226	(0.331)	0.142
166	13.83	0.77	0.368	0.225	(0.331)	0.143
167	13.92	0.77	0.368	0.223	(0.331)	0.145
168	14.00	0.77	0.368	0.222	(0.331)	0.146
169	14.08	0.90	0.432	0.221	(0.389)	0.211
170	14.17	0.90	0.432	0.220	(0.389)	0.212
171	14.25	0.90	0.432	0.219	(0.389)	0.213
172	14.33	0.87	0.416	0.218	(0.374)	0.198
173	14.42	0.87	0.416	0.217	(0.374)	0.199
174	14.50	0.87	0.416	0.216	(0.374)	0.200
175	14.58	0.87	0.416	0.214	(0.374)	0.202
176	14.67	0.87	0.416	0.213	(0.374)	0.203
177	14.75	0.87	0.416	0.212	(0.374)	0.204
178	14.83	0.83	0.400	0.211	(0.360)	0.189
179	14.92	0.83	0.400	0.210	(0.360)	0.190
180	15.00	0.83	0.400	0.209	(0.360)	0.191
181	15.08	0.80	0.384	0.208	(0.346)	0.176
182	15.17	0.80	0.384	0.207	(0.346)	0.177
183	15.25	0.80	0.384	0.206	(0.346)	0.178
184	15.33	0.77	0.368	0.205	(0.331)	0.163
185	15.42	0.77	0.368	0.204	(0.331)	0.164
186	15.50	0.77	0.368	0.203	(0.331)	0.165
187	15.58	0.63	0.304	0.202	(0.274)	0.102
188	15.67	0.63	0.304	0.201	(0.274)	0.103
189	15.75	0.63	0.304	0.200	(0.274)	0.104
190	15.83	0.63	0.304	0.199	(0.274)	0.105
191	15.92	0.63	0.304	0.198	(0.274)	0.106
192	16.00	0.63	0.304	0.197	(0.274)	0.107
193	16.08	0.13	0.064	(0.196)	0.058	0.006
194	16.17	0.13	0.064	(0.195)	0.058	0.006
195	16.25	0.13	0.064	(0.194)	0.058	0.006

196	16.33	0.13	0.064	(0.193)	0.058	0.006
197	16.42	0.13	0.064	(0.192)	0.058	0.006
198	16.50	0.13	0.064	(0.191)	0.058	0.006
199	16.58	0.10	0.048	(0.190)	0.043	0.005
200	16.67	0.10	0.048	(0.189)	0.043	0.005
201	16.75	0.10	0.048	(0.188)	0.043	0.005
202	16.83	0.10	0.048	(0.187)	0.043	0.005
203	16.92	0.10	0.048	(0.186)	0.043	0.005
204	17.00	0.10	0.048	(0.185)	0.043	0.005
205	17.08	0.17	0.080	(0.184)	0.072	0.008
206	17.17	0.17	0.080	(0.183)	0.072	0.008
207	17.25	0.17	0.080	(0.182)	0.072	0.008
208	17.33	0.17	0.080	(0.181)	0.072	0.008
209	17.42	0.17	0.080	(0.180)	0.072	0.008
210	17.50	0.17	0.080	(0.179)	0.072	0.008
211	17.58	0.17	0.080	(0.178)	0.072	0.008
212	17.67	0.17	0.080	(0.178)	0.072	0.008
213	17.75	0.17	0.080	(0.177)	0.072	0.008
214	17.83	0.13	0.064	(0.176)	0.058	0.006
215	17.92	0.13	0.064	(0.175)	0.058	0.006
216	18.00	0.13	0.064	(0.174)	0.058	0.006
217	18.08	0.13	0.064	(0.173)	0.058	0.006
218	18.17	0.13	0.064	(0.172)	0.058	0.006
219	18.25	0.13	0.064	(0.172)	0.058	0.006
220	18.33	0.13	0.064	(0.171)	0.058	0.006
221	18.42	0.13	0.064	(0.170)	0.058	0.006
222	18.50	0.13	0.064	(0.169)	0.058	0.006
223	18.58	0.10	0.048	(0.168)	0.043	0.005
224	18.67	0.10	0.048	(0.167)	0.043	0.005
225	18.75	0.10	0.048	(0.167)	0.043	0.005
226	18.83	0.07	0.032	(0.166)	0.029	0.003
227	18.92	0.07	0.032	(0.165)	0.029	0.003
228	19.00	0.07	0.032	(0.164)	0.029	0.003
229	19.08	0.10	0.048	(0.163)	0.043	0.005
230	19.17	0.10	0.048	(0.163)	0.043	0.005
231	19.25	0.10	0.048	(0.162)	0.043	0.005
232	19.33	0.13	0.064	(0.161)	0.058	0.006
233	19.42	0.13	0.064	(0.160)	0.058	0.006
234	19.50	0.13	0.064	(0.160)	0.058	0.006
235	19.58	0.10	0.048	(0.159)	0.043	0.005
236	19.67	0.10	0.048	(0.158)	0.043	0.005
237	19.75	0.10	0.048	(0.157)	0.043	0.005
238	19.83	0.07	0.032	(0.157)	0.029	0.003
239	19.92	0.07	0.032	(0.156)	0.029	0.003
240	20.00	0.07	0.032	(0.155)	0.029	0.003
241	20.08	0.10	0.048	(0.155)	0.043	0.005
242	20.17	0.10	0.048	(0.154)	0.043	0.005
243	20.25	0.10	0.048	(0.153)	0.043	0.005
244	20.33	0.10	0.048	(0.153)	0.043	0.005
245	20.42	0.10	0.048	(0.152)	0.043	0.005
246	20.50	0.10	0.048	(0.151)	0.043	0.005
247	20.58	0.10	0.048	(0.151)	0.043	0.005
248	20.67	0.10	0.048	(0.150)	0.043	0.005
249	20.75	0.10	0.048	(0.150)	0.043	0.005
250	20.83	0.07	0.032	(0.149)	0.029	0.003
251	20.92	0.07	0.032	(0.148)	0.029	0.003
252	21.00	0.07	0.032	(0.148)	0.029	0.003
253	21.08	0.10	0.048	(0.147)	0.043	0.005
254	21.17	0.10	0.048	(0.147)	0.043	0.005
255	21.25	0.10	0.048	(0.146)	0.043	0.005

256	21.33	0.07	0.032	(0.145)	0.029	0.003
257	21.42	0.07	0.032	(0.145)	0.029	0.003
258	21.50	0.07	0.032	(0.144)	0.029	0.003
259	21.58	0.10	0.048	(0.144)	0.043	0.005
260	21.67	0.10	0.048	(0.143)	0.043	0.005
261	21.75	0.10	0.048	(0.143)	0.043	0.005
262	21.83	0.07	0.032	(0.142)	0.029	0.003
263	21.92	0.07	0.032	(0.142)	0.029	0.003
264	22.00	0.07	0.032	(0.141)	0.029	0.003
265	22.08	0.10	0.048	(0.141)	0.043	0.005
266	22.17	0.10	0.048	(0.140)	0.043	0.005
267	22.25	0.10	0.048	(0.140)	0.043	0.005
268	22.33	0.07	0.032	(0.139)	0.029	0.003
269	22.42	0.07	0.032	(0.139)	0.029	0.003
270	22.50	0.07	0.032	(0.139)	0.029	0.003
271	22.58	0.07	0.032	(0.138)	0.029	0.003
272	22.67	0.07	0.032	(0.138)	0.029	0.003
273	22.75	0.07	0.032	(0.137)	0.029	0.003
274	22.83	0.07	0.032	(0.137)	0.029	0.003
275	22.92	0.07	0.032	(0.137)	0.029	0.003
276	23.00	0.07	0.032	(0.136)	0.029	0.003
277	23.08	0.07	0.032	(0.136)	0.029	0.003
278	23.17	0.07	0.032	(0.136)	0.029	0.003
279	23.25	0.07	0.032	(0.136)	0.029	0.003
280	23.33	0.07	0.032	(0.135)	0.029	0.003
281	23.42	0.07	0.032	(0.135)	0.029	0.003
282	23.50	0.07	0.032	(0.135)	0.029	0.003
283	23.58	0.07	0.032	(0.135)	0.029	0.003
284	23.67	0.07	0.032	(0.134)	0.029	0.003
285	23.75	0.07	0.032	(0.134)	0.029	0.003
286	23.83	0.07	0.032	(0.134)	0.029	0.003
287	23.92	0.07	0.032	(0.134)	0.029	0.003
288	24.00	0.07	0.032	(0.134)	0.029	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 12.2

Flood volume = Effective rainfall 1.02(In)
times area 3.0(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 2.98(In)
Total soil loss = 0.745(Ac.Ft)
Total rainfall = 4.00(In)
Flood volume = 11098.8 Cubic Feet
Total soil loss = 32460.9 Cubic Feet

Peak flow rate of this hydrograph = 0.950(CFS)

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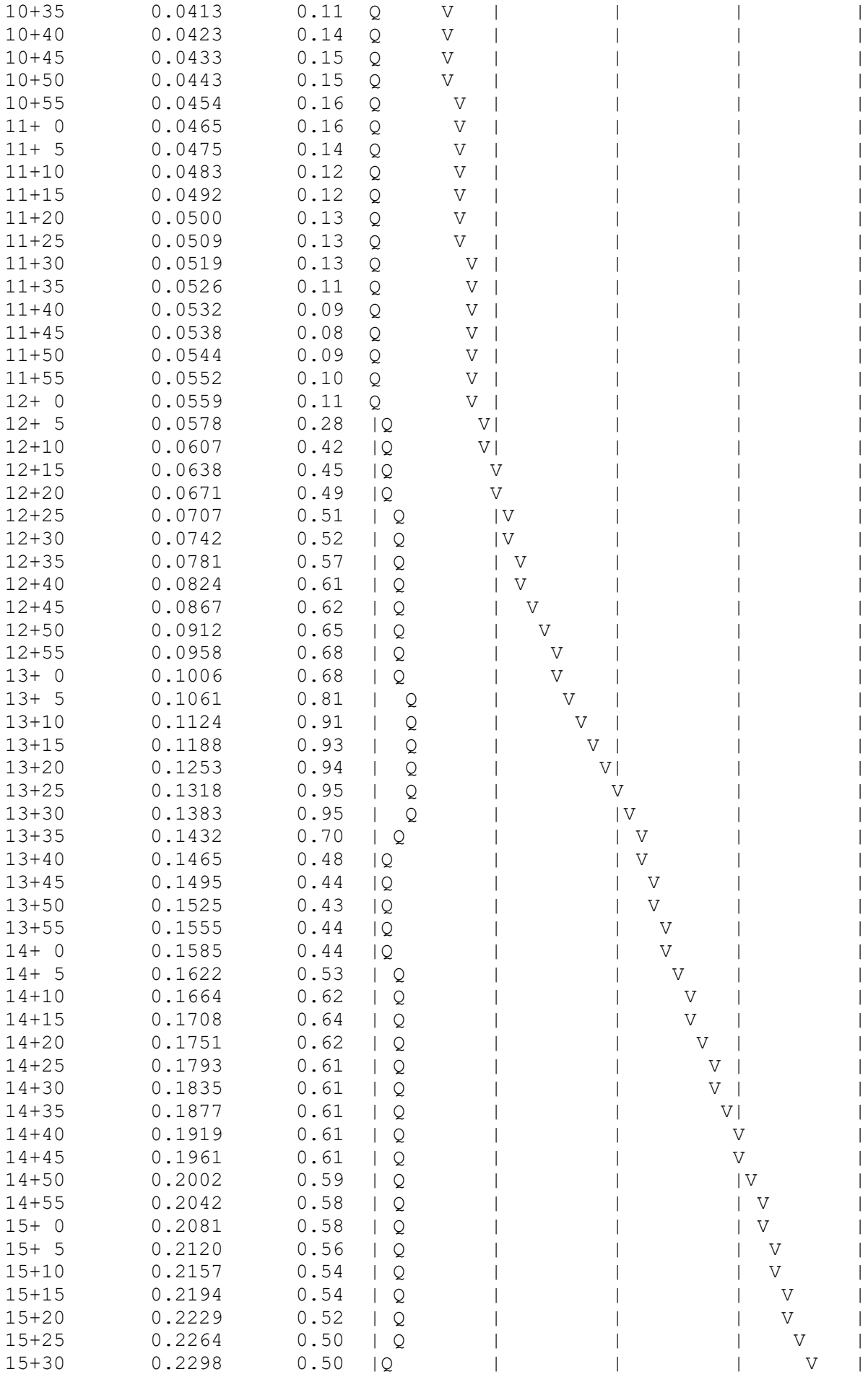
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0002	0.01	Q	|	|	|	|
0+25	0.0003	0.01	Q	|	|	|	|
0+30	0.0004	0.01	Q	|	|	|	|

0+35	0.0005	0.01	Q				
0+40	0.0006	0.01	Q				
0+45	0.0007	0.01	Q				
0+50	0.0009	0.02	Q				
0+55	0.0010	0.02	Q				
1+ 0	0.0011	0.02	Q				
1+ 5	0.0012	0.02	Q				
1+10	0.0013	0.02	Q				
1+15	0.0014	0.01	Q				
1+20	0.0015	0.01	Q				
1+25	0.0016	0.01	Q				
1+30	0.0017	0.01	Q				
1+35	0.0018	0.01	Q				
1+40	0.0019	0.01	Q				
1+45	0.0020	0.01	Q				
1+50	0.0022	0.02	Q				
1+55	0.0023	0.02	Q				
2+ 0	0.0024	0.02	Q				
2+ 5	0.0025	0.02	Q				
2+10	0.0027	0.02	Q				
2+15	0.0028	0.02	Q				
2+20	0.0029	0.02	Q				
2+25	0.0031	0.02	Q				
2+30	0.0032	0.02	Q				
2+35	0.0034	0.02	Q				
2+40	0.0035	0.02	Q				
2+45	0.0037	0.02	Q				
2+50	0.0039	0.02	Q				
2+55	0.0040	0.02	Q				
3+ 0	0.0042	0.02	Q				
3+ 5	0.0044	0.02	Q				
3+10	0.0045	0.02	Q				
3+15	0.0047	0.02	Q				
3+20	0.0049	0.02	Q				
3+25	0.0050	0.02	Q				
3+30	0.0052	0.02	Q				
3+35	0.0054	0.02	Q				
3+40	0.0055	0.02	Q				
3+45	0.0057	0.02	Q				
3+50	0.0059	0.03	Q				
3+55	0.0061	0.03	Q				
4+ 0	0.0063	0.03	Q				
4+ 5	0.0065	0.03	QV				
4+10	0.0067	0.03	QV				
4+15	0.0069	0.03	QV				
4+20	0.0071	0.03	QV				
4+25	0.0073	0.03	QV				
4+30	0.0075	0.03	QV				
4+35	0.0078	0.03	QV				
4+40	0.0080	0.03	QV				
4+45	0.0082	0.03	QV				
4+50	0.0085	0.04	QV				
4+55	0.0088	0.04	QV				
5+ 0	0.0090	0.04	QV				
5+ 5	0.0093	0.03	QV				
5+10	0.0095	0.03	QV				
5+15	0.0097	0.03	QV				
5+20	0.0099	0.03	QV				
5+25	0.0101	0.03	QV				
5+30	0.0103	0.03	QV				

5+35	0.0106	0.04	QV	|	|	|	|
5+40	0.0109	0.04	QV	|	|	|	|
5+45	0.0111	0.04	QV	|	|	|	|
5+50	0.0114	0.04	QV	|	|	|	|
5+55	0.0117	0.04	QV	|	|	|	|
6+ 0	0.0119	0.04	QV	|	|	|	|
6+ 5	0.0122	0.04	QV	|	|	|	|
6+10	0.0125	0.04	QV	|	|	|	|
6+15	0.0128	0.04	Q V	|	|	|	|
6+20	0.0131	0.04	Q V	|	|	|	|
6+25	0.0134	0.04	Q V	|	|	|	|
6+30	0.0137	0.04	Q V	|	|	|	|
6+35	0.0140	0.05	Q V	|	|	|	|
6+40	0.0143	0.05	Q V	|	|	|	|
6+45	0.0147	0.05	Q V	|	|	|	|
6+50	0.0150	0.05	Q V	|	|	|	|
6+55	0.0153	0.05	Q V	|	|	|	|
7+ 0	0.0157	0.05	Q V	|	|	|	|
7+ 5	0.0160	0.05	Q V	|	|	|	|
7+10	0.0163	0.05	Q V	|	|	|	|
7+15	0.0167	0.05	Q V	|	|	|	|
7+20	0.0170	0.05	Q V	|	|	|	|
7+25	0.0174	0.05	Q V	|	|	|	|
7+30	0.0178	0.05	Q V	|	|	|	|
7+35	0.0181	0.06	Q V	|	|	|	|
7+40	0.0185	0.06	Q V	|	|	|	|
7+45	0.0189	0.06	Q V	|	|	|	|
7+50	0.0194	0.06	Q V	|	|	|	|
7+55	0.0198	0.06	Q V	|	|	|	|
8+ 0	0.0202	0.06	Q V	|	|	|	|
8+ 5	0.0207	0.07	Q V	|	|	|	|
8+10	0.0212	0.07	Q V	|	|	|	|
8+15	0.0217	0.07	Q V	|	|	|	|
8+20	0.0222	0.07	Q V	|	|	|	|
8+25	0.0227	0.07	Q V	|	|	|	|
8+30	0.0232	0.07	Q V	|	|	|	|
8+35	0.0237	0.07	Q V	|	|	|	|
8+40	0.0242	0.08	Q V	|	|	|	|
8+45	0.0248	0.08	Q V	|	|	|	|
8+50	0.0253	0.08	Q V	|	|	|	|
8+55	0.0259	0.08	Q V	|	|	|	|
9+ 0	0.0264	0.08	Q V	|	|	|	|
9+ 5	0.0270	0.09	Q V	|	|	|	|
9+10	0.0277	0.09	Q V	|	|	|	|
9+15	0.0283	0.09	Q V	|	|	|	|
9+20	0.0289	0.09	Q V	|	|	|	|
9+25	0.0296	0.10	Q V	|	|	|	|
9+30	0.0303	0.10	Q V	|	|	|	|
9+35	0.0311	0.12	Q V	|	|	|	|
9+40	0.0320	0.14	Q V	|	|	|	|
9+45	0.0330	0.15	Q V	|	|	|	|
9+50	0.0342	0.17	Q V	|	|	|	|
9+55	0.0356	0.20	Q V	|	|	|	|
10+ 0	0.0370	0.21	Q V	|	|	|	|
10+ 5	0.0380	0.14	Q V	|	|	|	|
10+10	0.0386	0.09	Q V	|	|	|	|
10+15	0.0391	0.08	Q V	|	|	|	|
10+20	0.0396	0.07	Q V	|	|	|	|
10+25	0.0401	0.07	Q V	|	|	|	|
10+30	0.0406	0.07	Q V	|	|	|	|



