



ALLARD ENGINEERING

civil engineering land surveying land planning

TPM-20704

**Foothill Blvd & Maple Ave. Apartment
Fontana, CA 92337**

Preliminary Drainage Report

Drainage Study Number: MCN24-0040

August 5, 2024

**Prepared For:
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Discussion

Introduction

This report is for the proposed new development of an apartment complex located in the City of Fontana at the northeast corner of Foothill Blvd. & Maple Ave. which is approximately 8.5 acres. This site is currently in barren condition in pre-developed condition.

The current runoff, which occurs during storm events drains southeast on the existing surface and discharges into the street gutter in Foothill Blvd. which is tributary to the Rialto Channel. In developed condition the site will drain to the proposed Infiltration/Detention Chamber System for low flow infiltration and high flow detention & mitigation of the peak runoff flows from 100-yr, 25-yr, 10-yr & 2-yr storm events. The mitigated runoff flows will drain to the existing catch basin at the southeast corner of the site via the proposed 18" outlet pipe from detention chamber. Also there is a proposed 8" outlet pipe which drain the mitigated flow from lower storm events (2-yr & 10-yr) into the 18" outlet pipe. The mitigated flow will follow the existing storm drain system in Foothill Blvd. and ultimately drain to the Rialto Channel.

Purpose

The purpose of this Preliminary Drainage Report is to assess the existing and future flows that affect the site and provide necessary onsite drainage facilities to safely convey the mitigated peak flow generated from the proposed development into the Foothill Blvd existing gutter which will ultimately conveys to the east into the Rialto Channel.

The purpose of this Drainage Report is to quantify the developed condition runoff and show that the proposed drainage system is adequate to detain the water volume and drain the mitigated runoff flow into the Foothill Blvd. which ultimately drains to the Rialto Channel.

The site is located in FEMA Flood Zone "X" with minimal flood hazard. Refer to the FEMA FIRMette included in the reference material.

The site is located in Hydrologic Soil Group "A" per the USDA Web Soil Survey report also included in the Reference Materials.

There is no offsite run-on into the proposed site.

Guidance and Methodology (Criteria)

The criteria utilized for hydrologic analysis is the San Bernardino County Hydrology Manual and City of Fontana Master Storm Drainage Plan. Rational Method Hydrology was used to quantify flow rates (Developed and Existing condition), CivilDesign software to quantify detention volume (Unit Hydrograph Method) and Flood Routing of the proposed Infiltration/Detention Chamber to mitigate outflow rate. Also, WSPG was utilize to run water surface pressure-gradient analysis of the proposed 8" & 18" outflow line from Infiltration/Detention chamber system. AES software was used to size the proposed storm drains and swales/valley gutters to carry the flow onsite.

Findings

The proposed development will consist of multi-story apartment buildings, community center, swimming pool, parking lot, driveways, sidewalks, paved area, children park and landscape/planters. The existing site condition is considered open brush in fair condition.

In developed condition we have estimated the proposed development (High density dwelling, apartment) will create impervious areas which is about 90% overall of the site.

The primary drainage solution for the site will be an underground Infiltration/Detention chamber system (CMP-1) for low flow (WQ water volume) infiltration and high flow detention. Bottom 2.7' of the CMP-1 (including 1' rock backfill at bottom) will be used for infiltration of the low flow (WQ retention volume) while top 4.8' (including 0.5' rock backfill on top) will be used for high flow detention. Bottom 1.7' of the 6.0 diameter barrels (CMP-1) will be perforated for the low flow (WQ retention volume) for infiltration. When the WQ water volume is achieved, the water from high flow will be detained in the top 4.3' of the 6-ft diameter barrels (Unperforated, solid) of the CMP-1. CMP-1, the Infiltration/Detention chamber system have 8" and 18" outlet pipes those will discharge into the existing catch basin in the Foothill Blvd. at the southeast corner of the site. The Infiltration/Detention chamber system (CMP-1) will mitigate the developed runoff to less than 90% of the existing runoff flow rate. This onsite Infiltration/Detention system (CMP-1) will consist of 6-ft diameter (bottom 1.7' perforated, top 4.3' solid) CMP system (with 12-barrels, 0.5' rock backfill on top, 1.0' rock backfill at bottom & 1' rock backfill on the sides/ends)) located at the center of the site under the parking lot surface.

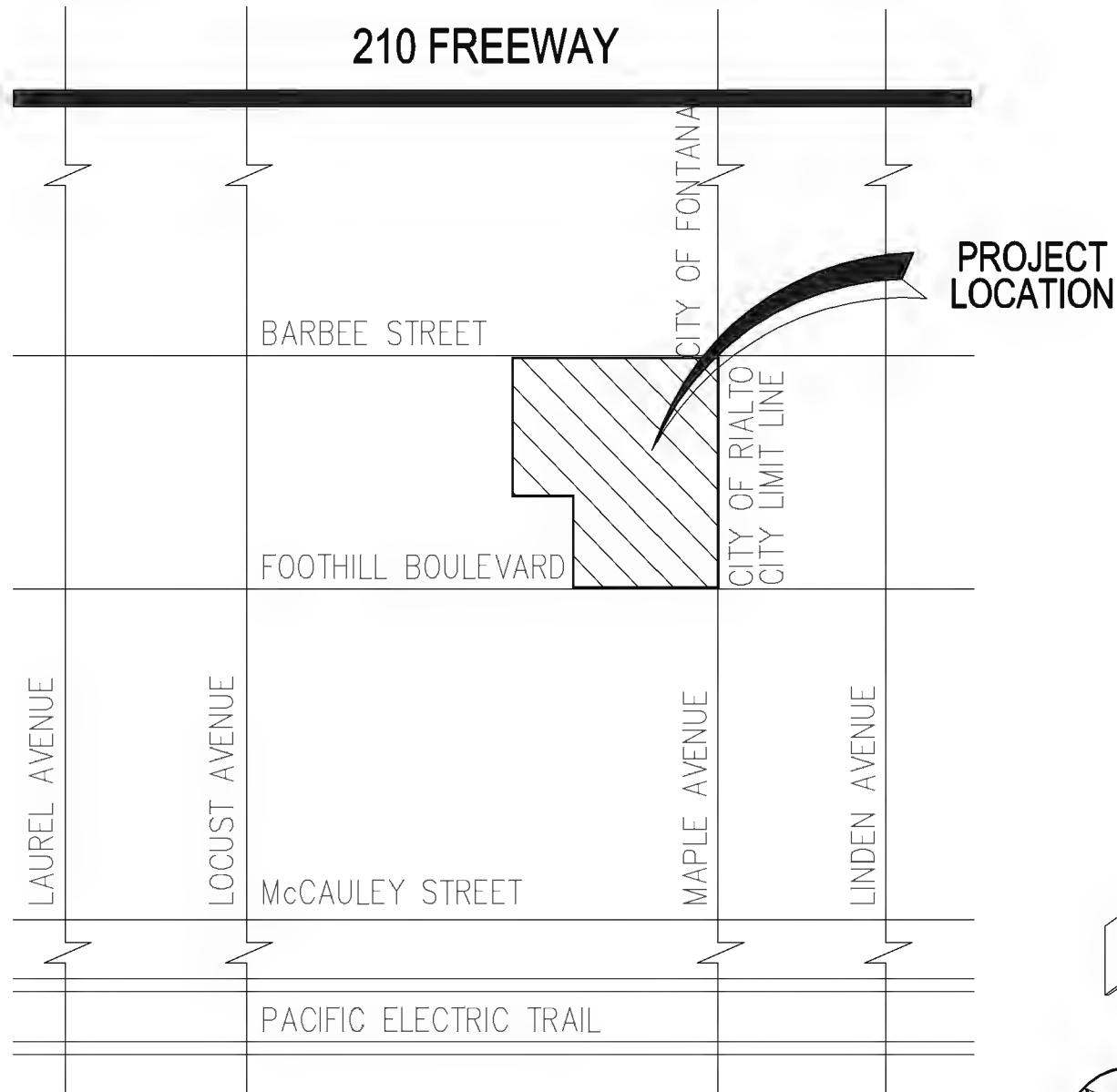
We calculated the runoff flowrate and runoff volume for 100-yr, 25-yr, 10-yr, & 2-yr storm events. Largest Increase in runoff volume and runoff flow rate generated in 100-yr storm event due to the proposed development from its pre-development condition.

Please see below table for the output of the hydrology analysis for 100-yr, 25-yr, 10-yr, 2-yr storm events in pre-developed and developed condition.

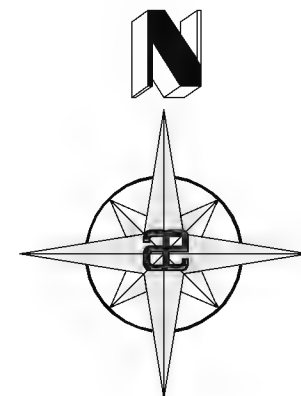
Higher up in the proposed sites watershed are WQMP infiltration basin to treat the water and the overflow will be the drive isles that will convey larger runoff to the said detention system. Ultimately the mitigated runoff will drain down Foothill Blvd. which will drain on surface in Foothill Blvd curb&gutter and then drain to the Rialto Channel.

There are no offsite tributary areas that drain through the property in existing or developed condition. The proposed developed site is consistent with drainage pattern in the area.

Calculations and exhibits are attached to support these findings.



VICINITY
NOT TO SCALE





34.10780, -117.40647

All Magic Paints Body Fontana

Maple Garden Apartments

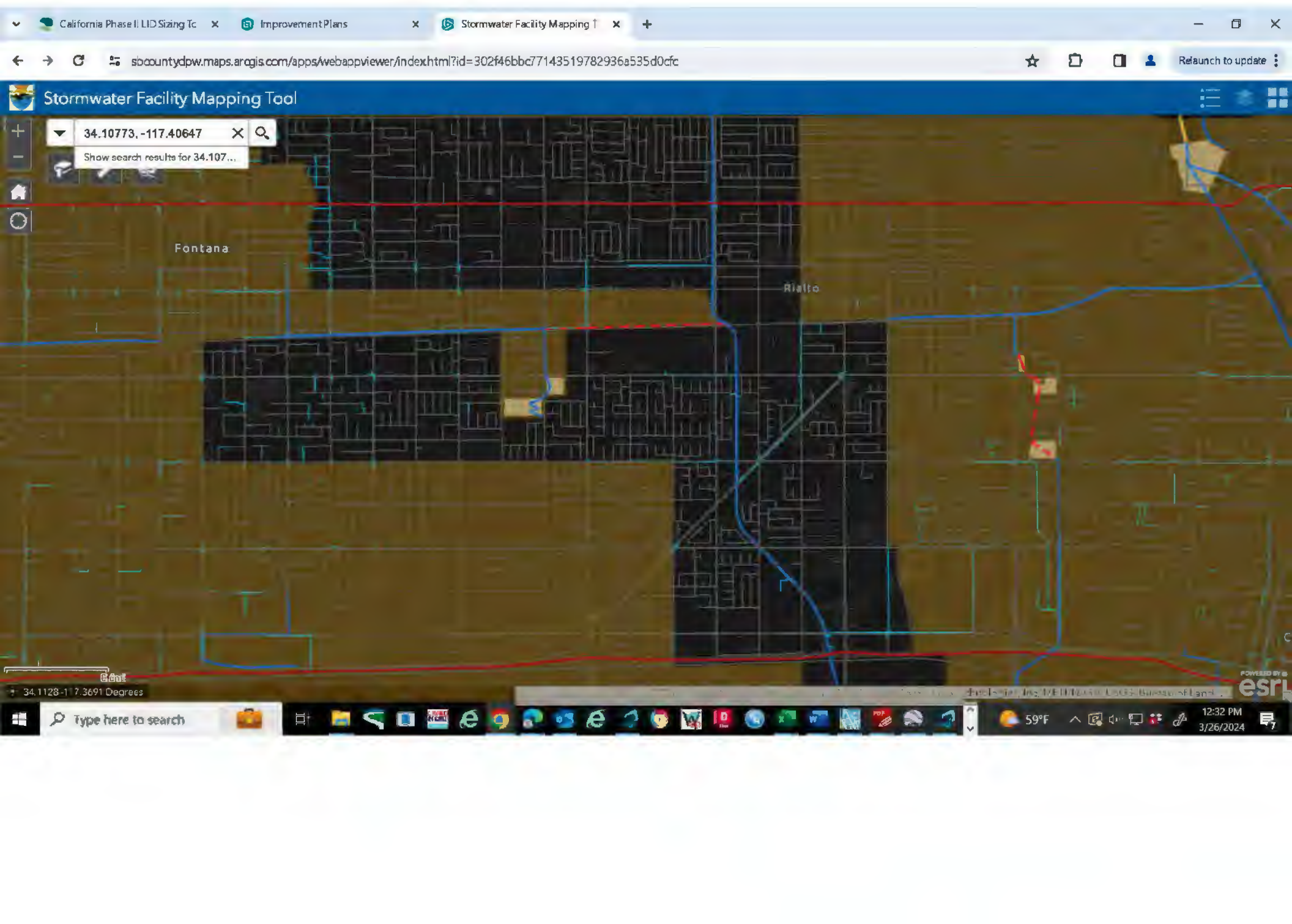
Maple Hill Apartments

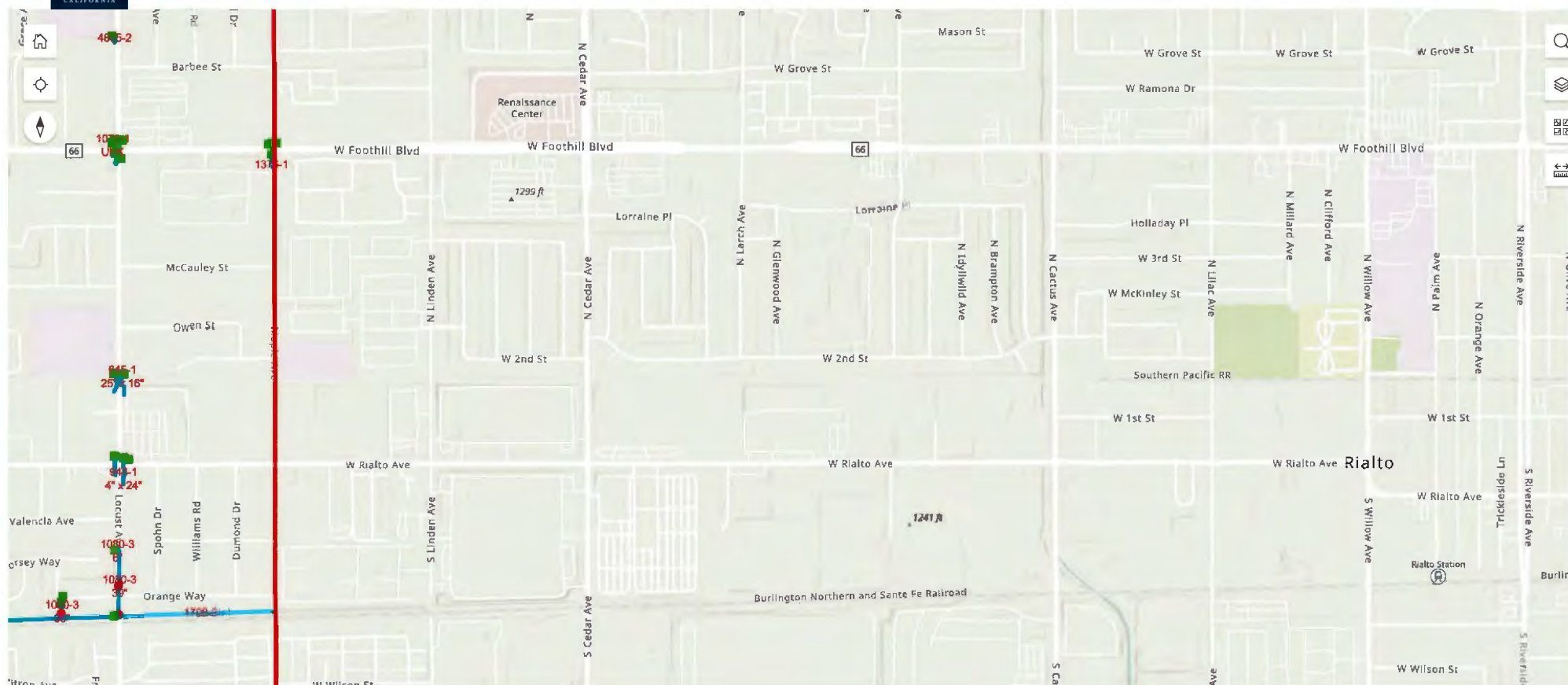
W Foothill Blvd

Google Earth

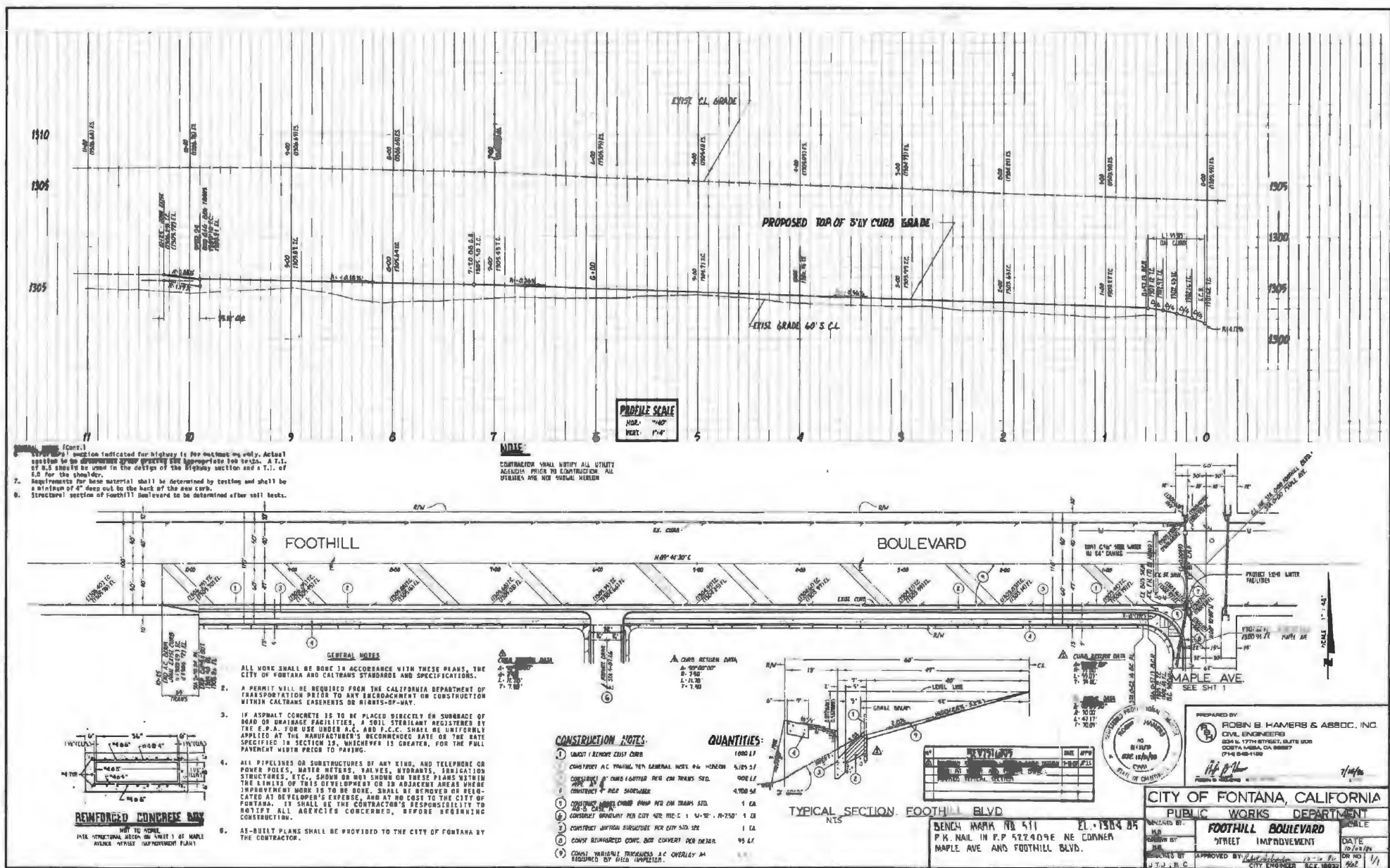
500 ft







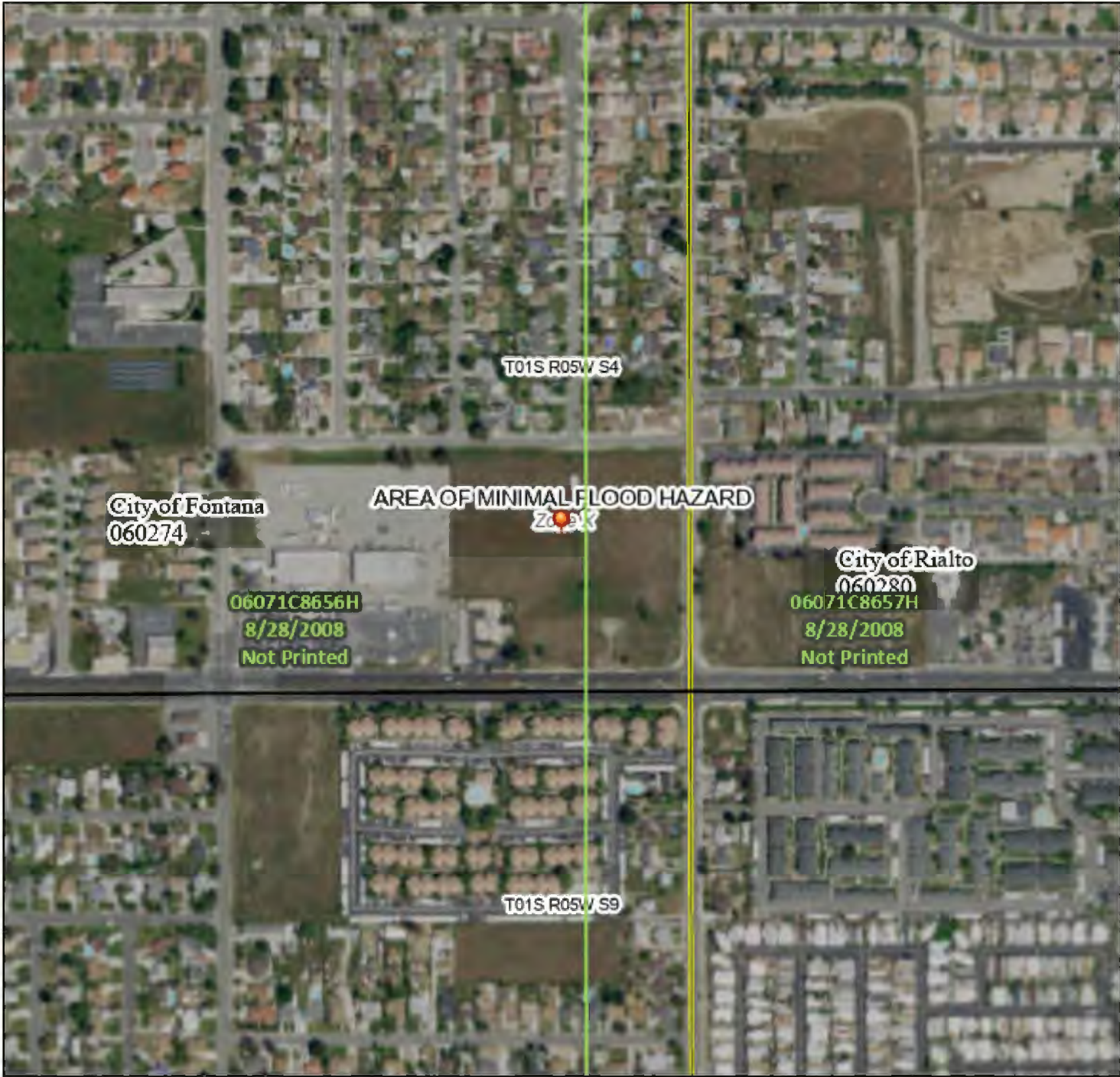




National Flood Hazard Layer FIRMMette



117°24'42"W 34°6'43"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/26/2024 at 4:44 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Best Available Map

Basemap

Measure

Layers

Legend

Zoom to County

Download

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Info

?

-117.40647, 34.10773

Quick Start

Floodplain Information

County: San Bernardino (34.10773, -117.40647)

Floodplain Layer	100-YR	200-YR	500-YR	Last Updated
FEMA Effective	N	N/A	N	View Data
DWR Awareness	N	N/A	N/A	Sept 27, 2012
Regional/Special Studies	N	N/A	N	Jan 07, 2008
USACE Comp. Study	N	N	N	Dec 20, 2002

View Data Layer Definitions

Y: The location is within the floodplain
N: The location is not within the floodplain
N/A: Data not available
✓ = Active Layer(s)

Data Layer Information

Flood Related Links

Sponsors

County: San Bernardino (34.10773, -117.40647)				
Floodplain Layer	100-YR	200-YR	500-YR	Last Updated
FEMA Effective	N	N/A	N	View Data
DWR Awareness	N	N/A	N/A	Sept 27, 2012
Regional/Special Studies	N	N/A	N	Jan 07, 2008
USACE Comp. Study	N	N	N	Dec 20, 2002
View Data Layer Definitions				
Y: The location is within the floodplain				
N: The location is not within the floodplain				
N/A: Data not available				
✓ = Active Layer(s)				

Layers

- 100-Year Floodplains
- 200-Year Floodplains
- 500-Year Floodplains
- County Boundary
- Federal Levee Centerline



NOAA Atlas 14, Volume 6, Version 2
Location name: Fontana, California, USA*
Latitude: 34.1078°, Longitude: -117.4065°
Elevation: m/ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

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

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.124 (0.104-0.151)	0.162 (0.135-0.197)	0.212 (0.176-0.259)	0.254 (0.209-0.312)	0.312 (0.248-0.396)	0.357 (0.278-0.464)	0.404 (0.306-0.538)	0.454 (0.334-0.622)	0.523 (0.369-0.748)	0.578 (0.394-0.858)
10-min	0.178 (0.148-0.216)	0.232 (0.193-0.282)	0.304 (0.252-0.371)	0.364 (0.299-0.447)	0.447 (0.355-0.568)	0.512 (0.398-0.665)	0.579 (0.439-0.772)	0.650 (0.479-0.892)	0.749 (0.529-1.07)	0.829 (0.565-1.23)
15-min	0.215 (0.179-0.261)	0.281 (0.234-0.341)	0.368 (0.305-0.449)	0.440 (0.362-0.541)	0.540 (0.429-0.687)	0.619 (0.481-0.804)	0.700 (0.531-0.933)	0.786 (0.579-1.08)	0.906 (0.640-1.30)	1.00 (0.683-1.49)
30-min	0.322 (0.268-0.391)	0.420 (0.350-0.511)	0.551 (0.457-0.671)	0.659 (0.542-0.809)	0.808 (0.642-1.03)	0.926 (0.720-1.20)	1.05 (0.794-1.40)	1.18 (0.866-1.61)	1.36 (0.957-1.94)	1.50 (1.02-2.22)
60-min	0.480 (0.400-0.582)	0.626 (0.521-0.760)	0.820 (0.680-0.999)	0.981 (0.807-1.20)	1.20 (0.956-1.53)	1.38 (1.07-1.79)	1.56 (1.18-2.08)	1.75 (1.29-2.40)	2.02 (1.42-2.89)	2.23 (1.52-3.31)
2-hr	0.715 (0.596-0.868)	0.926 (0.770-1.12)	1.20 (0.997-1.46)	1.43 (1.18-1.76)	1.74 (1.38-2.21)	1.98 (1.54-2.57)	2.22 (1.68-2.96)	2.48 (1.82-3.40)	2.83 (2.00-4.05)	3.10 (2.12-4.60)
3-hr	0.905 (0.753-1.10)	1.17 (0.971-1.42)	1.51 (1.25-1.84)	1.79 (1.47-2.20)	2.17 (1.72-2.76)	2.46 (1.91-3.19)	2.75 (2.09-3.67)	3.06 (2.25-4.20)	3.48 (2.45-4.98)	3.81 (2.59-5.64)
6-hr	1.31 (1.09-1.59)	1.69 (1.41-2.06)	2.18 (1.81-2.66)	2.58 (2.12-3.17)	3.11 (2.47-3.95)	3.51 (2.73-4.56)	3.92 (2.97-5.22)	4.33 (3.19-5.94)	4.89 (3.45-7.00)	5.33 (3.63-7.90)
12-hr	1.77 (1.47-2.15)	2.29 (1.91-2.78)	2.96 (2.45-3.60)	3.49 (2.87-4.28)	4.19 (3.33-5.32)	4.71 (3.66-6.12)	5.24 (3.97-6.98)	5.77 (4.25-7.91)	6.48 (4.57-9.27)	7.02 (4.78-10.4)
24-hr	2.40 (2.13-2.77)	3.14 (2.78-3.62)	4.08 (3.60-4.72)	4.82 (4.22-5.62)	5.79 (4.91-6.98)	6.52 (5.41-8.02)	7.24 (5.86-9.12)	7.96 (6.27-10.3)	8.91 (6.74-12.0)	9.63 (7.04-13.4)
2-day	2.93 (2.60-3.38)	3.92 (3.46-4.52)	5.18 (4.56-5.99)	6.19 (5.42-7.22)	7.54 (6.39-9.09)	8.57 (7.11-10.5)	9.60 (7.78-12.1)	10.6 (8.39-13.8)	12.1 (9.12-16.3)	13.1 (9.61-18.3)