15+35	0.2326	0.41	|Q	|	|	|	V |
15+40	0.2349	0.33	|Q	|	|	|	V |
15+45	0.2371	0.32	|Q	|	|	|	V |
15+50	0.2393	0.32	|Q	|	|	|	V |
15+55	0.2415	0.32	|Q	|	|	|	V |
16+ 0	0.2437	0.32	|Q	|	|	|	V |
16+ 5	0.2450	0.18	Q	|	|	|	V |
16+10	0.2453	0.05	Q	|	|	|	V |
16+15	0.2455	0.03	Q	|	|	|	V |
16+20	0.2456	0.02	Q	|	|	|	V |
16+25	0.2458	0.02	Q	|	|	|	V |
16+30	0.2459	0.02	Q	|	|	|	V |
16+35	0.2460	0.02	Q	|	|	|	V |
16+40	0.2461	0.02	Q	|	|	|	V |
16+45	0.2462	0.01	Q	|	|	|	V |
16+50	0.2463	0.01	Q	|	|	|	V |
16+55	0.2464	0.01	Q	|	|	|	V |
17+ 0	0.2465	0.01	Q	|	|	|	V |
17+ 5	0.2467	0.02	Q	|	|	|	V |
17+10	0.2468	0.02	Q	|	|	|	V |
17+15	0.2470	0.02	Q	|	|	|	V |
17+20	0.2472	0.02	Q	|	|	|	V |
17+25	0.2473	0.02	Q	|	|	|	V |
17+30	0.2475	0.02	Q	|	|	|	V |
17+35	0.2477	0.02	Q	|	|	|	V |
17+40	0.2478	0.02	Q	|	|	|	V |
17+45	0.2480	0.02	Q	|	|	|	V |
17+50	0.2481	0.02	Q	|	|	|	V |
17+55	0.2483	0.02	Q	|	|	|	V |
18+ 0	0.2484	0.02	Q	|	|	|	V |
18+ 5	0.2485	0.02	Q	|	|	|	V|
18+10	0.2487	0.02	Q	|	|	|	V|
18+15	0.2488	0.02	Q	|	|	|	V|
18+20	0.2489	0.02	Q	|	|	|	V|
18+25	0.2491	0.02	Q	|	|	|	V|
18+30	0.2492	0.02	Q	|	|	|	V|
18+35	0.2493	0.02	Q	|	|	|	V|
18+40	0.2494	0.02	Q	|	|	|	V|
18+45	0.2495	0.01	Q	|	|	|	V|
18+50	0.2496	0.01	Q	|	|	|	V|
18+55	0.2497	0.01	Q	|	|	|	V|
19+ 0	0.2498	0.01	Q	|	|	|	V|
19+ 5	0.2498	0.01	Q	|	|	|	V|
19+10	0.2499	0.01	Q	|	|	|	V|
19+15	0.2500	0.01	Q	|	|	|	V|
19+20	0.2501	0.02	Q	|	|	|	V|
19+25	0.2503	0.02	Q	|	|	|	V|
19+30	0.2504	0.02	Q	|	|	|	V|
19+35	0.2505	0.02	Q	|	|	|	V|
19+40	0.2506	0.02	Q	|	|	|	V|
19+45	0.2507	0.01	Q	|	|	|	V|
19+50	0.2508	0.01	Q	|	|	|	V|
19+55	0.2509	0.01	Q	|	|	|	V|
20+ 0	0.2510	0.01	Q	|	|	|	V|
20+ 5	0.2510	0.01	Q	|	|	|	V|
20+10	0.2511	0.01	Q	|	|	|	V|
20+15	0.2512	0.01	Q	|	|	|	V|
20+20	0.2513	0.01	Q	|	|	|	V|
20+25	0.2514	0.01	Q	|	|	|	V|
20+30	0.2515	0.01	Q	|	|	|	V|

20+35	0.2516	0.01	Q	|	|	|	V|
20+40	0.2517	0.01	Q	|	|	|	V|
20+45	0.2518	0.01	Q	|	|	|	V|
20+50	0.2519	0.01	Q	|	|	|	V|
20+55	0.2520	0.01	Q	|	|	|	V|
21+ 0	0.2521	0.01	Q	|	|	|	V|
21+ 5	0.2521	0.01	Q	|	|	|	V|
21+10	0.2522	0.01	Q	|	|	|	V|
21+15	0.2523	0.01	Q	|	|	|	V|
21+20	0.2524	0.01	Q	|	|	|	V|
21+25	0.2525	0.01	Q	|	|	|	V|
21+30	0.2526	0.01	Q	|	|	|	V|
21+35	0.2526	0.01	Q	|	|	|	V|
21+40	0.2527	0.01	Q	|	|	|	V|
21+45	0.2528	0.01	Q	|	|	|	V|
21+50	0.2529	0.01	Q	|	|	|	V|
21+55	0.2530	0.01	Q	|	|	|	V|
22+ 0	0.2531	0.01	Q	|	|	|	V|
22+ 5	0.2531	0.01	Q	|	|	|	V|
22+10	0.2532	0.01	Q	|	|	|	V|
22+15	0.2533	0.01	Q	|	|	|	V|
22+20	0.2534	0.01	Q	|	|	|	V|
22+25	0.2535	0.01	Q	|	|	|	V|
22+30	0.2536	0.01	Q	|	|	|	V|
22+35	0.2536	0.01	Q	|	|	|	V|
22+40	0.2537	0.01	Q	|	|	|	V|
22+45	0.2538	0.01	Q	|	|	|	V|
22+50	0.2538	0.01	Q	|	|	|	V|
22+55	0.2539	0.01	Q	|	|	|	V|
23+ 0	0.2540	0.01	Q	|	|	|	V|
23+ 5	0.2540	0.01	Q	|	|	|	V|
23+10	0.2541	0.01	Q	|	|	|	V|
23+15	0.2542	0.01	Q	|	|	|	V|
23+20	0.2542	0.01	Q	|	|	|	V|
23+25	0.2543	0.01	Q	|	|	|	V|
23+30	0.2544	0.01	Q	|	|	|	V|
23+35	0.2544	0.01	Q	|	|	|	V|
23+40	0.2545	0.01	Q	|	|	|	V|
23+45	0.2546	0.01	Q	|	|	|	V|
23+50	0.2546	0.01	Q	|	|	|	V|
23+55	0.2547	0.01	Q	|	|	|	V|
24+ 0	0.2548	0.01	Q	|	|	|	V|
24+ 5	0.2548	0.01	Q	|	|	|	V|
24+10	0.2548	0.00	Q	|	|	|	V|
24+15	0.2548	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

Study date 07/01/24 File: 24077P2410.out

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

Program License Serial Number 6310

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

English Units used in output format

24-077
PROPOSED CONDITION
10 YEAR STORM

Drainage Area = 3.00(Ac.) = 0.005 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 3.00(Ac.) = 0.005 Sq. Mi.
Length along longest watercourse = 424.00(Ft.)
Length along longest watercourse measured to centroid = 248.50(Ft.)
Length along longest watercourse = 0.080 Mi.
Length along longest watercourse measured to centroid = 0.047 Mi.
Difference in elevation = 5.10(Ft.)
Slope along watercourse = 63.5094 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.020 Hr.
Lag time = 1.18 Min.
25% of lag time = 0.29 Min.
40% of lag time = 0.47 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]
3.00	1.80	5.40

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
3.00	4.00	12.00

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 2.705(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.705(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
3.000	32.00	0.800

Total Area Entered = 3.00(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
32.0	32.0	0.742	0.800	0.208	1.000	0.208
					Sum (F) =	0.208

Area averaged mean soil loss (F) (In/Hr) = 0.208
Minimum soil loss rate ((In/Hr)) = 0.104
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	424.262	66.686	2.016
2	0.167	848.524	33.314	1.007
			Sum = 100.000 Sum=	3.023

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	0.022	(0.368)		0.006	0.016
2	0.17	0.07	0.022	(0.367)		0.006	0.016
3	0.25	0.07	0.022	(0.365)		0.006	0.016
4	0.33	0.10	0.032	(0.364)		0.008	0.024
5	0.42	0.10	0.032	(0.363)		0.008	0.024
6	0.50	0.10	0.032	(0.361)		0.008	0.024
7	0.58	0.10	0.032	(0.360)		0.008	0.024
8	0.67	0.10	0.032	(0.358)		0.008	0.024
9	0.75	0.10	0.032	(0.357)		0.008	0.024
10	0.83	0.13	0.043	(0.356)		0.011	0.032
11	0.92	0.13	0.043	(0.354)		0.011	0.032
12	1.00	0.13	0.043	(0.353)		0.011	0.032
13	1.08	0.10	0.032	(0.351)		0.008	0.024
14	1.17	0.10	0.032	(0.350)		0.008	0.024
15	1.25	0.10	0.032	(0.349)		0.008	0.024
16	1.33	0.10	0.032	(0.347)		0.008	0.024
17	1.42	0.10	0.032	(0.346)		0.008	0.024

18	1.50	0.10	0.032	(0.344)	0.008	0.024
19	1.58	0.10	0.032	(0.343)	0.008	0.024
20	1.67	0.10	0.032	(0.342)	0.008	0.024
21	1.75	0.10	0.032	(0.340)	0.008	0.024
22	1.83	0.13	0.043	(0.339)	0.011	0.032
23	1.92	0.13	0.043	(0.338)	0.011	0.032
24	2.00	0.13	0.043	(0.336)	0.011	0.032
25	2.08	0.13	0.043	(0.335)	0.011	0.032
26	2.17	0.13	0.043	(0.334)	0.011	0.032
27	2.25	0.13	0.043	(0.332)	0.011	0.032
28	2.33	0.13	0.043	(0.331)	0.011	0.032
29	2.42	0.13	0.043	(0.329)	0.011	0.032
30	2.50	0.13	0.043	(0.328)	0.011	0.032
31	2.58	0.17	0.054	(0.327)	0.014	0.040
32	2.67	0.17	0.054	(0.325)	0.014	0.040
33	2.75	0.17	0.054	(0.324)	0.014	0.040
34	2.83	0.17	0.054	(0.323)	0.014	0.040
35	2.92	0.17	0.054	(0.321)	0.014	0.040
36	3.00	0.17	0.054	(0.320)	0.014	0.040
37	3.08	0.17	0.054	(0.319)	0.014	0.040
38	3.17	0.17	0.054	(0.317)	0.014	0.040
39	3.25	0.17	0.054	(0.316)	0.014	0.040
40	3.33	0.17	0.054	(0.315)	0.014	0.040
41	3.42	0.17	0.054	(0.314)	0.014	0.040
42	3.50	0.17	0.054	(0.312)	0.014	0.040
43	3.58	0.17	0.054	(0.311)	0.014	0.040
44	3.67	0.17	0.054	(0.310)	0.014	0.040
45	3.75	0.17	0.054	(0.308)	0.014	0.040
46	3.83	0.20	0.065	(0.307)	0.017	0.048
47	3.92	0.20	0.065	(0.306)	0.017	0.048
48	4.00	0.20	0.065	(0.304)	0.017	0.048
49	4.08	0.20	0.065	(0.303)	0.017	0.048
50	4.17	0.20	0.065	(0.302)	0.017	0.048
51	4.25	0.20	0.065	(0.301)	0.017	0.048
52	4.33	0.23	0.076	(0.299)	0.020	0.056
53	4.42	0.23	0.076	(0.298)	0.020	0.056
54	4.50	0.23	0.076	(0.297)	0.020	0.056
55	4.58	0.23	0.076	(0.295)	0.020	0.056
56	4.67	0.23	0.076	(0.294)	0.020	0.056
57	4.75	0.23	0.076	(0.293)	0.020	0.056
58	4.83	0.27	0.087	(0.292)	0.023	0.064
59	4.92	0.27	0.087	(0.290)	0.023	0.064
60	5.00	0.27	0.087	(0.289)	0.023	0.064
61	5.08	0.20	0.065	(0.288)	0.017	0.048
62	5.17	0.20	0.065	(0.287)	0.017	0.048
63	5.25	0.20	0.065	(0.285)	0.017	0.048
64	5.33	0.23	0.076	(0.284)	0.020	0.056
65	5.42	0.23	0.076	(0.283)	0.020	0.056
66	5.50	0.23	0.076	(0.282)	0.020	0.056
67	5.58	0.27	0.087	(0.280)	0.023	0.064
68	5.67	0.27	0.087	(0.279)	0.023	0.064
69	5.75	0.27	0.087	(0.278)	0.023	0.064
70	5.83	0.27	0.087	(0.277)	0.023	0.064
71	5.92	0.27	0.087	(0.275)	0.023	0.064
72	6.00	0.27	0.087	(0.274)	0.023	0.064
73	6.08	0.30	0.097	(0.273)	0.025	0.072
74	6.17	0.30	0.097	(0.272)	0.025	0.072
75	6.25	0.30	0.097	(0.271)	0.025	0.072
76	6.33	0.30	0.097	(0.269)	0.025	0.072
77	6.42	0.30	0.097	(0.268)	0.025	0.072

78	6.50	0.30	0.097	(0.267)	0.025	0.072
79	6.58	0.33	0.108	(0.266)	0.028	0.080
80	6.67	0.33	0.108	(0.265)	0.028	0.080
81	6.75	0.33	0.108	(0.263)	0.028	0.080
82	6.83	0.33	0.108	(0.262)	0.028	0.080
83	6.92	0.33	0.108	(0.261)	0.028	0.080
84	7.00	0.33	0.108	(0.260)	0.028	0.080
85	7.08	0.33	0.108	(0.259)	0.028	0.080
86	7.17	0.33	0.108	(0.257)	0.028	0.080
87	7.25	0.33	0.108	(0.256)	0.028	0.080
88	7.33	0.37	0.119	(0.255)	0.031	0.088
89	7.42	0.37	0.119	(0.254)	0.031	0.088
90	7.50	0.37	0.119	(0.253)	0.031	0.088
91	7.58	0.40	0.130	(0.252)	0.034	0.096
92	7.67	0.40	0.130	(0.250)	0.034	0.096
93	7.75	0.40	0.130	(0.249)	0.034	0.096
94	7.83	0.43	0.141	(0.248)	0.037	0.104
95	7.92	0.43	0.141	(0.247)	0.037	0.104
96	8.00	0.43	0.141	(0.246)	0.037	0.104
97	8.08	0.50	0.162	(0.245)	0.042	0.120
98	8.17	0.50	0.162	(0.244)	0.042	0.120
99	8.25	0.50	0.162	(0.242)	0.042	0.120
100	8.33	0.50	0.162	(0.241)	0.042	0.120
101	8.42	0.50	0.162	(0.240)	0.042	0.120
102	8.50	0.50	0.162	(0.239)	0.042	0.120
103	8.58	0.53	0.173	(0.238)	0.045	0.128
104	8.67	0.53	0.173	(0.237)	0.045	0.128
105	8.75	0.53	0.173	(0.236)	0.045	0.128
106	8.83	0.57	0.184	(0.235)	0.048	0.136
107	8.92	0.57	0.184	(0.233)	0.048	0.136
108	9.00	0.57	0.184	(0.232)	0.048	0.136
109	9.08	0.63	0.206	(0.231)	0.053	0.152
110	9.17	0.63	0.206	(0.230)	0.053	0.152
111	9.25	0.63	0.206	(0.229)	0.053	0.152
112	9.33	0.67	0.216	(0.228)	0.056	0.160
113	9.42	0.67	0.216	(0.227)	0.056	0.160
114	9.50	0.67	0.216	(0.226)	0.056	0.160
115	9.58	0.70	0.227	(0.225)	0.059	0.168
116	9.67	0.70	0.227	(0.224)	0.059	0.168
117	9.75	0.70	0.227	(0.223)	0.059	0.168
118	9.83	0.73	0.238	(0.222)	0.062	0.176
119	9.92	0.73	0.238	(0.220)	0.062	0.176
120	10.00	0.73	0.238	(0.219)	0.062	0.176
121	10.08	0.50	0.162	(0.218)	0.042	0.120
122	10.17	0.50	0.162	(0.217)	0.042	0.120
123	10.25	0.50	0.162	(0.216)	0.042	0.120
124	10.33	0.50	0.162	(0.215)	0.042	0.120
125	10.42	0.50	0.162	(0.214)	0.042	0.120
126	10.50	0.50	0.162	(0.213)	0.042	0.120
127	10.58	0.67	0.216	(0.212)	0.056	0.160
128	10.67	0.67	0.216	(0.211)	0.056	0.160
129	10.75	0.67	0.216	(0.210)	0.056	0.160
130	10.83	0.67	0.216	(0.209)	0.056	0.160
131	10.92	0.67	0.216	(0.208)	0.056	0.160
132	11.00	0.67	0.216	(0.207)	0.056	0.160
133	11.08	0.63	0.206	(0.206)	0.053	0.152
134	11.17	0.63	0.206	(0.205)	0.053	0.152
135	11.25	0.63	0.206	(0.204)	0.053	0.152
136	11.33	0.63	0.206	(0.203)	0.053	0.152
137	11.42	0.63	0.206	(0.202)	0.053	0.152

138	11.50	0.63	0.206	(0.201)	0.053	0.152
139	11.58	0.57	0.184	(0.200)	0.048	0.136
140	11.67	0.57	0.184	(0.199)	0.048	0.136
141	11.75	0.57	0.184	(0.198)	0.048	0.136
142	11.83	0.60	0.195	(0.197)	0.051	0.144
143	11.92	0.60	0.195	(0.196)	0.051	0.144
144	12.00	0.60	0.195	(0.195)	0.051	0.144
145	12.08	0.83	0.271	(0.194)	0.070	0.200
146	12.17	0.83	0.271	(0.193)	0.070	0.200
147	12.25	0.83	0.271	(0.192)	0.070	0.200
148	12.33	0.87	0.281	(0.191)	0.073	0.208
149	12.42	0.87	0.281	(0.190)	0.073	0.208
150	12.50	0.87	0.281	(0.189)	0.073	0.208
151	12.58	0.93	0.303	(0.188)	0.079	0.224
152	12.67	0.93	0.303	(0.187)	0.079	0.224
153	12.75	0.93	0.303	(0.186)	0.079	0.224
154	12.83	0.97	0.314	(0.185)	0.082	0.232
155	12.92	0.97	0.314	(0.184)	0.082	0.232
156	13.00	0.97	0.314	(0.183)	0.082	0.232
157	13.08	1.13	0.368	(0.183)	0.096	0.272
158	13.17	1.13	0.368	(0.182)	0.096	0.272
159	13.25	1.13	0.368	(0.181)	0.096	0.272
160	13.33	1.13	0.368	(0.180)	0.096	0.272
161	13.42	1.13	0.368	(0.179)	0.096	0.272
162	13.50	1.13	0.368	(0.178)	0.096	0.272
163	13.58	0.77	0.249	(0.177)	0.065	0.184
164	13.67	0.77	0.249	(0.176)	0.065	0.184
165	13.75	0.77	0.249	(0.175)	0.065	0.184
166	13.83	0.77	0.249	(0.174)	0.065	0.184
167	13.92	0.77	0.249	(0.173)	0.065	0.184
168	14.00	0.77	0.249	(0.173)	0.065	0.184
169	14.08	0.90	0.292	(0.172)	0.076	0.216
170	14.17	0.90	0.292	(0.171)	0.076	0.216
171	14.25	0.90	0.292	(0.170)	0.076	0.216
172	14.33	0.87	0.281	(0.169)	0.073	0.208
173	14.42	0.87	0.281	(0.168)	0.073	0.208
174	14.50	0.87	0.281	(0.167)	0.073	0.208
175	14.58	0.87	0.281	(0.166)	0.073	0.208
176	14.67	0.87	0.281	(0.166)	0.073	0.208
177	14.75	0.87	0.281	(0.165)	0.073	0.208
178	14.83	0.83	0.271	(0.164)	0.070	0.200
179	14.92	0.83	0.271	(0.163)	0.070	0.200
180	15.00	0.83	0.271	(0.162)	0.070	0.200
181	15.08	0.80	0.260	(0.161)	0.068	0.192
182	15.17	0.80	0.260	(0.161)	0.068	0.192
183	15.25	0.80	0.260	(0.160)	0.068	0.192
184	15.33	0.77	0.249	(0.159)	0.065	0.184
185	15.42	0.77	0.249	(0.158)	0.065	0.184
186	15.50	0.77	0.249	(0.157)	0.065	0.184
187	15.58	0.63	0.206	(0.157)	0.053	0.152
188	15.67	0.63	0.206	(0.156)	0.053	0.152
189	15.75	0.63	0.206	(0.155)	0.053	0.152
190	15.83	0.63	0.206	(0.154)	0.053	0.152
191	15.92	0.63	0.206	(0.153)	0.053	0.152
192	16.00	0.63	0.206	(0.153)	0.053	0.152
193	16.08	0.13	0.043	(0.152)	0.011	0.032
194	16.17	0.13	0.043	(0.151)	0.011	0.032
195	16.25	0.13	0.043	(0.150)	0.011	0.032
196	16.33	0.13	0.043	(0.149)	0.011	0.032
197	16.42	0.13	0.043	(0.149)	0.011	0.032

198	16.50	0.13	0.043	(0.148)	0.011	0.032
199	16.58	0.10	0.032	(0.147)	0.008	0.024
200	16.67	0.10	0.032	(0.146)	0.008	0.024
201	16.75	0.10	0.032	(0.146)	0.008	0.024
202	16.83	0.10	0.032	(0.145)	0.008	0.024
203	16.92	0.10	0.032	(0.144)	0.008	0.024
204	17.00	0.10	0.032	(0.144)	0.008	0.024
205	17.08	0.17	0.054	(0.143)	0.014	0.040
206	17.17	0.17	0.054	(0.142)	0.014	0.040
207	17.25	0.17	0.054	(0.141)	0.014	0.040
208	17.33	0.17	0.054	(0.141)	0.014	0.040
209	17.42	0.17	0.054	(0.140)	0.014	0.040
210	17.50	0.17	0.054	(0.139)	0.014	0.040
211	17.58	0.17	0.054	(0.139)	0.014	0.040
212	17.67	0.17	0.054	(0.138)	0.014	0.040
213	17.75	0.17	0.054	(0.137)	0.014	0.040
214	17.83	0.13	0.043	(0.136)	0.011	0.032
215	17.92	0.13	0.043	(0.136)	0.011	0.032
216	18.00	0.13	0.043	(0.135)	0.011	0.032
217	18.08	0.13	0.043	(0.134)	0.011	0.032
218	18.17	0.13	0.043	(0.134)	0.011	0.032
219	18.25	0.13	0.043	(0.133)	0.011	0.032
220	18.33	0.13	0.043	(0.133)	0.011	0.032
221	18.42	0.13	0.043	(0.132)	0.011	0.032
222	18.50	0.13	0.043	(0.131)	0.011	0.032
223	18.58	0.10	0.032	(0.131)	0.008	0.024
224	18.67	0.10	0.032	(0.130)	0.008	0.024
225	18.75	0.10	0.032	(0.129)	0.008	0.024
226	18.83	0.07	0.022	(0.129)	0.006	0.016
227	18.92	0.07	0.022	(0.128)	0.006	0.016
228	19.00	0.07	0.022	(0.127)	0.006	0.016
229	19.08	0.10	0.032	(0.127)	0.008	0.024
230	19.17	0.10	0.032	(0.126)	0.008	0.024
231	19.25	0.10	0.032	(0.126)	0.008	0.024
232	19.33	0.13	0.043	(0.125)	0.011	0.032
233	19.42	0.13	0.043	(0.125)	0.011	0.032
234	19.50	0.13	0.043	(0.124)	0.011	0.032
235	19.58	0.10	0.032	(0.123)	0.008	0.024
236	19.67	0.10	0.032	(0.123)	0.008	0.024
237	19.75	0.10	0.032	(0.122)	0.008	0.024
238	19.83	0.07	0.022	(0.122)	0.006	0.016
239	19.92	0.07	0.022	(0.121)	0.006	0.016
240	20.00	0.07	0.022	(0.121)	0.006	0.016
241	20.08	0.10	0.032	(0.120)	0.008	0.024
242	20.17	0.10	0.032	(0.120)	0.008	0.024
243	20.25	0.10	0.032	(0.119)	0.008	0.024
244	20.33	0.10	0.032	(0.119)	0.008	0.024
245	20.42	0.10	0.032	(0.118)	0.008	0.024
246	20.50	0.10	0.032	(0.118)	0.008	0.024
247	20.58	0.10	0.032	(0.117)	0.008	0.024
248	20.67	0.10	0.032	(0.117)	0.008	0.024
249	20.75	0.10	0.032	(0.116)	0.008	0.024
250	20.83	0.07	0.022	(0.116)	0.006	0.016
251	20.92	0.07	0.022	(0.115)	0.006	0.016
252	21.00	0.07	0.022	(0.115)	0.006	0.016
253	21.08	0.10	0.032	(0.114)	0.008	0.024
254	21.17	0.10	0.032	(0.114)	0.008	0.024
255	21.25	0.10	0.032	(0.113)	0.008	0.024
256	21.33	0.07	0.022	(0.113)	0.006	0.016
257	21.42	0.07	0.022	(0.112)	0.006	0.016

258	21.50	0.07	0.022	(0.112)	0.006	0.016
259	21.58	0.10	0.032	(0.112)	0.008	0.024
260	21.67	0.10	0.032	(0.111)	0.008	0.024
261	21.75	0.10	0.032	(0.111)	0.008	0.024
262	21.83	0.07	0.022	(0.110)	0.006	0.016
263	21.92	0.07	0.022	(0.110)	0.006	0.016
264	22.00	0.07	0.022	(0.110)	0.006	0.016
265	22.08	0.10	0.032	(0.109)	0.008	0.024
266	22.17	0.10	0.032	(0.109)	0.008	0.024
267	22.25	0.10	0.032	(0.109)	0.008	0.024
268	22.33	0.07	0.022	(0.108)	0.006	0.016
269	22.42	0.07	0.022	(0.108)	0.006	0.016
270	22.50	0.07	0.022	(0.108)	0.006	0.016
271	22.58	0.07	0.022	(0.107)	0.006	0.016
272	22.67	0.07	0.022	(0.107)	0.006	0.016
273	22.75	0.07	0.022	(0.107)	0.006	0.016
274	22.83	0.07	0.022	(0.106)	0.006	0.016
275	22.92	0.07	0.022	(0.106)	0.006	0.016
276	23.00	0.07	0.022	(0.106)	0.006	0.016
277	23.08	0.07	0.022	(0.106)	0.006	0.016
278	23.17	0.07	0.022	(0.105)	0.006	0.016
279	23.25	0.07	0.022	(0.105)	0.006	0.016
280	23.33	0.07	0.022	(0.105)	0.006	0.016
281	23.42	0.07	0.022	(0.105)	0.006	0.016
282	23.50	0.07	0.022	(0.105)	0.006	0.016
283	23.58	0.07	0.022	(0.104)	0.006	0.016
284	23.67	0.07	0.022	(0.104)	0.006	0.016
285	23.75	0.07	0.022	(0.104)	0.006	0.016
286	23.83	0.07	0.022	(0.104)	0.006	0.016
287	23.92	0.07	0.022	(0.104)	0.006	0.016
288	24.00	0.07	0.022	(0.104)	0.006	0.016

(Loss Rate Not Used)

Sum = 100.0 Sum = 24.0

Flood volume = Effective rainfall 2.00(In)
times area 3.0(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 0.70(In)
Total soil loss = 0.176(Ac.Ft)
Total rainfall = 2.71(In)
Flood volume = 21799.2 Cubic Feet
Total soil loss = 7659.2 Cubic Feet

Peak flow rate of this hydrograph = 0.824(CFS)

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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	0.0002	0.03	Q	|	|	|	|
0+10	0.0006	0.05	Q	|	|	|	|
0+15	0.0009	0.05	Q	|	|	|	|
0+20	0.0013	0.06	Q	|	|	|	|
0+25	0.0018	0.07	Q	|	|	|	|
0+30	0.0023	0.07	Q	|	|	|	|
0+35	0.0028	0.07	Q	|	|	|	|
0+40	0.0033	0.07	Q	|	|	|	|

0+45	0.0038	0.07	Q	|	|	|	|
0+50	0.0044	0.09	Q	|	|	|	|
0+55	0.0051	0.10	Q	|	|	|	|
1+ 0	0.0058	0.10	Q	|	|	|	|
1+ 5	0.0063	0.08	Q	|	|	|	|
1+10	0.0068	0.07	Q	|	|	|	|
1+15	0.0073	0.07	Q	|	|	|	|
1+20	0.0078	0.07	Q	|	|	|	|
1+25	0.0083	0.07	Q	|	|	|	|
1+30	0.0088	0.07	Q	|	|	|	|
1+35	0.0093	0.07	Q	|	|	|	|
1+40	0.0098	0.07	Q	|	|	|	|
1+45	0.0103	0.07	Q	|	|	|	|
1+50	0.0110	0.09	Q	|	|	|	|
1+55	0.0116	0.10	Q	|	|	|	|
2+ 0	0.0123	0.10	Q	|	|	|	|
2+ 5	0.0130	0.10	QV	|	|	|	|
2+10	0.0136	0.10	QV	|	|	|	|
2+15	0.0143	0.10	QV	|	|	|	|
2+20	0.0150	0.10	QV	|	|	|	|
2+25	0.0156	0.10	QV	|	|	|	|
2+30	0.0163	0.10	QV	|	|	|	|
2+35	0.0171	0.11	QV	|	|	|	|
2+40	0.0179	0.12	QV	|	|	|	|
2+45	0.0187	0.12	QV	|	|	|	|
2+50	0.0196	0.12	QV	|	|	|	|
2+55	0.0204	0.12	QV	|	|	|	|
3+ 0	0.0212	0.12	QV	|	|	|	|
3+ 5	0.0221	0.12	QV	|	|	|	|
3+10	0.0229	0.12	QV	|	|	|	|
3+15	0.0237	0.12	QV	|	|	|	|
3+20	0.0246	0.12	QV	|	|	|	|
3+25	0.0254	0.12	Q V	|	|	|	|
3+30	0.0262	0.12	Q V	|	|	|	|
3+35	0.0271	0.12	Q V	|	|	|	|
3+40	0.0279	0.12	Q V	|	|	|	|
3+45	0.0287	0.12	Q V	|	|	|	|
3+50	0.0297	0.14	Q V	|	|	|	|
3+55	0.0307	0.15	Q V	|	|	|	|
4+ 0	0.0317	0.15	Q V	|	|	|	|
4+ 5	0.0327	0.15	Q V	|	|	|	|
4+10	0.0337	0.15	Q V	|	|	|	|
4+15	0.0347	0.15	Q V	|	|	|	|
4+20	0.0358	0.16	Q V	|	|	|	|
4+25	0.0370	0.17	Q V	|	|	|	|
4+30	0.0381	0.17	Q V	|	|	|	|
4+35	0.0393	0.17	Q V	|	|	|	|
4+40	0.0405	0.17	Q V	|	|	|	|
4+45	0.0416	0.17	Q V	|	|	|	|
4+50	0.0429	0.19	Q V	|	|	|	|
4+55	0.0443	0.19	Q V	|	|	|	|
5+ 0	0.0456	0.19	Q V	|	|	|	|
5+ 5	0.0467	0.16	Q V	|	|	|	|
5+10	0.0477	0.15	Q V	|	|	|	|
5+15	0.0487	0.15	Q V	|	|	|	|
5+20	0.0498	0.16	Q V	|	|	|	|
5+25	0.0510	0.17	Q V	|	|	|	|
5+30	0.0522	0.17	Q V	|	|	|	|
5+35	0.0534	0.19	Q V	|	|	|	|
5+40	0.0548	0.19	Q V	|	|	|	|

5+45	0.0561	0.19	Q V	|	|	|	|
5+50	0.0574	0.19	Q V	|	|	|	|
5+55	0.0588	0.19	Q V	|	|	|	|
6+ 0	0.0601	0.19	Q V	|	|	|	|
6+ 5	0.0616	0.21	Q V	|	|	|	|
6+10	0.0631	0.22	Q V	|	|	|	|
6+15	0.0646	0.22	Q V	|	|	|	|
6+20	0.0661	0.22	Q V	|	|	|	|
6+25	0.0676	0.22	Q V	|	|	|	|
6+30	0.0691	0.22	Q V	|	|	|	|
6+35	0.0707	0.23	Q V	|	|	|	|
6+40	0.0723	0.24	Q V	|	|	|	|
6+45	0.0740	0.24	Q V	|	|	|	|
6+50	0.0757	0.24	Q V	|	|	|	|
6+55	0.0773	0.24	Q V	|	|	|	|
7+ 0	0.0790	0.24	Q V	|	|	|	|
7+ 5	0.0807	0.24	Q V	|	|	|	|
7+10	0.0824	0.24	Q V	|	|	|	|
7+15	0.0840	0.24	Q V	|	|	|	|
7+20	0.0858	0.26	|Q V	|	|	|	|
7+25	0.0876	0.27	|Q V	|	|	|	|
7+30	0.0895	0.27	|Q V	|	|	|	|
7+35	0.0914	0.28	|Q V	|	|	|	|
7+40	0.0934	0.29	|Q V	|	|	|	|
7+45	0.0954	0.29	|Q V	|	|	|	|
7+50	0.0975	0.31	|Q V	|	|	|	|
7+55	0.0997	0.31	|Q V	|	|	|	|
8+ 0	0.1019	0.31	|Q V	|	|	|	|
8+ 5	0.1043	0.35	|Q V	|	|	|	|
8+10	0.1068	0.36	|Q V	|	|	|	|
8+15	0.1093	0.36	|Q V	|	|	|	|
8+20	0.1118	0.36	|Q V	|	|	|	|
8+25	0.1143	0.36	|Q V|	|	|	|	|
8+30	0.1168	0.36	|Q V|	|	|	|	|
8+35	0.1194	0.38	|Q V|	|	|	|	|
8+40	0.1221	0.39	|Q V|	|	|	|	|
8+45	0.1247	0.39	|Q V|	|	|	|	|
8+50	0.1275	0.40	|Q V	|	|	|	|
8+55	0.1303	0.41	|Q V	|	|	|	|
9+ 0	0.1332	0.41	|Q V	|	|	|	|
9+ 5	0.1362	0.44	|Q V	|	|	|	|
9+10	0.1394	0.46	|Q |V	|	|	|	|
9+15	0.1426	0.46	|Q |V	|	|	|	|
9+20	0.1459	0.48	|Q |V	|	|	|	|
9+25	0.1492	0.48	|Q |V	|	|	|	|
9+30	0.1525	0.48	|Q | V	|	|	|	|
9+35	0.1560	0.50	| Q | V	|	|	|	|
9+40	0.1595	0.51	| Q | V	|	|	|	|
9+45	0.1630	0.51	| Q | V	|	|	|	|
9+50	0.1666	0.52	| Q | V	|	|	|	|
9+55	0.1703	0.53	| Q | V	|	|	|	|
10+ 0	0.1739	0.53	| Q | V	|	|	|	|
10+ 5	0.1768	0.42	|Q | V	|	|	|	|
10+10	0.1793	0.36	|Q | V	|	|	|	|
10+15	0.1818	0.36	|Q | V	|	|	|	|
10+20	0.1843	0.36	|Q | V	|	|	|	|
10+25	0.1868	0.36	|Q | V	|	|	|	|
10+30	0.1893	0.36	|Q | V	|	|	|	|
10+35	0.1924	0.44	|Q | V	|	|	|	|
10+40	0.1957	0.48	|Q | V	|	|	|	|

10+45	0.1991	0.48	Q		V		
10+50	0.2024	0.48	Q		V		
10+55	0.2057	0.48	Q		V		
11+ 0	0.2091	0.48	Q		V		
11+ 5	0.2123	0.47	Q		V		
11+10	0.2155	0.46	Q		V		
11+15	0.2186	0.46	Q		V		
11+20	0.2218	0.46	Q		V		
11+25	0.2250	0.46	Q		V		
11+30	0.2281	0.46	Q		V		
11+35	0.2311	0.43	Q		V		
11+40	0.2339	0.41	Q		V		
11+45	0.2368	0.41	Q		V		
11+50	0.2397	0.43	Q		V		
11+55	0.2427	0.44	Q		V		
12+ 0	0.2457	0.44	Q		V		
12+ 5	0.2495	0.55	Q		V		
12+10	0.2537	0.61	Q		V		
12+15	0.2578	0.61	Q		V		
12+20	0.2621	0.62	Q		V		
12+25	0.2665	0.63	Q		V		
12+30	0.2708	0.63	Q		V		
12+35	0.2754	0.66	Q		V		
12+40	0.2800	0.68	Q		V		
12+45	0.2847	0.68	Q		V		
12+50	0.2895	0.69	Q		V		
12+55	0.2943	0.70	Q		V		
13+ 0	0.2992	0.70	Q		V		
13+ 5	0.3045	0.78	Q		V		
13+10	0.3102	0.82	Q		V		
13+15	0.3159	0.82	Q		V		
13+20	0.3216	0.82	Q		V		
13+25	0.3272	0.82	Q		V		
13+30	0.3329	0.82	Q		V		
13+35	0.3374	0.65	Q		V		
13+40	0.3412	0.56	Q		V		
13+45	0.3450	0.56	Q		V		
13+50	0.3489	0.56	Q		V		
13+55	0.3527	0.56	Q		V		
14+ 0	0.3565	0.56	Q		V		
14+ 5	0.3608	0.62	Q		V		
14+10	0.3653	0.65	Q		V		
14+15	0.3698	0.65	Q		V		
14+20	0.3742	0.64	Q		V		
14+25	0.3786	0.63	Q		V		
14+30	0.3829	0.63	Q		V		
14+35	0.3872	0.63	Q		V		
14+40	0.3916	0.63	Q		V		
14+45	0.3959	0.63	Q		V		
14+50	0.4001	0.61	Q		V		
14+55	0.4043	0.61	Q		V		
15+ 0	0.4085	0.61	Q		V		
15+ 5	0.4125	0.59	Q		V		
15+10	0.4165	0.58	Q		V		
15+15	0.4205	0.58	Q		V		
15+20	0.4244	0.57	Q		V		
15+25	0.4283	0.56	Q		V		
15+30	0.4321	0.56	Q		V		
15+35	0.4355	0.49	Q		V		
15+40	0.4387	0.46	Q		V		

15+45	0.4418	0.46	|Q	|	|	|	V |
15+50	0.4450	0.46	|Q	|	|	|	V |
15+55	0.4482	0.46	|Q	|	|	|	V |
16+ 0	0.4513	0.46	|Q	|	|	|	V |
16+ 5	0.4528	0.22	Q	|	|	|	V |
16+10	0.4535	0.10	Q	|	|	|	V |
16+15	0.4542	0.10	Q	|	|	|	V |
16+20	0.4548	0.10	Q	|	|	|	V |
16+25	0.4555	0.10	Q	|	|	|	V |
16+30	0.4562	0.10	Q	|	|	|	V |
16+35	0.4567	0.08	Q	|	|	|	V |
16+40	0.4572	0.07	Q	|	|	|	V |
16+45	0.4577	0.07	Q	|	|	|	V |
16+50	0.4582	0.07	Q	|	|	|	V |
16+55	0.4587	0.07	Q	|	|	|	V |
17+ 0	0.4592	0.07	Q	|	|	|	V |
17+ 5	0.4600	0.10	Q	|	|	|	V |
17+10	0.4608	0.12	Q	|	|	|	V |
17+15	0.4616	0.12	Q	|	|	|	V |
17+20	0.4625	0.12	Q	|	|	|	V |
17+25	0.4633	0.12	Q	|	|	|	V |
17+30	0.4641	0.12	Q	|	|	|	V |
17+35	0.4650	0.12	Q	|	|	|	V |
17+40	0.4658	0.12	Q	|	|	|	V |
17+45	0.4666	0.12	Q	|	|	|	V |
17+50	0.4674	0.10	Q	|	|	|	V |
17+55	0.4680	0.10	Q	|	|	|	V |
18+ 0	0.4687	0.10	Q	|	|	|	V |
18+ 5	0.4694	0.10	Q	|	|	|	V |
18+10	0.4700	0.10	Q	|	|	|	V |
18+15	0.4707	0.10	Q	|	|	|	V |
18+20	0.4714	0.10	Q	|	|	|	V |
18+25	0.4720	0.10	Q	|	|	|	V |
18+30	0.4727	0.10	Q	|	|	|	V |
18+35	0.4732	0.08	Q	|	|	|	V |
18+40	0.4738	0.07	Q	|	|	|	V |
18+45	0.4743	0.07	Q	|	|	|	V |
18+50	0.4746	0.06	Q	|	|	|	V |
18+55	0.4750	0.05	Q	|	|	|	V |
19+ 0	0.4753	0.05	Q	|	|	|	V |
19+ 5	0.4758	0.06	Q	|	|	|	V |
19+10	0.4763	0.07	Q	|	|	|	V |
19+15	0.4768	0.07	Q	|	|	|	V |
19+20	0.4774	0.09	Q	|	|	|	V |
19+25	0.4780	0.10	Q	|	|	|	V |
19+30	0.4787	0.10	Q	|	|	|	V |
19+35	0.4793	0.08	Q	|	|	|	V |
19+40	0.4798	0.07	Q	|	|	|	V |
19+45	0.4803	0.07	Q	|	|	|	V |
19+50	0.4806	0.06	Q	|	|	|	V |
19+55	0.4810	0.05	Q	|	|	|	V |
20+ 0	0.4813	0.05	Q	|	|	|	V |
20+ 5	0.4818	0.06	Q	|	|	|	V |
20+10	0.4823	0.07	Q	|	|	|	V |
20+15	0.4828	0.07	Q	|	|	|	V |
20+20	0.4833	0.07	Q	|	|	|	V |
20+25	0.4838	0.07	Q	|	|	|	V |
20+30	0.4843	0.07	Q	|	|	|	V |
20+35	0.4848	0.07	Q	|	|	|	V |
20+40	0.4853	0.07	Q	|	|	|	V |