3-day	3.14 (2.78-3.61)	4.26 (3.77-4.91)	5.73 (5.05-6.63)	6.93 (6.06-8.08)	8.57 (7.26-10.3)	9.84 (8.16-12.1)	11.1 (9.02-14.0)	12.5 (9.83-16.2)	14.3 (10.8-19.3)	15.8 (11.5-22.0)
4-day	3.36 (2.97-3.87)	4.61 (4.07-5.32)	6.26 (5.52-7.24)	7.62 (6.67-8.89)	9.50 (8.05-11.5)	11.0 (9.10-13.5)	12.5 (10.1-15.7)	14.1 (11.1-18.2)	16.3 (12.3-21.9)	18.0 (13.2-25.1)
7-day	3.83 (3.39-4.41)	5.32 (4.70-6.13)	7.29 (6.43-8.43)	8.93 (7.81-10.4)	11.2 (9.48-13.5)	13.0 (10.8-16.0)	14.8 (12.0-18.7)	16.8 (13.2-21.7)	19.5 (14.7-26.3)	21.6 (15.8-30.2)
10-day	4.15 (3.68-4.78)	5.80 (5.13-6.69)	8.00 (7.05-9.25)	9.83 (8.60-11.5)	12.4 (10.5-14.9)	14.4 (11.9-17.7)	16.5 (13.4-20.8)	18.7 (14.7-24.2)	21.8 (16.5-29.4)	24.2 (17.7-33.8)
20-day	5.00 (4.42-5.76)	7.04 (6.23-8.12)	9.80 (8.65-11.3)	12.1 (10.6-14.1)	15.4 (13.0-18.5)	18.0 (14.9-22.1)	20.7 (16.8-26.1)	23.7 (18.6-30.6)	27.8 (21.0-37.5)	31.1 (22.8-43.4)
30-day	5.87 (5.19-6.76)	8.28 (7.32-9.55)	11.6 (10.2-13.4)	14.3 (12.5-16.7)	18.3 (15.5-22.0)	21.4 (17.8-26.4)	24.8 (20.1-31.2)	28.4 (22.4-36.8)	33.5 (25.4-45.2)	37.7 (27.6-52.7)
45-day	7.01 (6.20-8.08)	9.82 (8.69-11.3)	13.7 (12.1-15.8)	17.0 (14.9-19.8)	21.7 (18.4-26.1)	25.5 (21.1-31.3)	29.6 (23.9-37.2)	34.0 (26.8-44.0)	40.3 (30.5-54.4)	45.6 (33.3-63.6)
60-day	8.18 (7.24-9.43)	11.4 (10.0-13.1)	15.7 (13.9-18.2)	19.5 (17.0-22.7)	24.9 (21.1-30.0)	29.3 (24.3-36.0)	34.0 (27.5-42.8)	39.2 (30.9-50.7)	46.6 (35.3-62.9)	52.8 (38.6-73.7)

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

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

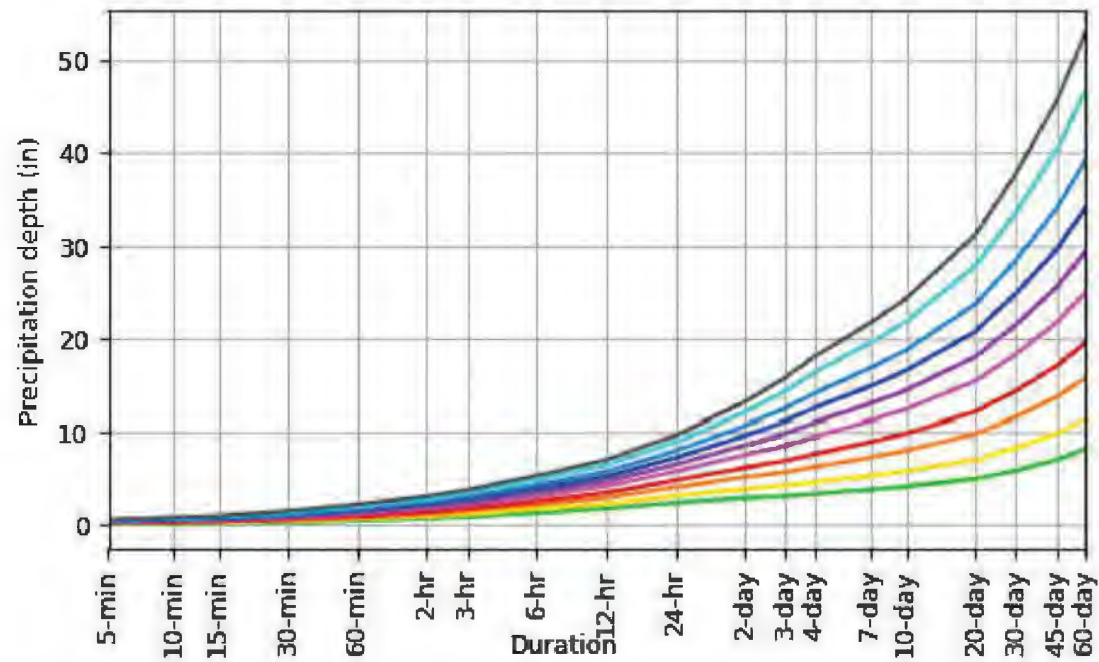
Please refer to NOAA Atlas 14 document for more information.

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PF graphical

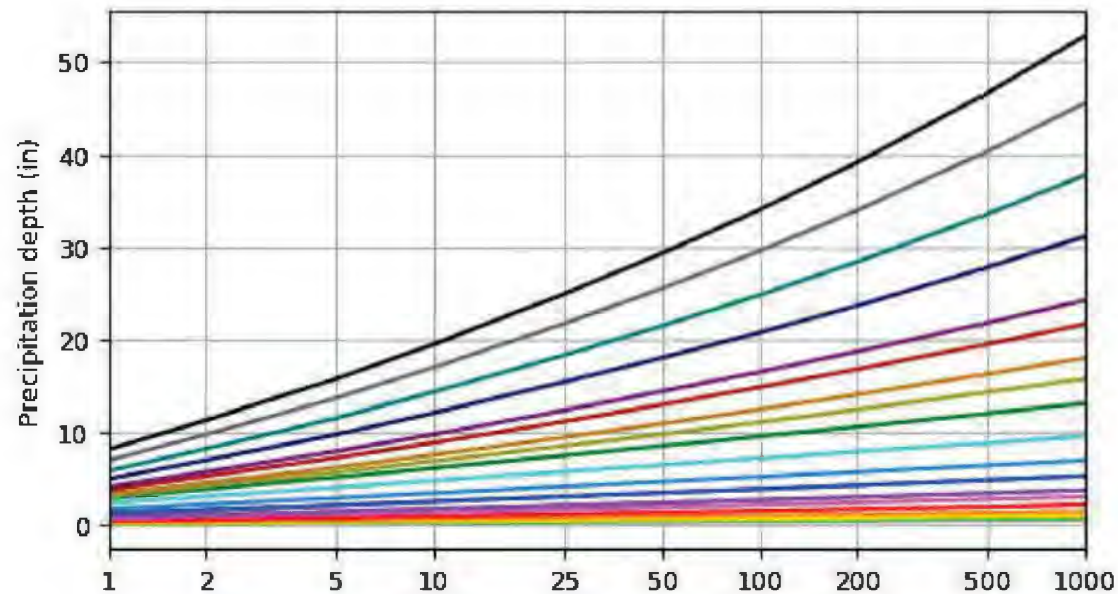
PDS-based depth-duration-frequency (DDF) curves

Latitude: 34.1078°, Longitude: -117.4065°



Average recurrence interval (years)

- 1
- 2
- 5
- 10
- 25
- 50
- 100
- 200
- 500
- 1000



Duration

- 5-min
- 10-min
- 15-min
- 30-min
- 60-min
- 2-hr
- 3-hr
- 6-hr
- 12-hr
- 24-hr
- 2-day
- 3-day
- 4-day
- 7-day
- 10-day
- 20-day
- 30-day
- 45-day
- 60-day

Average recurrence interval (years)

NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Wed Feb 7 20:02:37 2024

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Maps & aerals

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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Curve (I) Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group			
		A	B	C	D
<u>NATURAL COVERS -</u>					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparral, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparral, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	71	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent.)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	25	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
<u>URBAN COVERS -</u>					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
<u>AGRICULTURAL COVERS -</u>					
Fallow (Land plowed but not tilled or seeded)		77	86	91	94

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

**CURVE NUMBERS
FOR
PERVIOUS AREAS**

Curve (1) Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group			
		A	B	C	D
<u>AGRICULTURAL COVERS</u> (Continued)					
Legumes, Close Seeded (Alfalfa, sweetclover, timothy, etc.)	Poor	66	77	85	89
	Good	58	72	81	85
Orchards, Evergreen (Citrus, avocados, etc.)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
Pasture, Dryland (Annual grasses)	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Pasture, Irrigated (Legumes and perennial grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
Row Crops (Field crops - tomatoes, sugar beets, etc.)	Poor	72	81	88	91
	Good	67	78	85	89
Small grain (Wheat, oats, barley, etc.)	Poor	65	76	84	88
	Good	63	75	83	87

Notes:

1. All curve numbers are for Antecedent Moisture Condition (AMC) II.
2. Quality of cover definitions:

 Poor-Heavily grazed, regularly burned areas, or areas of high burn potential. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.

 Fair-Moderate cover with 50 percent to 75 percent of the ground surface protected.

 Good-Heavy or dense cover with more than 75 percent of the ground surface protected.
3. See Figure C-2 for definition of cover types.

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

**CURVE NUMBERS
FOR
PERVIOUS AREAS**

ACTUAL IMPERVIOUS COVER

Land Use (1)	Range-Percent	Recommended Value For Average Conditions-Percent (2)
Natural or Agriculture	0 - 0	0
Public Park	10 - 25	15
School	30 - 50	40
Single Family Residential: (3)		
2.5 acre lots	5 - 15	10
1 acre lots	10 - 25	20
2 dwellings/acre	20 - 40	30
3-4 dwellings/acre	30 - 50	40
5-7 dwellings/acre	35 - 55	50
8-10 dwellings/acre	50 - 70	60
More than 10 dwellings/acre	65 - 90	80
Multiple Family Residential:		
Condominiums	45 - 70	65
Apartments	65 - 90	80
Mobile Home Park	60 - 85	75
Commercial, Downtown Business or Industrial	80 - 100	90

Notes:

1. Land use should be based on ultimate development of the watershed. Long range master plans for the County and incorporated cities should be reviewed to insure reasonable land use assumptions.
2. Recommended values are based on average conditions which may not apply to a particular study area. The percentage impervious may vary greatly even on comparable sized lots due to differences in dwelling size, improvements, etc. Landscape practices should also be considered as it is common in some areas to use ornamental gravels underlain by impervious plastic materials in place of lawns and shrubs. A field investigation of a study area shall always be made, and a review of aerial photos, where available, may assist in estimating the percentage of impervious cover in developed areas.
3. For typical equestrian subdivisions increase impervious area 5 percent over the values recommended in the table above.

SAN BERNARDINO COUNTY
HYDROLOGY MANUAL

**ACTUAL IMPERVIOUS COVER
FOR
DEVELOPED AREAS**

C.5. ANTECEDENT MOISTURE CONDITION (AMC)

The definitions for the AMC classifications are:

AMC I: Lowest runoff potential. The watershed soils are dry enough to allow satisfactory grading or cultivation to take place.

AMC II: Moderate runoff potential; an average study condition.

AMC III: Highest runoff potential. The watershed is practically saturated from antecedent rains. Heavy rainfall or light rainfall and low temperatures have occurred within the last five days.

For runoff hydrograph studies based on this manual it is assumed that a low AMC index (high loss rates) will be used in developing short return period storms, and a moderate to high AMC index (low loss rates) will be used in developing longer return period storms (e.g., 100 year). For the purposes of design hydrology, AMC I will be used for the 2- and 5-year return frequency storms. For the case of 10-, 25-, 50-year return frequency design storms, AMC II will be used. For 100-year storm analysis, AMC III shall be used. In detention basin design studies, AMC III conditions shall be considered in order to identify any downstream flooding potential.

C.5.1. Adjustment of Curve Numbers (CN) for AMC

The CN values selected for a particular soil cover type and quality also depend upon the AMC condition assumed. The CN values listed in Figure C-3 correspond to AMC II and require adjustment in order to represent either AMC I or AMC III. Table C.1 provides the necessary CN adjustments to account for AMC changes for hydrologic studies in San Bernardino County.

TABLE C.1. CURVE NUMBER RELATIONSHIPS

CN for AMC <u>Condition II</u>	Corresponding CN for AMC Condition	
	<u>I</u>	<u>III</u>
100	100	100
95	87	99
90	78	98
85	70	97
80	63	94
75	57	91
70	51	87
65	45	83
60	40	79
55	35	75
50	31	70
45	27	65
40	23	60
35	19	55
30	15	50
25	12	45
20	9	39
15	7	33
10	4	26
5	2	17
0	0	0

C.6. ESTIMATION OF LOSS RATES

In estimating loss rates for design hydrology, a watershed curve number (CN) is determined for each soil-cover complex within the watershed using Figure C-3. The working range of CN values is between 0 and 98, where a low CN indicates low runoff potential (high infiltration), and a high CN indicates high runoff potential (low infiltration). Selection of a CN takes into account the major factors affecting loss rates on pervious surfaces including the hydrologic soil group, cover type and quality, and antecedent moisture condition (AMC).

Also included in the CN selection are the effects of "initial abstraction" (Ia) which represents the combined effects of other effective rainfall losses including depression storage, vegetation interception, evaporation, and transpiration, among other factors.

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Ver. 23.0 Release Date: 07/01/2016 License ID 1400

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* DIVERSIFIED - MAPLE AVE *
* HYDROLOGY ANALYSIS-PRE-DEVELOPED CONDITION *
* 100-YR STORM EVENT *

FILE NAME: MAPLE.DAT
TIME/DATE OF STUDY: 16:33 07/22/2024

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 100.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 36.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.2000

ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT-/PARK- SIDE / SIDE/ WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP (FT) (FT)	MANNING HIKE FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0312	0.167 0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 0.00 TO NODE 1.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 810.00
ELEVATION DATA: UPSTREAM(FEET) = 1320.00 DOWNSTREAM(FEET) = 1306.00

$T_c = K * [(LENGTH ** 3.00) / (ELEVATION CHANGE)] ** 0.20$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 23.156

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.125

SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
-------------------------------	-------------------	-----------------	-----------------	-----------------	-----------	-----------------

NATURAL FAIR COVER

"OPEN BRUSH"	A	8.50	0.86	1.000	46	23.16
--------------	---	------	------	-------	----	-------

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.86

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 1.000

```
SUBAREA RUNOFF(CFS) =      9.67
TOTAL AREA(ACRES) =      8.50   PEAK FLOW RATE(CFS) =      9.67
=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES)      =      8.5   TC(MIN.) =      23.16
EFFECTIVE AREA(ACRES) =      8.50   AREA-AVERAGED Fm(INCH/HR)=  0.86
AREA-AVERAGED Fp(INCH/HR) = 0.86   AREA-AVERAGED Ap = 1.000
PEAK FLOW RATE(CFS)    =      9.67
=====
=====
END OF RATIONAL METHOD ANALYSIS
```

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Ver. 23.0 Release Date: 07/01/2016 License ID 1400

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* DIVERSIFIED - MAPLE AVE *
* HYDROLOGY ANALYSIS-PRE-DEVELOPED CONDITION *
* 25-YR STORM EVENT *

FILE NAME: MAPLE.DAT
TIME/DATE OF STUDY: 16:23 07/22/2024

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 25.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 36.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 0.9810

ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT-/PARK- SIDE / SIDE/ WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP (FT) (FT)	MANNING HIKE FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0312	0.167 0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 0.00 TO NODE 1.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 810.00
ELEVATION DATA: UPSTREAM(FEET) = 1320.00 DOWNSTREAM(FEET) = 1306.00

$T_c = K * [(LENGTH^{**} 3.00) / (ELEVATION\ CHANGE)]^{**0.20}$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 23.156

* 25 YEAR RAINFALL INTENSITY(INCH/HR) = 1.737

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
-------------------------------	-------------------	-----------------	-----------------	-----------------	-----------	--------------

NATURAL FAIR COVER

"OPEN BRUSH"	A	8.50	0.86	1.000	46	23.16
--------------	---	------	------	-------	----	-------

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.86

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

```

SUBAREA RUNOFF(CFS) =      6.71
TOTAL AREA(ACRES) =      8.50   PEAK FLOW RATE(CFS) =      6.71
=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES)      =      8.5   TC(MIN.) =      23.16
EFFECTIVE AREA(ACRES) =      8.50   AREA-AVERAGED Fm(INCH/HR)=  0.86
AREA-AVERAGED Fp(INCH/HR) =  0.86   AREA-AVERAGED Ap = 1.000
PEAK FLOW RATE(CFS)   =      6.71
=====
=====
END OF RATIONAL METHOD ANALYSIS

```

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Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* DIVERSIFIED - MAPLE AVE *
* HYDROLOGY ANALYSIS-PRE-DEVELOPED CONDITION *
* 10-YR STORM EVENT *

FILE NAME: MAPLE.DAT
TIME/DATE OF STUDY: 14:18 08/05/2024

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 10.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 36.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 0.8200

ANTECEDENT MOISTURE CONDITION (AMC) I ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT-/PARK- SIDE / SIDE/ WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP (FT) (FT)	MANNING HIKE FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0313	0.167 0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 0.00 TO NODE 1.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 810.00
ELEVATION DATA: UPSTREAM(FEET) = 1320.00 DOWNSTREAM(FEET) = 1306.00

$T_c = K * [(LENGTH^{**} 3.00) / (ELEVATION\ CHANGE)]^{**0.20}$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 23.156

* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 1.452

SUBAREA Tc AND LOSS RATE DATA(AMC I):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
-------------------------------	-------------------	-----------------	-----------------	-----------------	-----------	--------------

NATURAL FAIR COVER

"OPEN BRUSH" A 8.50 1.00 1.000 28 23.16

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 1.00

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

```

SUBAREA RUNOFF(CFS) =      3.49
TOTAL AREA(ACRES) =      8.50   PEAK FLOW RATE(CFS) =      3.49
=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES)      =      8.5   TC(MIN.) =      23.16
EFFECTIVE AREA(ACRES) =      8.50   AREA-AVERAGED Fm(INCH/HR)=   1.00
AREA-AVERAGED Fp(INCH/HR) =   1.00   AREA-AVERAGED Ap =   1.000
PEAK FLOW RATE(CFS)    =      3.49
=====
=====
END OF RATIONAL METHOD ANALYSIS

```

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Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* DIVERSIFIED - MAPLE AVE *
* HYDROLOGY ANALYSIS-PRE-DEVELOPED CONDITION *
* 2-YR STORM EVENT *

FILE NAME: MAPLE.DAT
TIME/DATE OF STUDY: 16:11 07/22/2024

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 2.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 36.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 0.6260

ANTECEDENT MOISTURE CONDITION (AMC) I ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT-/PARK- SIDE / SIDE/ WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP (FT) (FT)	MANNING HIKE FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0312	0.167 0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 0.00 TO NODE 1.00 IS CODE = 21

=====

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 810.00
ELEVATION DATA: UPSTREAM(FEET) = 1320.00 DOWNSTREAM(FEET) = 1306.00

$T_c = K * [(LENGTH^{**} 3.00) / (ELEVATION\ CHANGE)]^{**0.20}$

SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 23.156

* 2 YEAR RAINFALL INTENSITY(INCH/HR) = 1.108

SUBAREA Tc AND LOSS RATE DATA(AMC I):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
-------------------------------	-------------------	-----------------	-----------------	-----------------	-----------	--------------

NATURAL FAIR COVER

"OPEN BRUSH"	A	8.50	1.00	1.000	28	23.16
--------------	---	------	------	-------	----	-------

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 1.00

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.000

```
SUBAREA RUNOFF(CFS) =      1.06
TOTAL AREA(ACRES) =      8.50   PEAK FLOW RATE(CFS) =      1.06
=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES)      =      8.5   TC(MIN.) =      23.16
EFFECTIVE AREA(ACRES) =      8.50   AREA-AVERAGED Fm(INCH/HR)=   1.00
AREA-AVERAGED Fp(INCH/HR) =   1.00   AREA-AVERAGED Ap =   1.000
PEAK FLOW RATE(CFS)    =      1.06
=====
=====
END OF RATIONAL METHOD ANALYSIS
```



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*****
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Ver. 23.0 Release Date: 07/01/2016 License ID 1400

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Analysis prepared by:

```

***** DESCRIPTION OF STUDY *****
* DIVERSIFIED - MAPLE AVE *
* HYDROLOGY ANALYSIS-DEVELOPED CONDITION *
* 100-YR STORM EVENT *
*****

```

FILE NAME: MAPLE.DAT
TIME/DATE OF STUDY: 16:42 07/22/2024

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 100.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 36.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.5600

ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT-/PARK- SIDE / SIDE/ WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP (FT) (FT)	MANNING HIKE FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0312	0.167 0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 0.00 TO NODE 1.00 IS CODE = 21

=====

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 730.00
ELEVATION DATA: UPSTREAM(FEET) = 1320.00 DOWNSTREAM(FEET) = 1307.30

$T_c = K * [(LENGTH^{**} 3.00) / (ELEVATION CHANGE)]^{**0.20}$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 9.552
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.698
SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
COMMERCIAL	A	4.90	0.74	0.100	52	9.55

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.74
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.100
SUBAREA RUNOFF(CFS) = 20.39

```

TOTAL AREA(ACRES) =      4.90    PEAK FLOW RATE(CFS) =      20.39

*****
FLOW PROCESS FROM NODE      1.00 TO NODE      1.00 IS CODE = 81
-----
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
=====
MAINLINE Tc(MIN.) =      9.55
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.698
SUBAREA LOSS RATE DATA(AMC III):
  DEVELOPMENT TYPE/      SCS SOIL      AREA      Fp      Ap      SCS
    LAND USE      GROUP    (ACRES)    (INCH/HR)    (DECIMAL)    CN
COMMERCIAL      A      3.60      0.74      0.100      52
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.74
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
SUBAREA AREA(ACRES) = 3.60      SUBAREA RUNOFF(CFS) = 14.98
EFFECTIVE AREA(ACRES) = 8.50      AREA-AVERAGED Fm(INCH/HR) = 0.07
AREA-AVERAGED Fp(INCH/HR) = 0.74      AREA-AVERAGED Ap = 0.10
TOTAL AREA(ACRES) = 8.5      PEAK FLOW RATE(CFS) = 35.38

*****
FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE = 31
-----
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 1307.30 DOWNSTREAM(FEET) = 1305.50
FLOW LENGTH(FEET) = 222.00 MANNING'S N = 0.013
ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 36.000
DEPTH OF FLOW IN 36.0 INCH PIPE IS 20.5 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 8.49
ESTIMATED PIPE DIAMETER(INCH) = 36.00      NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 35.38
PIPE TRAVEL TIME(MIN.) = 0.44      Tc(MIN.) = 9.99
LONGEST FLOWPATH FROM NODE      0.00 TO NODE      2.00 = 952.00 FEET.
=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES) = 8.5 TC(MIN.) = 9.99
EFFECTIVE AREA(ACRES) = 8.50 AREA-AVERAGED Fm(INCH/HR) = 0.07
AREA-AVERAGED Fp(INCH/HR) = 0.74 AREA-AVERAGED Ap = 0.100
PEAK FLOW RATE(CFS) = 35.38
=====
END OF RATIONAL METHOD ANALYSIS

```

```

*****
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Analysis prepared by:

```

***** DESCRIPTION OF STUDY *****
* DIVERSIFIED - MAPLE AVE *
* HYDROLOGY ANALYSIS-DEVELOPED CONDITION *
* 25-YR STORM EVENT *
*****

```

FILE NAME: MAPLE.DAT
TIME/DATE OF STUDY: 16:47 07/22/2024

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 25.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 36.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.2000

ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT-/PARK- SIDE / SIDE/ WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP (FT) (FT)	MANNING HIKE FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0312	0.167 0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 0.00 TO NODE 1.00 IS CODE = 21

=====

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 730.00
ELEVATION DATA: UPSTREAM(FEET) = 1320.00 DOWNSTREAM(FEET) = 1307.30

$T_c = K * [(LENGTH^{**} 3.00) / (ELEVATION CHANGE)]^{**0.20}$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 9.552
* 25 YEAR RAINFALL INTENSITY(INCH/HR) = 3.614
SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
COMMERCIAL	A	4.90	0.74	0.100	52	9.55

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.74
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.100
SUBAREA RUNOFF(CFS) = 15.61

```

TOTAL AREA(ACRES) =      4.90    PEAK FLOW RATE(CFS) =      15.61

*****
FLOW PROCESS FROM NODE      1.00 TO NODE      1.00 IS CODE = 81
-----
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
=====
MAINLINE Tc(MIN.) =      9.55
* 25 YEAR RAINFALL INTENSITY(INCH/HR) =      3.614
SUBAREA LOSS RATE DATA(AMC III):
  DEVELOPMENT TYPE/      SCS SOIL      AREA      Fp      Ap      SCS
    LAND USE      GROUP      (ACRES)      (INCH/HR)      (DECIMAL)      CN
COMMERCIAL      A      3.60      0.74      0.100      52
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =      0.74
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =      0.100
SUBAREA AREA(ACRES) =      3.60      SUBAREA RUNOFF(CFS) =      11.47
EFFECTIVE AREA(ACRES) =      8.50      AREA-AVERAGED Fm(INCH/HR) =      0.07
AREA-AVERAGED Fp(INCH/HR) =      0.74      AREA-AVERAGED Ap =      0.10
TOTAL AREA(ACRES) =      8.5      PEAK FLOW RATE(CFS) =      27.08

*****
FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE = 31
-----
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 1307.30 DOWNSTREAM(FEET) = 1305.50
FLOW LENGTH(FEET) = 222.00 MANNING'S N = 0.013
ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 36.000
DEPTH OF FLOW IN 36.0 INCH PIPE IS 17.5 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 7.96
ESTIMATED PIPE DIAMETER(INCH) = 36.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 27.08
PIPE TRAVEL TIME(MIN.) = 0.46 Tc(MIN.) = 10.02
LONGEST FLOWPATH FROM NODE      0.00 TO NODE      2.00 =      952.00 FEET.
=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES) =      8.5 TC(MIN.) = 10.02
EFFECTIVE AREA(ACRES) = 8.50 AREA-AVERAGED Fm(INCH/HR) = 0.07
AREA-AVERAGED Fp(INCH/HR) = 0.74 AREA-AVERAGED Ap = 0.100
PEAK FLOW RATE(CFS) = 27.08
=====
END OF RATIONAL METHOD ANALYSIS

```

RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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Ver. 23.0 Release Date: 07/01/2016 License ID 1400

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* DIVERSIFIED - MAPLE AVE *
* HYDROLOGY ANALYSIS-DEVELOPED CONDITION *
* 10--YR STORM EVENT *

FILE NAME: MAPLE.DAT
TIME/DATE OF STUDY: 16:51 07/22/2024

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 10.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 36.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 0.9810

ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT-/PARK- SIDE / SIDE/ WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP (FT) (FT)	MANNING HIKE FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0312	0.167 0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 0.00 TO NODE 1.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 730.00
ELEVATION DATA: UPSTREAM(FEET) = 1320.00 DOWNSTREAM(FEET) = 1307.30

$T_c = K * [(LENGTH^{**} 3.00) / (ELEVATION\ CHANGE)]^{**0.20}$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 9.552
* 10 YEAR RAINFALL INTENSITY(INCH/HR) = 2.955
SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
COMMERCIAL	A	4.90	0.98	0.100	32	9.55

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.98
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.100
SUBAREA RUNOFF(CFS) = 12.60

```

TOTAL AREA(ACRES) =      4.90    PEAK FLOW RATE(CFS) =      12.60

*****
FLOW PROCESS FROM NODE      1.00 TO NODE      1.00 IS CODE =  81
-----
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
=====
MAINLINE Tc(MIN.) =      9.55
* 10 YEAR RAINFALL INTENSITY(INCH/HR) =      2.955
SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/      SCS SOIL      AREA      Fp      Ap      SCS
    LAND USE      GROUP      (ACRES)      (INCH/HR)      (DECIMAL)      CN
COMMERCIAL      A      3.60      0.98      0.100      32
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =      0.98
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =      0.100
SUBAREA AREA(ACRES) =      3.60      SUBAREA RUNOFF(CFS) =      9.26
EFFECTIVE AREA(ACRES) =      8.50      AREA-AVERAGED Fm(INCH/HR) =      0.10
AREA-AVERAGED Fp(INCH/HR) =      0.98      AREA-AVERAGED Ap =      0.10
TOTAL AREA(ACRES) =      8.5      PEAK FLOW RATE(CFS) =      21.86

*****
FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE =  31
-----
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 1307.30 DOWNSTREAM(FEET) = 1305.50
FLOW LENGTH(FEET) = 222.00 MANNING'S N = 0.013
ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 36.000
DEPTH OF FLOW IN 36.0 INCH PIPE IS 15.5 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 7.53
ESTIMATED PIPE DIAMETER(INCH) = 36.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 21.86
PIPE TRAVEL TIME(MIN.) = 0.49 Tc(MIN.) = 10.04
LONGEST FLOWPATH FROM NODE      0.00 TO NODE      2.00 =      952.00 FEET.
=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES) =      8.5 TC(MIN.) = 10.04
EFFECTIVE AREA(ACRES) = 8.50 AREA-AVERAGED Fm(INCH/HR) = 0.10
AREA-AVERAGED Fp(INCH/HR) = 0.98 AREA-AVERAGED Ap = 0.100
PEAK FLOW RATE(CFS) = 21.86
=====
END OF RATIONAL METHOD ANALYSIS

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RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
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Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* DIVERSIFIED - MAPLE AVE *
* HYDROLOGY ANALYSIS-DEVELOPED CONDITION *
* 2-YR STORM EVENT *

FILE NAME: MAPLE.DAT
TIME/DATE OF STUDY: 16:57 07/22/2024

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 2.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 36.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 0.6260

ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT-/PARK- SIDE / SIDE/ WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP HIKE (FT) (FT) (FT)	MANNING FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0312 0.167	0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

FLOW PROCESS FROM NODE 0.00 TO NODE 1.00 IS CODE = 21

=====

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 730.00
ELEVATION DATA: UPSTREAM(FEET) = 1320.00 DOWNSTREAM(FEET) = 1307.30

$T_c = K * [(LENGTH^{**} 3.00) / (ELEVATION\ CHANGE)]^{**0.20}$
SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 9.552
* 2 YEAR RAINFALL INTENSITY(INCH/HR) = 1.885
SUBAREA T_c AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
COMMERCIAL	A	4.90	0.98	0.100	32	9.55

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.98
SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.100
SUBAREA RUNOFF(CFS) = 7.88

```

TOTAL AREA(ACRES) =      4.90    PEAK FLOW RATE(CFS) =      7.88

*****
FLOW PROCESS FROM NODE      1.00 TO NODE      1.00 IS CODE = 81
-----
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
=====
MAINLINE Tc(MIN.) =      9.55
* 2 YEAR RAINFALL INTENSITY(INCH/HR) = 1.885
SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/      SCS SOIL      AREA      Fp      Ap      SCS
    LAND USE      GROUP      (ACRES)      (INCH/HR)      (DECIMAL)      CN
COMMERCIAL      A      3.60      0.98      0.100      32
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.98
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.100
SUBAREA AREA(ACRES) = 3.60      SUBAREA RUNOFF(CFS) = 5.79
EFFECTIVE AREA(ACRES) = 8.50      AREA-AVERAGED Fm(INCH/HR) = 0.10
AREA-AVERAGED Fp(INCH/HR) = 0.98      AREA-AVERAGED Ap = 0.10
TOTAL AREA(ACRES) = 8.5      PEAK FLOW RATE(CFS) = 13.68

*****
FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE = 31
-----
>>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 1307.30 DOWNSTREAM(FEET) = 1305.50
FLOW LENGTH(FEET) = 222.00 MANNING'S N = 0.013
ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 36.000
DEPTH OF FLOW IN 36.0 INCH PIPE IS 12.0 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 6.63
ESTIMATED PIPE DIAMETER(INCH) = 36.00      NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 13.68
PIPE TRAVEL TIME(MIN.) = 0.56      Tc(MIN.) = 10.11
LONGEST FLOWPATH FROM NODE      0.00 TO NODE      2.00 = 952.00 FEET.
=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES) = 8.5      TC(MIN.) = 10.11
EFFECTIVE AREA(ACRES) = 8.50      AREA-AVERAGED Fm(INCH/HR) = 0.10
AREA-AVERAGED Fp(INCH/HR) = 0.98      AREA-AVERAGED Ap = 0.100
PEAK FLOW RATE(CFS) = 13.68
=====
END OF RATIONAL METHOD ANALYSIS

```


Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0

Study date 07/29/24

+++++

San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6484

DIVERSIFIED-MAPLE AVE
UH ANALYSIS-DEVELOPED CONDITION
100-YR STORM EVENT

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
8.50	1	1.56

Rainfall data for year 100
8.50 6 3.92

Rainfall data for year 100
8.50 24 7.24

+++++

***** Area-averaged max loss rate, Fm *****

SCS curve No. (AMCII)	SCS curve NO. (AMC 3)	Area (Ac.)	Area Fraction	Fp (Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
32.0	52.0	8.50	1.000	0.785	0.100	0.079

Area-averaged adjusted loss rate Fm (In/Hr) = 0.079

***** Area-Averaged low loss rate fraction, Yb *****

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
0.85	0.100	32.0	52.0	9.23	0.275
7.65	0.900	98.0	98.0	0.20	0.967

Area-averaged catchment yield fraction, Y = 0.898

Area-averaged low loss fraction, Yb = 0.102

Direct entry of lag time by user

+++++

Watershed area = 8.50 (Ac.)
 Catchment Lag time = 0.150 hours
 Unit interval = 5.000 minutes
 Unit interval percentage of lag time = 55.6297
 Hydrograph baseflow = 0.00 (CFS)
 Average maximum watershed loss rate (Fm) = 0.079 (In/Hr)
 Average low loss rate fraction (Yb) = 0.102 (decimal)
 VALLEY DEVELOPED S-Graph Selected
 Computed peak 5-minute rainfall = 0.577 (In)
 Computed peak 30-minute rainfall = 1.182 (In)
 Specified peak 1-hour rainfall = 1.560 (In)
 Computed peak 3-hour rainfall = 2.745 (In)
 Specified peak 6-hour rainfall = 3.920 (In)
 Specified peak 24-hour rainfall = 7.240 (In)

Rainfall depth area reduction factors:

Using a total area of 8.50 (Ac.) (Ref: fig. E-4)

5-minute factor = 1.000	Adjusted rainfall = 0.577 (In)
30-minute factor = 1.000	Adjusted rainfall = 1.182 (In)
1-hour factor = 1.000	Adjusted rainfall = 1.559 (In)
3-hour factor = 1.000	Adjusted rainfall = 2.744 (In)
6-hour factor = 1.000	Adjusted rainfall = 3.920 (In)
24-hour factor = 1.000	Adjusted rainfall = 7.240 (In)

U n i t H y d r o g r a p h		
Interval	'S' Graph	Unit Hydrograph
Number	Mean values	((CFS))

	(K = 102.80 (CFS))	
1	5.627	5.784
2	36.292	31.523
3	76.965	41.811
4	93.551	17.050
5	98.195	4.775
6	99.307	1.143
7	100.000	0.712

Peak Unit	Adjusted mass rainfall	Unit rainfall
Number	(In)	(In)
1	0.5771	0.5771
2	0.7615	0.1844
3	0.8956	0.1341
4	1.0049	0.1092
5	1.0987	0.0938
6	1.1818	0.0831
7	1.2570	0.0752
8	1.3259	0.0690
9	1.3899	0.0640
10	1.4497	0.0598
11	1.5060	0.0563
12	1.5594	0.0533
13	1.6249	0.0656
14	1.6881	0.0632
15	1.7491	0.0610
16	1.8082	0.0591
17	1.8655	0.0573
18	1.9212	0.0557
19	1.9754	0.0542
20	2.0282	0.0528
21	2.0797	0.0516
22	2.1301	0.0504
23	2.1794	0.0493
24	2.2277	0.0483
25	2.2750	0.0473
26	2.3213	0.0464
27	2.3669	0.0455

28	2.4116	0.0447
29	2.4555	0.0439
30	2.4987	0.0432
31	2.5412	0.0425
32	2.5831	0.0419
33	2.6243	0.0412
34	2.6649	0.0406
35	2.7050	0.0400
36	2.7445	0.0395
37	2.7834	0.0389
38	2.8219	0.0384
39	2.8598	0.0379
40	2.8973	0.0375
41	2.9343	0.0370
42	2.9709	0.0366
43	3.0071	0.0362
44	3.0428	0.0358
45	3.0782	0.0354
46	3.1132	0.0350
47	3.1478	0.0346
48	3.1821	0.0343
49	3.2160	0.0339
50	3.2496	0.0336
51	3.2829	0.0333
52	3.3158	0.0329
53	3.3485	0.0326
54	3.3808	0.0323
55	3.4129	0.0321
56	3.4446	0.0318
57	3.4761	0.0315
58	3.5074	0.0312
59	3.5383	0.0310
60	3.5691	0.0307
61	3.5995	0.0305
62	3.6298	0.0302
63	3.6597	0.0300
64	3.6895	0.0298
65	3.7190	0.0295
66	3.7484	0.0293
67	3.7775	0.0291
68	3.8063	0.0289
69	3.8350	0.0287
70	3.8635	0.0285
71	3.8918	0.0283
72	3.9199	0.0281
73	3.9439	0.0240
74	3.9677	0.0238
75	3.9914	0.0236
76	4.0148	0.0235
77	4.0381	0.0233
78	4.0612	0.0231
79	4.0842	0.0230
80	4.1070	0.0228
81	4.1297	0.0226
82	4.1521	0.0225
83	4.1745	0.0223
84	4.1967	0.0222
85	4.2187	0.0220
86	4.2406	0.0219
87	4.2623	0.0218
88	4.2840	0.0216
89	4.3054	0.0215
90	4.3268	0.0213
91	4.3480	0.0212
92	4.3691	0.0211
93	4.3900	0.0210
94	4.4109	0.0208
95	4.4316	0.0207
96	4.4522	0.0206
97	4.4726	0.0205
98	4.4930	0.0203

99	4.5132	0.0202
100	4.5333	0.0201
101	4.5533	0.0200
102	4.5732	0.0199
103	4.5930	0.0198
104	4.6127	0.0197
105	4.6323	0.0196
106	4.6517	0.0195
107	4.6711	0.0194
108	4.6904	0.0193
109	4.7096	0.0192
110	4.7286	0.0191
111	4.7476	0.0190
112	4.7665	0.0189
113	4.7853	0.0188
114	4.8040	0.0187
115	4.8226	0.0186
116	4.8411	0.0185
117	4.8595	0.0184
118	4.8779	0.0183
119	4.8961	0.0183
120	4.9143	0.0182
121	4.9324	0.0181
122	4.9504	0.0180
123	4.9683	0.0179
124	4.9861	0.0178
125	5.0039	0.0178
126	5.0216	0.0177
127	5.0392	0.0176
128	5.0567	0.0175
129	5.0741	0.0174
130	5.0915	0.0174
131	5.1088	0.0173
132	5.1260	0.0172
133	5.1432	0.0172
134	5.1602	0.0171
135	5.1773	0.0170
136	5.1942	0.0169
137	5.2111	0.0169
138	5.2279	0.0168
139	5.2446	0.0167
140	5.2613	0.0167
141	5.2779	0.0166
142	5.2944	0.0165
143	5.3109	0.0165
144	5.3273	0.0164
145	5.3436	0.0163
146	5.3599	0.0163
147	5.3761	0.0162
148	5.3923	0.0162
149	5.4084	0.0161
150	5.4244	0.0160
151	5.4404	0.0160
152	5.4563	0.0159
153	5.4721	0.0159
154	5.4879	0.0158
155	5.5037	0.0157
156	5.5194	0.0157
157	5.5350	0.0156
158	5.5506	0.0156
159	5.5661	0.0155
160	5.5816	0.0155
161	5.5970	0.0154
162	5.6123	0.0154
163	5.6276	0.0153
164	5.6429	0.0153
165	5.6581	0.0152
166	5.6732	0.0152
167	5.6883	0.0151
168	5.7034	0.0151
169	5.7184	0.0150

170	5.7333	0.0150
171	5.7482	0.0149
172	5.7631	0.0149
173	5.7779	0.0148
174	5.7927	0.0148
175	5.8074	0.0147
176	5.8220	0.0147
177	5.8367	0.0146
178	5.8512	0.0146
179	5.8658	0.0145
180	5.8802	0.0145
181	5.8947	0.0144
182	5.9091	0.0144
183	5.9234	0.0143
184	5.9377	0.0143
185	5.9520	0.0143
186	5.9662	0.0142
187	5.9804	0.0142
188	5.9945	0.0141
189	6.0086	0.0141
190	6.0226	0.0140
191	6.0366	0.0140
192	6.0506	0.0140
193	6.0645	0.0139
194	6.0784	0.0139
195	6.0923	0.0138
196	6.1061	0.0138
197	6.1199	0.0138
198	6.1336	0.0137
199	6.1473	0.0137
200	6.1609	0.0137
201	6.1745	0.0136
202	6.1881	0.0136
203	6.2017	0.0135
204	6.2152	0.0135
205	6.2286	0.0135
206	6.2421	0.0134
207	6.2554	0.0134
208	6.2688	0.0134
209	6.2821	0.0133
210	6.2954	0.0133
211	6.3087	0.0133
212	6.3219	0.0132
213	6.3351	0.0132
214	6.3482	0.0131
215	6.3613	0.0131
216	6.3744	0.0131
217	6.3874	0.0130
218	6.4004	0.0130
219	6.4134	0.0130
220	6.4264	0.0129
221	6.4393	0.0129
222	6.4522	0.0129
223	6.4650	0.0128
224	6.4778	0.0128
225	6.4906	0.0128
226	6.5034	0.0128
227	6.5161	0.0127
228	6.5288	0.0127
229	6.5414	0.0127
230	6.5540	0.0126
231	6.5666	0.0126
232	6.5792	0.0126
233	6.5917	0.0125
234	6.6043	0.0125
235	6.6167	0.0125
236	6.6292	0.0124
237	6.6416	0.0124
238	6.6540	0.0124
239	6.6663	0.0124
240	6.6787	0.0123

241	6.6910	0.0123
242	6.7032	0.0123
243	6.7155	0.0122
244	6.7277	0.0122
245	6.7399	0.0122
246	6.7521	0.0122
247	6.7642	0.0121
248	6.7763	0.0121
249	6.7884	0.0121
250	6.8004	0.0121
251	6.8125	0.0120
252	6.8245	0.0120
253	6.8364	0.0120
254	6.8484	0.0119
255	6.8603	0.0119
256	6.8722	0.0119
257	6.8841	0.0119
258	6.8959	0.0118
259	6.9077	0.0118
260	6.9195	0.0118
261	6.9313	0.0118
262	6.9430	0.0117
263	6.9547	0.0117
264	6.9664	0.0117
265	6.9781	0.0117
266	6.9897	0.0116
267	7.0013	0.0116
268	7.0129	0.0116
269	7.0245	0.0116
270	7.0361	0.0115
271	7.0476	0.0115
272	7.0591	0.0115
273	7.0705	0.0115
274	7.0820	0.0115
275	7.0934	0.0114
276	7.1048	0.0114
277	7.1162	0.0114
278	7.1276	0.0114
279	7.1389	0.0113
280	7.1502	0.0113
281	7.1615	0.0113
282	7.1728	0.0113
283	7.1840	0.0112
284	7.1952	0.0112
285	7.2064	0.0112
286	7.2176	0.0112
287	7.2288	0.0112
288	7.2399	0.0111

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0111	0.0011	0.0100
2	0.0112	0.0011	0.0100
3	0.0112	0.0011	0.0101
4	0.0112	0.0011	0.0101
5	0.0113	0.0012	0.0101
6	0.0113	0.0012	0.0101
7	0.0113	0.0012	0.0102
8	0.0114	0.0012	0.0102
9	0.0114	0.0012	0.0102
10	0.0114	0.0012	0.0103
11	0.0115	0.0012	0.0103
12	0.0115	0.0012	0.0103
13	0.0115	0.0012	0.0104
14	0.0116	0.0012	0.0104
15	0.0116	0.0012	0.0104
16	0.0116	0.0012	0.0105
17	0.0117	0.0012	0.0105
18	0.0117	0.0012	0.0105

19	0.0118	0.0012	0.0106
20	0.0118	0.0012	0.0106
21	0.0118	0.0012	0.0106
22	0.0119	0.0012	0.0107
23	0.0119	0.0012	0.0107
24	0.0119	0.0012	0.0107
25	0.0120	0.0012	0.0108
26	0.0120	0.0012	0.0108
27	0.0121	0.0012	0.0108
28	0.0121	0.0012	0.0109
29	0.0122	0.0012	0.0109
30	0.0122	0.0012	0.0109
31	0.0122	0.0013	0.0110
32	0.0123	0.0013	0.0110
33	0.0123	0.0013	0.0111
34	0.0124	0.0013	0.0111
35	0.0124	0.0013	0.0111
36	0.0124	0.0013	0.0112
37	0.0125	0.0013	0.0112
38	0.0125	0.0013	0.0113
39	0.0126	0.0013	0.0113
40	0.0126	0.0013	0.0113
41	0.0127	0.0013	0.0114
42	0.0127	0.0013	0.0114
43	0.0128	0.0013	0.0115
44	0.0128	0.0013	0.0115
45	0.0129	0.0013	0.0116
46	0.0129	0.0013	0.0116
47	0.0130	0.0013	0.0117
48	0.0130	0.0013	0.0117
49	0.0131	0.0013	0.0117
50	0.0131	0.0013	0.0118
51	0.0132	0.0013	0.0118
52	0.0132	0.0014	0.0119
53	0.0133	0.0014	0.0119
54	0.0133	0.0014	0.0120
55	0.0134	0.0014	0.0120
56	0.0134	0.0014	0.0121
57	0.0135	0.0014	0.0121
58	0.0135	0.0014	0.0122
59	0.0136	0.0014	0.0122
60	0.0137	0.0014	0.0123
61	0.0137	0.0014	0.0123
62	0.0138	0.0014	0.0124
63	0.0138	0.0014	0.0124
64	0.0139	0.0014	0.0125
65	0.0140	0.0014	0.0125
66	0.0140	0.0014	0.0126
67	0.0141	0.0014	0.0127
68	0.0141	0.0014	0.0127
69	0.0142	0.0015	0.0128
70	0.0143	0.0015	0.0128
71	0.0143	0.0015	0.0129
72	0.0144	0.0015	0.0129
73	0.0145	0.0015	0.0130
74	0.0145	0.0015	0.0130
75	0.0146	0.0015	0.0131
76	0.0147	0.0015	0.0132
77	0.0148	0.0015	0.0132
78	0.0148	0.0015	0.0133
79	0.0149	0.0015	0.0134
80	0.0150	0.0015	0.0134
81	0.0151	0.0015	0.0135
82	0.0151	0.0015	0.0136
83	0.0152	0.0016	0.0136
84	0.0153	0.0016	0.0137
85	0.0154	0.0016	0.0138
86	0.0154	0.0016	0.0138
87	0.0155	0.0016	0.0139
88	0.0156	0.0016	0.0140
89	0.0157	0.0016	0.0141

90	0.0157	0.0016	0.0141
91	0.0159	0.0016	0.0142
92	0.0159	0.0016	0.0143
93	0.0160	0.0016	0.0144
94	0.0161	0.0016	0.0144
95	0.0162	0.0017	0.0146
96	0.0163	0.0017	0.0146
97	0.0164	0.0017	0.0147
98	0.0165	0.0017	0.0148
99	0.0166	0.0017	0.0149
100	0.0167	0.0017	0.0150
101	0.0168	0.0017	0.0151
102	0.0169	0.0017	0.0151
103	0.0170	0.0017	0.0153
104	0.0171	0.0017	0.0153
105	0.0172	0.0018	0.0155
106	0.0173	0.0018	0.0155
107	0.0174	0.0018	0.0157
108	0.0175	0.0018	0.0157
109	0.0177	0.0018	0.0159
110	0.0178	0.0018	0.0159
111	0.0179	0.0018	0.0161
112	0.0180	0.0018	0.0162
113	0.0182	0.0019	0.0163
114	0.0183	0.0019	0.0164
115	0.0184	0.0019	0.0165
116	0.0185	0.0019	0.0166
117	0.0187	0.0019	0.0168
118	0.0188	0.0019	0.0169
119	0.0190	0.0019	0.0170
120	0.0191	0.0020	0.0171
121	0.0193	0.0020	0.0173
122	0.0194	0.0020	0.0174
123	0.0196	0.0020	0.0176
124	0.0197	0.0020	0.0177
125	0.0199	0.0020	0.0179
126	0.0200	0.0020	0.0180
127	0.0202	0.0021	0.0182
128	0.0203	0.0021	0.0183
129	0.0206	0.0021	0.0185
130	0.0207	0.0021	0.0186
131	0.0210	0.0021	0.0188
132	0.0211	0.0022	0.0189
133	0.0213	0.0022	0.0192
134	0.0215	0.0022	0.0193
135	0.0218	0.0022	0.0195
136	0.0219	0.0022	0.0197
137	0.0222	0.0023	0.0199
138	0.0223	0.0023	0.0201
139	0.0226	0.0023	0.0203
140	0.0228	0.0023	0.0205
141	0.0231	0.0024	0.0208
142	0.0233	0.0024	0.0209
143	0.0236	0.0024	0.0212
144	0.0238	0.0024	0.0214
145	0.0281	0.0029	0.0252
146	0.0283	0.0029	0.0254
147	0.0287	0.0029	0.0258
148	0.0289	0.0030	0.0259
149	0.0293	0.0030	0.0263
150	0.0295	0.0030	0.0265
151	0.0300	0.0031	0.0269
152	0.0302	0.0031	0.0271
153	0.0307	0.0031	0.0276
154	0.0310	0.0032	0.0278
155	0.0315	0.0032	0.0283
156	0.0318	0.0032	0.0285
157	0.0323	0.0033	0.0290
158	0.0326	0.0033	0.0293
159	0.0333	0.0034	0.0299
160	0.0336	0.0034	0.0302

161	0.0343	0.0035	0.0308
162	0.0346	0.0035	0.0311
163	0.0354	0.0036	0.0318
164	0.0358	0.0037	0.0321
165	0.0366	0.0037	0.0328
166	0.0370	0.0038	0.0332
167	0.0379	0.0039	0.0341
168	0.0384	0.0039	0.0345
169	0.0395	0.0040	0.0355
170	0.0400	0.0041	0.0360
171	0.0412	0.0042	0.0370
172	0.0419	0.0043	0.0376
173	0.0432	0.0044	0.0388
174	0.0439	0.0045	0.0394
175	0.0455	0.0047	0.0409
176	0.0464	0.0047	0.0416
177	0.0483	0.0049	0.0433
178	0.0493	0.0050	0.0442
179	0.0516	0.0053	0.0463
180	0.0528	0.0054	0.0474
181	0.0557	0.0057	0.0500
182	0.0573	0.0059	0.0514
183	0.0610	0.0062	0.0548
184	0.0632	0.0065	0.0567
185	0.0533	0.0055	0.0479
186	0.0563	0.0058	0.0506
187	0.0640	0.0065	0.0574
188	0.0690	0.0065	0.0624
189	0.0831	0.0065	0.0766
190	0.0938	0.0065	0.0873
191	0.1341	0.0065	0.1275
192	0.1844	0.0065	0.1779
193	0.5771	0.0065	0.5706
194	0.1092	0.0065	0.1027
195	0.0752	0.0065	0.0686
196	0.0598	0.0061	0.0537
197	0.0656	0.0065	0.0590
198	0.0591	0.0060	0.0530
199	0.0542	0.0055	0.0487
200	0.0504	0.0052	0.0452
201	0.0473	0.0048	0.0425
202	0.0447	0.0046	0.0401
203	0.0425	0.0043	0.0382
204	0.0406	0.0042	0.0365
205	0.0389	0.0040	0.0350
206	0.0375	0.0038	0.0336
207	0.0362	0.0037	0.0325
208	0.0350	0.0036	0.0314
209	0.0339	0.0035	0.0305
210	0.0329	0.0034	0.0296
211	0.0321	0.0033	0.0288
212	0.0312	0.0032	0.0280
213	0.0305	0.0031	0.0274
214	0.0298	0.0030	0.0267
215	0.0291	0.0030	0.0261
216	0.0285	0.0029	0.0256
217	0.0240	0.0025	0.0215
218	0.0235	0.0024	0.0211
219	0.0230	0.0023	0.0206
220	0.0225	0.0023	0.0202
221	0.0220	0.0023	0.0198
222	0.0216	0.0022	0.0194
223	0.0212	0.0022	0.0190
224	0.0208	0.0021	0.0187
225	0.0205	0.0021	0.0184
226	0.0201	0.0021	0.0181
227	0.0198	0.0020	0.0178
228	0.0195	0.0020	0.0175
229	0.0192	0.0020	0.0172
230	0.0189	0.0019	0.0170
231	0.0186	0.0019	0.0167

232	0.0183	0.0019	0.0165
233	0.0181	0.0018	0.0162
234	0.0178	0.0018	0.0160
235	0.0176	0.0018	0.0158
236	0.0174	0.0018	0.0156
237	0.0172	0.0018	0.0154
238	0.0169	0.0017	0.0152
239	0.0167	0.0017	0.0150
240	0.0165	0.0017	0.0148
241	0.0163	0.0017	0.0147
242	0.0162	0.0017	0.0145
243	0.0160	0.0016	0.0143
244	0.0158	0.0016	0.0142
245	0.0156	0.0016	0.0140
246	0.0155	0.0016	0.0139
247	0.0153	0.0016	0.0137
248	0.0152	0.0015	0.0136
249	0.0150	0.0015	0.0135
250	0.0149	0.0015	0.0133
251	0.0147	0.0015	0.0132
252	0.0146	0.0015	0.0131
253	0.0144	0.0015	0.0130
254	0.0143	0.0015	0.0128
255	0.0142	0.0014	0.0127
256	0.0140	0.0014	0.0126
257	0.0139	0.0014	0.0125
258	0.0138	0.0014	0.0124
259	0.0137	0.0014	0.0123
260	0.0136	0.0014	0.0122
261	0.0135	0.0014	0.0121
262	0.0134	0.0014	0.0120
263	0.0133	0.0014	0.0119
264	0.0131	0.0013	0.0118
265	0.0130	0.0013	0.0117
266	0.0129	0.0013	0.0116
267	0.0128	0.0013	0.0115
268	0.0128	0.0013	0.0114
269	0.0127	0.0013	0.0114
270	0.0126	0.0013	0.0113
271	0.0125	0.0013	0.0112
272	0.0124	0.0013	0.0111
273	0.0123	0.0013	0.0110
274	0.0122	0.0012	0.0110
275	0.0121	0.0012	0.0109
276	0.0121	0.0012	0.0108
277	0.0120	0.0012	0.0107
278	0.0119	0.0012	0.0107
279	0.0118	0.0012	0.0106
280	0.0117	0.0012	0.0105
281	0.0117	0.0012	0.0105
282	0.0116	0.0012	0.0104
283	0.0115	0.0012	0.0103
284	0.0115	0.0012	0.0103
285	0.0114	0.0012	0.0102
286	0.0113	0.0012	0.0102
287	0.0112	0.0012	0.0101
288	0.0112	0.0011	0.0100

Total soil rain loss = 0.66(In)
Total effective rainfall = 6.58(In)
Peak flow rate in flood hydrograph = 31.29(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time (h+m) Volume Ac.Ft Q (CFS) 0 10.0 20.0 30.0 40.0

0+ 5	0.0004	0.06	Q			
0+10	0.0030	0.37	Q			
0+15	0.0084	0.79	Q			
0+20	0.0151	0.96	Q			
0+25	0.0221	1.02	VQ			
0+30	0.0291	1.03	VQ			
0+35	0.0363	1.04	VQ			
0+40	0.0435	1.04	VQ			
0+45	0.0507	1.05	VQ			
0+50	0.0579	1.05	VQ			
0+55	0.0652	1.05	VQ			
1+ 0	0.0724	1.06	VQ			
1+ 5	0.0797	1.06	VQ			
1+10	0.0870	1.06	VQ			
1+15	0.0944	1.07	VQ			
1+20	0.1017	1.07	VQ			
1+25	0.1091	1.07	VQ			
1+30	0.1165	1.08	IQ			
1+35	0.1240	1.08	IQ			
1+40	0.1314	1.08	IQ			
1+45	0.1389	1.09	IQ			
1+50	0.1464	1.09	IQ			
1+55	0.1539	1.09	IQ			
2+ 0	0.1615	1.10	IQ			
2+ 5	0.1690	1.10	IQ			
2+10	0.1766	1.10	IQ			
2+15	0.1843	1.11	IQ			
2+20	0.1919	1.11	IQ			
2+25	0.1996	1.11	IQ			
2+30	0.2073	1.12	IQ			
2+35	0.2150	1.12	IQ			
2+40	0.2228	1.13	IQ			
2+45	0.2305	1.13	IQ			
2+50	0.2384	1.13	IQV			
2+55	0.2462	1.14	IQV			
3+ 0	0.2540	1.14	IQV			
3+ 5	0.2619	1.15	IQV			
3+10	0.2699	1.15	IQV			
3+15	0.2778	1.15	IQV			
3+20	0.2858	1.16	IQV			
3+25	0.2938	1.16	IQV			
3+30	0.3018	1.17	IQV			
3+35	0.3099	1.17	IQV			
3+40	0.3180	1.18	IQV			
3+45	0.3261	1.18	IQV			
3+50	0.3342	1.18	IQV			
3+55	0.3424	1.19	IQV			
4+ 0	0.3506	1.19	IQ V			
4+ 5	0.3589	1.20	IQ V			
4+10	0.3672	1.20	IQ V			
4+15	0.3755	1.21	IQ V			
4+20	0.3838	1.21	IQ V			
4+25	0.3922	1.22	IQ V			
4+30	0.4006	1.22	IQ V			
4+35	0.4090	1.23	IQ V			
4+40	0.4175	1.23	IQ V			
4+45	0.4260	1.24	IQ V			
4+50	0.4346	1.24	IQ V			
4+55	0.4432	1.25	IQ V			
5+ 0	0.4518	1.25	IQ V			
5+ 5	0.4604	1.26	IQ V			
5+10	0.4691	1.26	IQ V			
5+15	0.4778	1.27	IQ V			
5+20	0.4866	1.27	IQ V			
5+25	0.4954	1.28	IQ V			
5+30	0.5042	1.28	IQ V			
5+35	0.5131	1.29	IQ V			
5+40	0.5220	1.29	IQ V			
5+45	0.5310	1.30	IQ V			
5+50	0.5400	1.31	IQ V			