20+45	0.4858	0.07	Q	|	|	|	V |
20+50	0.4861	0.06	Q	|	|	|	V |
20+55	0.4865	0.05	Q	|	|	|	V |
21+ 0	0.4868	0.05	Q	|	|	|	V |
21+ 5	0.4873	0.06	Q	|	|	|	V |
21+10	0.4878	0.07	Q	|	|	|	V |
21+15	0.4883	0.07	Q	|	|	|	V|
21+20	0.4887	0.06	Q	|	|	|	V|
21+25	0.4890	0.05	Q	|	|	|	V|
21+30	0.4893	0.05	Q	|	|	|	V|
21+35	0.4898	0.06	Q	|	|	|	V|
21+40	0.4903	0.07	Q	|	|	|	V|
21+45	0.4908	0.07	Q	|	|	|	V|
21+50	0.4912	0.06	Q	|	|	|	V|
21+55	0.4915	0.05	Q	|	|	|	V|
22+ 0	0.4918	0.05	Q	|	|	|	V|
22+ 5	0.4923	0.06	Q	|	|	|	V|
22+10	0.4928	0.07	Q	|	|	|	V|
22+15	0.4933	0.07	Q	|	|	|	V|
22+20	0.4937	0.06	Q	|	|	|	V|
22+25	0.4940	0.05	Q	|	|	|	V|
22+30	0.4943	0.05	Q	|	|	|	V|
22+35	0.4947	0.05	Q	|	|	|	V|
22+40	0.4950	0.05	Q	|	|	|	V|
22+45	0.4953	0.05	Q	|	|	|	V|
22+50	0.4957	0.05	Q	|	|	|	V|
22+55	0.4960	0.05	Q	|	|	|	V|
23+ 0	0.4963	0.05	Q	|	|	|	V|
23+ 5	0.4967	0.05	Q	|	|	|	V|
23+10	0.4970	0.05	Q	|	|	|	V|
23+15	0.4973	0.05	Q	|	|	|	V|
23+20	0.4977	0.05	Q	|	|	|	V|
23+25	0.4980	0.05	Q	|	|	|	V|
23+30	0.4983	0.05	Q	|	|	|	V|
23+35	0.4987	0.05	Q	|	|	|	V|
23+40	0.4990	0.05	Q	|	|	|	V|
23+45	0.4993	0.05	Q	|	|	|	V|
23+50	0.4997	0.05	Q	|	|	|	V|
23+55	0.5000	0.05	Q	|	|	|	V|
24+ 0	0.5003	0.05	Q	|	|	|	V|
24+ 5	0.5004	0.02	Q	|	|	|	V

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

Study date 07/01/24 File: 24077P24100.out

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

Program License Serial Number 6310

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

English Units used in output format

24-077
PROPOSED CONDITION
100 YEAR STORM

Drainage Area = 3.00(Ac.) = 0.005 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 3.00(Ac.) = 0.005 Sq. Mi.
Length along longest watercourse = 424.00(Ft.)
Length along longest watercourse measured to centroid = 248.50(Ft.)
Length along longest watercourse = 0.080 Mi.
Length along longest watercourse measured to centroid = 0.047 Mi.
Difference in elevation = 5.10(Ft.)
Slope along watercourse = 63.5094 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.020 Hr.
Lag time = 1.18 Min.
25% of lag time = 0.29 Min.
40% of lag time = 0.47 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]
3.00	1.80	5.40

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
3.00	4.00	12.00

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.800(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
3.000	32.00	0.800

Total Area Entered = 3.00(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
32.0	32.0	0.742	0.800	0.208	1.000	0.208
					Sum (F) =	0.208

Area averaged mean soil loss (F) (In/Hr) = 0.208
Minimum soil loss rate ((In/Hr)) = 0.104
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	424.262	66.686	2.016
2	0.167	848.524	33.314	1.007
			Sum = 100.000 Sum=	3.023

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	(0.368)		0.008	0.024
2	0.17	0.07	0.032	(0.367)		0.008	0.024
3	0.25	0.07	0.032	(0.365)		0.008	0.024
4	0.33	0.10	0.048	(0.364)		0.012	0.036
5	0.42	0.10	0.048	(0.363)		0.012	0.036
6	0.50	0.10	0.048	(0.361)		0.012	0.036
7	0.58	0.10	0.048	(0.360)		0.012	0.036
8	0.67	0.10	0.048	(0.358)		0.012	0.036
9	0.75	0.10	0.048	(0.357)		0.012	0.036
10	0.83	0.13	0.064	(0.356)		0.017	0.047
11	0.92	0.13	0.064	(0.354)		0.017	0.047
12	1.00	0.13	0.064	(0.353)		0.017	0.047
13	1.08	0.10	0.048	(0.351)		0.012	0.036
14	1.17	0.10	0.048	(0.350)		0.012	0.036
15	1.25	0.10	0.048	(0.349)		0.012	0.036
16	1.33	0.10	0.048	(0.347)		0.012	0.036
17	1.42	0.10	0.048	(0.346)		0.012	0.036

18	1.50	0.10	0.048	(0.344)	0.012	0.036
19	1.58	0.10	0.048	(0.343)	0.012	0.036
20	1.67	0.10	0.048	(0.342)	0.012	0.036
21	1.75	0.10	0.048	(0.340)	0.012	0.036
22	1.83	0.13	0.064	(0.339)	0.017	0.047
23	1.92	0.13	0.064	(0.338)	0.017	0.047
24	2.00	0.13	0.064	(0.336)	0.017	0.047
25	2.08	0.13	0.064	(0.335)	0.017	0.047
26	2.17	0.13	0.064	(0.334)	0.017	0.047
27	2.25	0.13	0.064	(0.332)	0.017	0.047
28	2.33	0.13	0.064	(0.331)	0.017	0.047
29	2.42	0.13	0.064	(0.329)	0.017	0.047
30	2.50	0.13	0.064	(0.328)	0.017	0.047
31	2.58	0.17	0.080	(0.327)	0.021	0.059
32	2.67	0.17	0.080	(0.325)	0.021	0.059
33	2.75	0.17	0.080	(0.324)	0.021	0.059
34	2.83	0.17	0.080	(0.323)	0.021	0.059
35	2.92	0.17	0.080	(0.321)	0.021	0.059
36	3.00	0.17	0.080	(0.320)	0.021	0.059
37	3.08	0.17	0.080	(0.319)	0.021	0.059
38	3.17	0.17	0.080	(0.317)	0.021	0.059
39	3.25	0.17	0.080	(0.316)	0.021	0.059
40	3.33	0.17	0.080	(0.315)	0.021	0.059
41	3.42	0.17	0.080	(0.314)	0.021	0.059
42	3.50	0.17	0.080	(0.312)	0.021	0.059
43	3.58	0.17	0.080	(0.311)	0.021	0.059
44	3.67	0.17	0.080	(0.310)	0.021	0.059
45	3.75	0.17	0.080	(0.308)	0.021	0.059
46	3.83	0.20	0.096	(0.307)	0.025	0.071
47	3.92	0.20	0.096	(0.306)	0.025	0.071
48	4.00	0.20	0.096	(0.304)	0.025	0.071
49	4.08	0.20	0.096	(0.303)	0.025	0.071
50	4.17	0.20	0.096	(0.302)	0.025	0.071
51	4.25	0.20	0.096	(0.301)	0.025	0.071
52	4.33	0.23	0.112	(0.299)	0.029	0.083
53	4.42	0.23	0.112	(0.298)	0.029	0.083
54	4.50	0.23	0.112	(0.297)	0.029	0.083
55	4.58	0.23	0.112	(0.295)	0.029	0.083
56	4.67	0.23	0.112	(0.294)	0.029	0.083
57	4.75	0.23	0.112	(0.293)	0.029	0.083
58	4.83	0.27	0.128	(0.292)	0.033	0.095
59	4.92	0.27	0.128	(0.290)	0.033	0.095
60	5.00	0.27	0.128	(0.289)	0.033	0.095
61	5.08	0.20	0.096	(0.288)	0.025	0.071
62	5.17	0.20	0.096	(0.287)	0.025	0.071
63	5.25	0.20	0.096	(0.285)	0.025	0.071
64	5.33	0.23	0.112	(0.284)	0.029	0.083
65	5.42	0.23	0.112	(0.283)	0.029	0.083
66	5.50	0.23	0.112	(0.282)	0.029	0.083
67	5.58	0.27	0.128	(0.280)	0.033	0.095
68	5.67	0.27	0.128	(0.279)	0.033	0.095
69	5.75	0.27	0.128	(0.278)	0.033	0.095
70	5.83	0.27	0.128	(0.277)	0.033	0.095
71	5.92	0.27	0.128	(0.275)	0.033	0.095
72	6.00	0.27	0.128	(0.274)	0.033	0.095
73	6.08	0.30	0.144	(0.273)	0.037	0.107
74	6.17	0.30	0.144	(0.272)	0.037	0.107
75	6.25	0.30	0.144	(0.271)	0.037	0.107
76	6.33	0.30	0.144	(0.269)	0.037	0.107
77	6.42	0.30	0.144	(0.268)	0.037	0.107

78	6.50	0.30	0.144	(0.267)	0.037	0.107
79	6.58	0.33	0.160	(0.266)	0.042	0.118
80	6.67	0.33	0.160	(0.265)	0.042	0.118
81	6.75	0.33	0.160	(0.263)	0.042	0.118
82	6.83	0.33	0.160	(0.262)	0.042	0.118
83	6.92	0.33	0.160	(0.261)	0.042	0.118
84	7.00	0.33	0.160	(0.260)	0.042	0.118
85	7.08	0.33	0.160	(0.259)	0.042	0.118
86	7.17	0.33	0.160	(0.257)	0.042	0.118
87	7.25	0.33	0.160	(0.256)	0.042	0.118
88	7.33	0.37	0.176	(0.255)	0.046	0.130
89	7.42	0.37	0.176	(0.254)	0.046	0.130
90	7.50	0.37	0.176	(0.253)	0.046	0.130
91	7.58	0.40	0.192	(0.252)	0.050	0.142
92	7.67	0.40	0.192	(0.250)	0.050	0.142
93	7.75	0.40	0.192	(0.249)	0.050	0.142
94	7.83	0.43	0.208	(0.248)	0.054	0.154
95	7.92	0.43	0.208	(0.247)	0.054	0.154
96	8.00	0.43	0.208	(0.246)	0.054	0.154
97	8.08	0.50	0.240	(0.245)	0.062	0.178
98	8.17	0.50	0.240	(0.244)	0.062	0.178
99	8.25	0.50	0.240	(0.242)	0.062	0.178
100	8.33	0.50	0.240	(0.241)	0.062	0.178
101	8.42	0.50	0.240	(0.240)	0.062	0.178
102	8.50	0.50	0.240	(0.239)	0.062	0.178
103	8.58	0.53	0.256	(0.238)	0.067	0.189
104	8.67	0.53	0.256	(0.237)	0.067	0.189
105	8.75	0.53	0.256	(0.236)	0.067	0.189
106	8.83	0.57	0.272	(0.235)	0.071	0.201
107	8.92	0.57	0.272	(0.233)	0.071	0.201
108	9.00	0.57	0.272	(0.232)	0.071	0.201
109	9.08	0.63	0.304	(0.231)	0.079	0.225
110	9.17	0.63	0.304	(0.230)	0.079	0.225
111	9.25	0.63	0.304	(0.229)	0.079	0.225
112	9.33	0.67	0.320	(0.228)	0.083	0.237
113	9.42	0.67	0.320	(0.227)	0.083	0.237
114	9.50	0.67	0.320	(0.226)	0.083	0.237
115	9.58	0.70	0.336	(0.225)	0.087	0.249
116	9.67	0.70	0.336	(0.224)	0.087	0.249
117	9.75	0.70	0.336	(0.223)	0.087	0.249
118	9.83	0.73	0.352	(0.222)	0.092	0.260
119	9.92	0.73	0.352	(0.220)	0.092	0.260
120	10.00	0.73	0.352	(0.219)	0.092	0.260
121	10.08	0.50	0.240	(0.218)	0.062	0.178
122	10.17	0.50	0.240	(0.217)	0.062	0.178
123	10.25	0.50	0.240	(0.216)	0.062	0.178
124	10.33	0.50	0.240	(0.215)	0.062	0.178
125	10.42	0.50	0.240	(0.214)	0.062	0.178
126	10.50	0.50	0.240	(0.213)	0.062	0.178
127	10.58	0.67	0.320	(0.212)	0.083	0.237
128	10.67	0.67	0.320	(0.211)	0.083	0.237
129	10.75	0.67	0.320	(0.210)	0.083	0.237
130	10.83	0.67	0.320	(0.209)	0.083	0.237
131	10.92	0.67	0.320	(0.208)	0.083	0.237
132	11.00	0.67	0.320	(0.207)	0.083	0.237
133	11.08	0.63	0.304	(0.206)	0.079	0.225
134	11.17	0.63	0.304	(0.205)	0.079	0.225
135	11.25	0.63	0.304	(0.204)	0.079	0.225
136	11.33	0.63	0.304	(0.203)	0.079	0.225
137	11.42	0.63	0.304	(0.202)	0.079	0.225

138	11.50	0.63	0.304	(0.201)	0.079	0.225
139	11.58	0.57	0.272	(0.200)	0.071	0.201
140	11.67	0.57	0.272	(0.199)	0.071	0.201
141	11.75	0.57	0.272	(0.198)	0.071	0.201
142	11.83	0.60	0.288	(0.197)	0.075	0.213
143	11.92	0.60	0.288	(0.196)	0.075	0.213
144	12.00	0.60	0.288	(0.195)	0.075	0.213
145	12.08	0.83	0.400	(0.194)	0.104	0.296
146	12.17	0.83	0.400	(0.193)	0.104	0.296
147	12.25	0.83	0.400	(0.192)	0.104	0.296
148	12.33	0.87	0.416	(0.191)	0.108	0.308
149	12.42	0.87	0.416	(0.190)	0.108	0.308
150	12.50	0.87	0.416	(0.189)	0.108	0.308
151	12.58	0.93	0.448	(0.188)	0.116	0.332
152	12.67	0.93	0.448	(0.187)	0.116	0.332
153	12.75	0.93	0.448	(0.186)	0.116	0.332
154	12.83	0.97	0.464	(0.185)	0.121	0.343
155	12.92	0.97	0.464	(0.184)	0.121	0.343
156	13.00	0.97	0.464	(0.183)	0.121	0.343
157	13.08	1.13	0.544	(0.183)	0.141	0.403
158	13.17	1.13	0.544	(0.182)	0.141	0.403
159	13.25	1.13	0.544	(0.181)	0.141	0.403
160	13.33	1.13	0.544	(0.180)	0.141	0.403
161	13.42	1.13	0.544	(0.179)	0.141	0.403
162	13.50	1.13	0.544	(0.178)	0.141	0.403
163	13.58	0.77	0.368	(0.177)	0.096	0.272
164	13.67	0.77	0.368	(0.176)	0.096	0.272
165	13.75	0.77	0.368	(0.175)	0.096	0.272
166	13.83	0.77	0.368	(0.174)	0.096	0.272
167	13.92	0.77	0.368	(0.173)	0.096	0.272
168	14.00	0.77	0.368	(0.173)	0.096	0.272
169	14.08	0.90	0.432	(0.172)	0.112	0.320
170	14.17	0.90	0.432	(0.171)	0.112	0.320
171	14.25	0.90	0.432	(0.170)	0.112	0.320
172	14.33	0.87	0.416	(0.169)	0.108	0.308
173	14.42	0.87	0.416	(0.168)	0.108	0.308
174	14.50	0.87	0.416	(0.167)	0.108	0.308
175	14.58	0.87	0.416	(0.166)	0.108	0.308
176	14.67	0.87	0.416	(0.166)	0.108	0.308
177	14.75	0.87	0.416	(0.165)	0.108	0.308
178	14.83	0.83	0.400	(0.164)	0.104	0.296
179	14.92	0.83	0.400	(0.163)	0.104	0.296
180	15.00	0.83	0.400	(0.162)	0.104	0.296
181	15.08	0.80	0.384	(0.161)	0.100	0.284
182	15.17	0.80	0.384	(0.161)	0.100	0.284
183	15.25	0.80	0.384	(0.160)	0.100	0.284
184	15.33	0.77	0.368	(0.159)	0.096	0.272
185	15.42	0.77	0.368	(0.158)	0.096	0.272
186	15.50	0.77	0.368	(0.157)	0.096	0.272
187	15.58	0.63	0.304	(0.157)	0.079	0.225
188	15.67	0.63	0.304	(0.156)	0.079	0.225
189	15.75	0.63	0.304	(0.155)	0.079	0.225
190	15.83	0.63	0.304	(0.154)	0.079	0.225
191	15.92	0.63	0.304	(0.153)	0.079	0.225
192	16.00	0.63	0.304	(0.153)	0.079	0.225
193	16.08	0.13	0.064	(0.152)	0.017	0.047
194	16.17	0.13	0.064	(0.151)	0.017	0.047
195	16.25	0.13	0.064	(0.150)	0.017	0.047
196	16.33	0.13	0.064	(0.149)	0.017	0.047
197	16.42	0.13	0.064	(0.149)	0.017	0.047

198	16.50	0.13	0.064	(0.148)	0.017	0.047
199	16.58	0.10	0.048	(0.147)	0.012	0.036
200	16.67	0.10	0.048	(0.146)	0.012	0.036
201	16.75	0.10	0.048	(0.146)	0.012	0.036
202	16.83	0.10	0.048	(0.145)	0.012	0.036
203	16.92	0.10	0.048	(0.144)	0.012	0.036
204	17.00	0.10	0.048	(0.144)	0.012	0.036
205	17.08	0.17	0.080	(0.143)	0.021	0.059
206	17.17	0.17	0.080	(0.142)	0.021	0.059
207	17.25	0.17	0.080	(0.141)	0.021	0.059
208	17.33	0.17	0.080	(0.141)	0.021	0.059
209	17.42	0.17	0.080	(0.140)	0.021	0.059
210	17.50	0.17	0.080	(0.139)	0.021	0.059
211	17.58	0.17	0.080	(0.139)	0.021	0.059
212	17.67	0.17	0.080	(0.138)	0.021	0.059
213	17.75	0.17	0.080	(0.137)	0.021	0.059
214	17.83	0.13	0.064	(0.136)	0.017	0.047
215	17.92	0.13	0.064	(0.136)	0.017	0.047
216	18.00	0.13	0.064	(0.135)	0.017	0.047
217	18.08	0.13	0.064	(0.134)	0.017	0.047
218	18.17	0.13	0.064	(0.134)	0.017	0.047
219	18.25	0.13	0.064	(0.133)	0.017	0.047
220	18.33	0.13	0.064	(0.133)	0.017	0.047
221	18.42	0.13	0.064	(0.132)	0.017	0.047
222	18.50	0.13	0.064	(0.131)	0.017	0.047
223	18.58	0.10	0.048	(0.131)	0.012	0.036
224	18.67	0.10	0.048	(0.130)	0.012	0.036
225	18.75	0.10	0.048	(0.129)	0.012	0.036
226	18.83	0.07	0.032	(0.129)	0.008	0.024
227	18.92	0.07	0.032	(0.128)	0.008	0.024
228	19.00	0.07	0.032	(0.127)	0.008	0.024
229	19.08	0.10	0.048	(0.127)	0.012	0.036
230	19.17	0.10	0.048	(0.126)	0.012	0.036
231	19.25	0.10	0.048	(0.126)	0.012	0.036
232	19.33	0.13	0.064	(0.125)	0.017	0.047
233	19.42	0.13	0.064	(0.125)	0.017	0.047
234	19.50	0.13	0.064	(0.124)	0.017	0.047
235	19.58	0.10	0.048	(0.123)	0.012	0.036
236	19.67	0.10	0.048	(0.123)	0.012	0.036
237	19.75	0.10	0.048	(0.122)	0.012	0.036
238	19.83	0.07	0.032	(0.122)	0.008	0.024
239	19.92	0.07	0.032	(0.121)	0.008	0.024
240	20.00	0.07	0.032	(0.121)	0.008	0.024
241	20.08	0.10	0.048	(0.120)	0.012	0.036
242	20.17	0.10	0.048	(0.120)	0.012	0.036
243	20.25	0.10	0.048	(0.119)	0.012	0.036
244	20.33	0.10	0.048	(0.119)	0.012	0.036
245	20.42	0.10	0.048	(0.118)	0.012	0.036
246	20.50	0.10	0.048	(0.118)	0.012	0.036
247	20.58	0.10	0.048	(0.117)	0.012	0.036
248	20.67	0.10	0.048	(0.117)	0.012	0.036
249	20.75	0.10	0.048	(0.116)	0.012	0.036
250	20.83	0.07	0.032	(0.116)	0.008	0.024
251	20.92	0.07	0.032	(0.115)	0.008	0.024
252	21.00	0.07	0.032	(0.115)	0.008	0.024
253	21.08	0.10	0.048	(0.114)	0.012	0.036
254	21.17	0.10	0.048	(0.114)	0.012	0.036
255	21.25	0.10	0.048	(0.113)	0.012	0.036
256	21.33	0.07	0.032	(0.113)	0.008	0.024
257	21.42	0.07	0.032	(0.112)	0.008	0.024