5+55	0.5490	1.31	IQ	V				
6+ 0	0.5581	1.32	IQ	V				
6+ 5	0.5672	1.32	IQ	V				
6+10	0.5763	1.33	IQ	V				
6+15	0.5855	1.34	IQ	V				
6+20	0.5948	1.34	IQ	V				
6+25	0.6041	1.35	IQ	V				
6+30	0.6134	1.35	IQ	V				
6+35	0.6228	1.36	IQ	V				
6+40	0.6322	1.37	IQ	V				
6+45	0.6417	1.37	IQ	V				
6+50	0.6512	1.38	IQ	V				
6+55	0.6608	1.39	IQ	V				
7+ 0	0.6704	1.40	IQ	V				
7+ 5	0.6800	1.40	IQ	V				
7+10	0.6897	1.41	IQ	V				
7+15	0.6995	1.42	IQ	V				
7+20	0.7093	1.42	IQ	V				
7+25	0.7192	1.43	IQ	V				
7+30	0.7291	1.44	IQ	V				
7+35	0.7390	1.45	IQ	V				
7+40	0.7491	1.45	IQ	V				
7+45	0.7591	1.46	IQ	V				
7+50	0.7693	1.47	IQ	V				
7+55	0.7795	1.48	IQ	V				
8+ 0	0.7897	1.49	IQ	V				
8+ 5	0.8000	1.50	IQ	V				
8+10	0.8104	1.50	IQ	V				
8+15	0.8208	1.51	IQ	V				
8+20	0.8313	1.52	IQ	V				
8+25	0.8418	1.53	IQ	V				
8+30	0.8524	1.54	IQ	V				
8+35	0.8631	1.55	IQ	V				
8+40	0.8738	1.56	IQ	V				
8+45	0.8847	1.57	IQ	V				
8+50	0.8955	1.58	IQ	V				
8+55	0.9065	1.59	IQ	V				
9+ 0	0.9175	1.60	IQ	V				
9+ 5	0.9286	1.61	IQ	V				
9+10	0.9397	1.62	IQ	V				
9+15	0.9510	1.63	IQ	V				
9+20	0.9623	1.64	IQ	V				
9+25	0.9736	1.65	IQ	V				
9+30	0.9851	1.66	IQ	V				
9+35	0.9966	1.68	IQ	V				
9+40	1.0083	1.69	IQ	V				
9+45	1.0200	1.70	IQ	V				
9+50	1.0318	1.71	IQ	V				
9+55	1.0436	1.72	IQ	V				
10+ 0	1.0556	1.74	IQ	V				
10+ 5	1.0677	1.75	IQ	V				
10+10	1.0798	1.76	IQ	V				
10+15	1.0921	1.78	IQ	V				
10+20	1.1044	1.79	IQ	V				
10+25	1.1168	1.81	IQ	V				
10+30	1.1294	1.82	IQ	V				
10+35	1.1420	1.84	IQ	V				
10+40	1.1548	1.85	IQ	V				
10+45	1.1676	1.87	IQ	V				
10+50	1.1806	1.88	IQ	V				
10+55	1.1937	1.90	IQ	V				
11+ 0	1.2068	1.92	IQ	V				
11+ 5	1.2202	1.93	IQ	V				
11+10	1.2336	1.95	IQ	V				
11+15	1.2472	1.97	IQ	V				
11+20	1.2608	1.99	IQ	V				
11+25	1.2747	2.01	I Q	V				
11+30	1.2886	2.03	I Q	V				
11+35	1.3027	2.05	I Q	V				
11+40	1.3169	2.07	I Q	V				
11+45	1.3313	2.09	I Q	V				

11+50	1.3459	2.11	Q	V				
11+55	1.3605	2.13	Q	V				
12+ 0	1.3754	2.16	Q	V				
12+ 5	1.3906	2.20	Q	V				
12+10	1.4066	2.34	Q	V				
12+15	1.4239	2.51	Q	V				
12+20	1.4418	2.59	Q	V				
12+25	1.4600	2.64	Q	V				
12+30	1.4784	2.67	Q	V				
12+35	1.4970	2.70	Q	V				
12+40	1.5158	2.73	Q	V				
12+45	1.5349	2.77	Q	V				
12+50	1.5542	2.80	Q	V				
12+55	1.5737	2.83	Q	V				
13+ 0	1.5934	2.87	Q	V				
13+ 5	1.6134	2.91	Q	V				
13+10	1.6337	2.94	Q	V				
13+15	1.6542	2.98	Q	V				
13+20	1.6751	3.02	Q	V				
13+25	1.6962	3.07	Q	V				
13+30	1.7176	3.11	Q	V				
13+35	1.7394	3.16	Q	V				
13+40	1.7615	3.21	Q	V				
13+45	1.7840	3.26	Q	V				
13+50	1.8068	3.32	Q	V				
13+55	1.8301	3.37	Q	V				
14+ 0	1.8537	3.44	Q	V				
14+ 5	1.8778	3.50	Q	V				
14+10	1.9024	3.57	Q	V				
14+15	1.9275	3.64	Q	V				
14+20	1.9531	3.72	Q	V				
14+25	1.9793	3.80	Q	V				
14+30	2.0061	3.89	Q	V				
14+35	2.0335	3.99	Q	V				
14+40	2.0617	4.09	Q	V				
14+45	2.0906	4.20	Q	V				
14+50	2.1203	4.32	Q	V				
14+55	2.1510	4.45	Q	V				
15+ 0	2.1826	4.60	Q	V				
15+ 5	2.2154	4.76	Q	V				
15+10	2.2494	4.94	Q	V				
15+15	2.2848	5.14	Q	V				
15+20	2.3218	5.37	Q	V				
15+25	2.3600	5.56	Q	V				
15+30	2.3975	5.44	Q	V				
15+35	2.4337	5.25	Q	V				
15+40	2.4714	5.47	Q	V				
15+45	2.5127	6.01	Q	V				
15+50	2.5599	6.84	Q	V				
15+55	2.6158	8.12	Q	V				
16+ 0	2.6874	10.40	Q	V				
16+ 5	2.7991	16.21		Q	V			
16+10	2.9970	28.74			V	Q		
16+15	3.2125	31.29			V	Q		
16+20	3.3333	17.55		Q	V			
16+25	3.4000	9.67		Q	V			
16+30	3.4472	6.85		Q	V			
16+35	3.4898	6.19		Q	V			
16+40	3.5271	5.43		Q	V			
16+45	3.5616	5.00		Q	V			
16+50	3.5936	4.65		Q	V			
16+55	3.6237	4.37		Q	V			
17+ 0	3.6521	4.13		Q	V			
17+ 5	3.6791	3.92		Q	V			
17+10	3.7049	3.74		Q	V			
17+15	3.7296	3.59		Q	V			
17+20	3.7534	3.45		Q	V			
17+25	3.7764	3.33		Q	V			
17+30	3.7986	3.22		Q	V			
17+35	3.8201	3.13		Q	V			
17+40	3.8410	3.04		Q	V			

17+45	3.8614	2.95	Q			V	
17+50	3.8812	2.88	Q			V	
17+55	3.9005	2.81	Q			V	
18+ 0	3.9194	2.74	Q			V	
18+ 5	3.9377	2.66	Q			V	
18+10	3.9549	2.49	Q			V	
18+15	3.9707	2.29	Q			V	
18+20	3.9858	2.19	Q			V	
18+25	4.0004	2.12	Q			V	
18+30	4.0147	2.07	Q			V	
18+35	4.0287	2.03	Q			V	
18+40	4.0424	1.99	Q			V	
18+45	4.0559	1.95	Q			V	
18+50	4.0691	1.92	Q			V	
18+55	4.0821	1.89	Q			V	
19+ 0	4.0948	1.85	Q			V	
19+ 5	4.1074	1.82	Q			V	
19+10	4.1198	1.79	Q			V	
19+15	4.1319	1.77	Q			V	
19+20	4.1439	1.74	Q			V	
19+25	4.1557	1.72	Q			V	
19+30	4.1674	1.69	Q			V	
19+35	4.1789	1.67	Q			V	
19+40	4.1902	1.64	Q			V	
19+45	4.2014	1.62	Q			V	
19+50	4.2124	1.60	Q			V	
19+55	4.2233	1.58	Q			V	
20+ 0	4.2340	1.56	Q			V	
20+ 5	4.2447	1.54	Q			V	
20+10	4.2552	1.52	Q			V	
20+15	4.2655	1.51	Q			V	
20+20	4.2758	1.49	Q			V	
20+25	4.2859	1.47	Q			V	
20+30	4.2960	1.46	Q			V	
20+35	4.3059	1.44	Q			V	
20+40	4.3157	1.43	Q			V	
20+45	4.3254	1.41	Q			V	
20+50	4.3351	1.40	Q			V	
20+55	4.3446	1.38	Q			V	
21+ 0	4.3540	1.37	Q			V	
21+ 5	4.3634	1.36	Q			V	
21+10	4.3726	1.34	Q			V	
21+15	4.3818	1.33	Q			V	
21+20	4.3909	1.32	Q			V	
21+25	4.3999	1.31	Q			V	
21+30	4.4088	1.30	Q			V	
21+35	4.4176	1.28	Q			V	
21+40	4.4264	1.27	Q			V	
21+45	4.4351	1.26	Q			V	
21+50	4.4437	1.25	Q			V	
21+55	4.4523	1.24	Q			V	
22+ 0	4.4608	1.23	Q			V	
22+ 5	4.4692	1.22	Q			V	
22+10	4.4775	1.21	Q			V	
22+15	4.4858	1.20	Q			V	
22+20	4.4940	1.19	Q			V	
22+25	4.5022	1.18	Q			V	
22+30	4.5103	1.18	Q			V	
22+35	4.5183	1.17	Q			V	
22+40	4.5263	1.16	Q			V	
22+45	4.5342	1.15	Q			V	
22+50	4.5421	1.14	Q			V	
22+55	4.5499	1.13	Q			V	
23+ 0	4.5577	1.13	Q			V	
23+ 5	4.5654	1.12	Q			V	
23+10	4.5730	1.11	Q			V	
23+15	4.5806	1.10	Q			V	
23+20	4.5882	1.10	Q			V	
23+25	4.5957	1.09	Q			V	
23+30	4.6032	1.08	Q			V	
23+35	4.6106	1.08	Q			V	

23+40	4.6179	1.07	IQ				V
23+45	4.6253	1.06	IQ				V
23+50	4.6325	1.06	IQ				V
23+55	4.6398	1.05	IQ				V
24+ 0	4.6469	1.04	IQ				V
24+ 5	4.6537	0.98	Q				V
24+10	4.6582	0.66	Q				V
24+15	4.6599	0.24	Q				V
24+20	4.6603	0.07	Q				V
24+25	4.6605	0.02	Q				V
24+30	4.6605	0.01	Q				V

Unit Hydrograph Analysis

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Study date 03/08/24

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6484

DIVERSIFIED-MAPLE AVE
UH ANALYSIS-PRE-DEVELOPED CONDITION
25-YR STORM EVENT
2-STORM EVENT

Storm Event Year = 25

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 25		
8.20	1	0.98

Rainfall data for year 25
8.20 6 2.58

Rainfall data for year 25
8.20 24 4.82

+++++

***** Area-averaged max loss rate, Fm *****

SCS curve No. (AMCII)	SCS curve NO. (AMC 2)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
78.0	78.0	8.20	1.000	0.404	1.000	0.404

Area-averaged adjusted loss rate Fm (In/Hr) = 0.404

***** Area-Averaged low loss rate fraction, Yb *****

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
8.20	1.000	78.0	78.0	2.82	0.531

Area-averaged catchment yield fraction, Y = 0.531

Area-averaged low loss fraction, Yb = 0.469

Direct entry of lag time by user

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Watershed area = 8.20 (Ac.)

Catchment Lag time = 0.233 hours
 Unit interval = 5.000 minutes
 Unit interval percentage of lag time = 35.7654
 Hydrograph baseflow = 0.00 (CFS)
 Average maximum watershed loss rate (Fm) = 0.404 (In/Hr)
 Average low loss rate fraction (Yb) = 0.469 (decimal)
 VALLEY UNDEVELOPED S-Graph Selected
 Computed peak 5-minute rainfall = 0.363 (In)
 Computed peak 30-minute rainfall = 0.743 (In)
 Specified peak 1-hour rainfall = 0.981 (In)
 Computed peak 3-hour rainfall = 1.775 (In)
 Specified peak 6-hour rainfall = 2.580 (In)
 Specified peak 24-hour rainfall = 4.820 (In)

Rainfall depth area reduction factors:

Using a total area of 8.20 (Ac.) (Ref: fig. E-4)

5-minute factor = 1.000	Adjusted rainfall = 0.363 (In)
30-minute factor = 1.000	Adjusted rainfall = 0.743 (In)
1-hour factor = 1.000	Adjusted rainfall = 0.981 (In)
3-hour factor = 1.000	Adjusted rainfall = 1.775 (In)
6-hour factor = 1.000	Adjusted rainfall = 2.580 (In)
24-hour factor = 1.000	Adjusted rainfall = 4.820 (In)

U n i t H y d r o g r a p h		
Interval	'S' Graph	Unit Hydrograph
Number	Mean values	((CFS))

	(K = 99.17 (CFS))	
1	3.697	3.666
2	18.341	14.523
3	42.237	23.697
4	61.560	19.162
5	71.617	9.974
6	77.430	5.765
7	81.717	4.252
8	85.077	3.332
9	87.708	2.609
10	89.873	2.147
11	91.624	1.736
12	93.054	1.419
13	94.200	1.136
14	95.285	1.076
15	96.209	0.917
16	96.968	0.753
17	97.619	0.645
18	98.163	0.539
19	98.614	0.448
20	98.974	0.357
21	99.332	0.355
22	99.690	0.355
23	100.000	0.308

Peak Unit	Adjusted mass rainfall	Unit rainfall
Number	(In)	(In)
1	0.3629	0.3629
2	0.4789	0.1160
3	0.5632	0.0843
4	0.6319	0.0687
5	0.6909	0.0590
6	0.7432	0.0523
7	0.7904	0.0473
8	0.8338	0.0434
9	0.8740	0.0402
10	0.9117	0.0376
11	0.9471	0.0354
12	0.9806	0.0335

13	1.0239	0.0433
14	1.0657	0.0418
15	1.1062	0.0405
16	1.1454	0.0392
17	1.1835	0.0381
18	1.2206	0.0371
19	1.2568	0.0362
20	1.2921	0.0353
21	1.3266	0.0345
22	1.3603	0.0337
23	1.3934	0.0330
24	1.4258	0.0324
25	1.4576	0.0318
26	1.4888	0.0312
27	1.5194	0.0307
28	1.5495	0.0301
29	1.5792	0.0296
30	1.6084	0.0292
31	1.6371	0.0287
32	1.6654	0.0283
33	1.6933	0.0279
34	1.7208	0.0275
35	1.7480	0.0271
36	1.7748	0.0268
37	1.8012	0.0264
38	1.8273	0.0261
39	1.8531	0.0258
40	1.8786	0.0255
41	1.9038	0.0252
42	1.9287	0.0249
43	1.9534	0.0247
44	1.9778	0.0244
45	2.0019	0.0241
46	2.0258	0.0239
47	2.0494	0.0237
48	2.0729	0.0234
49	2.0961	0.0232
50	2.1190	0.0230
51	2.1418	0.0228
52	2.1644	0.0226
53	2.1867	0.0224
54	2.2089	0.0222
55	2.2309	0.0220
56	2.2527	0.0218
57	2.2743	0.0216
58	2.2958	0.0214
59	2.3170	0.0213
60	2.3382	0.0211
61	2.3591	0.0210
62	2.3799	0.0208
63	2.4005	0.0206
64	2.4210	0.0205
65	2.4414	0.0203
66	2.4616	0.0202
67	2.4816	0.0201
68	2.5016	0.0199
69	2.5213	0.0198
70	2.5410	0.0197
71	2.5605	0.0195
72	2.5799	0.0194
73	2.5960	0.0161
74	2.6120	0.0160
75	2.6279	0.0159
76	2.6436	0.0157
77	2.6592	0.0156
78	2.6747	0.0155
79	2.6901	0.0154
80	2.7054	0.0153
81	2.7206	0.0152
82	2.7357	0.0151
83	2.7507	0.0150

84	2.7656	0.0149
85	2.7804	0.0148
86	2.7951	0.0147
87	2.8097	0.0146
88	2.8242	0.0145
89	2.8387	0.0144
90	2.8530	0.0143
91	2.8672	0.0142
92	2.8814	0.0142
93	2.8955	0.0141
94	2.9095	0.0140
95	2.9234	0.0139
96	2.9372	0.0138
97	2.9510	0.0138
98	2.9647	0.0137
99	2.9783	0.0136
100	2.9918	0.0135
101	3.0052	0.0135
102	3.0186	0.0134
103	3.0319	0.0133
104	3.0451	0.0132
105	3.0583	0.0132
106	3.0714	0.0131
107	3.0844	0.0130
108	3.0974	0.0130
109	3.1103	0.0129
110	3.1231	0.0128
111	3.1359	0.0128
112	3.1486	0.0127
113	3.1613	0.0126
114	3.1738	0.0126
115	3.1864	0.0125
116	3.1988	0.0125
117	3.2112	0.0124
118	3.2236	0.0123
119	3.2359	0.0123
120	3.2481	0.0122
121	3.2603	0.0122
122	3.2724	0.0121
123	3.2844	0.0121
124	3.2965	0.0120
125	3.3084	0.0120
126	3.3203	0.0119
127	3.3322	0.0119
128	3.3440	0.0118
129	3.3557	0.0118
130	3.3674	0.0117
131	3.3791	0.0117
132	3.3907	0.0116
133	3.4023	0.0116
134	3.4138	0.0115
135	3.4252	0.0115
136	3.4366	0.0114
137	3.4480	0.0114
138	3.4593	0.0113
139	3.4706	0.0113
140	3.4818	0.0112
141	3.4930	0.0112
142	3.5042	0.0111
143	3.5153	0.0111
144	3.5264	0.0111
145	3.5374	0.0110
146	3.5483	0.0110
147	3.5593	0.0109
148	3.5702	0.0109
149	3.5810	0.0109
150	3.5919	0.0108
151	3.6026	0.0108
152	3.6134	0.0107
153	3.6241	0.0107
154	3.6347	0.0107

155	3.6453	0.0106
156	3.6559	0.0106
157	3.6665	0.0105
158	3.6770	0.0105
159	3.6875	0.0105
160	3.6979	0.0104
161	3.7083	0.0104
162	3.7187	0.0104
163	3.7290	0.0103
164	3.7393	0.0103
165	3.7496	0.0103
166	3.7598	0.0102
167	3.7700	0.0102
168	3.7801	0.0102
169	3.7903	0.0101
170	3.8004	0.0101
171	3.8104	0.0101
172	3.8205	0.0100
173	3.8305	0.0100
174	3.8404	0.0100
175	3.8504	0.0099
176	3.8603	0.0099
177	3.8701	0.0099
178	3.8800	0.0098
179	3.8898	0.0098
180	3.8996	0.0098
181	3.9093	0.0098
182	3.9190	0.0097
183	3.9287	0.0097
184	3.9384	0.0097
185	3.9480	0.0096
186	3.9576	0.0096
187	3.9672	0.0096
188	3.9768	0.0096
189	3.9863	0.0095
190	3.9958	0.0095
191	4.0053	0.0095
192	4.0147	0.0094
193	4.0241	0.0094
194	4.0335	0.0094
195	4.0429	0.0094
196	4.0522	0.0093
197	4.0615	0.0093
198	4.0708	0.0093
199	4.0800	0.0093
200	4.0893	0.0092
201	4.0985	0.0092
202	4.1077	0.0092
203	4.1168	0.0092
204	4.1259	0.0091
205	4.1351	0.0091
206	4.1441	0.0091
207	4.1532	0.0091
208	4.1622	0.0090
209	4.1712	0.0090
210	4.1802	0.0090
211	4.1892	0.0090
212	4.1981	0.0089
213	4.2070	0.0089
214	4.2159	0.0089
215	4.2248	0.0089
216	4.2336	0.0088
217	4.2425	0.0088
218	4.2513	0.0088
219	4.2601	0.0088
220	4.2688	0.0088
221	4.2776	0.0087
222	4.2863	0.0087
223	4.2950	0.0087
224	4.3036	0.0087
225	4.3123	0.0087

226	4.3209	0.0086
227	4.3295	0.0086
228	4.3381	0.0086
229	4.3467	0.0086
230	4.3552	0.0085
231	4.3638	0.0085
232	4.3723	0.0085
233	4.3808	0.0085
234	4.3892	0.0085
235	4.3977	0.0084
236	4.4061	0.0084
237	4.4145	0.0084
238	4.4229	0.0084
239	4.4313	0.0084
240	4.4396	0.0083
241	4.4479	0.0083
242	4.4562	0.0083
243	4.4645	0.0083
244	4.4728	0.0083
245	4.4811	0.0083
246	4.4893	0.0082
247	4.4975	0.0082
248	4.5057	0.0082
249	4.5139	0.0082
250	4.5221	0.0082
251	4.5302	0.0081
252	4.5383	0.0081
253	4.5465	0.0081
254	4.5545	0.0081
255	4.5626	0.0081
256	4.5707	0.0081
257	4.5787	0.0080
258	4.5867	0.0080
259	4.5948	0.0080
260	4.6027	0.0080
261	4.6107	0.0080
262	4.6187	0.0080
263	4.6266	0.0079
264	4.6345	0.0079
265	4.6424	0.0079
266	4.6503	0.0079
267	4.6582	0.0079
268	4.6661	0.0079
269	4.6739	0.0078
270	4.6817	0.0078
271	4.6895	0.0078
272	4.6973	0.0078
273	4.7051	0.0078
274	4.7129	0.0078
275	4.7206	0.0077
276	4.7283	0.0077
277	4.7361	0.0077
278	4.7438	0.0077
279	4.7515	0.0077
280	4.7591	0.0077
281	4.7668	0.0077
282	4.7744	0.0076
283	4.7820	0.0076
284	4.7897	0.0076
285	4.7972	0.0076
286	4.8048	0.0076
287	4.8124	0.0076
288	4.8200	0.0076

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0076	0.0035	0.0040
2	0.0076	0.0035	0.0040
3	0.0076	0.0036	0.0040

4	0.0076	0.0036	0.0040
5	0.0076	0.0036	0.0041
6	0.0077	0.0036	0.0041
7	0.0077	0.0036	0.0041
8	0.0077	0.0036	0.0041
9	0.0077	0.0036	0.0041
10	0.0077	0.0036	0.0041
11	0.0078	0.0036	0.0041
12	0.0078	0.0037	0.0041
13	0.0078	0.0037	0.0042
14	0.0078	0.0037	0.0042
15	0.0079	0.0037	0.0042
16	0.0079	0.0037	0.0042
17	0.0079	0.0037	0.0042
18	0.0079	0.0037	0.0042
19	0.0080	0.0037	0.0042
20	0.0080	0.0037	0.0042
21	0.0080	0.0038	0.0043
22	0.0080	0.0038	0.0043
23	0.0081	0.0038	0.0043
24	0.0081	0.0038	0.0043
25	0.0081	0.0038	0.0043
26	0.0081	0.0038	0.0043
27	0.0082	0.0038	0.0043
28	0.0082	0.0038	0.0044
29	0.0082	0.0039	0.0044
30	0.0083	0.0039	0.0044
31	0.0083	0.0039	0.0044
32	0.0083	0.0039	0.0044
33	0.0083	0.0039	0.0044
34	0.0084	0.0039	0.0044
35	0.0084	0.0039	0.0045
36	0.0084	0.0040	0.0045
37	0.0085	0.0040	0.0045
38	0.0085	0.0040	0.0045
39	0.0085	0.0040	0.0045
40	0.0085	0.0040	0.0045
41	0.0086	0.0040	0.0046
42	0.0086	0.0040	0.0046
43	0.0087	0.0041	0.0046
44	0.0087	0.0041	0.0046
45	0.0087	0.0041	0.0046
46	0.0087	0.0041	0.0046
47	0.0088	0.0041	0.0047
48	0.0088	0.0041	0.0047
49	0.0088	0.0041	0.0047
50	0.0089	0.0042	0.0047
51	0.0089	0.0042	0.0047
52	0.0089	0.0042	0.0047
53	0.0090	0.0042	0.0048
54	0.0090	0.0042	0.0048
55	0.0091	0.0042	0.0048
56	0.0091	0.0043	0.0048
57	0.0091	0.0043	0.0048
58	0.0092	0.0043	0.0049
59	0.0092	0.0043	0.0049
60	0.0092	0.0043	0.0049
61	0.0093	0.0044	0.0049
62	0.0093	0.0044	0.0049
63	0.0094	0.0044	0.0050
64	0.0094	0.0044	0.0050
65	0.0094	0.0044	0.0050
66	0.0095	0.0044	0.0050
67	0.0095	0.0045	0.0051
68	0.0096	0.0045	0.0051
69	0.0096	0.0045	0.0051
70	0.0096	0.0045	0.0051
71	0.0097	0.0045	0.0051
72	0.0097	0.0046	0.0052
73	0.0098	0.0046	0.0052
74	0.0098	0.0046	0.0052

75	0.0099	0.0046	0.0052
76	0.0099	0.0046	0.0053
77	0.0100	0.0047	0.0053
78	0.0100	0.0047	0.0053
79	0.0101	0.0047	0.0053
80	0.0101	0.0047	0.0054
81	0.0102	0.0048	0.0054
82	0.0102	0.0048	0.0054
83	0.0103	0.0048	0.0054
84	0.0103	0.0048	0.0055
85	0.0104	0.0049	0.0055
86	0.0104	0.0049	0.0055
87	0.0105	0.0049	0.0056
88	0.0105	0.0049	0.0056
89	0.0106	0.0050	0.0056
90	0.0106	0.0050	0.0056
91	0.0107	0.0050	0.0057
92	0.0107	0.0050	0.0057
93	0.0108	0.0051	0.0057
94	0.0109	0.0051	0.0058
95	0.0109	0.0051	0.0058
96	0.0110	0.0051	0.0058
97	0.0111	0.0052	0.0059
98	0.0111	0.0052	0.0059
99	0.0112	0.0052	0.0059
100	0.0112	0.0053	0.0060
101	0.0113	0.0053	0.0060
102	0.0114	0.0053	0.0060
103	0.0115	0.0054	0.0061
104	0.0115	0.0054	0.0061
105	0.0116	0.0054	0.0062
106	0.0117	0.0055	0.0062
107	0.0118	0.0055	0.0062
108	0.0118	0.0055	0.0063
109	0.0119	0.0056	0.0063
110	0.0120	0.0056	0.0064
111	0.0121	0.0057	0.0064
112	0.0121	0.0057	0.0064
113	0.0122	0.0057	0.0065
114	0.0123	0.0058	0.0065
115	0.0124	0.0058	0.0066
116	0.0125	0.0058	0.0066
117	0.0126	0.0059	0.0067
118	0.0126	0.0059	0.0067
119	0.0128	0.0060	0.0068
120	0.0128	0.0060	0.0068
121	0.0130	0.0061	0.0069
122	0.0130	0.0061	0.0069
123	0.0132	0.0062	0.0070
124	0.0132	0.0062	0.0070
125	0.0134	0.0063	0.0071
126	0.0135	0.0063	0.0071
127	0.0136	0.0064	0.0072
128	0.0137	0.0064	0.0073
129	0.0138	0.0065	0.0073
130	0.0139	0.0065	0.0074
131	0.0141	0.0066	0.0075
132	0.0142	0.0066	0.0075
133	0.0143	0.0067	0.0076
134	0.0144	0.0068	0.0077
135	0.0146	0.0068	0.0078
136	0.0147	0.0069	0.0078
137	0.0149	0.0070	0.0079
138	0.0150	0.0070	0.0080
139	0.0152	0.0071	0.0081
140	0.0153	0.0072	0.0081
141	0.0155	0.0073	0.0082
142	0.0156	0.0073	0.0083
143	0.0159	0.0074	0.0084
144	0.0160	0.0075	0.0085
145	0.0194	0.0091	0.0103

146	0.0195	0.0092	0.0104
147	0.0198	0.0093	0.0105
148	0.0199	0.0093	0.0106
149	0.0202	0.0095	0.0107
150	0.0203	0.0095	0.0108
151	0.0206	0.0097	0.0110
152	0.0208	0.0098	0.0110
153	0.0211	0.0099	0.0112
154	0.0213	0.0100	0.0113
155	0.0216	0.0101	0.0115
156	0.0218	0.0102	0.0116
157	0.0222	0.0104	0.0118
158	0.0224	0.0105	0.0119
159	0.0228	0.0107	0.0121
160	0.0230	0.0108	0.0122
161	0.0234	0.0110	0.0124
162	0.0237	0.0111	0.0126
163	0.0241	0.0113	0.0128
164	0.0244	0.0114	0.0130
165	0.0249	0.0117	0.0132
166	0.0252	0.0118	0.0134
167	0.0258	0.0121	0.0137
168	0.0261	0.0122	0.0139
169	0.0268	0.0126	0.0142
170	0.0271	0.0127	0.0144
171	0.0279	0.0131	0.0148
172	0.0283	0.0133	0.0150
173	0.0292	0.0137	0.0155
174	0.0296	0.0139	0.0157
175	0.0307	0.0144	0.0163
176	0.0312	0.0146	0.0166
177	0.0324	0.0152	0.0172
178	0.0330	0.0155	0.0175
179	0.0345	0.0162	0.0183
180	0.0353	0.0166	0.0187
181	0.0371	0.0174	0.0197
182	0.0381	0.0179	0.0202
183	0.0405	0.0190	0.0215
184	0.0418	0.0196	0.0222
185	0.0335	0.0157	0.0178
186	0.0354	0.0166	0.0188
187	0.0402	0.0189	0.0214
188	0.0434	0.0203	0.0230
189	0.0523	0.0245	0.0278
190	0.0590	0.0277	0.0313
191	0.0843	0.0336	0.0507
192	0.1160	0.0336	0.0823
193	0.3629	0.0336	0.3293
194	0.0687	0.0322	0.0365
195	0.0473	0.0222	0.0251
196	0.0376	0.0176	0.0200
197	0.0433	0.0203	0.0230
198	0.0392	0.0184	0.0208
199	0.0362	0.0170	0.0192
200	0.0337	0.0158	0.0179
201	0.0318	0.0149	0.0169
202	0.0301	0.0141	0.0160
203	0.0287	0.0135	0.0153
204	0.0275	0.0129	0.0146
205	0.0264	0.0124	0.0140
206	0.0255	0.0120	0.0135
207	0.0247	0.0116	0.0131
208	0.0239	0.0112	0.0127
209	0.0232	0.0109	0.0123
210	0.0226	0.0106	0.0120
211	0.0220	0.0103	0.0117
212	0.0214	0.0101	0.0114
213	0.0210	0.0098	0.0111
214	0.0205	0.0096	0.0109
215	0.0201	0.0094	0.0107
216	0.0197	0.0092	0.0104