258	21.50	0.07	0.032	(0.112)	0.008	0.024
259	21.58	0.10	0.048	(0.112)	0.012	0.036
260	21.67	0.10	0.048	(0.111)	0.012	0.036
261	21.75	0.10	0.048	(0.111)	0.012	0.036
262	21.83	0.07	0.032	(0.110)	0.008	0.024
263	21.92	0.07	0.032	(0.110)	0.008	0.024
264	22.00	0.07	0.032	(0.110)	0.008	0.024
265	22.08	0.10	0.048	(0.109)	0.012	0.036
266	22.17	0.10	0.048	(0.109)	0.012	0.036
267	22.25	0.10	0.048	(0.109)	0.012	0.036
268	22.33	0.07	0.032	(0.108)	0.008	0.024
269	22.42	0.07	0.032	(0.108)	0.008	0.024
270	22.50	0.07	0.032	(0.108)	0.008	0.024
271	22.58	0.07	0.032	(0.107)	0.008	0.024
272	22.67	0.07	0.032	(0.107)	0.008	0.024
273	22.75	0.07	0.032	(0.107)	0.008	0.024
274	22.83	0.07	0.032	(0.106)	0.008	0.024
275	22.92	0.07	0.032	(0.106)	0.008	0.024
276	23.00	0.07	0.032	(0.106)	0.008	0.024
277	23.08	0.07	0.032	(0.106)	0.008	0.024
278	23.17	0.07	0.032	(0.105)	0.008	0.024
279	23.25	0.07	0.032	(0.105)	0.008	0.024
280	23.33	0.07	0.032	(0.105)	0.008	0.024
281	23.42	0.07	0.032	(0.105)	0.008	0.024
282	23.50	0.07	0.032	(0.105)	0.008	0.024
283	23.58	0.07	0.032	(0.104)	0.008	0.024
284	23.67	0.07	0.032	(0.104)	0.008	0.024
285	23.75	0.07	0.032	(0.104)	0.008	0.024
286	23.83	0.07	0.032	(0.104)	0.008	0.024
287	23.92	0.07	0.032	(0.104)	0.008	0.024
288	24.00	0.07	0.032	(0.104)	0.008	0.024

(Loss Rate Not Used)

Sum = 100.0 Sum = 35.5

Flood volume = Effective rainfall 2.96(In)
times area 3.0(Ac.)/[(In)/(Ft.)] = 0.7(Ac.Ft)
Total soil loss = 1.04(In)
Total soil loss = 0.260(Ac.Ft)
Total rainfall = 4.00(In)
Flood volume = 32234.2 Cubic Feet
Total soil loss = 11325.5 Cubic Feet

Peak flow rate of this hydrograph = 1.218(CFS)

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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	0.0008	0.07	Q	|	|	|	|
0+15	0.0013	0.07	Q	|	|	|	|
0+20	0.0020	0.10	Q	|	|	|	|
0+25	0.0027	0.11	Q	|	|	|	|
0+30	0.0035	0.11	Q	|	|	|	|
0+35	0.0042	0.11	Q	|	|	|	|
0+40	0.0049	0.11	Q	|	|	|	|

0+45	0.0057	0.11	Q	|	|	|	|
0+50	0.0066	0.13	Q	|	|	|	|
0+55	0.0076	0.14	Q	|	|	|	|
1+ 0	0.0086	0.14	Q	|	|	|	|
1+ 5	0.0094	0.12	Q	|	|	|	|
1+10	0.0101	0.11	Q	|	|	|	|
1+15	0.0109	0.11	Q	|	|	|	|
1+20	0.0116	0.11	Q	|	|	|	|
1+25	0.0123	0.11	Q	|	|	|	|
1+30	0.0131	0.11	Q	|	|	|	|
1+35	0.0138	0.11	Q	|	|	|	|
1+40	0.0146	0.11	Q	|	|	|	|
1+45	0.0153	0.11	Q	|	|	|	|
1+50	0.0162	0.13	Q	|	|	|	|
1+55	0.0172	0.14	Q	|	|	|	|
2+ 0	0.0182	0.14	Q	|	|	|	|
2+ 5	0.0192	0.14	QV	|	|	|	|
2+10	0.0201	0.14	QV	|	|	|	|
2+15	0.0211	0.14	QV	|	|	|	|
2+20	0.0221	0.14	QV	|	|	|	|
2+25	0.0231	0.14	QV	|	|	|	|
2+30	0.0241	0.14	QV	|	|	|	|
2+35	0.0252	0.17	QV	|	|	|	|
2+40	0.0265	0.18	QV	|	|	|	|
2+45	0.0277	0.18	QV	|	|	|	|
2+50	0.0289	0.18	QV	|	|	|	|
2+55	0.0302	0.18	QV	|	|	|	|
3+ 0	0.0314	0.18	QV	|	|	|	|
3+ 5	0.0326	0.18	QV	|	|	|	|
3+10	0.0339	0.18	QV	|	|	|	|
3+15	0.0351	0.18	QV	|	|	|	|
3+20	0.0363	0.18	QV	|	|	|	|
3+25	0.0376	0.18	Q V	|	|	|	|
3+30	0.0388	0.18	Q V	|	|	|	|
3+35	0.0400	0.18	Q V	|	|	|	|
3+40	0.0413	0.18	Q V	|	|	|	|
3+45	0.0425	0.18	Q V	|	|	|	|
3+50	0.0439	0.20	Q V	|	|	|	|
3+55	0.0454	0.21	Q V	|	|	|	|
4+ 0	0.0469	0.21	Q V	|	|	|	|
4+ 5	0.0483	0.21	Q V	|	|	|	|
4+10	0.0498	0.21	Q V	|	|	|	|
4+15	0.0513	0.21	Q V	|	|	|	|
4+20	0.0530	0.24	Q V	|	|	|	|
4+25	0.0547	0.25	|QV	|	|	|	|
4+30	0.0564	0.25	|Q V	|	|	|	|
4+35	0.0581	0.25	|Q V	|	|	|	|
4+40	0.0599	0.25	|Q V	|	|	|	|
4+45	0.0616	0.25	|Q V	|	|	|	|
4+50	0.0635	0.27	|Q V	|	|	|	|
4+55	0.0654	0.29	|Q V	|	|	|	|
5+ 0	0.0674	0.29	|Q V	|	|	|	|
5+ 5	0.0691	0.24	Q V	|	|	|	|
5+10	0.0705	0.21	Q V	|	|	|	|
5+15	0.0720	0.21	Q V	|	|	|	|
5+20	0.0737	0.24	Q V	|	|	|	|
5+25	0.0754	0.25	|Q V	|	|	|	|
5+30	0.0771	0.25	|Q V	|	|	|	|
5+35	0.0790	0.27	|Q V	|	|	|	|
5+40	0.0810	0.29	|Q V	|	|	|	|

5+45	0.0830	0.29	|Q V |	|	|	|
5+50	0.0849	0.29	|Q V |	|	|	|
5+55	0.0869	0.29	|Q V |	|	|	|
6+ 0	0.0889	0.29	|Q V |	|	|	|
6+ 5	0.0910	0.31	|Q V |	|	|	|
6+10	0.0932	0.32	|Q V |	|	|	|
6+15	0.0955	0.32	|Q V |	|	|	|
6+20	0.0977	0.32	|Q V |	|	|	|
6+25	0.0999	0.32	|Q V |	|	|	|
6+30	0.1021	0.32	|Q V |	|	|	|
6+35	0.1045	0.35	|Q V |	|	|	|
6+40	0.1070	0.36	|Q V |	|	|	|
6+45	0.1094	0.36	|Q V |	|	|	|
6+50	0.1119	0.36	|Q V |	|	|	|
6+55	0.1144	0.36	|Q V |	|	|	|
7+ 0	0.1168	0.36	|Q V |	|	|	|
7+ 5	0.1193	0.36	|Q V |	|	|	|
7+10	0.1218	0.36	|Q V |	|	|	|
7+15	0.1242	0.36	|Q V |	|	|	|
7+20	0.1269	0.38	|Q V |	|	|	|
7+25	0.1296	0.39	|Q V |	|	|	|
7+30	0.1323	0.39	|Q V |	|	|	|
7+35	0.1352	0.42	|Q V |	|	|	|
7+40	0.1381	0.43	|Q V |	|	|	|
7+45	0.1411	0.43	|Q V |	|	|	|
7+50	0.1442	0.45	|Q V |	|	|	|
7+55	0.1474	0.47	|Q V |	|	|	|
8+ 0	0.1506	0.47	|Q V |	|	|	|
8+ 5	0.1542	0.51	| Q V |	|	|	|
8+10	0.1579	0.54	| Q V |	|	|	|
8+15	0.1616	0.54	| Q V |	|	|	|
8+20	0.1653	0.54	| Q V |	|	|	|
8+25	0.1690	0.54	| Q V|	|	|	|
8+30	0.1727	0.54	| Q V|	|	|	|
8+35	0.1765	0.56	| Q V|	|	|	|
8+40	0.1805	0.57	| Q V|	|	|	|
8+45	0.1844	0.57	| Q V|	|	|	|
8+50	0.1885	0.60	| Q V |	|	|	|
8+55	0.1927	0.61	| Q V |	|	|	|
9+ 0	0.1969	0.61	| Q V |	|	|	|
9+ 5	0.2014	0.66	| Q V |	|	|	|
9+10	0.2061	0.68	| Q |V |	|	|	|
9+15	0.2108	0.68	| Q |V |	|	|	|
9+20	0.2157	0.70	| Q |V |	|	|	|
9+25	0.2206	0.72	| Q |V |	|	|	|
9+30	0.2255	0.72	| Q | V |	|	|	|
9+35	0.2306	0.74	| Q | V |	|	|	|
9+40	0.2358	0.75	| Q | V |	|	|	|
9+45	0.2410	0.75	| Q | V |	|	|	|
9+50	0.2463	0.78	| Q | V |	|	|	|
9+55	0.2518	0.79	| Q | V |	|	|	|
10+ 0	0.2572	0.79	| Q | V |	|	|	|
10+ 5	0.2615	0.62	| Q | V |	|	|	|
10+10	0.2652	0.54	| Q | V |	|	|	|
10+15	0.2689	0.54	| Q | V |	|	|	|
10+20	0.2726	0.54	| Q | V |	|	|	|
10+25	0.2763	0.54	| Q | V |	|	|	|
10+30	0.2800	0.54	| Q | V |	|	|	|
10+35	0.2845	0.66	| Q | V |	|	|	|
10+40	0.2894	0.72	| Q | V |	|	|	|

10+45	0.2944	0.72	Q	V			
10+50	0.2993	0.72	Q	V			
10+55	0.3042	0.72	Q	V			
11+ 0	0.3092	0.72	Q	V			
11+ 5	0.3139	0.69	Q	V			
11+10	0.3186	0.68	Q	V			
11+15	0.3233	0.68	Q	V			
11+20	0.3280	0.68	Q	V			
11+25	0.3327	0.68	Q	V			
11+30	0.3374	0.68	Q	V			
11+35	0.3417	0.63	Q	V			
11+40	0.3459	0.61	Q	V			
11+45	0.3501	0.61	Q	V			
11+50	0.3545	0.63	Q	V			
11+55	0.3589	0.64	Q	V			
12+ 0	0.3633	0.64	Q	V			
12+ 5	0.3689	0.81	Q	V			
12+10	0.3751	0.90	Q	V			
12+15	0.3813	0.90	Q	V			
12+20	0.3876	0.92	Q	V			
12+25	0.3940	0.93	Q	V			
12+30	0.4004	0.93	Q	V			
12+35	0.4072	0.98	Q	V			
12+40	0.4141	1.00	Q	V			
12+45	0.4210	1.00	Q	V			
12+50	0.4280	1.03	Q	V			
12+55	0.4352	1.04	Q	V			
13+ 0	0.4424	1.04	Q	V			
13+ 5	0.4503	1.16	Q	V			
13+10	0.4587	1.22	Q	V			
13+15	0.4671	1.22	Q	V			
13+20	0.4755	1.22	Q	V			
13+25	0.4839	1.22	Q	V			
13+30	0.4923	1.22	Q	V			
13+35	0.4988	0.96	Q	V			
13+40	0.5045	0.82	Q	V			
13+45	0.5102	0.82	Q	V			
13+50	0.5159	0.82	Q	V			
13+55	0.5215	0.82	Q	V			
14+ 0	0.5272	0.82	Q	V			
14+ 5	0.5335	0.92	Q	V			
14+10	0.5402	0.97	Q	V			
14+15	0.5469	0.97	Q	V			
14+20	0.5534	0.94	Q	V			
14+25	0.5598	0.93	Q	V			
14+30	0.5662	0.93	Q	V			
14+35	0.5726	0.93	Q	V			
14+40	0.5790	0.93	Q	V			
14+45	0.5854	0.93	Q	V			
14+50	0.5917	0.91	Q	V			
14+55	0.5978	0.90	Q	V			
15+ 0	0.6040	0.90	Q	V			
15+ 5	0.6100	0.87	Q	V			
15+10	0.6159	0.86	Q	V			
15+15	0.6218	0.86	Q	V			
15+20	0.6276	0.84	Q	V			
15+25	0.6333	0.82	Q	V			
15+30	0.6389	0.82	Q	V			
15+35	0.6440	0.73	Q	V			
15+40	0.6486	0.68	Q	V			

15+45	0.6533	0.68	| Q	|	|	|	V |
15+50	0.6580	0.68	| Q	|	|	|	V |
15+55	0.6627	0.68	| Q	|	|	|	V |
16+ 0	0.6674	0.68	| Q	|	|	|	V |
16+ 5	0.6696	0.32	|Q	|	|	|	V |
16+10	0.6706	0.14	Q	|	|	|	V |
16+15	0.6716	0.14	Q	|	|	|	V |
16+20	0.6726	0.14	Q	|	|	|	V |
16+25	0.6736	0.14	Q	|	|	|	V |
16+30	0.6745	0.14	Q	|	|	|	V |
16+35	0.6754	0.12	Q	|	|	|	V |
16+40	0.6761	0.11	Q	|	|	|	V |
16+45	0.6768	0.11	Q	|	|	|	V |
16+50	0.6776	0.11	Q	|	|	|	V |
16+55	0.6783	0.11	Q	|	|	|	V |
17+ 0	0.6791	0.11	Q	|	|	|	V |
17+ 5	0.6801	0.16	Q	|	|	|	V |
17+10	0.6814	0.18	Q	|	|	|	V |
17+15	0.6826	0.18	Q	|	|	|	V |
17+20	0.6838	0.18	Q	|	|	|	V |
17+25	0.6851	0.18	Q	|	|	|	V |
17+30	0.6863	0.18	Q	|	|	|	V |
17+35	0.6875	0.18	Q	|	|	|	V |
17+40	0.6888	0.18	Q	|	|	|	V |
17+45	0.6900	0.18	Q	|	|	|	V |
17+50	0.6911	0.16	Q	|	|	|	V |
17+55	0.6921	0.14	Q	|	|	|	V |
18+ 0	0.6930	0.14	Q	|	|	|	V |
18+ 5	0.6940	0.14	Q	|	|	|	V |
18+10	0.6950	0.14	Q	|	|	|	V |
18+15	0.6960	0.14	Q	|	|	|	V |
18+20	0.6970	0.14	Q	|	|	|	V |
18+25	0.6980	0.14	Q	|	|	|	V |
18+30	0.6990	0.14	Q	|	|	|	V |
18+35	0.6998	0.12	Q	|	|	|	V |
18+40	0.7005	0.11	Q	|	|	|	V |
18+45	0.7013	0.11	Q	|	|	|	V |
18+50	0.7018	0.08	Q	|	|	|	V |
18+55	0.7023	0.07	Q	|	|	|	V |
19+ 0	0.7028	0.07	Q	|	|	|	V |
19+ 5	0.7035	0.10	Q	|	|	|	V |
19+10	0.7042	0.11	Q	|	|	|	V |
19+15	0.7050	0.11	Q	|	|	|	V |
19+20	0.7059	0.13	Q	|	|	|	V |
19+25	0.7069	0.14	Q	|	|	|	V |
19+30	0.7078	0.14	Q	|	|	|	V |
19+35	0.7087	0.12	Q	|	|	|	V |
19+40	0.7094	0.11	Q	|	|	|	V |
19+45	0.7101	0.11	Q	|	|	|	V |
19+50	0.7107	0.08	Q	|	|	|	V |
19+55	0.7112	0.07	Q	|	|	|	V |
20+ 0	0.7117	0.07	Q	|	|	|	V |
20+ 5	0.7124	0.10	Q	|	|	|	V |
20+10	0.7131	0.11	Q	|	|	|	V |
20+15	0.7138	0.11	Q	|	|	|	V |
20+20	0.7146	0.11	Q	|	|	|	V |
20+25	0.7153	0.11	Q	|	|	|	V |
20+30	0.7161	0.11	Q	|	|	|	V |
20+35	0.7168	0.11	Q	|	|	|	V |
20+40	0.7175	0.11	Q	|	|	|	V |

20+45	0.7183	0.11	Q	|	|	|	V |
20+50	0.7189	0.08	Q	|	|	|	V |
20+55	0.7194	0.07	Q	|	|	|	V |
21+ 0	0.7199	0.07	Q	|	|	|	V |
21+ 5	0.7205	0.10	Q	|	|	|	V |
21+10	0.7212	0.11	Q	|	|	|	V |
21+15	0.7220	0.11	Q	|	|	|	V|
21+20	0.7226	0.08	Q	|	|	|	V|
21+25	0.7231	0.07	Q	|	|	|	V|
21+30	0.7236	0.07	Q	|	|	|	V|
21+35	0.7242	0.10	Q	|	|	|	V|
21+40	0.7249	0.11	Q	|	|	|	V|
21+45	0.7257	0.11	Q	|	|	|	V|
21+50	0.7263	0.08	Q	|	|	|	V|
21+55	0.7268	0.07	Q	|	|	|	V|
22+ 0	0.7273	0.07	Q	|	|	|	V|
22+ 5	0.7279	0.10	Q	|	|	|	V|
22+10	0.7286	0.11	Q	|	|	|	V|
22+15	0.7294	0.11	Q	|	|	|	V|
22+20	0.7300	0.08	Q	|	|	|	V|
22+25	0.7305	0.07	Q	|	|	|	V|
22+30	0.7310	0.07	Q	|	|	|	V|
22+35	0.7314	0.07	Q	|	|	|	V|
22+40	0.7319	0.07	Q	|	|	|	V|
22+45	0.7324	0.07	Q	|	|	|	V|
22+50	0.7329	0.07	Q	|	|	|	V|
22+55	0.7334	0.07	Q	|	|	|	V|
23+ 0	0.7339	0.07	Q	|	|	|	V|
23+ 5	0.7344	0.07	Q	|	|	|	V|
23+10	0.7349	0.07	Q	|	|	|	V|
23+15	0.7354	0.07	Q	|	|	|	V|
23+20	0.7359	0.07	Q	|	|	|	V|
23+25	0.7364	0.07	Q	|	|	|	V|
23+30	0.7369	0.07	Q	|	|	|	V|
23+35	0.7374	0.07	Q	|	|	|	V|
23+40	0.7379	0.07	Q	|	|	|	V|
23+45	0.7384	0.07	Q	|	|	|	V|
23+50	0.7388	0.07	Q	|	|	|	V|
23+55	0.7393	0.07	Q	|	|	|	V|
24+ 0	0.7398	0.07	Q	|	|	|	V|
24+ 5	0.7400	0.02	Q	|	|	|	V