217	0.0161	0.0075	0.0085
218	0.0157	0.0074	0.0084
219	0.0154	0.0072	0.0082
220	0.0151	0.0071	0.0080
221	0.0148	0.0069	0.0079
222	0.0145	0.0068	0.0077
223	0.0142	0.0067	0.0076
224	0.0140	0.0066	0.0074
225	0.0138	0.0065	0.0073
226	0.0135	0.0063	0.0072
227	0.0133	0.0062	0.0071
228	0.0131	0.0061	0.0070
229	0.0129	0.0060	0.0068
230	0.0127	0.0060	0.0067
231	0.0125	0.0059	0.0066
232	0.0123	0.0058	0.0066
233	0.0122	0.0057	0.0065
234	0.0120	0.0056	0.0064
235	0.0119	0.0056	0.0063
236	0.0117	0.0055	0.0062
237	0.0116	0.0054	0.0061
238	0.0114	0.0054	0.0061
239	0.0113	0.0053	0.0060
240	0.0111	0.0052	0.0059
241	0.0110	0.0052	0.0059
242	0.0109	0.0051	0.0058
243	0.0108	0.0051	0.0057
244	0.0107	0.0050	0.0057
245	0.0105	0.0049	0.0056
246	0.0104	0.0049	0.0055
247	0.0103	0.0048	0.0055
248	0.0102	0.0048	0.0054
249	0.0101	0.0047	0.0054
250	0.0100	0.0047	0.0053
251	0.0099	0.0047	0.0053
252	0.0098	0.0046	0.0052
253	0.0098	0.0046	0.0052
254	0.0097	0.0045	0.0051
255	0.0096	0.0045	0.0051
256	0.0095	0.0045	0.0050
257	0.0094	0.0044	0.0050
258	0.0093	0.0044	0.0050
259	0.0093	0.0043	0.0049
260	0.0092	0.0043	0.0049
261	0.0091	0.0043	0.0048
262	0.0090	0.0042	0.0048
263	0.0090	0.0042	0.0048
264	0.0089	0.0042	0.0047
265	0.0088	0.0041	0.0047
266	0.0088	0.0041	0.0047
267	0.0087	0.0041	0.0046
268	0.0086	0.0040	0.0046
269	0.0086	0.0040	0.0045
270	0.0085	0.0040	0.0045
271	0.0084	0.0040	0.0045
272	0.0084	0.0039	0.0045
273	0.0083	0.0039	0.0044
274	0.0083	0.0039	0.0044
275	0.0082	0.0039	0.0044
276	0.0082	0.0038	0.0043
277	0.0081	0.0038	0.0043
278	0.0081	0.0038	0.0043
279	0.0080	0.0038	0.0043
280	0.0080	0.0037	0.0042
281	0.0079	0.0037	0.0042
282	0.0079	0.0037	0.0042
283	0.0078	0.0037	0.0041
284	0.0078	0.0036	0.0041
285	0.0077	0.0036	0.0041
286	0.0077	0.0036	0.0041
287	0.0076	0.0036	0.0040

288 0.0076 0.0036 0.0040

 Total soil rain loss = 2.10(In)
 Total effective rainfall = 2.72(In)
 Peak flow rate in flood hydrograph = 11.17(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	5.0	10.0	15.0	20.0
0+ 5	0.0001		0.01 Q					
0+10	0.0006		0.07 Q					
0+15	0.0018		0.17 Q					
0+20	0.0035		0.25 Q					
0+25	0.0054		0.29 Q					
0+30	0.0076		0.31 Q					
0+35	0.0098		0.33 Q					
0+40	0.0122		0.34 Q					
0+45	0.0146		0.35 Q					
0+50	0.0171		0.36 Q					
0+55	0.0197		0.37 Q					
1+ 0	0.0223		0.38 Q					
1+ 5	0.0249		0.38 Q					
1+10	0.0276		0.39 Q					
1+15	0.0303		0.39 Q					
1+20	0.0331		0.40 Q					
1+25	0.0358		0.40 Q					
1+30	0.0386		0.41 Q					
1+35	0.0414		0.41 Q					
1+40	0.0443		0.41 Q					
1+45	0.0471		0.41 QV					
1+50	0.0500		0.42 QV					
1+55	0.0529		0.42 QV					
2+ 0	0.0558		0.42 QV					
2+ 5	0.0587		0.42 QV					
2+10	0.0616		0.42 QV					
2+15	0.0645		0.42 QV					
2+20	0.0675		0.43 QV					
2+25	0.0704		0.43 QV					
2+30	0.0734		0.43 QV					
2+35	0.0763		0.43 QV					
2+40	0.0793		0.43 QV					
2+45	0.0823		0.43 QV					
2+50	0.0853		0.43 QV					
2+55	0.0883		0.44 QV					
3+ 0	0.0913		0.44 QV					
3+ 5	0.0943		0.44 Q V					
3+10	0.0974		0.44 Q V					
3+15	0.1004		0.44 Q V					
3+20	0.1035		0.44 Q V					
3+25	0.1065		0.45 Q V					
3+30	0.1096		0.45 Q V					
3+35	0.1127		0.45 Q V					
3+40	0.1158		0.45 Q V					
3+45	0.1189		0.45 Q V					
3+50	0.1220		0.45 Q V					
3+55	0.1252		0.46 Q V					
4+ 0	0.1283		0.46 Q V					
4+ 5	0.1315		0.46 Q V					
4+10	0.1347		0.46 Q V					
4+15	0.1378		0.46 Q V					
4+20	0.1410		0.46 Q V					
4+25	0.1442		0.47 Q V					
4+30	0.1475		0.47 Q V					
4+35	0.1507		0.47 Q V					

4+40	0.1539	0.47	Q	V				
4+45	0.1572	0.47	Q	V				
4+50	0.1604	0.47	Q	V				
4+55	0.1637	0.48	Q	V				
5+ 0	0.1670	0.48	Q	V				
5+ 5	0.1703	0.48	Q	V				
5+10	0.1737	0.48	Q	V				
5+15	0.1770	0.48	Q	V				
5+20	0.1803	0.49	Q	V				
5+25	0.1837	0.49	Q	V				
5+30	0.1871	0.49	Q	V				
5+35	0.1905	0.49	Q	V				
5+40	0.1939	0.49	Q	V				
5+45	0.1973	0.50	Q	V				
5+50	0.2007	0.50	Q	V				
5+55	0.2042	0.50	IQ	V				
6+ 0	0.2076	0.50	IQ	V				
6+ 5	0.2111	0.51	IQ	V				
6+10	0.2146	0.51	IQ	V				
6+15	0.2181	0.51	IQ	V				
6+20	0.2217	0.51	IQ	V				
6+25	0.2252	0.51	IQ	V				
6+30	0.2288	0.52	IQ	V				
6+35	0.2323	0.52	IQ	V				
6+40	0.2359	0.52	IQ	V				
6+45	0.2395	0.52	IQ	V				
6+50	0.2432	0.53	IQ	V				
6+55	0.2468	0.53	IQ	V				
7+ 0	0.2505	0.53	IQ	V				
7+ 5	0.2541	0.53	IQ	V				
7+10	0.2578	0.54	IQ	V				
7+15	0.2616	0.54	IQ	V				
7+20	0.2653	0.54	IQ	V				
7+25	0.2691	0.55	IQ	V				
7+30	0.2728	0.55	IQ	V				
7+35	0.2766	0.55	IQ	V				
7+40	0.2804	0.55	IQ	V				
7+45	0.2843	0.56	IQ	V				
7+50	0.2881	0.56	IQ	V				
7+55	0.2920	0.56	IQ	V				
8+ 0	0.2959	0.57	IQ	V				
8+ 5	0.2998	0.57	IQ	V				
8+10	0.3037	0.57	IQ	V				
8+15	0.3077	0.58	IQ	V				
8+20	0.3117	0.58	IQ	V				
8+25	0.3157	0.58	IQ	V				
8+30	0.3197	0.59	IQ	V				
8+35	0.3238	0.59	IQ	V				
8+40	0.3279	0.59	IQ	V				
8+45	0.3320	0.60	IQ	V				
8+50	0.3361	0.60	IQ	V				
8+55	0.3402	0.60	IQ	V				
9+ 0	0.3444	0.61	IQ	V				
9+ 5	0.3486	0.61	IQ	V				
9+10	0.3528	0.61	IQ	V				
9+15	0.3571	0.62	IQ	V				
9+20	0.3614	0.62	IQ	V				
9+25	0.3657	0.63	IQ	V				
9+30	0.3700	0.63	IQ	V				
9+35	0.3744	0.63	IQ	V				
9+40	0.3788	0.64	IQ	V				
9+45	0.3832	0.64	IQ	V				
9+50	0.3877	0.65	IQ	V				
9+55	0.3922	0.65	IQ	V				
10+ 0	0.3967	0.66	IQ	V				
10+ 5	0.4013	0.66	IQ	V				
10+10	0.4058	0.67	IQ	V				
10+15	0.4105	0.67	IQ	V				
10+20	0.4151	0.68	IQ	V				
10+25	0.4198	0.68	IQ	V				
10+30	0.4246	0.69	IQ	V				

10+35	0.4293	0.69	Q	V			
10+40	0.4341	0.70	Q	V			
10+45	0.4390	0.70	Q	V			
10+50	0.4439	0.71	Q	V			
10+55	0.4488	0.72	Q	V			
11+ 0	0.4537	0.72	Q	V			
11+ 5	0.4588	0.73	Q	V			
11+10	0.4638	0.73	Q	V			
11+15	0.4689	0.74	Q	V			
11+20	0.4740	0.75	Q	V			
11+25	0.4792	0.75	Q	V			
11+30	0.4845	0.76	Q	V			
11+35	0.4898	0.77	Q	V			
11+40	0.4951	0.78	Q	V			
11+45	0.5005	0.78	Q	V			
11+50	0.5059	0.79	Q	V			
11+55	0.5114	0.80	Q	V			
12+ 0	0.5170	0.81	Q	V			
12+ 5	0.5227	0.82	Q	V			
12+10	0.5285	0.86	Q	V			
12+15	0.5348	0.90	Q	V			
12+20	0.5413	0.95	Q	V			
12+25	0.5480	0.97	Q	V			
12+30	0.5548	0.99	Q	V			
12+35	0.5618	1.01	Q	V			
12+40	0.5688	1.03	Q	V			
12+45	0.5760	1.04	Q	V			
12+50	0.5833	1.06	Q	V			
12+55	0.5907	1.07	Q	V			
13+ 0	0.5982	1.09	Q	V			
13+ 5	0.6057	1.10	Q	V			
13+10	0.6134	1.12	Q	V			
13+15	0.6212	1.13	Q	V			
13+20	0.6291	1.15	Q	V			
13+25	0.6371	1.16	Q	V			
13+30	0.6452	1.18	Q	V			
13+35	0.6534	1.20	Q	V			
13+40	0.6618	1.21	Q	V			
13+45	0.6703	1.23	Q	V			
13+50	0.6789	1.25	Q	V			
13+55	0.6876	1.27	Q	V			
14+ 0	0.6965	1.29	Q	V			
14+ 5	0.7056	1.31	Q	V			
14+10	0.7147	1.33	Q	V			
14+15	0.7241	1.36	Q	V			
14+20	0.7336	1.38	Q	V			
14+25	0.7433	1.41	Q	V			
14+30	0.7533	1.44	Q	V			
14+35	0.7634	1.47	Q	V			
14+40	0.7738	1.50	Q	V			
14+45	0.7844	1.54	Q	V			
14+50	0.7952	1.58	Q	V			
14+55	0.8064	1.62	Q	V			
15+ 0	0.8178	1.66	Q	V			
15+ 5	0.8296	1.71	Q	V			
15+10	0.8418	1.77	Q	V			
15+15	0.8544	1.83	Q	V			
15+20	0.8675	1.90	Q	V			
15+25	0.8810	1.96	Q	V			
15+30	0.8945	1.96	Q	V			
15+35	0.9077	1.92	Q	V			
15+40	0.9209	1.93	Q	V			
15+45	0.9349	2.02	Q	V			
15+50	0.9500	2.19	Q	V			
15+55	0.9671	2.49	Q	V			
16+ 0	0.9884	3.09	Q	V			
16+ 5	1.0231	5.05	Q	V			
16+10	1.0835	8.76		Q	V		
16+15	1.1604	11.17		Q	V		
16+20	1.2241	9.25		Q	V		
16+25	1.2659	6.07		Q	V		

16+30	1.2968	4.49		Q			V		
16+35	1.3234	3.85		Q			V		
16+40	1.3470	3.43		Q			V		
16+45	1.3681	3.07		Q			V		
16+50	1.3873	2.78		Q			V		
16+55	1.4048	2.53		Q			V		
17+ 0	1.4208	2.33		Q			V		
17+ 5	1.4356	2.15		Q			V		
17+10	1.4497	2.05		Q			V		
17+15	1.4629	1.92		Q			V		
17+20	1.4753	1.80		Q			V		
17+25	1.4870	1.70		Q			V		
17+30	1.4981	1.61		Q			V		
17+35	1.5086	1.53		Q			V		
17+40	1.5187	1.45		Q			V		
17+45	1.5284	1.41		Q			V		
17+50	1.5377	1.36		Q			V		
17+55	1.5467	1.30		Q			V		
18+ 0	1.5547	1.17		Q			V		
18+ 5	1.5625	1.13		Q			V		
18+10	1.5699	1.08		Q			V		
18+15	1.5769	1.01		Q			V		
18+20	1.5834	0.95		Q			V		
18+25	1.5897	0.91		Q			V		
18+30	1.5958	0.88		Q			V		
18+35	1.6017	0.86		Q			V		
18+40	1.6075	0.83		Q			V		
18+45	1.6131	0.81		Q			V		
18+50	1.6185	0.79		Q			V		
18+55	1.6239	0.78		Q			V		
19+ 0	1.6291	0.76		Q			V		
19+ 5	1.6342	0.74		Q			V		
19+10	1.6392	0.73		Q			V		
19+15	1.6441	0.71		Q			V		
19+20	1.6490	0.70		Q			V		
19+25	1.6537	0.69		Q			V		
19+30	1.6584	0.68		Q			V		
19+35	1.6630	0.67		Q			V		
19+40	1.6675	0.66		Q			V		
19+45	1.6720	0.65		Q			V		
19+50	1.6764	0.64		Q			V		
19+55	1.6807	0.63		Q			V		
20+ 0	1.6850	0.62		Q			V		
20+ 5	1.6892	0.61		Q			V		
20+10	1.6934	0.61		Q			V		
20+15	1.6975	0.60		Q			V		
20+20	1.7016	0.59		Q			V		
20+25	1.7056	0.58		Q			V		
20+30	1.7096	0.58		Q			V		
20+35	1.7135	0.57		Q			V		
20+40	1.7174	0.56		Q			V		
20+45	1.7212	0.56		Q			V		
20+50	1.7250	0.55		Q			V		
20+55	1.7288	0.55		Q			V		
21+ 0	1.7325	0.54		Q			V		
21+ 5	1.7362	0.54		Q			V		
21+10	1.7399	0.53		Q			V		
21+15	1.7435	0.53		Q			V		
21+20	1.7471	0.52		Q			V		
21+25	1.7506	0.52		Q			V		
21+30	1.7541	0.51		Q			V		
21+35	1.7576	0.51		Q			V		
21+40	1.7611	0.50		Q			V		
21+45	1.7645	0.50		Q			V		
21+50	1.7679	0.49		Q			V		
21+55	1.7713	0.49		Q			V		
22+ 0	1.7746	0.49		Q			V		
22+ 5	1.7779	0.48		Q			V		
22+10	1.7812	0.48		Q			V		
22+15	1.7845	0.47		Q			V		
22+20	1.7877	0.47		Q			V		

22+25	1.7909	0.47	Q				V	
22+30	1.7941	0.46	Q				V	
22+35	1.7973	0.46	Q				V	
22+40	1.8004	0.46	Q				V	
22+45	1.8035	0.45	Q				V	
22+50	1.8066	0.45	Q				V	
22+55	1.8097	0.45	Q				V	
23+ 0	1.8127	0.44	Q				V	
23+ 5	1.8158	0.44	Q				V	
23+10	1.8188	0.44	Q				V	
23+15	1.8218	0.43	Q				V	
23+20	1.8247	0.43	Q				V	
23+25	1.8277	0.43	Q				V	
23+30	1.8306	0.43	Q				V	
23+35	1.8335	0.42	Q				V	
23+40	1.8364	0.42	Q				V	
23+45	1.8393	0.42	Q				V	
23+50	1.8421	0.41	Q				V	
23+55	1.8450	0.41	Q				V	
24+ 0	1.8478	0.41	Q				V	
24+ 5	1.8505	0.39	Q				V	
24+10	1.8528	0.33	Q				V	
24+15	1.8544	0.24	Q				V	
24+20	1.8555	0.16	Q				V	
24+25	1.8563	0.12	Q				V	
24+30	1.8569	0.09	Q				V	
24+35	1.8574	0.07	Q				V	
24+40	1.8579	0.06	Q				V	
24+45	1.8582	0.05	Q				V	
24+50	1.8585	0.04	Q				V	
24+55	1.8587	0.03	Q				V	
25+ 0	1.8589	0.03	Q				V	
25+ 5	1.8591	0.02	Q				V	
25+10	1.8592	0.02	Q				V	
25+15	1.8593	0.02	Q				V	
25+20	1.8594	0.01	Q				V	
25+25	1.8595	0.01	Q				V	
25+30	1.8595	0.01	Q				V	
25+35	1.8596	0.01	Q				V	
25+40	1.8596	0.00	Q				V	
25+45	1.8596	0.00	Q				V	
25+50	1.8596	0.00	Q				V	

Unit Hydrograph Analysis

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Study date 03/08/24

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6484

DIVERSIFIED-MAPLE AVE
UH ANALYSIS-PRE-DEVELOPED CONDITION
10-YR STORM EVENT
2-STORM EVENT

Storm Event Year = 10

Antecedent Moisture Condition = 1

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
8.20	1	0.82

Rainfall data for year 10
8.20 6 2.18

Rainfall data for year 10
8.20 24 4.08

+++++

***** Area-averaged max loss rate, Fm *****

SCS curve No. (AMCII)	SCS curve NO. (AMC 1)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
78.0	60.6	8.20	1.000	0.671	1.000	0.671

Area-averaged adjusted loss rate Fm (In/Hr) = 0.671

***** Area-Averaged low loss rate fraction, Yb *****

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
8.20	1.000	78.0	60.6	6.50	0.204

Area-averaged catchment yield fraction, Y = 0.204

Area-averaged low loss fraction, Yb = 0.796

Direct entry of lag time by user

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Watershed area = 8.20 (Ac.)

Catchment Lag time = 0.233 hours
 Unit interval = 5.000 minutes
 Unit interval percentage of lag time = 35.7654
 Hydrograph baseflow = 0.00 (CFS)
 Average maximum watershed loss rate (Fm) = 0.671 (In/Hr)
 Average low loss rate fraction (Yb) = 0.796 (decimal)
 VALLEY UNDEVELOPED S-Graph Selected
 Computed peak 5-minute rainfall = 0.303 (In)
 Computed peak 30-minute rainfall = 0.621 (In)
 Specified peak 1-hour rainfall = 0.820 (In)
 Computed peak 3-hour rainfall = 1.493 (In)
 Specified peak 6-hour rainfall = 2.180 (In)
 Specified peak 24-hour rainfall = 4.080 (In)

Rainfall depth area reduction factors:

Using a total area of 8.20 (Ac.) (Ref: fig. E-4)

5-minute factor = 1.000	Adjusted rainfall = 0.303 (In)
30-minute factor = 1.000	Adjusted rainfall = 0.621 (In)
1-hour factor = 1.000	Adjusted rainfall = 0.820 (In)
3-hour factor = 1.000	Adjusted rainfall = 1.493 (In)
6-hour factor = 1.000	Adjusted rainfall = 2.180 (In)
24-hour factor = 1.000	Adjusted rainfall = 4.080 (In)

Unit Hydrograph		
Interval	'S' Graph	Unit Hydrograph
Number	Mean values	((CFS))

	(K = 99.17 (CFS))	
1	3.697	3.666
2	18.341	14.523
3	42.237	23.697
4	61.560	19.162
5	71.617	9.974
6	77.430	5.765
7	81.717	4.252
8	85.077	3.332
9	87.708	2.609
10	89.873	2.147
11	91.624	1.736
12	93.054	1.419
13	94.200	1.136
14	95.285	1.076
15	96.209	0.917
16	96.968	0.753
17	97.619	0.645
18	98.163	0.539
19	98.614	0.448
20	98.974	0.357
21	99.332	0.355
22	99.690	0.355
23	100.000	0.308

Peak Unit	Adjusted mass rainfall	Unit rainfall
Number	(In)	(In)
1	0.3034	0.3034
2	0.4003	0.0969
3	0.4708	0.0705
4	0.5282	0.0574
5	0.5775	0.0493
6	0.6212	0.0437
7	0.6607	0.0395
8	0.6970	0.0362
9	0.7306	0.0336
10	0.7620	0.0314
11	0.7916	0.0296
12	0.8197	0.0280

13	0.8563	0.0366
14	0.8917	0.0354
15	0.9259	0.0342
16	0.9591	0.0332
17	0.9914	0.0323
18	1.0228	0.0314
19	1.0535	0.0306
20	1.0834	0.0299
21	1.1126	0.0292
22	1.1412	0.0286
23	1.1693	0.0280
24	1.1968	0.0275
25	1.2238	0.0270
26	1.2502	0.0265
27	1.2763	0.0260
28	1.3019	0.0256
29	1.3271	0.0252
30	1.3518	0.0248
31	1.3763	0.0244
32	1.4003	0.0241
33	1.4241	0.0237
34	1.4475	0.0234
35	1.4706	0.0231
36	1.4933	0.0228
37	1.5158	0.0225
38	1.5381	0.0222
39	1.5600	0.0220
40	1.5817	0.0217
41	1.6032	0.0215
42	1.6244	0.0212
43	1.6454	0.0210
44	1.6662	0.0208
45	1.6867	0.0206
46	1.7071	0.0204
47	1.7273	0.0202
48	1.7472	0.0200
49	1.7670	0.0198
50	1.7866	0.0196
51	1.8060	0.0194
52	1.8252	0.0192
53	1.8443	0.0191
54	1.8632	0.0189
55	1.8820	0.0188
56	1.9006	0.0186
57	1.9190	0.0184
58	1.9373	0.0183
59	1.9555	0.0182
60	1.9735	0.0180
61	1.9914	0.0179
62	2.0091	0.0178
63	2.0267	0.0176
64	2.0442	0.0175
65	2.0616	0.0174
66	2.0788	0.0172
67	2.0960	0.0171
68	2.1130	0.0170
69	2.1299	0.0169
70	2.1467	0.0168
71	2.1634	0.0167
72	2.1799	0.0166
73	2.1936	0.0136
74	2.2071	0.0135
75	2.2206	0.0134
76	2.2339	0.0133
77	2.2471	0.0132
78	2.2603	0.0131
79	2.2733	0.0131
80	2.2863	0.0130
81	2.2992	0.0129
82	2.3120	0.0128
83	2.3247	0.0127

84	2.3373	0.0126
85	2.3498	0.0125
86	2.3623	0.0125
87	2.3747	0.0124
88	2.3870	0.0123
89	2.3992	0.0122
90	2.4114	0.0122
91	2.4234	0.0121
92	2.4354	0.0120
93	2.4474	0.0119
94	2.4592	0.0119
95	2.4710	0.0118
96	2.4828	0.0117
97	2.4944	0.0117
98	2.5060	0.0116
99	2.5175	0.0115
100	2.5290	0.0115
101	2.5404	0.0114
102	2.5518	0.0113
103	2.5630	0.0113
104	2.5743	0.0112
105	2.5854	0.0112
106	2.5965	0.0111
107	2.6076	0.0110
108	2.6186	0.0110
109	2.6295	0.0109
110	2.6404	0.0109
111	2.6512	0.0108
112	2.6620	0.0108
113	2.6727	0.0107
114	2.6834	0.0107
115	2.6940	0.0106
116	2.7045	0.0106
117	2.7151	0.0105
118	2.7255	0.0105
119	2.7359	0.0104
120	2.7463	0.0104
121	2.7566	0.0103
122	2.7669	0.0103
123	2.7771	0.0102
124	2.7873	0.0102
125	2.7975	0.0101
126	2.8076	0.0101
127	2.8176	0.0101
128	2.8276	0.0100
129	2.8376	0.0100
130	2.8475	0.0099
131	2.8574	0.0099
132	2.8672	0.0098
133	2.8770	0.0098
134	2.8868	0.0098
135	2.8965	0.0097
136	2.9062	0.0097
137	2.9159	0.0096
138	2.9255	0.0096
139	2.9350	0.0096
140	2.9446	0.0095
141	2.9540	0.0095
142	2.9635	0.0095
143	2.9729	0.0094
144	2.9823	0.0094
145	2.9916	0.0093
146	3.0010	0.0093
147	3.0102	0.0093
148	3.0195	0.0092
149	3.0287	0.0092
150	3.0378	0.0092
151	3.0470	0.0091
152	3.0561	0.0091
153	3.0652	0.0091
154	3.0742	0.0090

155	3.0832	0.0090
156	3.0922	0.0090
157	3.1011	0.0089
158	3.1101	0.0089
159	3.1189	0.0089
160	3.1278	0.0089
161	3.1366	0.0088
162	3.1454	0.0088
163	3.1542	0.0088
164	3.1629	0.0087
165	3.1716	0.0087
166	3.1803	0.0087
167	3.1889	0.0086
168	3.1976	0.0086
169	3.2062	0.0086
170	3.2147	0.0086
171	3.2233	0.0085
172	3.2318	0.0085
173	3.2402	0.0085
174	3.2487	0.0085
175	3.2571	0.0084
176	3.2655	0.0084
177	3.2739	0.0084
178	3.2823	0.0084
179	3.2906	0.0083
180	3.2989	0.0083
181	3.3072	0.0083
182	3.3154	0.0082
183	3.3236	0.0082
184	3.3318	0.0082
185	3.3400	0.0082
186	3.3482	0.0082
187	3.3563	0.0081
188	3.3644	0.0081
189	3.3725	0.0081
190	3.3805	0.0081
191	3.3886	0.0080
192	3.3966	0.0080
193	3.4045	0.0080
194	3.4125	0.0080
195	3.4205	0.0079
196	3.4284	0.0079
197	3.4363	0.0079
198	3.4441	0.0079
199	3.4520	0.0079
200	3.4598	0.0078
201	3.4676	0.0078
202	3.4754	0.0078
203	3.4832	0.0078
204	3.4909	0.0077
205	3.4987	0.0077
206	3.5064	0.0077
207	3.5141	0.0077
208	3.5217	0.0077
209	3.5294	0.0076
210	3.5370	0.0076
211	3.5446	0.0076
212	3.5522	0.0076
213	3.5598	0.0076
214	3.5673	0.0075
215	3.5748	0.0075
216	3.5823	0.0075
217	3.5898	0.0075
218	3.5973	0.0075
219	3.6048	0.0075
220	3.6122	0.0074
221	3.6196	0.0074
222	3.6270	0.0074
223	3.6344	0.0074
224	3.6417	0.0074
225	3.6491	0.0073

226	3.6564	0.0073
227	3.6637	0.0073
228	3.6710	0.0073
229	3.6783	0.0073
230	3.6855	0.0073
231	3.6928	0.0072
232	3.7000	0.0072
233	3.7072	0.0072
234	3.7144	0.0072
235	3.7215	0.0072
236	3.7287	0.0072
237	3.7358	0.0071
238	3.7429	0.0071
239	3.7500	0.0071
240	3.7571	0.0071
241	3.7642	0.0071
242	3.7712	0.0071
243	3.7783	0.0070
244	3.7853	0.0070
245	3.7923	0.0070
246	3.7993	0.0070
247	3.8063	0.0070
248	3.8132	0.0070
249	3.8202	0.0069
250	3.8271	0.0069
251	3.8340	0.0069
252	3.8409	0.0069
253	3.8478	0.0069
254	3.8547	0.0069
255	3.8615	0.0069
256	3.8684	0.0068
257	3.8752	0.0068
258	3.8820	0.0068
259	3.8888	0.0068
260	3.8956	0.0068
261	3.9023	0.0068
262	3.9091	0.0068
263	3.9158	0.0067
264	3.9226	0.0067
265	3.9293	0.0067
266	3.9360	0.0067
267	3.9427	0.0067
268	3.9493	0.0067
269	3.9560	0.0067
270	3.9626	0.0066
271	3.9693	0.0066
272	3.9759	0.0066
273	3.9825	0.0066
274	3.9891	0.0066
275	3.9956	0.0066
276	4.0022	0.0066
277	4.0087	0.0065
278	4.0153	0.0065
279	4.0218	0.0065
280	4.0283	0.0065
281	4.0348	0.0065
282	4.0413	0.0065
283	4.0478	0.0065
284	4.0542	0.0065
285	4.0607	0.0064
286	4.0671	0.0064
287	4.0735	0.0064
288	4.0800	0.0064

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0064	0.0051	0.0013
2	0.0064	0.0051	0.0013
3	0.0064	0.0051	0.0013

4	0.0065	0.0051	0.0013
5	0.0065	0.0052	0.0013
6	0.0065	0.0052	0.0013
7	0.0065	0.0052	0.0013
8	0.0065	0.0052	0.0013
9	0.0066	0.0052	0.0013
10	0.0066	0.0052	0.0013
11	0.0066	0.0053	0.0013
12	0.0066	0.0053	0.0013
13	0.0066	0.0053	0.0014
14	0.0067	0.0053	0.0014
15	0.0067	0.0053	0.0014
16	0.0067	0.0053	0.0014
17	0.0067	0.0054	0.0014
18	0.0067	0.0054	0.0014
19	0.0068	0.0054	0.0014
20	0.0068	0.0054	0.0014
21	0.0068	0.0054	0.0014
22	0.0068	0.0054	0.0014
23	0.0069	0.0055	0.0014
24	0.0069	0.0055	0.0014
25	0.0069	0.0055	0.0014
26	0.0069	0.0055	0.0014
27	0.0069	0.0055	0.0014
28	0.0070	0.0055	0.0014
29	0.0070	0.0056	0.0014
30	0.0070	0.0056	0.0014
31	0.0070	0.0056	0.0014
32	0.0071	0.0056	0.0014
33	0.0071	0.0056	0.0014
34	0.0071	0.0057	0.0014
35	0.0071	0.0057	0.0015
36	0.0072	0.0057	0.0015
37	0.0072	0.0057	0.0015
38	0.0072	0.0057	0.0015
39	0.0072	0.0058	0.0015
40	0.0073	0.0058	0.0015
41	0.0073	0.0058	0.0015
42	0.0073	0.0058	0.0015
43	0.0073	0.0058	0.0015
44	0.0074	0.0059	0.0015
45	0.0074	0.0059	0.0015
46	0.0074	0.0059	0.0015
47	0.0075	0.0059	0.0015
48	0.0075	0.0059	0.0015
49	0.0075	0.0060	0.0015
50	0.0075	0.0060	0.0015
51	0.0076	0.0060	0.0015
52	0.0076	0.0060	0.0015
53	0.0076	0.0061	0.0016
54	0.0076	0.0061	0.0016
55	0.0077	0.0061	0.0016
56	0.0077	0.0061	0.0016
57	0.0077	0.0062	0.0016
58	0.0078	0.0062	0.0016
59	0.0078	0.0062	0.0016
60	0.0078	0.0062	0.0016
61	0.0079	0.0063	0.0016
62	0.0079	0.0063	0.0016
63	0.0079	0.0063	0.0016
64	0.0080	0.0063	0.0016
65	0.0080	0.0064	0.0016
66	0.0080	0.0064	0.0016
67	0.0081	0.0064	0.0016
68	0.0081	0.0064	0.0017
69	0.0082	0.0065	0.0017
70	0.0082	0.0065	0.0017
71	0.0082	0.0065	0.0017
72	0.0082	0.0066	0.0017
73	0.0083	0.0066	0.0017
74	0.0083	0.0066	0.0017