APPENDIX D

Detention Analysis (Hydraflow)

Project: **Public Storage Moreno Valley**

Chamber Model -	MC-3500	
Units -	Imperial	
Number of Chambers -	100	
Number of End Caps -	8	
Voids in the stone (porosity) -	40	%
Base of Stone Elevation -	1570.50	ft
Amount of Stone Above Chambers -	12	in
Amount of Stone Below Chambers -	9	in

Area of system - 5484 sf Min. Area - 5087 sf min. area

☑ Include Perimeter Stone in Calculations

☐ Click for Stage Area Data

☐ Click to Invert Stage Area Data

Click Here for Metric

StormTech MC-3500 Cumulative Storage Volumes

Height of System (inches)	Incremental Single Chamber (cubic feet)	Incremental Single End Cap (cubic feet)	Incremental Chambers (cubic feet)	Incremental End Cap (cubic feet)	Incremental Stone (cubic feet)	Incremental Ch, EC and Stone (cubic feet)	Cumulative System (cubic feet)	Elevation (feet)
66	0.00	0.00	0.00	0.00	182.80	182.80	18733.42	1576.00
65	0.00	0.00	0.00	0.00	182.80	182.80	18550.62	1575.92
64	0.00	0.00	0.00	0.00	182.80	182.80	18367.82	1575.83
63	0.00	0.00	0.00	0.00	182.80	182.80	18185.02	1575.75
62	0.00	0.00	0.00	0.00	182.80	182.80	18002.22	1575.67
61	0.00	0.00	0.00	0.00	182.80	182.80	17819.42	1575.58
60	0.00	0.00	0.00	0.00	182.80	182.80	17636.62	1575.50
59	0.00	0.00	0.00	0.00	182.80	182.80	17453.82	1575.42
58	0.00	0.00	0.00	0.00	182.80	182.80	17271.02	1575.33
57	0.00	0.00	0.00	0.00	182.80	182.80	17088.22	1575.25
56	0.00	0.00	0.00	0.00	182.80	182.80	16905.42	1575.17
55	0.00	0.00	0.00	0.00	182.80	182.80	16722.62	1575.08
54	0.06	0.00	5.81	0.00	180.48	186.29	16539.82	1575.00
53	0.19	0.02	19.41	0.19	174.96	194.56	16353.53	1574.92
52	0.29	0.04	29.40	0.30	170.92	200.62	16158.97	1574.83
51	0.40	0.05	40.36	0.41	166.49	207.27	15958.36	1574.75
50	0.69	0.07	68.72	0.54	155.10	224.36	15751.09	1574.67
49	1.03	0.09	102.83	0.71	141.39	244.92	15526.73	1574.58
48	1.25	0.11	124.95	0.86	132.48	258.29	15281.81	1574.50
47	1.42	0.13	142.22	1.01	125.51	268.74	15023.53	1574.42
46	1.57	0.14	157.31	1.16	119.41	277.88	14754.79	1574.33
45	1.71	0.16	170.72	1.30	113.99	286.01	14476.91	1574.25
44	1.83	0.18	182.85	1.45	109.08	293.38	14190.89	1574.17
43	1.94	0.20	193.78	1.60	104.65	300.03	13897.51	1574.08
42	2.04	0.22	204.08	1.75	100.47	306.30	13597.48	1574.00
41	2.13	0.23	213.47	1.88	96.66	312.01	13291.19	1573.92
40	2.22	0.25	222.42	2.00	93.03	317.46	12979.18	1573.83
39	2.31	0.27	230.68	2.12	89.68	322.48	12661.72	1573.75
38	2.38	0.28	238.48	2.24	86.51	327.23	12339.24	1573.67
37	2.46	0.29	245.91	2.35	83.50	331.76	12012.01	1573.58
36	2.53	0.31	252.82	2.46	80.69	335.97	11680.25	1573.50
35	2.59	0.32	259.37	2.57	78.02	339.97	11344.29	1573.42
34	2.66	0.33	265.61	2.68	75.49	343.77	11004.32	1573.33
33	2.72	0.35	271.51	2.78	73.09	347.37	10660.55	1573.25
32	2.77	0.36	277.13	2.88	70.80	350.81	10313.18	1573.17
31	2.82	0.37	282.47	2.98	68.62	354.07	9962.37	1573.08
30	2.88	0.38	287.55	3.07	66.55	357.17	9608.31	1573.00
29	2.92	0.40	292.41	3.17	64.57	360.15	9251.13	1572.92
28	2.97	0.41	296.99	3.26	62.70	362.95	8890.99	1572.83
27	3.01	0.42	301.25	3.35	60.96	365.56	8528.04	1572.75
26	3.05	0.43	305.33	3.44	59.29	368.06	8162.48	1572.67
25	3.09	0.44	309.43	3.52	57.62	370.57	7794.42	1572.58
24	3.13	0.45	313.06	3.61	56.14	372.80	7423.85	1572.50
23	3.17	0.46	316.57	3.69	54.70	374.95	7051.05	1572.42
22	3.20	0.47	319.95	3.77	53.32	377.03	6676.10	1572.33
21	3.23	0.48	323.11	3.84	52.02	378.97	6299.08	1572.25
20	3.26	0.49	326.14	3.91	50.78	380.83	5920.10	1572.17
19	3.29	0.50	329.03	3.98	49.60	382.61	5539.27	1572.08
18	3.32	0.51	331.80	4.05	48.46	384.31	5156.67	1572.00
17	3.34	0.51	334.41	4.12	47.39	385.92	4772.36	1571.92
16	3.37	0.52	336.86	4.18	46.38	387.42	4386.44	1571.83
15	3.39	0.53	339.25	4.24	45.41	388.89	3999.02	1571.75
14	3.41	0.54	341.45	4.29	44.50	390.25	3610.12	1571.67
13	3.44	0.54	343.70	4.35	43.58	391.63	3219.88	1571.58
12	3.46	0.55	345.77	4.40	42.73	392.90	2828.25	1571.50
11	3.48	0.56	347.87	4.44	41.88	394.19	2435.35	1571.42
10	3.51	0.59	350.51	4.76	40.69	395.96	2041.16	1571.33
9	0.00	0.00	0.00	0.00	182.80	182.80	1645.20	1571.25
8	0.00	0.00	0.00	0.00	182.80	182.80	1462.40	1571.17
7	0.00	0.00	0.00	0.00	182.80	182.80	1279.60	1571.08
6	0.00	0.00	0.00	0.00	182.80	182.80	1096.80	1571.00
5	0.00	0.00	0.00	0.00	182.80	182.80	914.00	1570.92
4	0.00	0.00	0.00	0.00	182.80	182.80	731.20	1570.83
3	0.00	0.00	0.00	0.00	182.80	182.80	548.40	1570.75
2	0.00	0.00	0.00	0.00	182.80	182.80	365.60	1570.67
1	0.00	0.00	0.00	0.00	182.80	182.80	182.80	1570.58

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

Advanced Drainage Systems, Inc.

SiteAssist™
FOR STORMTECH
INSTALLATION INSTRUCTIONS
VISIT OUR APP

24-077 PUBLIC STORAGE

MORENO VALLEY, CA, USA

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

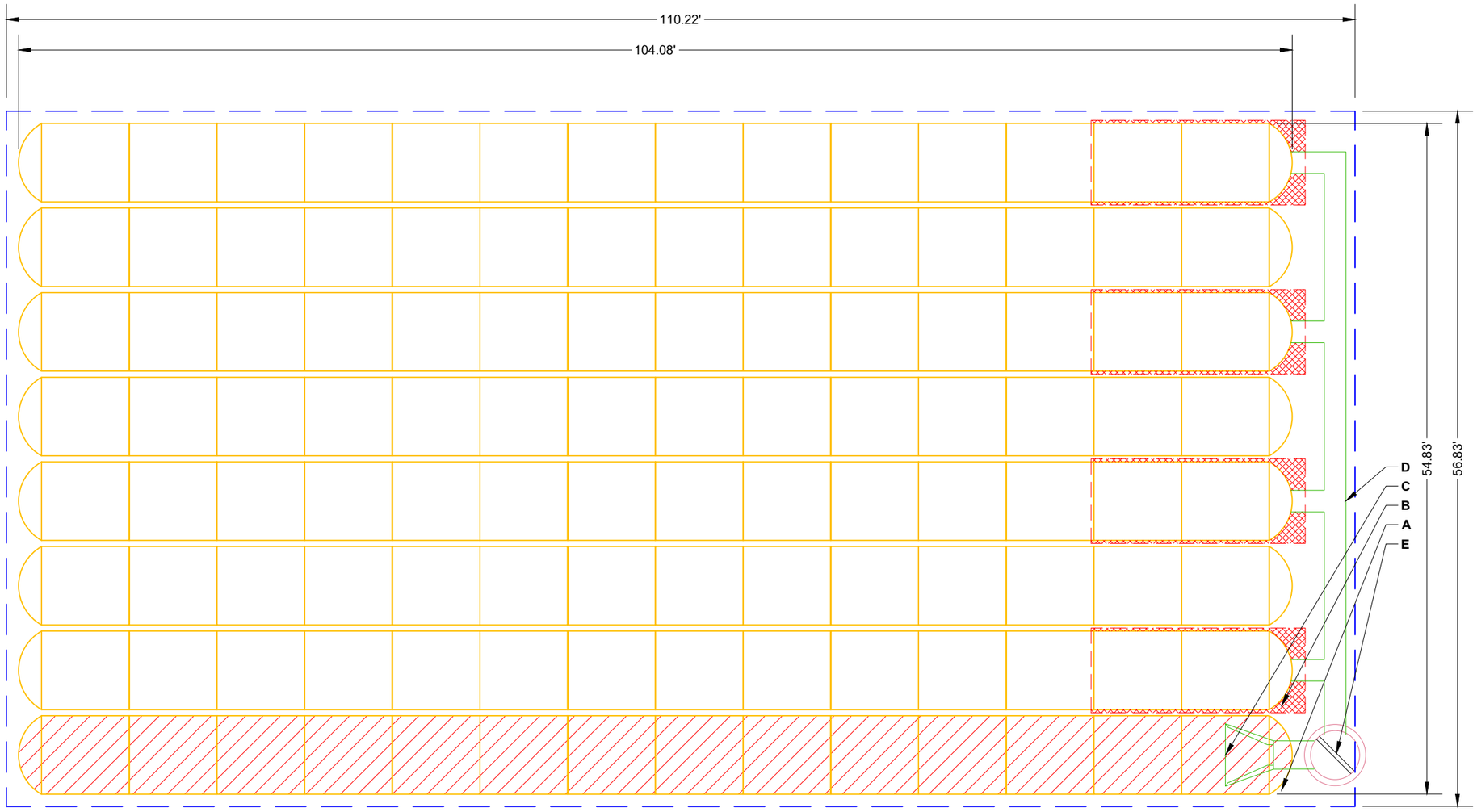
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT		PROPOSED ELEVATIONS:	
112	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	1583.00
16	STORMTECH MC-3500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	1577.00
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	1576.50
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	1576.50
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	1576.50
21313	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	1576.00
		TOP OF MC-3500 CHAMBER:	1575.00
		24" ISOLATOR ROW PLUS INVERT:	1571.42
		18" x 18" BOTTOM MANIFOLD INVERT:	1571.40
6264	SYSTEM AREA (SF)	BOTTOM OF MC-3500 CHAMBER:	1571.25
334.1	SYSTEM PERIMETER (ft)	BOTTOM OF STONE:	1570.50

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP, PART#: MC3500IEPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
PREFABRICATED END CAP	B	18" BOTTOM CORED END CAP, PART#: MC3500IEPP18BC / TYP OF ALL 18" BOTTOM CONNECTIONS	1.77"	
FLAMP	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP		
MANIFOLD	D	18" x 18" BOTTOM MANIFOLD, ADS N-12	1.77"	
CONCRETE STRUCTURE W/WEIR	E	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		20.9 CFS IN



ISOLATOR ROW PLUS
(SEE DETAIL)

PLACE MINIMUM 17.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

24-077 PUBLIC STORAGE
MORENO VALLEY, CA, USA
DATE:
DRAWN: KK
PROJECT #:
CHECKED: N/A

DATE	DRW	CHK	DESCRIPTION

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Chamber System
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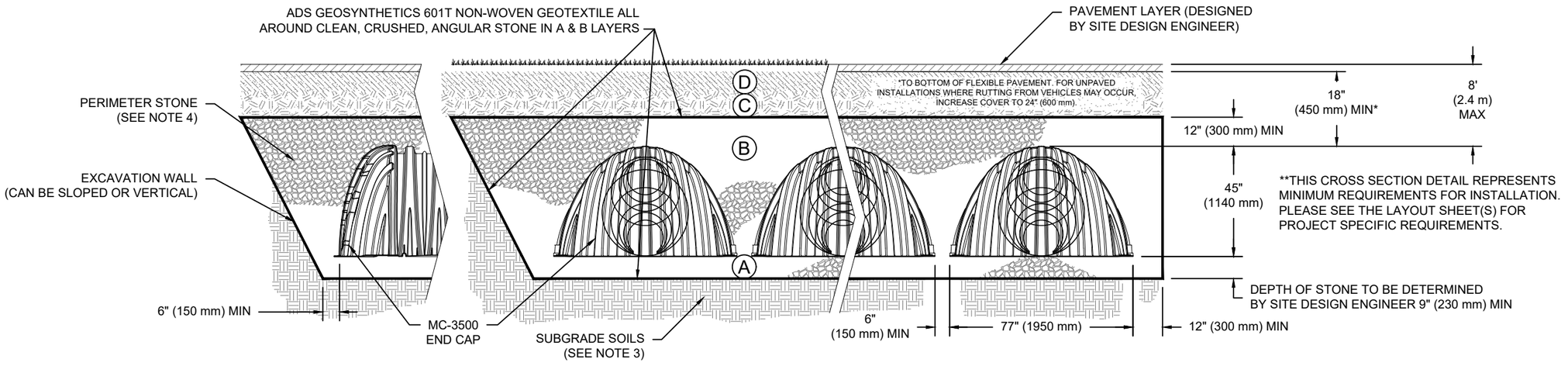
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

0 10 20

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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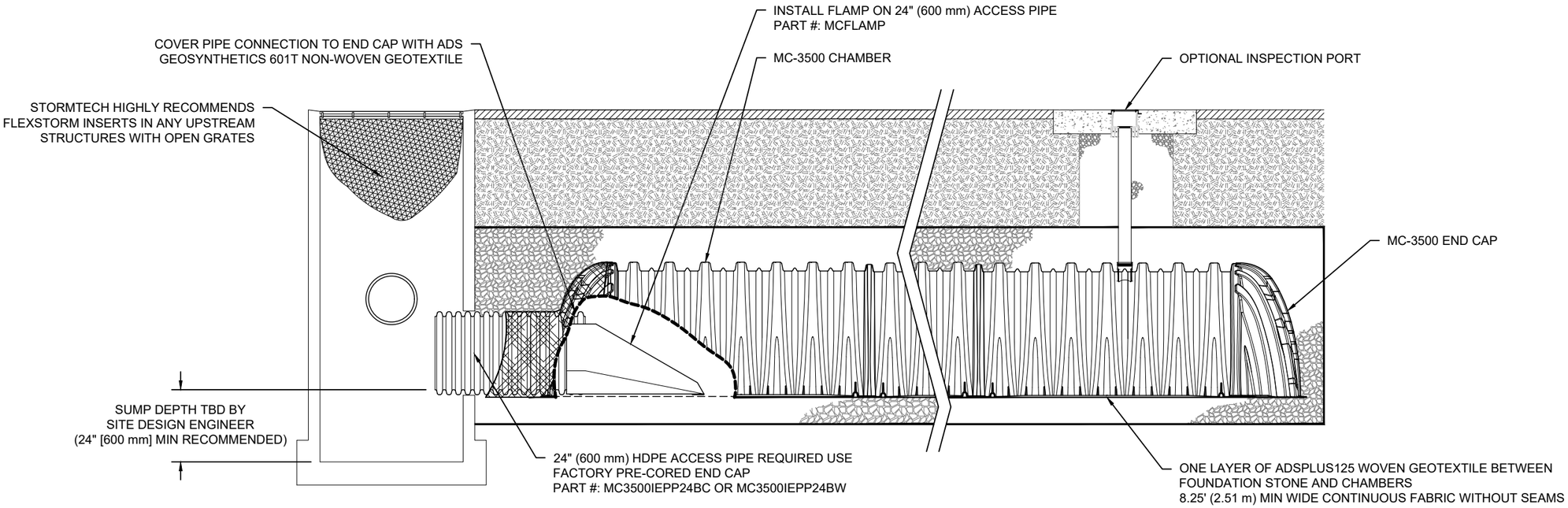

MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

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MC-3500 TECHNICAL SPECIFICATION

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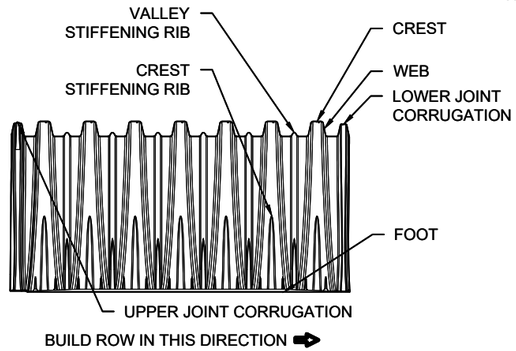
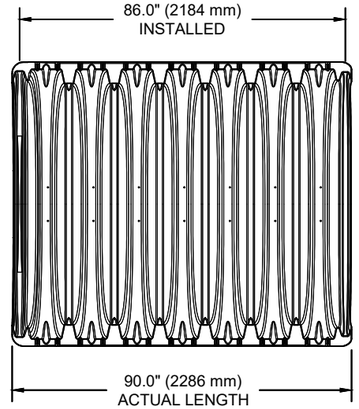
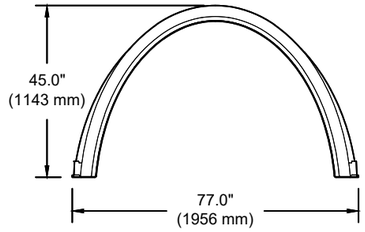
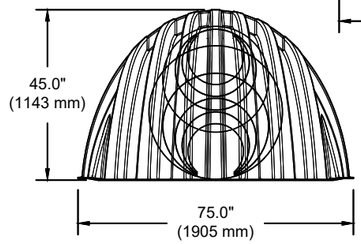
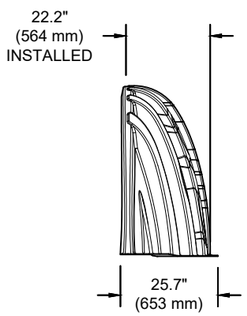










NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

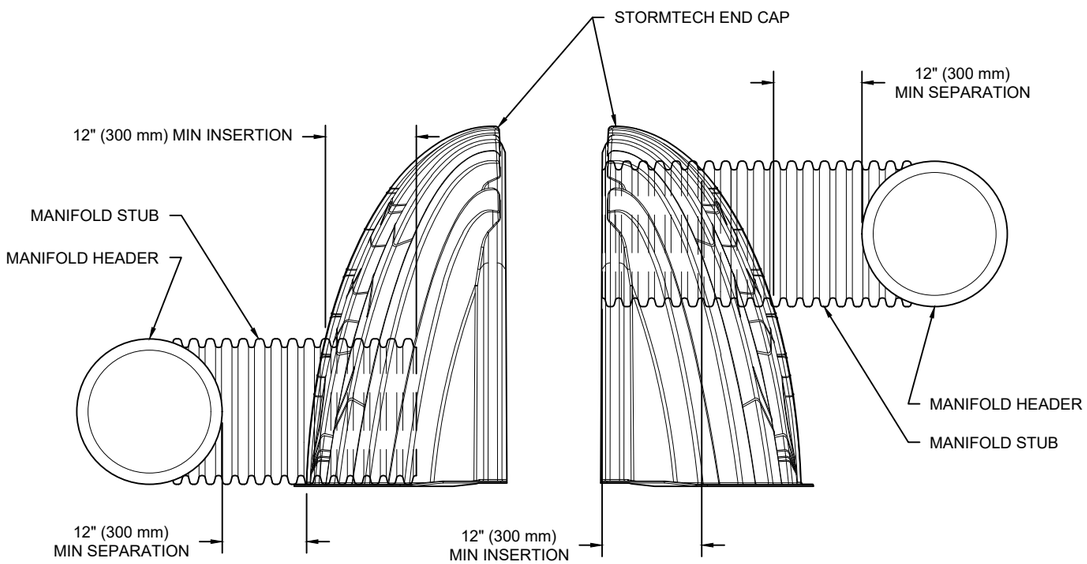
NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

MC-SERIES END CAP INSERTION DETAIL

NTS

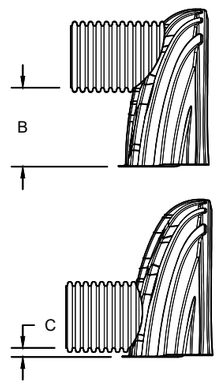


NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

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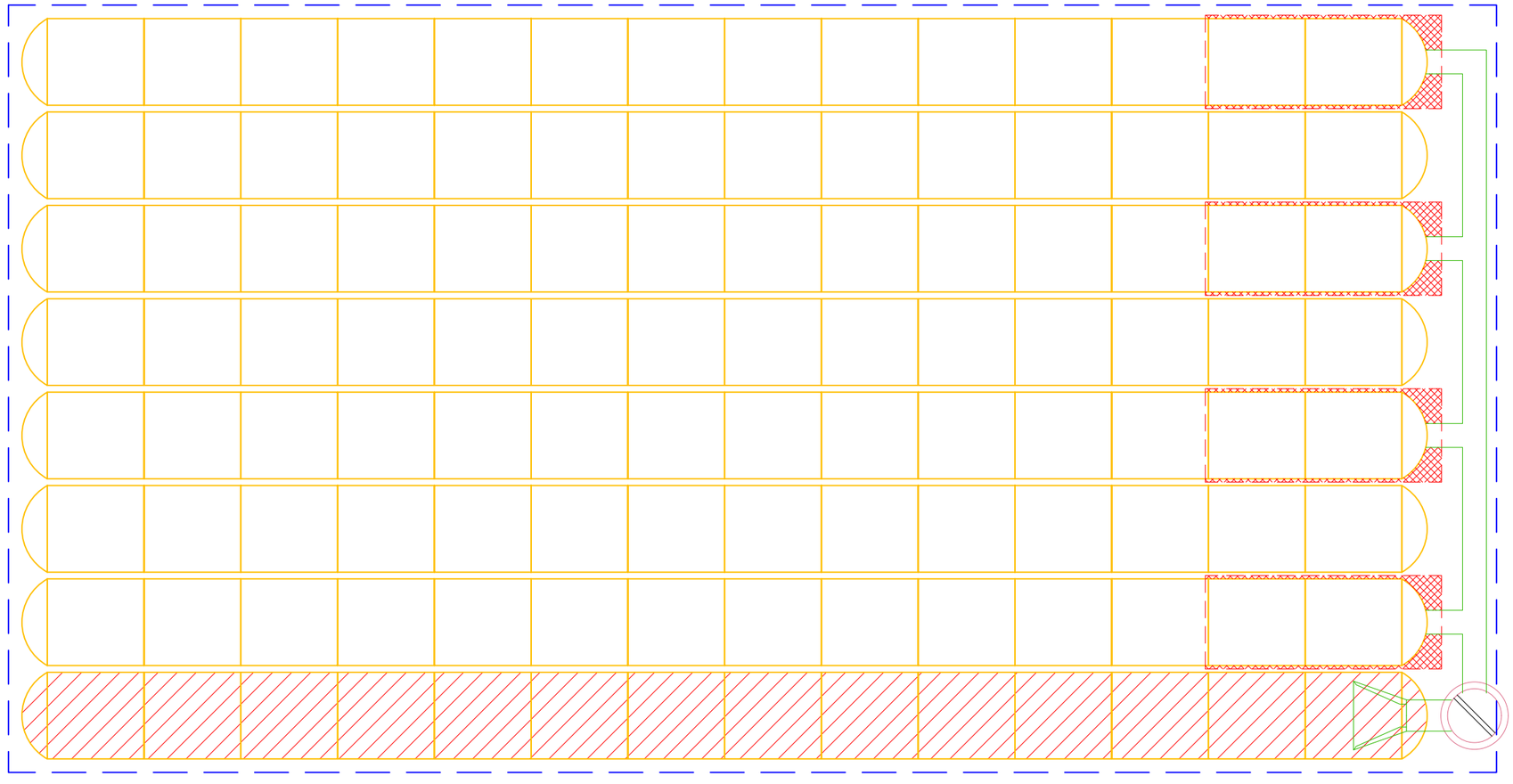

Pond Report

Pond No. 1 - Infiltration Chamber

Pond Data

Pond storage is based on user-defined values.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1570.00	n/a	0	0
0.67	1570.67	n/a	340	340
1.33	1571.33	n/a	1,573	1,913
2.00	1572.00	n/a	3,013	4,926
2.67	1572.67	n/a	2,903	7,830
3.34	1573.34	n/a	2,739	10,569
4.01	1574.01	n/a	2,491	13,060
4.68	1574.68	n/a	2,051	15,111
5.33	1575.35	n/a	1,418	16,529
6.00	1576.00	n/a	1,360	17,889
6.67	1576.67	n/a	1	17,890
7.34	1577.34	n/a	1	17,891
8.01	1578.01	n/a	1	17,892
8.68	1578.68	n/a	1	17,893
9.00	1579.00	n/a	1	17,894
9.25	1579.25	n/a	1	17,895
9.50	1579.50	n/a	1	17,896
9.75	1579.75	n/a	1	17,897
10.00	1580.00	n/a	1	17,898

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 3.00	0.00	0.00	0.00
Crest El. (ft)	= 1579.44	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	1570.00	---	---	---	---	0.00	---	---	---	---	---	0.000
0.07	34	1570.07	---	---	---	---	0.00	---	---	---	---	0.011	0.011
0.13	68	1570.13	---	---	---	---	0.00	---	---	---	---	0.022	0.022
0.20	102	1570.20	---	---	---	---	0.00	---	---	---	---	0.033	0.033
0.27	136	1570.27	---	---	---	---	0.00	---	---	---	---	0.044	0.044
0.34	170	1570.33	---	---	---	---	0.00	---	---	---	---	0.055	0.055
0.40	204	1570.40	---	---	---	---	0.00	---	---	---	---	0.066	0.066
0.47	238	1570.47	---	---	---	---	0.00	---	---	---	---	0.077	0.077
0.54	272	1570.54	---	---	---	---	0.00	---	---	---	---	0.088	0.088
0.60	306	1570.60	---	---	---	---	0.00	---	---	---	---	0.099	0.099
0.67	340	1570.67	---	---	---	---	0.00	---	---	---	---	0.110	0.110
0.74	497	1570.74	---	---	---	---	0.00	---	---	---	---	0.110	0.110
0.80	655	1570.80	---	---	---	---	0.00	---	---	---	---	0.110	0.110
0.87	812	1570.87	---	---	---	---	0.00	---	---	---	---	0.110	0.110
0.93	969	1570.93	---	---	---	---	0.00	---	---	---	---	0.110	0.110
1.00	1,127	1571.00	---	---	---	---	0.00	---	---	---	---	0.111	0.111
1.07	1,284	1571.07	---	---	---	---	0.00	---	---	---	---	0.111	0.111
1.13	1,441	1571.13	---	---	---	---	0.00	---	---	---	---	0.111	0.111
1.20	1,599	1571.20	---	---	---	---	0.00	---	---	---	---	0.111	0.111
1.26	1,756	1571.26	---	---	---	---	0.00	---	---	---	---	0.111	0.111
1.33	1,913	1571.33	---	---	---	---	0.00	---	---	---	---	0.111	0.111
1.40	2,214	1571.40	---	---	---	---	0.00	---	---	---	---	0.111	0.111
1.46	2,516	1571.46	---	---	---	---	0.00	---	---	---	---	0.111	0.111
1.53	2,817	1571.53	---	---	---	---	0.00	---	---	---	---	0.111	0.111
1.60	3,118	1571.60	---	---	---	---	0.00	---	---	---	---	0.111	0.111

Continues on next page...

Infiltration Chamber

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
1.66	3,420	1571.67	---	---	---	---	0.00	---	---	---	---	0.112	0.112
1.73	3,721	1571.73	---	---	---	---	0.00	---	---	---	---	0.112	0.112
1.80	4,022	1571.80	---	---	---	---	0.00	---	---	---	---	0.112	0.112
1.87	4,324	1571.87	---	---	---	---	0.00	---	---	---	---	0.112	0.112
1.93	4,625	1571.93	---	---	---	---	0.00	---	---	---	---	0.112	0.112
2.00	4,926	1572.00	---	---	---	---	0.00	---	---	---	---	0.112	0.112
2.07	5,217	1572.07	---	---	---	---	0.00	---	---	---	---	0.112	0.112
2.13	5,507	1572.13	---	---	---	---	0.00	---	---	---	---	0.112	0.112
2.20	5,797	1572.20	---	---	---	---	0.00	---	---	---	---	0.112	0.112
2.27	6,088	1572.27	---	---	---	---	0.00	---	---	---	---	0.112	0.112
2.34	6,378	1572.33	---	---	---	---	0.00	---	---	---	---	0.113	0.113
2.40	6,668	1572.40	---	---	---	---	0.00	---	---	---	---	0.113	0.113
2.47	6,959	1572.47	---	---	---	---	0.00	---	---	---	---	0.113	0.113
2.54	7,249	1572.54	---	---	---	---	0.00	---	---	---	---	0.113	0.113
2.60	7,539	1572.60	---	---	---	---	0.00	---	---	---	---	0.113	0.113
2.67	7,830	1572.67	---	---	---	---	0.00	---	---	---	---	0.113	0.113
2.74	8,104	1572.74	---	---	---	---	0.00	---	---	---	---	0.113	0.113
2.80	8,378	1572.80	---	---	---	---	0.00	---	---	---	---	0.113	0.113
2.87	8,652	1572.87	---	---	---	---	0.00	---	---	---	---	0.113	0.113
2.94	8,925	1572.94	---	---	---	---	0.00	---	---	---	---	0.113	0.113
3.01	9,199	1573.01	---	---	---	---	0.00	---	---	---	---	0.114	0.114
3.07	9,473	1573.07	---	---	---	---	0.00	---	---	---	---	0.114	0.114
3.14	9,747	1573.14	---	---	---	---	0.00	---	---	---	---	0.114	0.114
3.21	10,021	1573.21	---	---	---	---	0.00	---	---	---	---	0.114	0.114
3.27	10,295	1573.27	---	---	---	---	0.00	---	---	---	---	0.114	0.114
3.34	10,569	1573.34	---	---	---	---	0.00	---	---	---	---	0.114	0.114
3.41	10,818	1573.41	---	---	---	---	0.00	---	---	---	---	0.114	0.114
3.47	11,067	1573.47	---	---	---	---	0.00	---	---	---	---	0.114	0.114
3.54	11,316	1573.54	---	---	---	---	0.00	---	---	---	---	0.114	0.114
3.61	11,565	1573.61	---	---	---	---	0.00	---	---	---	---	0.114	0.114
3.68	11,815	1573.68	---	---	---	---	0.00	---	---	---	---	0.115	0.115
3.74	12,064	1573.74	---	---	---	---	0.00	---	---	---	---	0.115	0.115
3.81	12,313	1573.81	---	---	---	---	0.00	---	---	---	---	0.115	0.115
3.88	12,562	1573.88	---	---	---	---	0.00	---	---	---	---	0.115	0.115
3.94	12,811	1573.94	---	---	---	---	0.00	---	---	---	---	0.115	0.115
4.01	13,060	1574.01	---	---	---	---	0.00	---	---	---	---	0.115	0.115
4.08	13,265	1574.08	---	---	---	---	0.00	---	---	---	---	0.115	0.115
4.14	13,470	1574.14	---	---	---	---	0.00	---	---	---	---	0.115	0.115
4.21	13,675	1574.21	---	---	---	---	0.00	---	---	---	---	0.115	0.115
4.28	13,880	1574.28	---	---	---	---	0.00	---	---	---	---	0.115	0.115
4.35	14,085	1574.34	---	---	---	---	0.00	---	---	---	---	0.116	0.116
4.41	14,291	1574.41	---	---	---	---	0.00	---	---	---	---	0.116	0.116
4.48	14,496	1574.48	---	---	---	---	0.00	---	---	---	---	0.116	0.116
4.55	14,701	1574.55	---	---	---	---	0.00	---	---	---	---	0.116	0.116
4.61	14,906	1574.61	---	---	---	---	0.00	---	---	---	---	0.116	0.116
4.68	15,111	1574.68	---	---	---	---	0.00	---	---	---	---	0.116	0.116
4.75	15,253	1574.74	---	---	---	---	0.00	---	---	---	---	0.116	0.116
4.81	15,395	1574.81	---	---	---	---	0.00	---	---	---	---	0.116	0.116
4.88	15,536	1574.88	---	---	---	---	0.00	---	---	---	---	0.116	0.116
4.94	15,678	1574.94	---	---	---	---	0.00	---	---	---	---	0.116	0.116
5.01	15,820	1575.01	---	---	---	---	0.00	---	---	---	---	0.117	0.117
5.07	15,962	1575.07	---	---	---	---	0.00	---	---	---	---	0.117	0.117
5.14	16,103	1575.14	---	---	---	---	0.00	---	---	---	---	0.117	0.117
5.20	16,245	1575.20	---	---	---	---	0.00	---	---	---	---	0.117	0.117
5.27	16,387	1575.27	---	---	---	---	0.00	---	---	---	---	0.117	0.117
5.33	16,529	1575.35	---	---	---	---	0.00	---	---	---	---	0.117	0.117
5.40	16,665	1575.42	---	---	---	---	0.00	---	---	---	---	0.117	0.117
5.46	16,801	1575.48	---	---	---	---	0.00	---	---	---	---	0.117	0.117
5.53	16,937	1575.55	---	---	---	---	0.00	---	---	---	---	0.117	0.117
5.60	17,073	1575.62	---	---	---	---	0.00	---	---	---	---	0.117	0.117
5.66	17,209	1575.69	---	---	---	---	0.00	---	---	---	---	0.118	0.118
5.73	17,345	1575.75	---	---	---	---	0.00	---	---	---	---	0.118	0.118
5.80	17,481	1575.82	---	---	---	---	0.00	---	---	---	---	0.118	0.118
5.87	17,617	1575.89	---	---	---	---	0.00	---	---	---	---	0.118	0.118
5.93	17,753	1575.95	---	---	---	---	0.00	---	---	---	---	0.118	0.118
6.00	17,889	1576.00	---	---	---	---	0.00	---	---	---	---	0.118	0.118
6.07	17,889	1576.07	---	---	---	---	0.00	---	---	---	---	0.118	0.118
6.13	17,889	1576.13	---	---	---	---	0.00	---	---	---	---	0.118	0.118
6.20	17,889	1576.20	---	---	---	---	0.00	---	---	---	---	0.118	0.118
6.27	17,889	1576.27	---	---	---	---	0.00	---	---	---	---	0.118	0.118
6.34	17,889	1576.33	---	---	---	---	0.00	---	---	---	---	0.119	0.119
6.40	17,889	1576.40	---	---	---	---	0.00	---	---	---	---	0.119	0.119

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Infiltration Chamber

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
6.47	17,890	1576.47	---	---	---	---	0.00	---	---	---	---	0.119	0.119
6.54	17,890	1576.54	---	---	---	---	0.00	---	---	---	---	0.119	0.119
6.60	17,890	1576.60	---	---	---	---	0.00	---	---	---	---	0.119	0.119
6.67	17,890	1576.67	---	---	---	---	0.00	---	---	---	---	0.119	0.119
6.74	17,890	1576.74	---	---	---	---	0.00	---	---	---	---	0.119	0.119
6.80	17,890	1576.80	---	---	---	---	0.00	---	---	---	---	0.119	0.119
6.87	17,890	1576.87	---	---	---	---	0.00	---	---	---	---	0.119	0.119
6.94	17,890	1576.94	---	---	---	---	0.00	---	---	---	---	0.119	0.119
7.01	17,891	1577.01	---	---	---	---	0.00	---	---	---	---	0.120	0.120
7.07	17,891	1577.07	---	---	---	---	0.00	---	---	---	---	0.120	0.120
7.14	17,891	1577.14	---	---	---	---	0.00	---	---	---	---	0.120	0.120
7.21	17,891	1577.21	---	---	---	---	0.00	---	---	---	---	0.120	0.120
7.27	17,891	1577.27	---	---	---	---	0.00	---	---	---	---	0.120	0.120
7.34	17,891	1577.34	---	---	---	---	0.00	---	---	---	---	0.120	0.120
7.41	17,891	1577.41	---	---	---	---	0.00	---	---	---	---	0.120	0.120
7.47	17,891	1577.47	---	---	---	---	0.00	---	---	---	---	0.120	0.120
7.54	17,891	1577.54	---	---	---	---	0.00	---	---	---	---	0.120	0.120
7.61	17,891	1577.61	---	---	---	---	0.00	---	---	---	---	0.120	0.120
7.68	17,892	1577.68	---	---	---	---	0.00	---	---	---	---	0.121	0.121
7.74	17,892	1577.74	---	---	---	---	0.00	---	---	---	---	0.121	0.121
7.81	17,892	1577.81	---	---	---	---	0.00	---	---	---	---	0.121	0.121
7.88	17,892	1577.88	---	---	---	---	0.00	---	---	---	---	0.121	0.121
7.94	17,892	1577.94	---	---	---	---	0.00	---	---	---	---	0.121	0.121
8.01	17,892	1578.01	---	---	---	---	0.00	---	---	---	---	0.121	0.121
8.08	17,892	1578.08	---	---	---	---	0.00	---	---	---	---	0.121	0.121
8.14	17,892	1578.14	---	---	---	---	0.00	---	---	---	---	0.121	0.121
8.21	17,892	1578.21	---	---	---	---	0.00	---	---	---	---	0.121	0.121
8.28	17,892	1578.28	---	---	---	---	0.00	---	---	---	---	0.121	0.121
8.35	17,893	1578.34	---	---	---	---	0.00	---	---	---	---	0.122	0.122
8.41	17,893	1578.41	---	---	---	---	0.00	---	---	---	---	0.122	0.122
8.48	17,893	1578.48	---	---	---	---	0.00	---	---	---	---	0.122	0.122
8.55	17,893	1578.55	---	---	---	---	0.00	---	---	---	---	0.122	0.122
8.61	17,893	1578.61	---	---	---	---	0.00	---	---	---	---	0.122	0.122
8.68	17,893	1578.68	---	---	---	---	0.00	---	---	---	---	0.122	0.122
8.71	17,893	1578.71	---	---	---	---	0.00	---	---	---	---	0.122	0.122
8.74	17,893	1578.74	---	---	---	---	0.00	---	---	---	---	0.122	0.122
8.78	17,893	1578.78	---	---	---	---	0.00	---	---	---	---	0.122	0.122
8.81	17,893	1578.81	---	---	---	---	0.00	---	---	---	---	0.122	0.122
8.84	17,894	1578.84	---	---	---	---	0.00	---	---	---	---	0.123	0.123
8.87	17,894	1578.87	---	---	---	---	0.00	---	---	---	---	0.123	0.123
8.90	17,894	1578.90	---	---	---	---	0.00	---	---	---	---	0.123	0.123
8.94	17,894	1578.94	---	---	---	---	0.00	---	---	---	---	0.123	0.123
8.97	17,894	1578.97	---	---	---	---	0.00	---	---	---	---	0.123	0.123
9.00	17,894	1579.00	---	---	---	---	0.00	---	---	---	---	0.123	0.123
9.02	17,894	1579.03	---	---	---	---	0.00	---	---	---	---	0.123	0.123
9.05	17,894	1579.05	---	---	---	---	0.00	---	---	---	---	0.123	0.123
9.07	17,894	1579.07	---	---	---	---	0.00	---	---	---	---	0.123	0.123
9.10	17,894	1579.10	---	---	---	---	0.00	---	---	---	---	0.123	0.123
9.12	17,895	1579.13	---	---	---	---	0.00	---	---	---	---	0.124	0.124
9.15	17,895	1579.15	---	---	---	---	0.00	---	---	---	---	0.124	0.124
9.17	17,895	1579.18	---	---	---	---	0.00	---	---	---	---	0.124	0.124
9.20	17,895	1579.20	---	---	---	---	0.00	---	---	---	---	0.124	0.124
9.22	17,895	1579.22	---	---	---	---	0.00	---	---	---	---	0.124	0.124
9.25	17,895	1579.25	---	---	---	---	0.00	---	---	---	---	0.124	0.124
9.27	17,895	1579.28	---	---	---	---	0.00	---	---	---	---	---	0.000
9.30	17,895	1579.30	---	---	---	---	0.00	---	---	---	---	---	0.000
9.32	17,895	1579.32	---	---	---	---	0.00	---	---	---	---	---	0.000
9.35	17,895	1579.35	---	---	---	---	0.00	---	---	---	---	---	0.000
9.37	17,896	1579.38	---	---	---	---	0.00	---	---	---	---	---	0.000
9.40	17,896	1579.40	---	---	---	---	0.00	---	---	---	---	---	0.000
9.42	17,896	1579.43	---	---	---	---	0.00	---	---	---	---	---	0.000
9.45	17,896	1579.45	---	---	---	---	0.01	---	---	---	---	---	0.010
9.47	17,896	1579.47	---	---	---	---	0.07	---	---	---	---	---	0.066
9.50	17,896	1579.50	---	---	---	---	0.15	---	---	---	---	---	0.147
9.52	17,896	1579.53	---	---	---	---	0.25	---	---	---	---	---	0.248
9.55	17,896	1579.55	---	---	---	---	0.36	---	---	---	---	---	0.365
9.57	17,896	1579.57	---	---	---	---	0.50	---	---	---	---	---	0.496
9.60	17,896	1579.60	---	---	---	---	0.64	---	---	---	---	---	0.640
9.62	17,897	1579.63	---	---	---	---	0.80	---	---	---	---	---	0.795
9.65	17,897	1579.65	---	---	---	---	0.96	---	---	---	---	---	0.962
9.67	17,897	1579.68	---	---	---	---	1.14	---	---	---	---	---	1.139
9.70	17,897	1579.70	---	---	---	---	1.32	---	---	---	---	---	1.324