75	0.0084	0.0067	0.0017
76	0.0084	0.0067	0.0017
77	0.0085	0.0067	0.0017
78	0.0085	0.0068	0.0017
79	0.0085	0.0068	0.0017
80	0.0086	0.0068	0.0017
81	0.0086	0.0069	0.0018
82	0.0086	0.0069	0.0018
83	0.0087	0.0069	0.0018
84	0.0087	0.0070	0.0018
85	0.0088	0.0070	0.0018
86	0.0088	0.0070	0.0018
87	0.0089	0.0071	0.0018
88	0.0089	0.0071	0.0018
89	0.0090	0.0071	0.0018
90	0.0090	0.0072	0.0018
91	0.0091	0.0072	0.0019
92	0.0091	0.0072	0.0019
93	0.0092	0.0073	0.0019
94	0.0092	0.0073	0.0019
95	0.0093	0.0074	0.0019
96	0.0093	0.0074	0.0019
97	0.0094	0.0075	0.0019
98	0.0094	0.0075	0.0019
99	0.0095	0.0076	0.0019
100	0.0095	0.0076	0.0019
101	0.0096	0.0076	0.0020
102	0.0096	0.0077	0.0020
103	0.0097	0.0077	0.0020
104	0.0098	0.0078	0.0020
105	0.0098	0.0078	0.0020
106	0.0099	0.0079	0.0020
107	0.0100	0.0079	0.0020
108	0.0100	0.0080	0.0020
109	0.0101	0.0080	0.0021
110	0.0101	0.0081	0.0021
111	0.0102	0.0081	0.0021
112	0.0103	0.0082	0.0021
113	0.0104	0.0083	0.0021
114	0.0104	0.0083	0.0021
115	0.0105	0.0084	0.0021
116	0.0106	0.0084	0.0022
117	0.0107	0.0085	0.0022
118	0.0107	0.0085	0.0022
119	0.0108	0.0086	0.0022
120	0.0109	0.0087	0.0022
121	0.0110	0.0087	0.0022
122	0.0110	0.0088	0.0023
123	0.0112	0.0089	0.0023
124	0.0112	0.0089	0.0023
125	0.0113	0.0090	0.0023
126	0.0114	0.0091	0.0023
127	0.0115	0.0092	0.0024
128	0.0116	0.0092	0.0024
129	0.0117	0.0093	0.0024
130	0.0118	0.0094	0.0024
131	0.0119	0.0095	0.0024
132	0.0120	0.0096	0.0024
133	0.0122	0.0097	0.0025
134	0.0122	0.0097	0.0025
135	0.0124	0.0099	0.0025
136	0.0125	0.0099	0.0025
137	0.0126	0.0100	0.0026
138	0.0127	0.0101	0.0026
139	0.0129	0.0102	0.0026
140	0.0130	0.0103	0.0026
141	0.0131	0.0105	0.0027
142	0.0132	0.0105	0.0027
143	0.0134	0.0107	0.0027
144	0.0135	0.0108	0.0028
145	0.0166	0.0132	0.0034

146	0.0167	0.0133	0.0034
147	0.0169	0.0135	0.0034
148	0.0170	0.0135	0.0035
149	0.0172	0.0137	0.0035
150	0.0174	0.0138	0.0035
151	0.0176	0.0140	0.0036
152	0.0178	0.0141	0.0036
153	0.0180	0.0143	0.0037
154	0.0182	0.0145	0.0037
155	0.0184	0.0147	0.0038
156	0.0186	0.0148	0.0038
157	0.0189	0.0151	0.0039
158	0.0191	0.0152	0.0039
159	0.0194	0.0155	0.0040
160	0.0196	0.0156	0.0040
161	0.0200	0.0159	0.0041
162	0.0202	0.0160	0.0041
163	0.0206	0.0164	0.0042
164	0.0208	0.0165	0.0042
165	0.0212	0.0169	0.0043
166	0.0215	0.0171	0.0044
167	0.0220	0.0175	0.0045
168	0.0222	0.0177	0.0045
169	0.0228	0.0181	0.0047
170	0.0231	0.0184	0.0047
171	0.0237	0.0189	0.0048
172	0.0241	0.0192	0.0049
173	0.0248	0.0197	0.0051
174	0.0252	0.0200	0.0051
175	0.0260	0.0207	0.0053
176	0.0265	0.0211	0.0054
177	0.0275	0.0219	0.0056
178	0.0280	0.0223	0.0057
179	0.0292	0.0233	0.0060
180	0.0299	0.0238	0.0061
181	0.0314	0.0250	0.0064
182	0.0323	0.0257	0.0066
183	0.0342	0.0272	0.0070
184	0.0354	0.0281	0.0072
185	0.0280	0.0223	0.0057
186	0.0296	0.0236	0.0060
187	0.0336	0.0268	0.0069
188	0.0362	0.0289	0.0074
189	0.0437	0.0348	0.0089
190	0.0493	0.0393	0.0101
191	0.0705	0.0559	0.0145
192	0.0969	0.0559	0.0410
193	0.3034	0.0559	0.2474
194	0.0574	0.0457	0.0117
195	0.0395	0.0314	0.0081
196	0.0314	0.0250	0.0064
197	0.0366	0.0291	0.0075
198	0.0332	0.0264	0.0068
199	0.0306	0.0244	0.0063
200	0.0286	0.0228	0.0058
201	0.0270	0.0215	0.0055
202	0.0256	0.0204	0.0052
203	0.0244	0.0194	0.0050
204	0.0234	0.0186	0.0048
205	0.0225	0.0179	0.0046
206	0.0217	0.0173	0.0044
207	0.0210	0.0167	0.0043
208	0.0204	0.0162	0.0042
209	0.0198	0.0157	0.0040
210	0.0192	0.0153	0.0039
211	0.0188	0.0149	0.0038
212	0.0183	0.0146	0.0037
213	0.0179	0.0142	0.0036
214	0.0175	0.0139	0.0036
215	0.0171	0.0136	0.0035
216	0.0168	0.0134	0.0034

217	0.0136	0.0109	0.0028
218	0.0133	0.0106	0.0027
219	0.0131	0.0104	0.0027
220	0.0128	0.0102	0.0026
221	0.0125	0.0100	0.0026
222	0.0123	0.0098	0.0025
223	0.0121	0.0096	0.0025
224	0.0119	0.0094	0.0024
225	0.0117	0.0093	0.0024
226	0.0115	0.0091	0.0023
227	0.0113	0.0090	0.0023
228	0.0111	0.0088	0.0023
229	0.0109	0.0087	0.0022
230	0.0108	0.0086	0.0022
231	0.0106	0.0085	0.0022
232	0.0105	0.0083	0.0021
233	0.0103	0.0082	0.0021
234	0.0102	0.0081	0.0021
235	0.0101	0.0080	0.0021
236	0.0099	0.0079	0.0020
237	0.0098	0.0078	0.0020
238	0.0097	0.0077	0.0020
239	0.0096	0.0076	0.0020
240	0.0095	0.0075	0.0019
241	0.0093	0.0074	0.0019
242	0.0092	0.0074	0.0019
243	0.0091	0.0073	0.0019
244	0.0090	0.0072	0.0018
245	0.0089	0.0071	0.0018
246	0.0089	0.0070	0.0018
247	0.0088	0.0070	0.0018
248	0.0087	0.0069	0.0018
249	0.0086	0.0068	0.0018
250	0.0085	0.0068	0.0017
251	0.0084	0.0067	0.0017
252	0.0084	0.0066	0.0017
253	0.0083	0.0066	0.0017
254	0.0082	0.0065	0.0017
255	0.0081	0.0065	0.0017
256	0.0081	0.0064	0.0016
257	0.0080	0.0064	0.0016
258	0.0079	0.0063	0.0016
259	0.0079	0.0063	0.0016
260	0.0078	0.0062	0.0016
261	0.0077	0.0062	0.0016
262	0.0077	0.0061	0.0016
263	0.0076	0.0061	0.0016
264	0.0075	0.0060	0.0015
265	0.0075	0.0060	0.0015
266	0.0074	0.0059	0.0015
267	0.0074	0.0059	0.0015
268	0.0073	0.0058	0.0015
269	0.0073	0.0058	0.0015
270	0.0072	0.0057	0.0015
271	0.0072	0.0057	0.0015
272	0.0071	0.0057	0.0015
273	0.0071	0.0056	0.0014
274	0.0070	0.0056	0.0014
275	0.0070	0.0056	0.0014
276	0.0069	0.0055	0.0014
277	0.0069	0.0055	0.0014
278	0.0068	0.0054	0.0014
279	0.0068	0.0054	0.0014
280	0.0068	0.0054	0.0014
281	0.0067	0.0053	0.0014
282	0.0067	0.0053	0.0014
283	0.0066	0.0053	0.0014
284	0.0066	0.0052	0.0013
285	0.0065	0.0052	0.0013
286	0.0065	0.0052	0.0013
287	0.0065	0.0052	0.0013

288 0.0064 0.0051 0.0013

 Total soil rain loss = 3.04(In)
 Total effective rainfall = 1.04(In)
 Peak flow rate in flood hydrograph = 7.21(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	0.0002		0.02 Q					
0+15	0.0006		0.05 Q					
0+20	0.0011		0.08 Q					
0+25	0.0018		0.09 Q					
0+30	0.0025		0.10 Q					
0+35	0.0032		0.11 Q					
0+40	0.0040		0.11 Q					
0+45	0.0048		0.12 Q					
0+50	0.0056		0.12 Q					
0+55	0.0064		0.12 Q					
1+ 0	0.0073		0.12 Q					
1+ 5	0.0081		0.13 Q					
1+10	0.0090		0.13 Q					
1+15	0.0099		0.13 Q					
1+20	0.0108		0.13 Q					
1+25	0.0117		0.13 Q					
1+30	0.0126		0.13 Q					
1+35	0.0135		0.13 Q					
1+40	0.0144		0.13 Q					
1+45	0.0154		0.14 Q					
1+50	0.0163		0.14 Q					
1+55	0.0173		0.14 Q					
2+ 0	0.0182		0.14 QV					
2+ 5	0.0191		0.14 QV					
2+10	0.0201		0.14 QV					
2+15	0.0211		0.14 QV					
2+20	0.0220		0.14 QV					
2+25	0.0230		0.14 QV					
2+30	0.0239		0.14 QV					
2+35	0.0249		0.14 QV					
2+40	0.0259		0.14 QV					
2+45	0.0268		0.14 QV					
2+50	0.0278		0.14 QV					
2+55	0.0288		0.14 QV					
3+ 0	0.0298		0.14 QV					
3+ 5	0.0308		0.14 QV					
3+10	0.0318		0.14 QV					
3+15	0.0328		0.14 QV					
3+20	0.0337		0.14 QV					
3+25	0.0347		0.15 QV					
3+30	0.0358		0.15 Q V					
3+35	0.0368		0.15 Q V					
3+40	0.0378		0.15 Q V					
3+45	0.0388		0.15 Q V					
3+50	0.0398		0.15 Q V					
3+55	0.0408		0.15 Q V					
4+ 0	0.0418		0.15 Q V					
4+ 5	0.0429		0.15 Q V					
4+10	0.0439		0.15 Q V					
4+15	0.0450		0.15 Q V					
4+20	0.0460		0.15 Q V					
4+25	0.0470		0.15 Q V					
4+30	0.0481		0.15 Q V					
4+35	0.0491		0.15 Q V					

4+40	0.0502	0.15	Q V				
4+45	0.0513	0.15	Q V				
4+50	0.0523	0.15	Q V				
4+55	0.0534	0.16	Q V				
5+ 0	0.0545	0.16	Q V				
5+ 5	0.0555	0.16	Q V				
5+10	0.0566	0.16	Q V				
5+15	0.0577	0.16	Q V				
5+20	0.0588	0.16	Q V				
5+25	0.0599	0.16	Q V				
5+30	0.0610	0.16	Q V				
5+35	0.0621	0.16	Q V				
5+40	0.0632	0.16	Q V				
5+45	0.0643	0.16	Q V				
5+50	0.0655	0.16	Q V				
5+55	0.0666	0.16	Q V				
6+ 0	0.0677	0.16	Q V				
6+ 5	0.0688	0.16	Q V				
6+10	0.0700	0.17	Q V				
6+15	0.0711	0.17	Q V				
6+20	0.0723	0.17	Q V				
6+25	0.0734	0.17	Q V				
6+30	0.0746	0.17	Q V				
6+35	0.0758	0.17	Q V				
6+40	0.0769	0.17	Q V				
6+45	0.0781	0.17	Q V				
6+50	0.0793	0.17	Q V				
6+55	0.0805	0.17	Q V				
7+ 0	0.0817	0.17	Q V				
7+ 5	0.0829	0.17	Q V				
7+10	0.0841	0.18	Q V				
7+15	0.0853	0.18	Q V				
7+20	0.0865	0.18	Q V				
7+25	0.0877	0.18	Q V				
7+30	0.0890	0.18	Q V				
7+35	0.0902	0.18	Q V				
7+40	0.0914	0.18	Q V				
7+45	0.0927	0.18	Q V				
7+50	0.0939	0.18	Q V				
7+55	0.0952	0.18	Q V				
8+ 0	0.0965	0.18	Q V				
8+ 5	0.0978	0.19	Q V				
8+10	0.0990	0.19	Q V				
8+15	0.1003	0.19	Q V				
8+20	0.1016	0.19	Q V				
8+25	0.1029	0.19	Q V				
8+30	0.1042	0.19	Q V				
8+35	0.1056	0.19	Q V				
8+40	0.1069	0.19	Q V				
8+45	0.1082	0.19	Q V				
8+50	0.1096	0.20	Q V				
8+55	0.1109	0.20	Q V				
9+ 0	0.1123	0.20	Q V				
9+ 5	0.1137	0.20	Q V				
9+10	0.1150	0.20	Q V				
9+15	0.1164	0.20	Q V				
9+20	0.1178	0.20	Q V				
9+25	0.1192	0.20	Q V				
9+30	0.1206	0.21	Q V				
9+35	0.1221	0.21	Q V				
9+40	0.1235	0.21	Q V				
9+45	0.1249	0.21	Q V				
9+50	0.1264	0.21	Q V				
9+55	0.1278	0.21	Q V				
10+ 0	0.1293	0.21	Q V				
10+ 5	0.1308	0.22	Q V				
10+10	0.1323	0.22	Q V				
10+15	0.1338	0.22	Q V				
10+20	0.1353	0.22	Q V				
10+25	0.1369	0.22	Q V				
10+30	0.1384	0.22	Q V				

10+35	0.1399	0.23	Q	V							
10+40	0.1415	0.23	Q	V							
10+45	0.1431	0.23	Q	V							
10+50	0.1447	0.23	Q	V							
10+55	0.1463	0.23	Q	V							
11+ 0	0.1479	0.23	Q	V							
11+ 5	0.1495	0.24	Q	V							
11+10	0.1512	0.24	Q	V							
11+15	0.1528	0.24	Q	V							
11+20	0.1545	0.24	Q	V							
11+25	0.1562	0.25	Q	V							
11+30	0.1579	0.25	Q	V							
11+35	0.1596	0.25	IQ	V							
11+40	0.1614	0.25	IQ	V							
11+45	0.1631	0.25	IQ	V							
11+50	0.1649	0.26	IQ	V							
11+55	0.1667	0.26	IQ	V							
12+ 0	0.1685	0.26	IQ	V							
12+ 5	0.1703	0.27	IQ	V							
12+10	0.1723	0.28	IQ	V							
12+15	0.1743	0.30	IQ	V							
12+20	0.1764	0.31	IQ	V							
12+25	0.1786	0.32	IQ	V							
12+30	0.1809	0.33	IQ	V							
12+35	0.1832	0.33	IQ	V							
12+40	0.1855	0.34	IQ	V							
12+45	0.1878	0.34	IQ	V							
12+50	0.1902	0.35	IQ	V							
12+55	0.1926	0.35	IQ	V							
13+ 0	0.1951	0.36	IQ	V							
13+ 5	0.1976	0.36	IQ	IV							
13+10	0.2001	0.37	IQ	IV							
13+15	0.2026	0.37	IQ	IV							
13+20	0.2052	0.38	IQ	IV							
13+25	0.2078	0.38	IQ	IV							
13+30	0.2105	0.39	IQ	IV							
13+35	0.2132	0.39	IQ	I V							
13+40	0.2159	0.40	IQ	I V							
13+45	0.2187	0.40	IQ	I V							
13+50	0.2215	0.41	IQ	I V							
13+55	0.2244	0.42	IQ	I V							
14+ 0	0.2273	0.42	IQ	I V							
14+ 5	0.2303	0.43	IQ	I V							
14+10	0.2333	0.44	IQ	I V							
14+15	0.2363	0.44	IQ	I V							
14+20	0.2394	0.45	IQ	I V							
14+25	0.2426	0.46	IQ	I V							
14+30	0.2459	0.47	IQ	I V							
14+35	0.2492	0.48	IQ	I V							
14+40	0.2525	0.49	IQ	I V							
14+45	0.2560	0.50	I Q	I V							
14+50	0.2595	0.51	I Q	I V							
14+55	0.2632	0.53	I Q	I V							
15+ 0	0.2669	0.54	I Q	I V							
15+ 5	0.2708	0.56	I Q	I V							
15+10	0.2747	0.58	I Q	I V							
15+15	0.2789	0.60	I Q	I V							
15+20	0.2831	0.62	I Q	I V							
15+25	0.2875	0.64	I Q	I V							
15+30	0.2919	0.64	I Q	I V							
15+35	0.2961	0.62	I Q	I V							
15+40	0.3004	0.62	I Q	I V							
15+45	0.3049	0.65	I Q	I V							
15+50	0.3098	0.71	I Q	I V							
15+55	0.3153	0.79	I Q	I V							
16+ 0	0.3223	1.02	I Q	I V							
16+ 5	0.3382	2.31	I Q	I V							
16+10	0.3739	5.18	I	I							
16+15	0.4235	7.21	I	I							
16+20	0.4636	5.82	I	I							
16+25	0.4873	3.44	I	I							

16+30	0.5033	2.32				V		
16+35	0.5163	1.89				V		
16+40	0.5274	1.61				V		
16+45	0.5369	1.39				V		
16+50	0.5454	1.23				V		
16+55	0.5529	1.09				V		
17+ 0	0.5596	0.97				V		
17+ 5	0.5656	0.87				V		
17+10	0.5713	0.83				V		
17+15	0.5765	0.76				V		
17+20	0.5814	0.70				V		
17+25	0.5859	0.65				V		
17+30	0.5900	0.61				V		
17+35	0.5939	0.57				V		
17+40	0.5976	0.53				V		
17+45	0.6011	0.52				V		
17+50	0.6046	0.50				V		
17+55	0.6078	0.47				V		
18+ 0	0.6104	0.38				V		
18+ 5	0.6130	0.37				V		
18+10	0.6154	0.35				V		
18+15	0.6177	0.33				V		
18+20	0.6198	0.31				V		
18+25	0.6219	0.30				V		
18+30	0.6239	0.29				V		
18+35	0.6258	0.28				V		
18+40	0.6277	0.27				V		
18+45	0.6295	0.26				V		
18+50	0.6313	0.26				V		
18+55	0.6330	0.25				V		
19+ 0	0.6347	0.25				V		
19+ 5	0.6364	0.24				V		
19+10	0.6380	0.24				V		
19+15	0.6396	0.23				V		
19+20	0.6412	0.23				V		
19+25	0.6427	0.22				V		
19+30	0.6443	0.22				V		
19+35	0.6458	0.22				V		
19+40	0.6472	0.21				V		
19+45	0.6487	0.21				V		
19+50	0.6501	0.21				V		
19+55	0.6515	0.20				V		
20+ 0	0.6529	0.20				V		
20+ 5	0.6543	0.20				V		
20+10	0.6557	0.20				V		
20+15	0.6570	0.19				V		
20+20	0.6583	0.19				V		
20+25	0.6596	0.19				V		
20+30	0.6609	0.19				V		
20+35	0.6622	0.19				V		
20+40	0.6635	0.18				V		
20+45	0.6647	0.18				V		
20+50	0.6660	0.18				V		
20+55	0.6672	0.18				V		
21+ 0	0.6684	0.18				V		
21+ 5	0.6696	0.17				V		
21+10	0.6708	0.17				V		
21+15	0.6720	0.17				V		
21+20	0.6732	0.17				V		
21+25	0.6743	0.17				V		
21+30	0.6755	0.17				V		
21+35	0.6766	0.17				V		
21+40	0.6777	0.16				V		
21+45	0.6788	0.16				V		
21+50	0.6800	0.16				V		
21+55	0.6811	0.16				V		
22+ 0	0.6821	0.16				V		
22+ 5	0.6832	0.16				V		
22+10	0.6843	0.16				V		
22+15	0.6854	0.15				V		
22+20	0.6864	0.15				V		

22+25	0.6875	0.15	Q				V
22+30	0.6885	0.15	Q				V
22+35	0.6895	0.15	Q				V
22+40	0.6905	0.15	Q				V
22+45	0.6916	0.15	Q				V
22+50	0.6926	0.15	Q				V
22+55	0.6936	0.15	Q				V
23+ 0	0.6946	0.14	Q				V
23+ 5	0.6956	0.14	Q				V
23+10	0.6965	0.14	Q				V
23+15	0.6975	0.14	Q				V
23+20	0.6985	0.14	Q				V
23+25	0.6994	0.14	Q				V
23+30	0.7004	0.14	Q				V
23+35	0.7013	0.14	Q				V
23+40	0.7023	0.14	Q				V
23+45	0.7032	0.14	Q				V
23+50	0.7042	0.14	Q				V
23+55	0.7051	0.13	Q				V
24+ 0	0.7060	0.13	Q				V
24+ 5	0.7069	0.13	Q				V
24+10	0.7076	0.11	Q				V
24+15	0.7082	0.08	Q				V
24+20	0.7085	0.05	Q				V
24+25	0.7088	0.04	Q				V
24+30	0.7090	0.03	Q				V
24+35	0.7092	0.02	Q				V
24+40	0.7093	0.02	Q				V
24+45	0.7094	0.02	Q				V
24+50	0.7095	0.01	Q				V
24+55	0.7096	0.01	Q				V
25+ 0	0.7096	0.01	Q				V
25+ 5	0.7097	0.01	Q				V
25+10	0.7097	0.01	Q				V
25+15	0.7098	0.01	Q				V
25+20	0.7098	0.00	Q				V
25+25	0.7098	0.00	Q				V
25+30	0.7098	0.00	Q				V
25+35	0.7098	0.00	Q				V
25+40	0.7099	0.00	Q				V
25+45	0.7099	0.00	Q				V
25+50	0.7099	0.00	Q				V

Unit Hydrograph Analysis

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Study date 03/07/24

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6484

DIVERSIFIED-MAPLE AVE
UH ANALYSIS-PRE-DEVELOPED CONDITION
2-STORM EVENT

Storm Event Year = 2

Antecedent Moisture Condition = 1

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 2		
8.20	1	0.63

Rainfall data for year 2
8.20 6 1.69

Rainfall data for year 2
8.20 24 3.14

+++++
***** Area-averaged max loss rate, Fm *****

SCS curve No.(AMCII)	SCS curve NO.(AMC 1)	Area (Ac.)	Area Fraction	Fp(Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
78.0	60.6	8.20	1.000	0.671	1.000	0.671

Area-averaged adjusted loss rate Fm (In/Hr) = 0.671

***** Area-Averaged low loss rate fraction, Yb *****

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
8.20	1.000	78.0	60.6	6.50	0.129

Area-averaged catchment yield fraction, Y = 0.129

Area-averaged low loss fraction, Yb = 0.871

Direct entry of lag time by user

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Watershed area = 8.20(Ac.)

Catchment Lag time = 0.233 hours

Unit interval = 5.000 minutes
 Unit interval percentage of lag time = 35.7654
 Hydrograph baseflow = 0.00(CFS)
 Average maximum watershed loss rate(Fm) = 0.671(In/Hr)
 Average low loss rate fraction (Yb) = 0.871 (decimal)
 VALLEY UNDEVELOPED S-Graph Selected
 Computed peak 5-minute rainfall = 0.232(In)
 Computed peak 30-minute rainfall = 0.474(In)
 Specified peak 1-hour rainfall = 0.626(In)
 Computed peak 3-hour rainfall = 1.151(In)
 Specified peak 6-hour rainfall = 1.690(In)
 Specified peak 24-hour rainfall = 3.140(In)

Rainfall depth area reduction factors:

Using a total area of 8.20(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000	Adjusted rainfall = 0.232(In)
30-minute factor = 1.000	Adjusted rainfall = 0.474(In)
1-hour factor = 1.000	Adjusted rainfall = 0.626(In)
3-hour factor = 1.000	Adjusted rainfall = 1.151(In)
6-hour factor = 1.000	Adjusted rainfall = 1.690(In)
24-hour factor = 1.000	Adjusted rainfall = 3.140(In)

Unit Hydrograph		
Interval	'S' Graph	Unit Hydrograph
Number	Mean values	((CFS))

	(K = 99.17 (CFS))	
1	3.697	3.666
2	18.341	14.523
3	42.237	23.697
4	61.560	19.162
5	71.617	9.974
6	77.430	5.765
7	81.717	4.252
8	85.077	3.332
9	87.708	2.609
10	89.873	2.147
11	91.624	1.736
12	93.054	1.419
13	94.200	1.136
14	95.285	1.076
15	96.209	0.917
16	96.968	0.753
17	97.619	0.645
18	98.163	0.539
19	98.614	0.448
20	98.974	0.357
21	99.332	0.355
22	99.690	0.355
23	100.000	0.308

Peak Unit	Adjusted mass rainfall	Unit rainfall
Number	(In)	(In)
1	0.2316	0.2316
2	0.3056	0.0740
3	0.3594	0.0538
4	0.4032	0.0438
5	0.4409	0.0376
6	0.4742	0.0334
7	0.5044	0.0302
8	0.5321	0.0277
9	0.5577	0.0257
10	0.5817	0.0240
11	0.6044	0.0226
12	0.6258	0.0214
13	0.6542	0.0284

14	0.6816	0.0274
15	0.7082	0.0266
16	0.7340	0.0258
17	0.7591	0.0251
18	0.7835	0.0244
19	0.8074	0.0239
20	0.8307	0.0233
21	0.8535	0.0228
22	0.8758	0.0223
23	0.8976	0.0219
24	0.9191	0.0214
25	0.9401	0.0210
26	0.9608	0.0207
27	0.9811	0.0203
28	1.0011	0.0200
29	1.0208	0.0197
30	1.0402	0.0194
31	1.0592	0.0191
32	1.0781	0.0188
33	1.0966	0.0186
34	1.1149	0.0183
35	1.1330	0.0181
36	1.1508	0.0178
37	1.1684	0.0176
38	1.1858	0.0174
39	1.2030	0.0172
40	1.2200	0.0170
41	1.2369	0.0168
42	1.2535	0.0166
43	1.2699	0.0165
44	1.2862	0.0163
45	1.3024	0.0161
46	1.3183	0.0160
47	1.3341	0.0158
48	1.3498	0.0157
49	1.3653	0.0155
50	1.3807	0.0154
51	1.3959	0.0152
52	1.4110	0.0151
53	1.4260	0.0150
54	1.4409	0.0149
55	1.4556	0.0147
56	1.4702	0.0146
57	1.4847	0.0145
58	1.4991	0.0144
59	1.5133	0.0143
60	1.5275	0.0142
61	1.5416	0.0141
62	1.5555	0.0140
63	1.5694	0.0139
64	1.5831	0.0138
65	1.5968	0.0137
66	1.6104	0.0136
67	1.6239	0.0135
68	1.6373	0.0134
69	1.6506	0.0133
70	1.6638	0.0132
71	1.6769	0.0131
72	1.6900	0.0131
73	1.7004	0.0104
74	1.7108	0.0104
75	1.7211	0.0103
76	1.7313	0.0102
77	1.7414	0.0101
78	1.7515	0.0101
79	1.7615	0.0100
80	1.7714	0.0099
81	1.7813	0.0099
82	1.7911	0.0098
83	1.8008	0.0097
84	1.8105	0.0097

85	1.8201	0.0096
86	1.8296	0.0095
87	1.8391	0.0095
88	1.8485	0.0094
89	1.8579	0.0094
90	1.8672	0.0093
91	1.8764	0.0092
92	1.8856	0.0092
93	1.8947	0.0091
94	1.9038	0.0091
95	1.9128	0.0090
96	1.9218	0.0090
97	1.9307	0.0089
98	1.9396	0.0089
99	1.9484	0.0088
100	1.9572	0.0088
101	1.9659	0.0087
102	1.9746	0.0087
103	1.9832	0.0086
104	1.9918	0.0086
105	2.0003	0.0085
106	2.0088	0.0085
107	2.0173	0.0084
108	2.0257	0.0084
109	2.0340	0.0084
110	2.0423	0.0083
111	2.0506	0.0083
112	2.0589	0.0082
113	2.0670	0.0082
114	2.0752	0.0082
115	2.0833	0.0081
116	2.0914	0.0081
117	2.0994	0.0080
118	2.1074	0.0080
119	2.1154	0.0080
120	2.1233	0.0079
121	2.1312	0.0079
122	2.1391	0.0079
123	2.1469	0.0078
124	2.1547	0.0078
125	2.1624	0.0077
126	2.1701	0.0077
127	2.1778	0.0077
128	2.1855	0.0076
129	2.1931	0.0076
130	2.2006	0.0076
131	2.2082	0.0075
132	2.2157	0.0075
133	2.2232	0.0075
134	2.2307	0.0075
135	2.2381	0.0074
136	2.2455	0.0074
137	2.2528	0.0074
138	2.2602	0.0073
139	2.2675	0.0073
140	2.2747	0.0073
141	2.2820	0.0072
142	2.2892	0.0072
143	2.2964	0.0072
144	2.3036	0.0072
145	2.3107	0.0071
146	2.3178	0.0071
147	2.3249	0.0071
148	2.3319	0.0071
149	2.3390	0.0070
150	2.3460	0.0070
151	2.3529	0.0070
152	2.3599	0.0070
153	2.3668	0.0069
154	2.3737	0.0069
155	2.3806	0.0069

156	2.3875	0.0069
157	2.3943	0.0068
158	2.4011	0.0068
159	2.4079	0.0068
160	2.4146	0.0068
161	2.4214	0.0067
162	2.4281	0.0067
163	2.4347	0.0067
164	2.4414	0.0067
165	2.4481	0.0066
166	2.4547	0.0066
167	2.4613	0.0066
168	2.4678	0.0066
169	2.4744	0.0066
170	2.4809	0.0065
171	2.4874	0.0065
172	2.4939	0.0065
173	2.5004	0.0065
174	2.5068	0.0064
175	2.5133	0.0064
176	2.5197	0.0064
177	2.5261	0.0064
178	2.5324	0.0064
179	2.5388	0.0063
180	2.5451	0.0063
181	2.5514	0.0063
182	2.5577	0.0063
183	2.5640	0.0063
184	2.5702	0.0063
185	2.5765	0.0062
186	2.5827	0.0062
187	2.5889	0.0062
188	2.5951	0.0062
189	2.6012	0.0062
190	2.6074	0.0061
191	2.6135	0.0061
192	2.6196	0.0061
193	2.6257	0.0061
194	2.6317	0.0061
195	2.6378	0.0061
196	2.6438	0.0060
197	2.6499	0.0060
198	2.6559	0.0060
199	2.6618	0.0060
200	2.6678	0.0060
201	2.6738	0.0060
202	2.6797	0.0059
203	2.6856	0.0059
204	2.6915	0.0059
205	2.6974	0.0059
206	2.7033	0.0059
207	2.7091	0.0059
208	2.7150	0.0058
209	2.7208	0.0058
210	2.7266	0.0058
211	2.7324	0.0058
212	2.7382	0.0058
213	2.7440	0.0058
214	2.7497	0.0057
215	2.7554	0.0057
216	2.7612	0.0057
217	2.7669	0.0057
218	2.7726	0.0057
219	2.7782	0.0057
220	2.7839	0.0057
221	2.7895	0.0056
222	2.7952	0.0056
223	2.8008	0.0056
224	2.8064	0.0056
225	2.8120	0.0056
226	2.8176	0.0056

227	2.8231	0.0056
228	2.8287	0.0056
229	2.8342	0.0055
230	2.8398	0.0055
231	2.8453	0.0055
232	2.8508	0.0055
233	2.8562	0.0055
234	2.8617	0.0055
235	2.8672	0.0055
236	2.8726	0.0054
237	2.8781	0.0054
238	2.8835	0.0054
239	2.8889	0.0054
240	2.8943	0.0054
241	2.8997	0.0054
242	2.9050	0.0054
243	2.9104	0.0054
244	2.9157	0.0053
245	2.9211	0.0053
246	2.9264	0.0053
247	2.9317	0.0053
248	2.9370	0.0053
249	2.9423	0.0053
250	2.9476	0.0053
251	2.9528	0.0053
252	2.9581	0.0053
253	2.9633	0.0052
254	2.9685	0.0052
255	2.9738	0.0052
256	2.9790	0.0052
257	2.9842	0.0052
258	2.9893	0.0052
259	2.9945	0.0052
260	2.9997	0.0052
261	3.0048	0.0052
262	3.0100	0.0051
263	3.0151	0.0051
264	3.0202	0.0051
265	3.0253	0.0051
266	3.0304	0.0051
267	3.0355	0.0051
268	3.0406	0.0051
269	3.0456	0.0051
270	3.0507	0.0051
271	3.0557	0.0050
272	3.0608	0.0050
273	3.0658	0.0050
274	3.0708	0.0050
275	3.0758	0.0050
276	3.0808	0.0050
277	3.0858	0.0050
278	3.0908	0.0050
279	3.0957	0.0050
280	3.1007	0.0050
281	3.1056	0.0049
282	3.1106	0.0049
283	3.1155	0.0049
284	3.1204	0.0049
285	3.1253	0.0049
286	3.1302	0.0049
287	3.1351	0.0049
288	3.1400	0.0049

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0049	0.0042	0.0006
2	0.0049	0.0043	0.0006
3	0.0049	0.0043	0.0006
4	0.0049	0.0043	0.0006

5	0.0049	0.0043	0.0006
6	0.0049	0.0043	0.0006
7	0.0050	0.0043	0.0006
8	0.0050	0.0043	0.0006
9	0.0050	0.0043	0.0006
10	0.0050	0.0044	0.0006
11	0.0050	0.0044	0.0006
12	0.0050	0.0044	0.0007
13	0.0051	0.0044	0.0007
14	0.0051	0.0044	0.0007
15	0.0051	0.0044	0.0007
16	0.0051	0.0044	0.0007
17	0.0051	0.0045	0.0007
18	0.0051	0.0045	0.0007
19	0.0052	0.0045	0.0007
20	0.0052	0.0045	0.0007
21	0.0052	0.0045	0.0007
22	0.0052	0.0045	0.0007
23	0.0052	0.0045	0.0007
24	0.0052	0.0046	0.0007
25	0.0053	0.0046	0.0007
26	0.0053	0.0046	0.0007
27	0.0053	0.0046	0.0007
28	0.0053	0.0046	0.0007
29	0.0053	0.0046	0.0007
30	0.0053	0.0046	0.0007
31	0.0054	0.0047	0.0007
32	0.0054	0.0047	0.0007
33	0.0054	0.0047	0.0007
34	0.0054	0.0047	0.0007
35	0.0054	0.0047	0.0007
36	0.0054	0.0047	0.0007
37	0.0055	0.0048	0.0007
38	0.0055	0.0048	0.0007
39	0.0055	0.0048	0.0007
40	0.0055	0.0048	0.0007
41	0.0056	0.0048	0.0007
42	0.0056	0.0048	0.0007
43	0.0056	0.0049	0.0007
44	0.0056	0.0049	0.0007
45	0.0056	0.0049	0.0007
46	0.0056	0.0049	0.0007
47	0.0057	0.0049	0.0007
48	0.0057	0.0050	0.0007
49	0.0057	0.0050	0.0007
50	0.0057	0.0050	0.0007
51	0.0058	0.0050	0.0007
52	0.0058	0.0050	0.0007
53	0.0058	0.0051	0.0008
54	0.0058	0.0051	0.0008
55	0.0059	0.0051	0.0008
56	0.0059	0.0051	0.0008
57	0.0059	0.0051	0.0008
58	0.0059	0.0052	0.0008
59	0.0060	0.0052	0.0008
60	0.0060	0.0052	0.0008
61	0.0060	0.0052	0.0008
62	0.0060	0.0052	0.0008
63	0.0061	0.0053	0.0008
64	0.0061	0.0053	0.0008
65	0.0061	0.0053	0.0008
66	0.0061	0.0053	0.0008
67	0.0062	0.0054	0.0008
68	0.0062	0.0054	0.0008
69	0.0062	0.0054	0.0008
70	0.0062	0.0054	0.0008
71	0.0063	0.0055	0.0008
72	0.0063	0.0055	0.0008
73	0.0063	0.0055	0.0008
74	0.0063	0.0055	0.0008
75	0.0064	0.0056	0.0008

76	0.0064	0.0056	0.0008
77	0.0064	0.0056	0.0008
78	0.0065	0.0056	0.0008
79	0.0065	0.0057	0.0008
80	0.0065	0.0057	0.0008
81	0.0066	0.0057	0.0008
82	0.0066	0.0057	0.0009
83	0.0066	0.0058	0.0009
84	0.0067	0.0058	0.0009
85	0.0067	0.0058	0.0009
86	0.0067	0.0059	0.0009
87	0.0068	0.0059	0.0009
88	0.0068	0.0059	0.0009
89	0.0069	0.0060	0.0009
90	0.0069	0.0060	0.0009
91	0.0069	0.0060	0.0009
92	0.0070	0.0061	0.0009
93	0.0070	0.0061	0.0009
94	0.0070	0.0061	0.0009
95	0.0071	0.0062	0.0009
96	0.0071	0.0062	0.0009
97	0.0072	0.0062	0.0009
98	0.0072	0.0063	0.0009
99	0.0072	0.0063	0.0009
100	0.0073	0.0063	0.0009
101	0.0073	0.0064	0.0009
102	0.0074	0.0064	0.0010
103	0.0074	0.0065	0.0010
104	0.0075	0.0065	0.0010
105	0.0075	0.0065	0.0010
106	0.0075	0.0066	0.0010
107	0.0076	0.0066	0.0010
108	0.0076	0.0067	0.0010
109	0.0077	0.0067	0.0010
110	0.0077	0.0067	0.0010
111	0.0078	0.0068	0.0010
112	0.0079	0.0068	0.0010
113	0.0079	0.0069	0.0010
114	0.0080	0.0069	0.0010
115	0.0080	0.0070	0.0010
116	0.0081	0.0070	0.0010
117	0.0082	0.0071	0.0011
118	0.0082	0.0071	0.0011
119	0.0083	0.0072	0.0011
120	0.0083	0.0072	0.0011
121	0.0084	0.0073	0.0011
122	0.0084	0.0074	0.0011
123	0.0085	0.0074	0.0011
124	0.0086	0.0075	0.0011
125	0.0087	0.0076	0.0011
126	0.0087	0.0076	0.0011
127	0.0088	0.0077	0.0011
128	0.0089	0.0077	0.0011
129	0.0090	0.0078	0.0012
130	0.0090	0.0079	0.0012
131	0.0091	0.0080	0.0012
132	0.0092	0.0080	0.0012
133	0.0093	0.0081	0.0012
134	0.0094	0.0081	0.0012
135	0.0095	0.0083	0.0012
136	0.0095	0.0083	0.0012
137	0.0097	0.0084	0.0012
138	0.0097	0.0085	0.0013
139	0.0099	0.0086	0.0013
140	0.0099	0.0086	0.0013
141	0.0101	0.0088	0.0013
142	0.0101	0.0088	0.0013
143	0.0103	0.0090	0.0013
144	0.0104	0.0090	0.0013
145	0.0131	0.0114	0.0017
146	0.0131	0.0114	0.0017

147	0.0133	0.0116	0.0017
148	0.0134	0.0117	0.0017
149	0.0136	0.0118	0.0018
150	0.0137	0.0119	0.0018
151	0.0139	0.0121	0.0018
152	0.0140	0.0122	0.0018
153	0.0142	0.0123	0.0018
154	0.0143	0.0124	0.0018
155	0.0145	0.0126	0.0019
156	0.0146	0.0127	0.0019
157	0.0149	0.0129	0.0019
158	0.0150	0.0130	0.0019
159	0.0152	0.0133	0.0020
160	0.0154	0.0134	0.0020
161	0.0157	0.0136	0.0020
162	0.0158	0.0138	0.0020
163	0.0161	0.0140	0.0021
164	0.0163	0.0142	0.0021
165	0.0166	0.0145	0.0021
166	0.0168	0.0146	0.0022
167	0.0172	0.0150	0.0022
168	0.0174	0.0152	0.0022
169	0.0178	0.0155	0.0023
170	0.0181	0.0157	0.0023
171	0.0186	0.0162	0.0024
172	0.0188	0.0164	0.0024
173	0.0194	0.0169	0.0025
174	0.0197	0.0171	0.0025
175	0.0203	0.0177	0.0026
176	0.0207	0.0180	0.0027
177	0.0214	0.0187	0.0028
178	0.0219	0.0190	0.0028
179	0.0228	0.0198	0.0029
180	0.0233	0.0203	0.0030
181	0.0244	0.0213	0.0032
182	0.0251	0.0219	0.0032
183	0.0266	0.0232	0.0034
184	0.0274	0.0239	0.0035
185	0.0214	0.0186	0.0028
186	0.0226	0.0197	0.0029
187	0.0257	0.0224	0.0033
188	0.0277	0.0241	0.0036
189	0.0334	0.0290	0.0043
190	0.0376	0.0328	0.0049
191	0.0538	0.0469	0.0070
192	0.0740	0.0559	0.0181
193	0.2316	0.0559	0.1757
194	0.0438	0.0382	0.0057
195	0.0302	0.0263	0.0039
196	0.0240	0.0209	0.0031
197	0.0284	0.0247	0.0037
198	0.0258	0.0225	0.0033
199	0.0239	0.0208	0.0031
200	0.0223	0.0194	0.0029
201	0.0210	0.0183	0.0027
202	0.0200	0.0174	0.0026
203	0.0191	0.0166	0.0025
204	0.0183	0.0159	0.0024
205	0.0176	0.0153	0.0023
206	0.0170	0.0148	0.0022
207	0.0165	0.0143	0.0021
208	0.0160	0.0139	0.0021
209	0.0155	0.0135	0.0020
210	0.0151	0.0132	0.0020
211	0.0147	0.0128	0.0019
212	0.0144	0.0125	0.0019
213	0.0141	0.0122	0.0018
214	0.0138	0.0120	0.0018
215	0.0135	0.0117	0.0017
216	0.0132	0.0115	0.0017
217	0.0104	0.0091	0.0014

218	0.0102	0.0089	0.0013
219	0.0100	0.0087	0.0013
220	0.0098	0.0085	0.0013
221	0.0096	0.0084	0.0012
222	0.0094	0.0082	0.0012
223	0.0092	0.0080	0.0012
224	0.0091	0.0079	0.0012
225	0.0089	0.0078	0.0012
226	0.0088	0.0076	0.0011
227	0.0086	0.0075	0.0011
228	0.0085	0.0074	0.0011
229	0.0084	0.0073	0.0011
230	0.0082	0.0072	0.0011
231	0.0081	0.0071	0.0010
232	0.0080	0.0070	0.0010
233	0.0079	0.0069	0.0010
234	0.0078	0.0068	0.0010
235	0.0077	0.0067	0.0010
236	0.0076	0.0066	0.0010
237	0.0075	0.0065	0.0010
238	0.0074	0.0064	0.0010
239	0.0073	0.0064	0.0009
240	0.0072	0.0063	0.0009
241	0.0071	0.0062	0.0009
242	0.0071	0.0061	0.0009
243	0.0070	0.0061	0.0009
244	0.0069	0.0060	0.0009
245	0.0068	0.0059	0.0009
246	0.0068	0.0059	0.0009
247	0.0067	0.0058	0.0009
248	0.0066	0.0058	0.0009
249	0.0066	0.0057	0.0008
250	0.0065	0.0057	0.0008
251	0.0064	0.0056	0.0008
252	0.0064	0.0055	0.0008
253	0.0063	0.0055	0.0008
254	0.0063	0.0054	0.0008
255	0.0062	0.0054	0.0008
256	0.0061	0.0053	0.0008
257	0.0061	0.0053	0.0008
258	0.0060	0.0053	0.0008
259	0.0060	0.0052	0.0008
260	0.0059	0.0052	0.0008
261	0.0059	0.0051	0.0008
262	0.0058	0.0051	0.0008
263	0.0058	0.0050	0.0007
264	0.0057	0.0050	0.0007
265	0.0057	0.0050	0.0007
266	0.0057	0.0049	0.0007
267	0.0056	0.0049	0.0007
268	0.0056	0.0049	0.0007
269	0.0055	0.0048	0.0007
270	0.0055	0.0048	0.0007
271	0.0055	0.0048	0.0007
272	0.0054	0.0047	0.0007
273	0.0054	0.0047	0.0007
274	0.0053	0.0047	0.0007
275	0.0053	0.0046	0.0007
276	0.0053	0.0046	0.0007
277	0.0052	0.0046	0.0007
278	0.0052	0.0045	0.0007
279	0.0052	0.0045	0.0007
280	0.0051	0.0045	0.0007
281	0.0051	0.0044	0.0007
282	0.0051	0.0044	0.0007
283	0.0050	0.0044	0.0007
284	0.0050	0.0044	0.0006
285	0.0050	0.0043	0.0006
286	0.0050	0.0043	0.0006
287	0.0049	0.0043	0.0006
288	0.0049	0.0043	0.0006

 Total soil rain loss = 2.58(In)
 Total effective rainfall = 0.56(In)
 Peak flow rate in flood hydrograph = 4.78(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00 Q					
0+10	0.0001	0.01 Q					
0+15	0.0003	0.03 Q					
0+20	0.0005	0.04 Q					
0+25	0.0009	0.04 Q					
0+30	0.0012	0.05 Q					
0+35	0.0015	0.05 Q					
0+40	0.0019	0.05 Q					
0+45	0.0023	0.06 Q					
0+50	0.0027	0.06 Q					
0+55	0.0031	0.06 Q					
1+ 0	0.0035	0.06 Q					
1+ 5	0.0039	0.06 Q					
1+10	0.0043	0.06 Q					
1+15	0.0048	0.06 Q					
1+20	0.0052	0.06 Q					
1+25	0.0056	0.06 Q					
1+30	0.0061	0.06 Q					
1+35	0.0065	0.06 Q					
1+40	0.0070	0.06 Q					
1+45	0.0074	0.07 Q					
1+50	0.0079	0.07 Q					
1+55	0.0083	0.07 Q					
2+ 0	0.0088	0.07 Q					
2+ 5	0.0092	0.07 Q					
2+10	0.0097	0.07 QV					
2+15	0.0101	0.07 QV					
2+20	0.0106	0.07 QV					
2+25	0.0111	0.07 QV					
2+30	0.0115	0.07 QV					
2+35	0.0120	0.07 QV					
2+40	0.0125	0.07 QV					
2+45	0.0129	0.07 QV					
2+50	0.0134	0.07 QV					
2+55	0.0139	0.07 QV					
3+ 0	0.0144	0.07 QV					
3+ 5	0.0148	0.07 QV					
3+10	0.0153	0.07 QV					
3+15	0.0158	0.07 QV					
3+20	0.0163	0.07 QV					
3+25	0.0167	0.07 QV					
3+30	0.0172	0.07 QV					
3+35	0.0177	0.07 QV					
3+40	0.0182	0.07 QV					
3+45	0.0187	0.07 QV					
3+50	0.0192	0.07 Q V					
3+55	0.0197	0.07 Q V					
4+ 0	0.0202	0.07 Q V					
4+ 5	0.0207	0.07 Q V					
4+10	0.0212	0.07 Q V					
4+15	0.0217	0.07 Q V					
4+20	0.0222	0.07 Q V					
4+25	0.0227	0.07 Q V					
4+30	0.0232	0.07 Q V					
4+35	0.0237	0.07 Q V					
4+40	0.0242	0.07 Q V					

4+45	0.0247	0.07	Q V				
4+50	0.0252	0.07	Q V				
4+55	0.0257	0.07	Q V				
5+ 0	0.0263	0.08	Q V				
5+ 5	0.0268	0.08	Q V				
5+10	0.0273	0.08	Q V				
5+15	0.0278	0.08	Q V				
5+20	0.0284	0.08	Q V				
5+25	0.0289	0.08	Q V				
5+30	0.0294	0.08	Q V				
5+35	0.0299	0.08	Q V				
5+40	0.0305	0.08	Q V				
5+45	0.0310	0.08	Q V				
5+50	0.0316	0.08	Q V				
5+55	0.0321	0.08	Q V				
6+ 0	0.0327	0.08	Q V				
6+ 5	0.0332	0.08	Q V				
6+10	0.0338	0.08	Q V				
6+15	0.0343	0.08	Q V				
6+20	0.0349	0.08	Q V				
6+25	0.0354	0.08	Q V				
6+30	0.0360	0.08	Q V				
6+35	0.0365	0.08	Q V				
6+40	0.0371	0.08	Q V				
6+45	0.0377	0.08	Q V				
6+50	0.0382	0.08	Q V				
6+55	0.0388	0.08	Q V				
7+ 0	0.0394	0.08	Q V				
7+ 5	0.0400	0.08	Q V				
7+10	0.0406	0.08	Q V				
7+15	0.0411	0.08	Q V				
7+20	0.0417	0.09	Q V				
7+25	0.0423	0.09	Q V				
7+30	0.0429	0.09	Q V				
7+35	0.0435	0.09	Q V				
7+40	0.0441	0.09	Q V				
7+45	0.0447	0.09	Q V				
7+50	0.0453	0.09	Q V				
7+55	0.0459	0.09	Q V				
8+ 0	0.0465	0.09	Q V				
8+ 5	0.0472	0.09	Q V				
8+10	0.0478	0.09	Q V				
8+15	0.0484	0.09	Q V				
8+20	0.0490	0.09	Q V				
8+25	0.0497	0.09	Q V				
8+30	0.0503	0.09	Q V				
8+35	0.0509	0.09	Q V				
8+40	0.0516	0.09	Q V				
8+45	0.0522	0.09	Q V				
8+50	0.0529	0.09	Q V				
8+55	0.0535	0.09	Q V				
9+ 0	0.0542	0.10	Q V				
9+ 5	0.0549	0.10	Q V				
9+10	0.0555	0.10	Q V				
9+15	0.0562	0.10	Q V				
9+20	0.0569	0.10	Q V				
9+25	0.0575	0.10	Q V				
9+30	0.0582	0.10	Q V				
9+35	0.0589	0.10	Q V				
9+40	0.0596	0.10	Q V				
9+45	0.0603	0.10	Q V				
9+50	0.0610	0.10	Q V				
9+55	0.0617	0.10	Q V				
10+ 0	0.0624	0.10	Q V				
10+ 5	0.0632	0.10	Q V				
10+10	0.0639	0.11	Q V				
10+15	0.0646	0.11	Q V				
10+20	0.0653	0.11	Q V				
10+25	0.0661	0.11	Q V				
10+30	0.0668	0.11	Q V				
10+35	0.0676	0.11	Q V				

10+40	0.0683	0.11	Q	V							
10+45	0.0691	0.11	Q	V							
10+50	0.0699	0.11	Q	V							
10+55	0.0707	0.11	Q	V							
11+ 0	0.0714	0.11	Q	V							
11+ 5	0.0722	0.11	Q	V							
11+10	0.0730	0.12	Q	V							
11+15	0.0738	0.12	Q	V							
11+20	0.0746	0.12	Q	V							
11+25	0.0755	0.12	Q	V							
11+30	0.0763	0.12	Q	V							
11+35	0.0771	0.12	Q	V							
11+40	0.0780	0.12	Q	V							
11+45	0.0788	0.12	Q	V							
11+50	0.0797	0.12	Q	V							
11+55	0.0805	0.13	Q	V							
12+ 0	0.0814	0.13	Q	V							
12+ 5	0.0823	0.13	Q	V							
12+10	0.0833	0.14	Q	V							
12+15	0.0843	0.15	Q	V							
12+20	0.0853	0.15	Q	V							
12+25	0.0864	0.16	Q	V							
12+30	0.0875	0.16	Q	V							
12+35	0.0886	0.16	Q	V							
12+40	0.0898	0.17	Q	V							
12+45	0.0910	0.17	Q	V							
12+50	0.0921	0.17	Q	V							
12+55	0.0933	0.17	Q	V							
13+ 0	0.0946	0.18	Q	V							
13+ 5	0.0958	0.18	Q	V							
13+10	0.0971	0.18	Q	V							
13+15	0.0983	0.18	Q	V							
13+20	0.0996	0.19	Q	V							
13+25	0.1009	0.19	Q	V							
13+30	0.1022	0.19	Q	V							
13+35	0.1036	0.19	Q	V							
13+40	0.1049	0.20	Q	V							
13+45	0.1063	0.20	Q	V							
13+50	0.1077	0.20	Q	V							
13+55	0.1091	0.21	Q	V							
14+ 0	0.1106	0.21	Q	V							
14+ 5	0.1120	0.21	Q	V							
14+10	0.1135	0.22	Q	V							
14+15	0.1151	0.22	Q	V							
14+20	0.1166	0.22	Q	V							
14+25	0.1182	0.23	Q	V							
14+30	0.1198	0.23	Q	V							
14+35	0.1214	0.24	Q	V							
14+40	0.1231	0.24	Q	V							
14+45	0.1248	0.25	Q	V							
14+50	0.1266	0.25	IQ	V							
14+55	0.1284	0.26	IQ	V							
15+ 0	0.1302	0.27	IQ	V							
15+ 5	0.1321	0.28	IQ	V							
15+10	0.1341	0.28	IQ	V							
15+15	0.1361	0.29	IQ	V							
15+20	0.1382	0.30	IQ	V							
15+25	0.1403	0.31	IQ	V							
15+30	0.1425	0.31	IQ	V							
15+35	0.1446	0.30	IQ	V							
15+40	0.1467	0.30	IQ	V							
15+45	0.1489	0.32	IQ	V							
15+50	0.1512	0.34	IQ	V							
15+55	0.1539	0.38	IQ	V							
16+ 0	0.1572	0.49	IQ	V							
16+ 5	0.1661	1.30		Q			V				
16+10	0.1887	3.28				Q	V				
16+15	0.2216	4.78					Q	V			
16+20	0.2483	3.87				Q		V			
16+25	0.2635	2.21		Q				V			
16+30	0.2734	1.44		Q				V			

16+35	0.2813	1.15		Q			V	
16+40	0.2880	0.97		Q			V	
16+45	0.2936	0.82		Q			V	
16+50	0.2985	0.72		Q			V	
16+55	0.3028	0.62		Q			V	
17+ 0	0.3066	0.55		Q			V	
17+ 5	0.3100	0.49		Q			V	
17+10	0.3132	0.46		Q			V	
17+15	0.3161	0.42		Q			V	
17+20	0.3188	0.38		Q			V	
17+25	0.3212	0.36		Q			V	
17+30	0.3235	0.33		Q			V	
17+35	0.3256	0.30		Q			V	
17+40	0.3275	0.28		Q			V	
17+45	0.3294	0.27		Q			V	
17+50	0.3312	0.27		Q			V	
17+55	0.3329	0.25		Q			V	
18+ 0	0.3342	0.19		Q			V	
18+ 5	0.3355	0.18		Q			V	
18+10	0.3367	0.17		Q			V	
18+15	0.3378	0.16		Q			V	
18+20	0.3389	0.15		Q			V	
18+25	0.3399	0.15		Q			V	
18+30	0.3408	0.14		Q			V	
18+35	0.3418	0.14		Q			V	
18+40	0.3427	0.13		Q			V	
18+45	0.3436	0.13		Q			V	
18+50	0.3445	0.13		Q			V	
18+55	0.3453	0.12		Q			V	
19+ 0	0.3461	0.12		Q			V	
19+ 5	0.3469	0.12		Q			V	
19+10	0.3477	0.12		Q			V	
19+15	0.3485	0.11		Q			V	
19+20	0.3493	0.11		Q			V	
19+25	0.3500	0.11		Q			V	
19+30	0.3508	0.11		Q			V	
19+35	0.3515	0.11		Q			V	
19+40	0.3522	0.10		Q			V	
19+45	0.3529	0.10		Q			V	
19+50	0.3536	0.10		Q			V	
19+55	0.3543	0.10		Q			V	
20+ 0	0.3550	0.10		Q			V	
20+ 5	0.3556	0.10		Q			V	
20+10	0.3563	0.10		Q			V	
20+15	0.3569	0.09		Q			V	
20+20	0.3576	0.09		Q			V	
20+25	0.3582	0.09		Q			V	
20+30	0.3588	0.09		Q			V	
20+35	0.3594	0.09		Q			V	
20+40	0.3601	0.09		Q			V	
20+45	0.3607	0.09		Q			V	
20+50	0.3613	0.09		Q			V	
20+55	0.3619	0.09		Q			V	
21+ 0	0.3624	0.09		Q			V	
21+ 5	0.3630	0.08		Q			V	
21+10	0.3636	0.08		Q			V	
21+15	0.3642	0.08		Q			V	
21+20	0.3647	0.08		Q			V	
21+25	0.3653	0.08		Q			V	
21+30	0.3658	0.08		Q			V	
21+35	0.3664	0.08		Q			V	
21+40	0.3669	0.08		Q			V	
21+45	0.3675	0.08		Q			V	
21+50	0.3680	0.08		Q			V	
21+55	0.3685	0.08		Q			V	
22+ 0	0.3691	0.08		Q			V	
22+ 5	0.3696	0.08		Q			V	
22+10	0.3701	0.08		Q			V	
22+15	0.3706	0.07		Q			V	
22+20	0.3711	0.07		Q			V	
22+25	0.3716	0.07		Q			V	

22+30	0.3721	0.07	Q				V
22+35	0.3726	0.07	Q				V
22+40	0.3731	0.07	Q				V
22+45	0.3736	0.07	Q				V
22+50	0.3741	0.07	Q				V
22+55	0.3746	0.07	Q				V
23+ 0	0.3751	0.07	Q				V
23+ 5	0.3755	0.07	Q				V
23+10	0.3760	0.07	Q				V
23+15	0.3765	0.07	Q				V
23+20	0.3769	0.07	Q				V
23+25	0.3774	0.07	Q				V
23+30	0.3779	0.07	Q				V
23+35	0.3783	0.07	Q				V
23+40	0.3788	0.07	Q				V
23+45	0.3792	0.07	Q				V
23+50	0.3797	0.07	Q				V
23+55	0.3801	0.06	Q				V
24+ 0	0.3806	0.06	Q				V
24+ 5	0.3810	0.06	Q				V
24+10	0.3814	0.05	Q				V
24+15	0.3816	0.04	Q				V
24+20	0.3818	0.02	Q				V
24+25	0.3819	0.02	Q				V
24+30	0.3820	0.01	Q				V
24+35	0.3821	0.01	Q				V
24+40	0.3822	0.01	Q				V
24+45	0.3822	0.01	Q				V
24+50	0.3823	0.01	Q				V
24+55	0.3823	0.01	Q				V
25+ 0	0.3823	0.00	Q				V
25+ 5	0.3823	0.00	Q				V
25+10	0.3824	0.00	Q				V
25+15	0.3824	0.00	Q				V
25+20	0.3824	0.00	Q				V
25+25	0.3824	0.00	Q				V
25+30	0.3824	0.00	Q				V
25+35	0.3824	0.00	Q				V
25+40	0.3824	0.00	Q				V
25+45	0.3824	0.00	Q				V
25+50	0.3824	0.00	Q				V