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Infiltration Chamber

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
9.72	17,897	1579.72	---	---	---	---	1.52	---	---	---	---	---	1.520
9.75	17,897	1579.75	---	---	---	---	1.72	---	---	---	---	---	1.725
9.77	17,897	1579.78	---	---	---	---	1.94	---	---	---	---	---	1.938
9.80	17,897	1579.80	---	---	---	---	2.16	---	---	---	---	---	2.159
9.82	17,897	1579.82	---	---	---	---	2.39	---	---	---	---	---	2.387
9.85	17,897	1579.85	---	---	---	---	2.62	---	---	---	---	---	2.623
9.87	17,898	1579.88	---	---	---	---	2.87	---	---	---	---	---	2.867
9.90	17,898	1579.90	---	---	---	---	3.12	---	---	---	---	---	3.118
9.92	17,898	1579.93	---	---	---	---	3.38	---	---	---	---	---	3.375
9.95	17,898	1579.95	---	---	---	---	3.64	---	---	---	---	---	3.639
9.97	17,898	1579.97	---	---	---	---	3.91	---	---	---	---	---	3.910
10.00	17,898	1580.00	---	---	---	---	4.19	---	---	---	---	---	4.187

...End

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

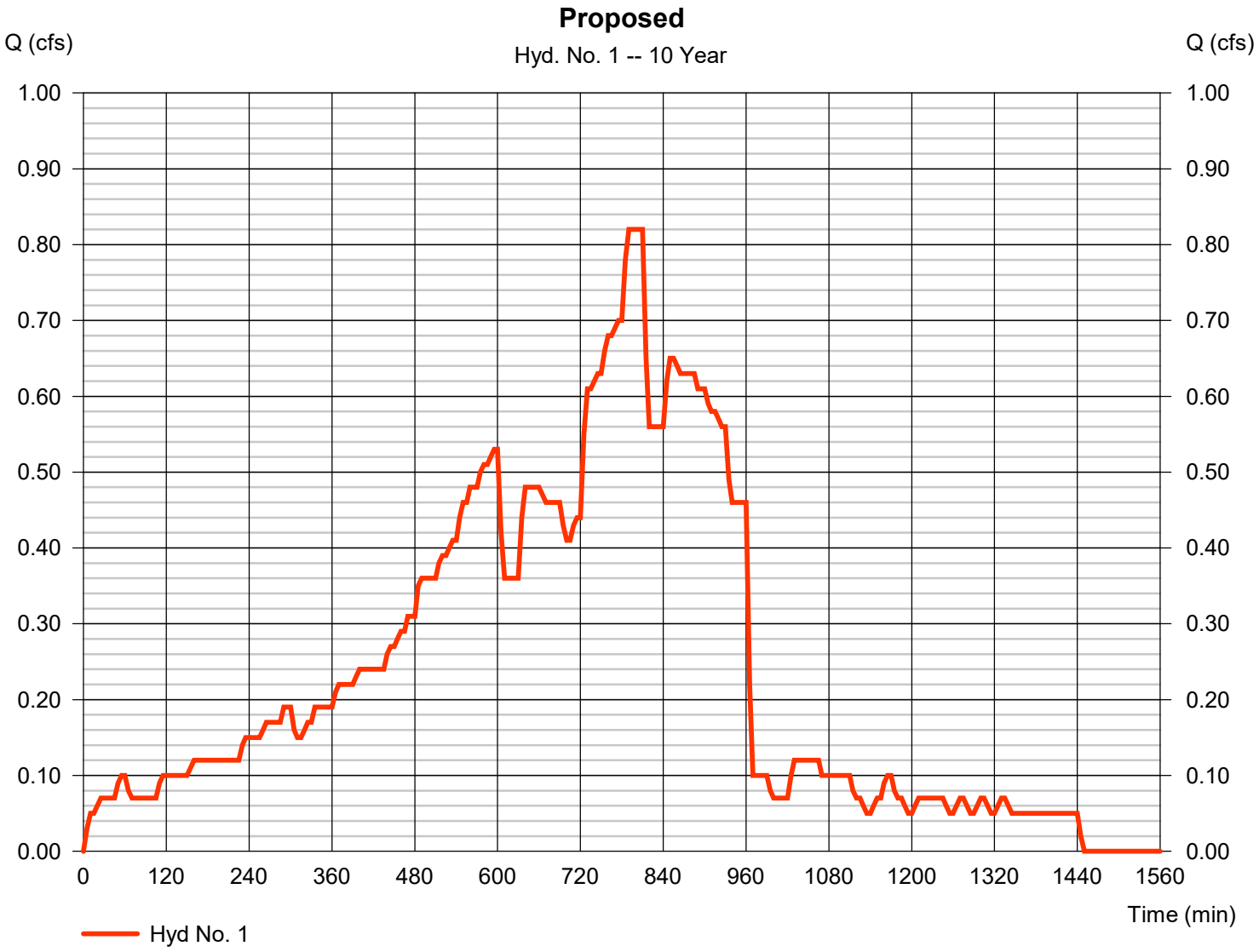
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Manual	0.820	5	790	21,777	------	------	------	Proposed
2	Reservoir	0.115	5	970	21,774	1	1574.26	13,825	Outflow

Hydrograph Report

Hyd. No. 1

Proposed

Hydrograph type	= Manual	Peak discharge	= 0.820 cfs
Storm frequency	= 10 yrs	Time to peak	= 790 min
Time interval	= 5 min	Hyd. volume	= 21,777 cuft



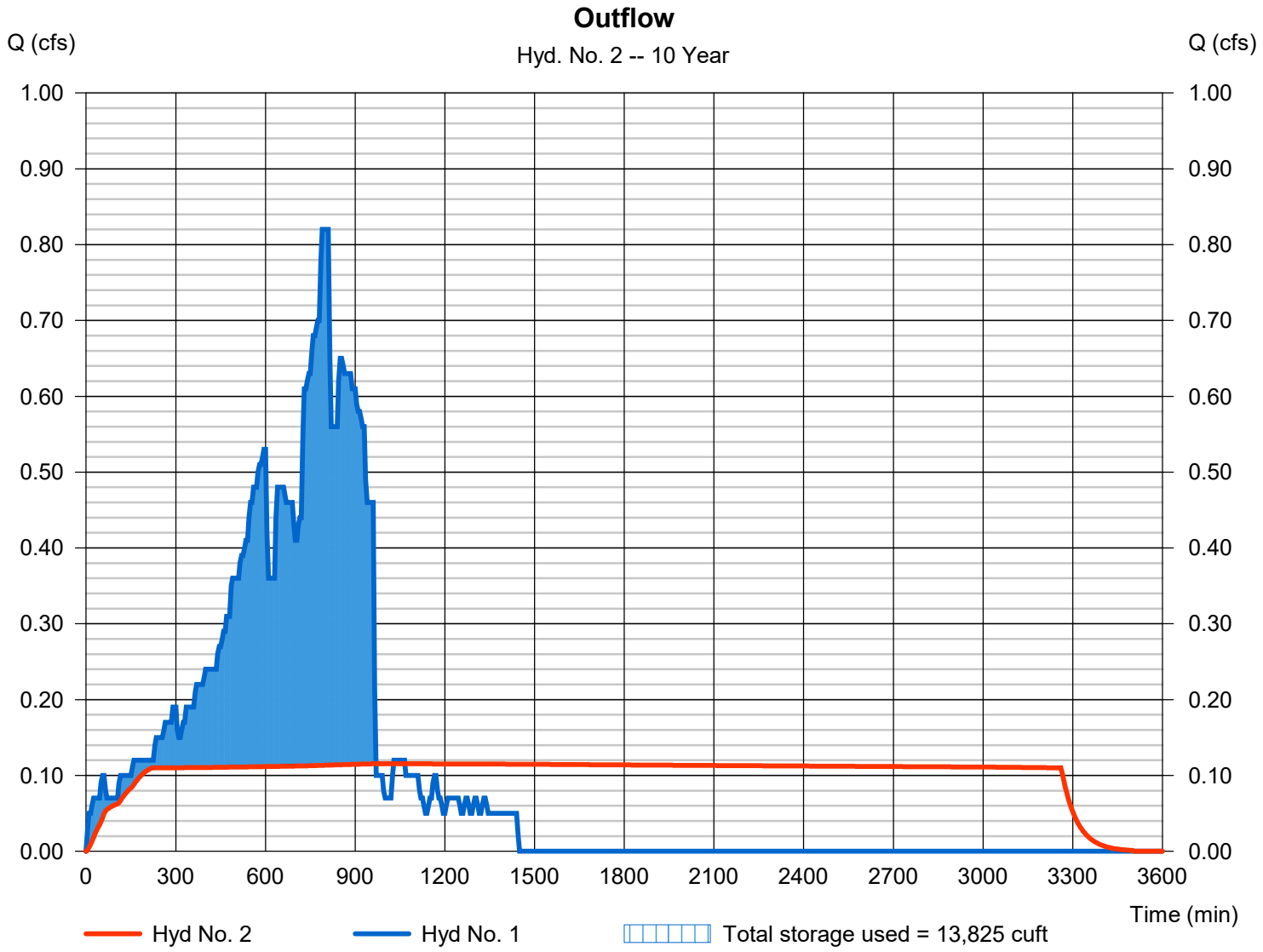
Hydrograph Report

Hyd. No. 2

Outflow

Hydrograph type	=	Reservoir	Peak discharge	=	0.115 cfs
Storm frequency	=	10 yrs	Time to peak	=	970 min
Time interval	=	5 min	Hyd. volume	=	21,774 cuft
Inflow hyd. No.	=	1 - Proposed	Max. Elevation	=	1574.26 ft
Reservoir name	=	Infiltration Chamber	Max. Storage	=	13,825 cuft

Storage Indication method used.



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4

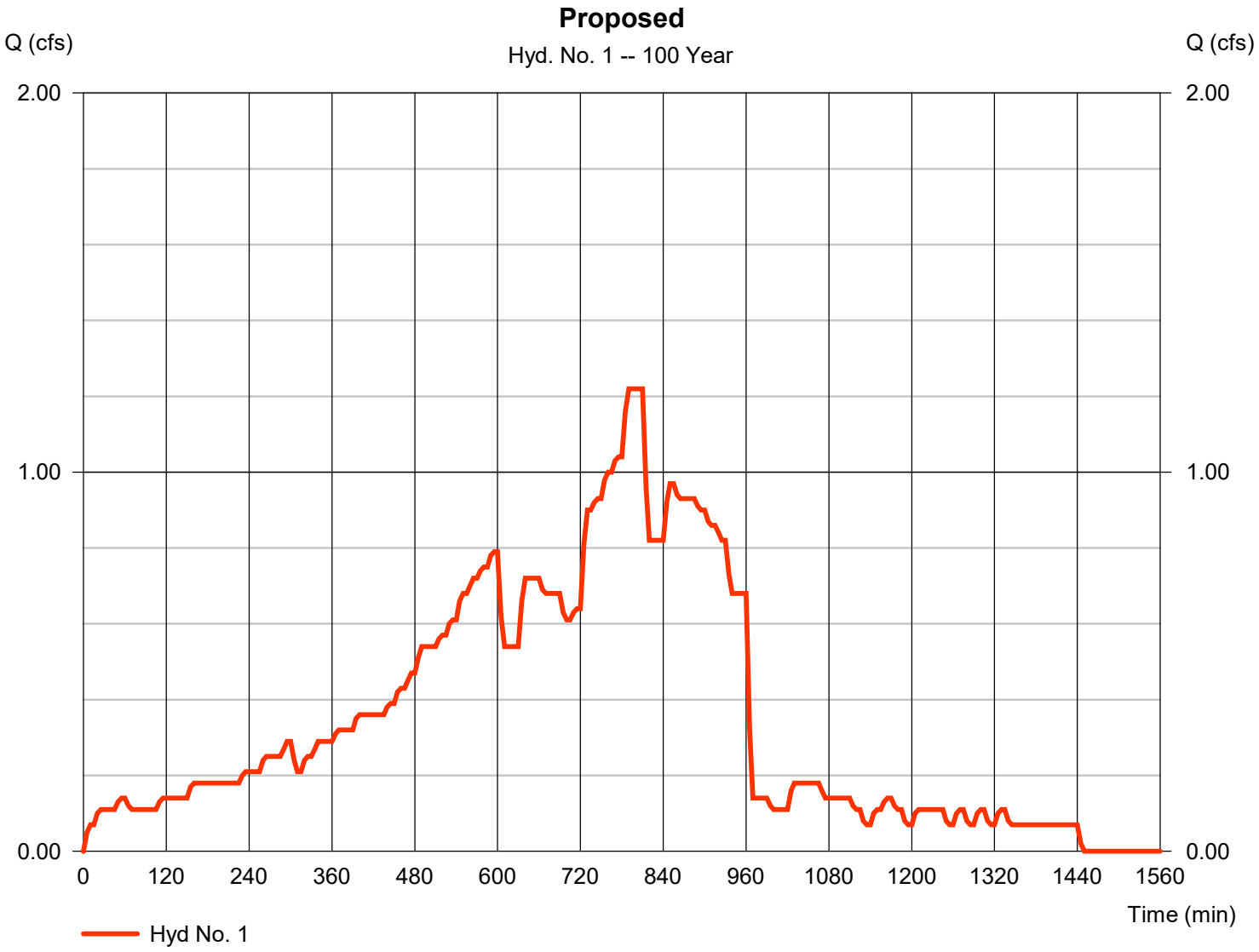
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Manual	1.220	5	790	32,241	------	------	------	Proposed
2	Reservoir	0.999	5	850	32,238	1	1579.66	17,897	Outflow

Hydrograph Report

Hyd. No. 1

Proposed

Hydrograph type	= Manual	Peak discharge	= 1.220 cfs
Storm frequency	= 100 yrs	Time to peak	= 790 min
Time interval	= 5 min	Hyd. volume	= 32,241 cuft



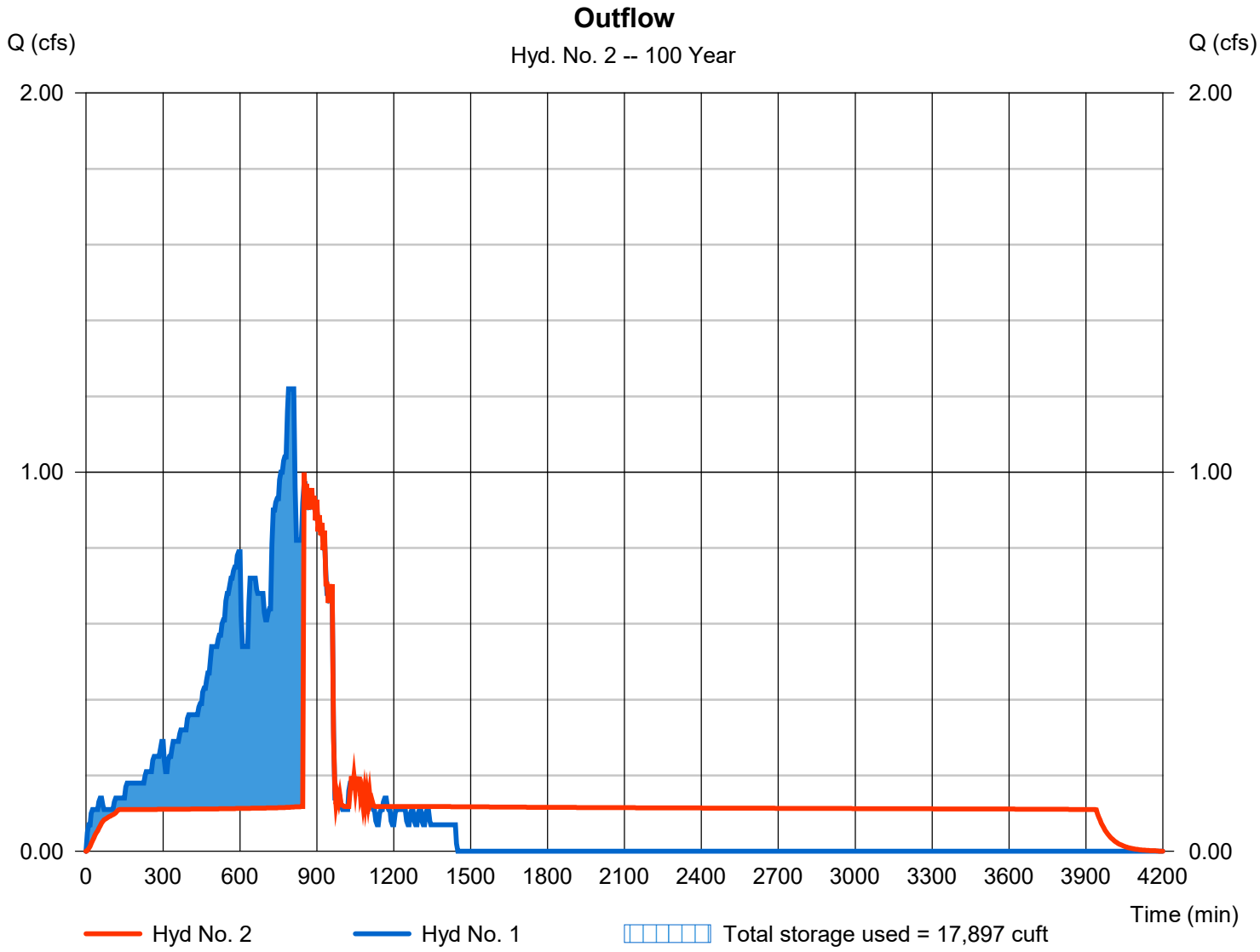
Hydrograph Report

Hyd. No. 2

Outflow

Hydrograph type	=	Reservoir	Peak discharge	=	0.999 cfs
Storm frequency	=	100 yrs	Time to peak	=	850 min
Time interval	=	5 min	Hyd. volume	=	32,238 cuft
Inflow hyd. No.	=	1 - Proposed	Max. Elevation	=	1579.66 ft
Reservoir name	=	Infiltration Chamber	Max. Storage	=	17,897 cuft

Storage Indication method used.



Hydraflow Table of Contents