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*****
HYDRAULIC ELEMENTS - I PROGRAM PACKAGE
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Ver. 23.0 Release Date: 07/01/2016 License ID 1400

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Analysis prepared by:

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TIME/DATE OF STUDY: 14:43 04/03/2024
=====
Problem Descriptions:
18" DIA OUTLET PIPE CAPACITY

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*****
>>>>PIPEFLOW HYDRAULIC INPUT INFORMATION<<<<

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-----
PIPE DIAMETER(FEET) = 1.500
FLOWDEPTH(FEET) = 1.460
PIPE SLOPE(FEET/FEET) = 0.0060
MANNINGS FRICTION FACTOR = 0.013000
>>>> NORMAL DEPTH FLOW(CFS) = 8.65
=====
NORMAL-DEPTH FLOW INFORMATION:
-----
NORMAL DEPTH(FEET) = 1.46
FLOW AREA(SQUARE FEET) = 1.75
FLOW TOP-WIDTH(FEET) = 0.483
FLOW PRESSURE + MOMENTUM(POUNDS) = 160.97
FLOW VELOCITY(FEET/SEC.) = 4.931
FLOW VELOCITY HEAD(FEET) = 0.378
HYDRAULIC DEPTH(FEET) = 3.63
FROUDE NUMBER = 0.456
SPECIFIC ENERGY(FEET) = 1.84
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Problem Descriptions:
12" DIA PIPE CAPACITY

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>>>>PIPEFLOW HYDRAULIC INPUT INFORMATION<<<<

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-----
PIPE DIAMETER(FEET) = 1.000
FLOWDEPTH(FEET) = 0.950
PIPE SLOPE(FEET/FEET) = 0.0100
MANNINGS FRICTION FACTOR = 0.013000
>>>> NORMAL DEPTH FLOW(CFS) = 3.83
=====
NORMAL-DEPTH FLOW INFORMATION:
-----
NORMAL DEPTH(FEET) = 0.95
FLOW AREA(SQUARE FEET) = 0.77
FLOW TOP-WIDTH(FEET) = 0.436
FLOW PRESSURE + MOMENTUM(POUNDS) = 58.96
FLOW VELOCITY(FEET/SEC.) = 4.967
FLOW VELOCITY HEAD(FEET) = 0.383
HYDRAULIC DEPTH(FEET) = 1.77
FROUDE NUMBER = 0.658
SPECIFIC ENERGY(FEET) = 1.33
=====

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Chamber Detention Outlet

Elevation (ft)	Total Depth (ft)	Total Volume (cf)	Total Volume (ac-ft)	Det Vol.	8" Outflow (cfs) Lower Storm Event	18" Outflow (cfs) Higher Storm Event
1303.4	0.0	0	0.00		0.00	0.00
1304.9	1.5	17,793	0.41		0.00	0.00
1306.1	2.7	39,463	0.91	0.00	0.00	0.00
	Detention		Inf. Vol. 0.91 ac-ft			
1307.6	4.2	70,762	1.62	0.72	1.10	0.70
1308.6	5.2	91,630	2.10	1.20	2.40	8.20
1309.6	6.2	110,935	2.55	1.64	3.20	10.40
1310.6	7.2	125,689	2.89	1.98	3.60	11.50
1310.9	7.5	129,198	2.97	2.06	3.80	12.00

Det Vol (Total) 2.06 AC-FT



Date: 7/30/2024
Project Name: CMP-1 INFDET CHAMBER SYSTEM - 46936 (7-30-2024 1

CMP: Underground Detention System
Storage Volume Estimation

City / County:
State:

Designed By:
Company:
Telephone:

=Adjustable Input Cells

Contech Engineered Solutions, LLC is pleased to offer the following estimate of storage volume for the above named project. The results are submitted as an estimate only, without liability on the part of Contech Engineered Solutions, LLC for accuracy or suitability to any particular application and are subject to verification of the Engineer of Record. This tool is only applicable for rectangular shaped systems.

Summary of Inputs

System Information		Backfill Information		Pipe & Analysis Information	
Out-to-out length (ft):	244.4	Backfill Porosity (%):	50%	System Diameter (in):	72
Out-to-out width (ft):	105.0	Depth Above Pipe (in):	6.0	Pipe Spacing (in):	36
Number of Manifolds (ea):	1.0	Depth Below Pipe (in):	12.0	Incremental Analysis (in):	1
Number of Barrels (ea):	12.0	Width At Ends (ft):	1.0	System Invert (Elevation):	0
		Width At Sides (ft):	1.0		

Storage Volume Estimation

System		Pipe		Stone		Total System		Miscellaneous	
Depth (ft)	Elevation (ft)	Incremental Storage (cf)	Cumulative Storage (cf)	Incremental Storage (cf)	Cumulative Storage (cf)	Incremental Storage (cf)	Cumulative Storage (cf)	Percent Open Storage (%)	Ave. Surface Area (sf)
0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	10,528.8
0.17	0.16	0.0	0.0	1,754.8	1,754.8	1,754.8	1,754.8	0.0%	10,528.8
0.33	0.33	0.0	0.0	1,754.8	3,509.6	1,754.8	3,509.6	0.0%	10,528.8
0.50	0.50	0.0	0.0	1,754.8	5,264.4	1,754.8	5,264.4	0.0%	10,528.8
0.67	0.66	0.0	0.0	1,754.8	7,019.2	1,754.8	7,019.2	0.0%	10,528.8
0.83	0.83	0.0	0.0	1,754.8	8,774.0	1,754.8	8,774.0	0.0%	10,528.8
1.00	1.00	0.0	0.0	1,754.8	10,528.8	1,754.8	10,528.8	0.0%	10,528.8
1.17	1.16	652.5	652.5	1,493.8	12,022.6	2,146.3	12,675.1	5.1%	14,032.3
1.33	1.33	1,177.3	1,829.8	1,283.9	13,306.5	2,461.2	15,136.3	12.1%	15,412.2
1.50	1.50	1,502.5	3,332.3	1,153.8	14,460.3	2,656.3	17,792.6	18.7%	16,421.1
1.67	1.66	1,752.6	5,084.9	1,053.8	15,514.0	2,806.4	20,598.9	24.7%	17,228.8
1.83	1.83	1,957.2	7,042.1	971.9	16,486.0	2,929.1	23,528.1	29.9%	17,901.6
2.00	2.00	2,129.6	9,171.6	903.0	17,388.9	3,032.5	26,560.6	34.5%	18,474.0
2.17	2.16	2,277.1	11,448.7	844.0	18,232.9	3,121.0	29,681.6	38.6%	18,966.4
2.33	2.33	2,404.3	13,853.0	793.1	19,026.0	3,197.4	32,879.0	42.1%	19,392.0
2.50	2.50	2,514.4	16,367.4	749.0	19,775.0	3,263.4	36,142.4	45.3%	19,760.3
2.67	2.66	2,609.5	18,976.9	711.0	20,486.0	3,320.5	39,463.0	48.1%	20,077.7
2.83	2.83	2,691.2	21,668.1	678.3	21,164.3	3,369.5	42,832.5	50.6%	20,349.3
3.00	3.00	2,760.7	24,428.9	650.5	21,814.9	3,411.2	46,243.7	52.8%	20,578.8
3.17	3.16	2,818.9	27,247.8	627.2	22,442.1	3,446.2	49,689.9	54.8%	20,768.9
3.33	3.33	2,866.6	30,114.4	608.2	23,050.3	3,474.7	53,164.6	56.6%	20,921.9
3.50	3.50	2,904.1	33,018.4	593.2	23,643.4	3,497.2	56,661.9	58.3%	21,039.3
3.67	3.66	2,931.9	35,950.4	582.0	24,225.5	3,513.9	60,175.8	59.7%	21,122.4
3.83	3.83	2,950.3	38,900.7	574.7	24,800.1	3,525.0	63,700.8	61.1%	21,171.9
4.00	4.00	2,959.5	41,860.2	571.0	25,371.1	3,530.5	67,231.3	62.3%	21,188.4
4.17	4.16	2,959.5	44,819.6	571.0	25,942.1	3,530.5	70,761.8	63.3%	21,171.9
4.33	4.33	2,950.3	47,769.9	574.7	26,516.8	3,525.0	74,286.8	64.3%	21,122.4
4.50	4.50	2,931.9	50,701.9	582.0	27,098.9	3,513.9	77,800.7	65.2%	21,039.3
4.67	4.66	2,904.1	53,605.9	593.2	27,692.0	3,497.2	81,298.0	65.9%	20,921.9
4.83	4.83	2,866.6	56,472.5	608.2	28,300.2	3,474.7	84,772.7	66.6%	20,768.9
5.00	5.00	2,818.9	59,291.4	627.2	28,927.4	3,446.2	88,218.9	67.2%	20,578.8
5.17	5.16	2,760.7	62,052.2	650.5	29,577.9	3,411.2	91,630.1	67.7%	20,349.3
5.33	5.33	2,691.2	64,743.4	678.3	30,256.2	3,369.5	94,999.6	68.2%	20,077.7
5.50	5.50	2,609.5	67,352.9	711.0	30,967.2	3,320.5	98,320.1	68.5%	19,760.3
5.67	5.66	2,514.4	69,867.3	749.0	31,716.3	3,263.4	101,583.6	68.8%	19,392.0
5.83	5.83	2,404.3	72,271.6	793.1	32,509.4	3,197.4	104,781.0	69.0%	18,966.4
6.00	6.00	2,277.1	74,548.7	844.0	33,353.3	3,121.0	107,902.0	69.1%	18,474.0
6.17	6.16	2,129.6	76,678.2	903.0	34,256.3	3,032.5	110,934.5	69.1%	17,901.6
6.33	6.33	1,957.2	78,635.4	971.9	35,228.2	2,929.1	113,863.6	69.1%	17,228.8

These results are submitted to you as a guideline only, without liability on the part of CONTECH Engineered Solutions, LLC for accuracy or suitability to any particular application, and are subject to your verification.

6.50	6.50	1,752.6	80,388.0	1,053.8	36,282.0	2,806.4	116,670.0	68.9%	16,421.1
6.67	6.66	1,502.5	81,890.5	1,153.8	37,435.8	2,656.3	119,326.3	68.6%	15,412.2
6.83	6.83	1,177.3	83,067.8	1,283.9	38,719.7	2,461.2	121,787.5	68.2%	14,032.3
7.00	7.00	652.5	83,720.3	1,493.8	40,213.5	2,146.3	123,933.8	67.6%	10,528.8
7.17	7.16	0.0	83,720.3	1,754.8	41,968.3	1,754.8	125,688.6	66.6%	10,528.8
7.33	7.33	0.0	83,720.3	1,754.8	43,723.1	1,754.8	127,443.4	65.7%	10,528.8
7.50	7.50	0.0	83,720.3	1,754.8	45,477.9	1,754.8	129,198.2	64.8%	10,528.8

These results are submitted to you as a guideline only, without liability on the part of CONTECH Engineered Solutions, LLC for accuracy or suitability to any particular application, and are subject to your verification.

PROJECT SUMMARY

CALCULATION DETAILS

- LOADING = HS20/HS25
- APPROX. LINEAR FOOTAGE = 2,961 LF

STORAGE SUMMARY

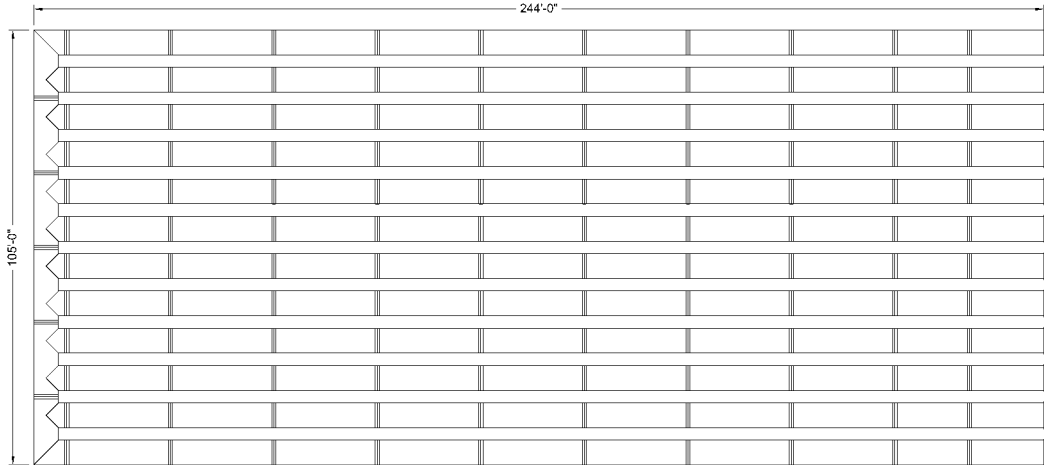
- STORAGE VOLUME REQUIRED = 129,000 CF
- PIPE STORAGE VOLUME = 83,720 CF
- BACKFILL STORAGE VOLUME = 45,478 CF
- TOTAL STORAGE PROVIDED = 129,198 CF
- STONE VOID = 40%

PIPE DETAILS

- DIAMETER = 72"
- CORRUGATION = 5x1
- GAGE = 16
- COATING = ALT2
- WALL TYPE = PERFORATED
- BARREL SPACING = 36"

BACKFILL DETAILS

- WIDTH AT ENDS = 12"
- ABOVE PIPE = 6"
- WIDTH AT SIDES = 12"
- BELOW PIPE = 12"



NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE 2²/₃ x 1¹/₂ CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN. QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

ASSEMBLY
SCALE: 1" = 30'

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DYODS
DRAWING

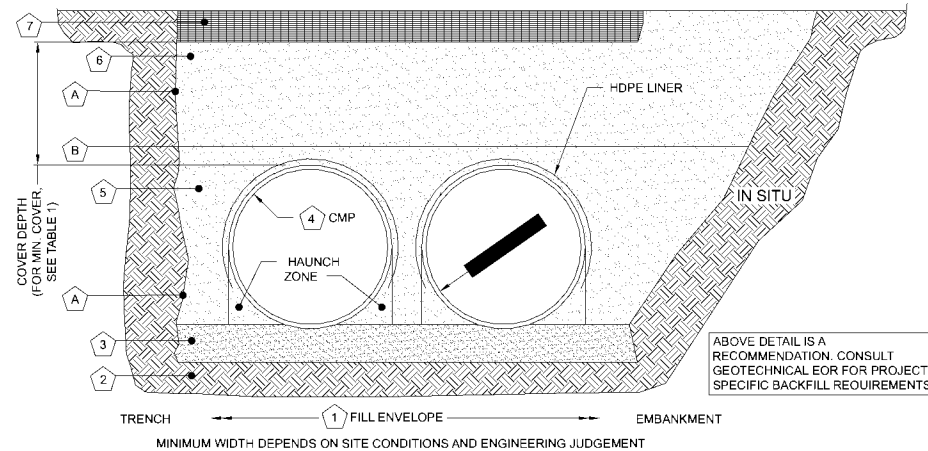
DYO46936 Pacific Communities-Maple Ave, Fontana
CMP-1 INF/DET CHAMBER SYSTEM
Fontana, CA
DETENTION SYSTEM

PROJECT No.: 32414	SEQ. No.: 46936	DATE: 7/30/2024
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.:		1

TABLE 1:

DIAMETER, D	MIN. COVER	CORR. PROFILE
6"-10"	12"	1 1/2" x 1/4"
12"-48"	12"	2 2/3" x 1/2"
>48"-96"	12"	3" x 1", 5" x 1"
>96"	D/8	3" x 1", 5" x 1"

- STRUCTURAL BACKFILL MUST EXTEND TO LIMITS OF THE TABLE
- TOTAL HEIGHT OF COMPACTED COVER FOR CONVENTIONAL HIGH-WAY LOADS IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT.



INSTALLATION NOTES

- WHEN PLACING THE FIRST LIFTS OF BACKFILL IT IS IMPORTANT TO MAKE SURE THAT THE BACKFILL IS PROPERLY COMPACTED UNDER AND AROUND THE PIPE HAUNCHES.
- OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS, AS APPROVED BY SITE ENGINEER.
- AN HDPE MEMBRANE LINER WILL BE PLACED ON THE CROWN OF EACH PIPE TO PROVIDE AN IMPERMEABLE BARRIER AGAINST ENVIRONMENTAL CHANGES THAT MAY ADVERSELY AFFECT THE SYSTEM OVER TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL TECHNICAL DETAILS.

TABLE 2: PERFORATED STANDARD

CMP RETENTION STANDARD BACKFILL SPECIFICATIONS			
MATERIAL LOCATION	MATERIAL SPECIFICATION	DESCRIPTION	
FILL ENVELOPE WIDTH	PER ENGINEER OF RECORD	MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE. THE SUGGESTED MINIMUM TRENCH WIDTH, OR EOR RECOMMENDATION: PIPE ≤ 12": D + 16" PIPE > 12": 1.5D + 12"	MINIMUM EMBANKMENT WIDTH (IN FEET) FOR INITIAL FILL ENVELOPE: PIPE < 24": 3.0D PIPE 24" - 144": D + 4'0" PIPE > 144": D + 10'0"
FOUNDATION	AASHTO 26.5.2 - PER ENGINEER OF RECORD	PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND FOUNDATION BROUGHT BACK TO GRADE WITH A FILL MATERIAL APPROVED BY THE ENGINEER OF RECORD.	
BEDDING	AASHTO M 43: 3, 357, 4, 467, 5, 56, 57	ENGINEER OF RECORD TO DETERMINE IF BEDDING IS REQUIRED. PIPE MAY BE PLACED ON THE TRENCH BOTTOM OF A RELATIVELY LOOSE, NATIVE SUITABLE WELL GRADED GRANULAR MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE, 2" MIN DEPTH. THE BEDDING MATERIAL MAY BE SUITABLE OPEN GRADED GRANULAR BEDDING CONFORMING TO AASHTO SOIL CLASSIFICATIONS A1, A2, OR A3 WITH MAXIMUM PARTICLE SIZE OF 3" PER AASHTO 26.3.8.1	
CORRUGATED METAL PIPE			
BACKFILL	FREE-DRAINING, ANGULAR, NATURALLY OCCURRING WASHED-STONE PER M 43: 3, 357, 4, 467, 5, 56, 57 APPROVED EQUAL *	AASHTO OR	HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION WITHOUT SOFT SPOTS. BACKFILL SHALL BE PLACED IN 8" +/- LOOSE LIFTS AND COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T 99. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO LIFT (16") DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHOULD BE ADVANCED ALONG THE LENGTH OF THE SYSTEM TO AVOID DIFFERENTIAL LOADING. WHERE CONVENTIONAL COMPACTION TESTING IS NOT PRACTICAL, THE MATERIAL SHALL BE MECHANICALLY COMPACTED UNTIL NO FURTHER YIELDING OF MATERIAL IS OBSERVED UNDER THE COMPACTOR. AREAS WITH HIGH WATER TABLE FLUCTUATIONS THAT INTERACT WITH THE PIPE ZONE, CONSIDER INSTALLING A GEOTEXTILE SEPARATION LAYER TO PREVENT SOIL MIGRATION.
COVER MATERIAL	UP TO MIN. COVER - AASHTO M 145: A-1, A-2, A-3 ABOVE MIN. COVER - PER ENGINEER OF RECORD	COVER MATERIAL MAY INCLUDE NON-BITUMINOUS, GRANULAR ROADBASE MATERIAL WITHIN MIN COVER LIMITS	
RIGID OR FLEXIBLE PAVEMENT (IF APPLICABLE)	PER ENGINEER OF RECORD	FLEXIBLE PAVEMENT SHOULD NOT BE COUNTED AS PART OF THE FILL HEIGHT OVER THE CMP. FINAL BACKFILL MATERIAL SELECTION AND COMPACTION REQUIREMENTS SHALL FOLLOW THE PROJECT PLANS AND SPECIFICATIONS PER THE ENGINEER OF RECORD.	
OPTIONAL SIDE GEOTEXTILE	NONE	GEOTEXTILE LAYER IS RECOMMENDED ON SIDES OF EXCAVATION TO PREVENT SOIL MIGRATION.	
GEOTEXTILE BETWEEN LAYERS	NONE	IF SOIL TYPES DIFFER AT ANY POINT ABOVE PIPE INVERT, A GEOTEXTILE LAYER IS RECOMMENDED TO BE PLACED BETWEEN THE LAYERS TO PREVENT SOIL MIGRATION.	

NOTES:

- FOR MULTIPLE BARREL INSTALLATIONS, THE RECOMMENDED STANDARD SPACING BETWEEN PARALLEL PIPE RUNS SHALL BE THE PIPE DIAMETER /2 BUT NO LESS THAN 12" FOR DIAMETERS <72". FOR 72" AND LARGER DIAMETERS, THE MINIMUM SPACING IS 36". CONTACT YOUR CONTECH REPRESENTATIVE FOR NONSTANDARD SPACING.
- APPROVED REGIONAL EQUIVALENTS FOR SECTION 5 INCLUDE CA-7, MIDOT 6AA, 6A, OR 5G. PROVIDED THEY MEET THE PARTICLE SIZES INDICATED.

MANUFACTURER RECOMMENDED BACKFILL

NOT TO SCALE

CONTECH
ENGINEERED SOLUTIONS LLC
www.ContechES.com

9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH
CMP DETENTION SYSTEMS

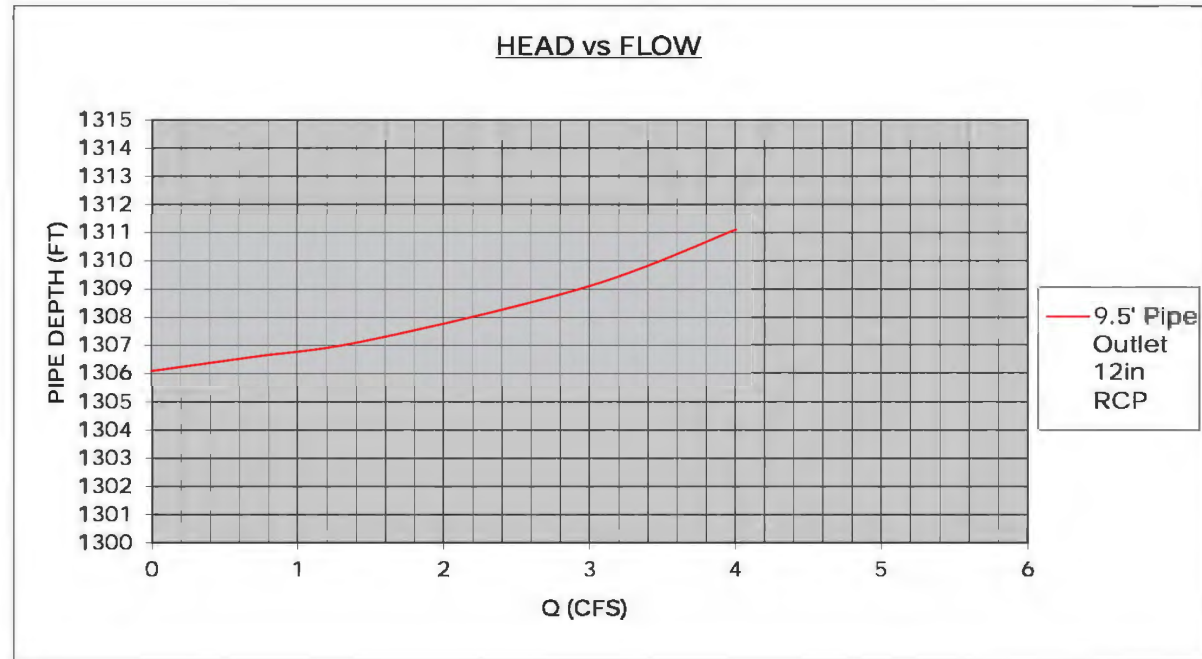
CONTECH
DYODS
DRAWING

DYO46936 Pacific Communities-Maple Ave, Fontana
CMP-1 INF/DET CHAMBER SYSTEM
Fontana, CA
DETENTION SYSTEM

PROJECT No.: 32414	SEQ. No.: 46936	DATE: 7/30/2024
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

8" RCP Outflow line

Q (cfs)	Elev (ft)
0	1306.1
0.7	1306.6
1.5	1307.2
3	1309.1
4	1311.1



T1	8" OUTLET PIPE										0
T2	100-YR STORM										
T3											
SO	1000.000	1305.980	1			1305.980					
R	1007.070	1306.020	1		.013			.000	.000	0	
R	1020.220	1306.100	1		.013			45.000	.000	0	
SH			1								
CD	1	4	1		.000	.670	.000	.000	.000	.00	
Q					.001	.0					
Q					.700	.0					
Q					1.500	.0					
Q					3.000	.0					
Q					4.000	.0					

WATER SURFACE PROFILE LISTING

Date: 8- 1-2024 Time:10:46:42

8" OUTLET PIPE
100-YR STORM

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1000.000	1305.980	.014	1305.994	.00	.55	.00	1306.00	.00	.01	.19	.670	.000	.00	1 .0
	-.078	-.0057				.0110	.00	.01	1.00	.02	.013	.00	.00	PIPE
1000.078	1305.980	.014	1305.995	.00	.53	.00	1306.00	.00	.01	.19	.670	.000	.00	1 .0
	-.155	-.0057				.0096	.00	.01	.93	.02	.013	.00	.00	PIPE
1000.233	1305.981	.015	1305.996	.00	.50	.00	1306.00	.00	.01	.20	.670	.000	.00	1 .0
	-.129	-.0057				.0084	.00	.02	.88	.02	.013	.00	.00	PIPE
1000.362	1305.982	.015	1305.997	.00	.48	.00	1306.00	.00	.01	.20	.670	.000	.00	1 .0
	-.411	-.0057				.0073	.00	.02	.82	.02	.013	.00	.00	PIPE
1000.773	1305.984	.016	1306.000	.00	.46	.00	1306.00	.00	.01	.21	.670	.000	.00	1 .0
	-.406	-.0057				.0064	.00	.02	.78	.02	.013	.00	.00	PIPE
1001.179	1305.987	.016	1306.003	.00	.43	.00	1306.01	.00	.01	.21	.670	.000	.00	1 .0
	-.439	-.0057				.0045	.00	.02	.72	.02	.013	.00	.00	PIPE
1001.618	1305.989	.017	1306.006	.00	.43	.00	1306.01	.00	.01	.21	.670	.000	.00	1 .0
	5.452	-.0057				.0031	.02	.02	.71	.02	.013	.00	.00	PIPE
1007.070	1306.020	.017	1306.037	.00	.43	.00	1306.04	.00	.01	.21	.670	.000	.00	1 .0
	-.084	-.0061				.0045	.00	.02	.71	.02	.013	.00	.00	PIPE
1007.154	1306.021	.016	1306.037	.00	.44	.00	1306.04	.00	.01	.21	.670	.000	.00	1 .0
	13.066	-.0061				.0033	.04	.02	.74	.02	.013	.00	.00	PIPE

WATER SURFACE PROFILE LISTING

Date: 8- 1-2024 Time:10:46:42

8" OUTLET PIPE
100-YR STORM

```
*****
| Invert | Depth | Water | Q | Vel | Vel | Energy | Super | Critical | Flow Top | Height/ | Base Wt | | No Wth
Station | Elev | (FT) | Elev | (CFS) | (FPS) | Head | Grd.El. | Elev | Depth | Width | Dia.-FT | or I.D. | ZL | Prs/Pip
-|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|-
L/Elem | Ch Slope | | | | | SF Ave | HF | SE Dpth | Froude N | Norm Dp | "N" | X-Fall | ZR | Type Ch
*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****
| | | | | | | | | | | | | | | |
1020.220 1306.100 .016 1306.116 .00 .44 .00 1306.12 .00 .01 .21 .670 .000 .00 1 .0
-|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|-
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8" OUTLET PIPE
100-YR STORM

Date: 8- 1-2024 Time:10:46:42

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/I.D.	ZL	No Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	1305.980	.394	1306.374	.70	3.25	.16	1306.54	.00	.39	.66	.670	.000	.00	1 .0
.705	.0057					.0073	.01	.39	1.00	.44	.013	.00	.00	PIPE
1000.705	1305.984	.410	1306.394	.70	3.09	.15	1306.54	.00	.39	.65	.670	.000	.00	1 .0
4.580	.0057					.0064	.03	.41	.93	.44	.013	.00	.00	PIPE
1005.285	1306.010	.427	1306.437	.70	2.95	.14	1306.57	.00	.39	.64	.670	.000	.00	1 .0
1.785	.0057					.0060	.01	.43	.86	.44	.013	.00	.00	PIPE
1007.070	1306.020	.430	1306.450	.70	2.93	.13	1306.58	.01	.39	.64	.670	.000	.00	1 .0
7.201	.0061					.0059	.04	.44	.85	.43	.013	.00	.00	PIPE
1014.271	1306.064	.426	1306.490	.70	2.96	.14	1306.63	.01	.39	.64	.670	.000	.00	1 .0
5.949	.0061					.0059	.04	.43	.86	.43	.013	.00	.00	PIPE
1020.220	1306.100	.426	1306.526	.70	2.96	.14	1306.66	.01	.39	.64	.670	.000	.00	1 .0

8" OUTLET PIPE
100-YR STORM

Date: 8- 1-2024 Time:10:46:42

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Dia.-FT	Height/for I.D.	Base Wt ZL	No With Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	1305.980	.572	1306.552	1.50	4.68	.34	1306.89	.00	.57	.47	.670	.000	.00	1 .0
.611	.0057					.0136	.01	.57	1.00	.67	.013	.00	.00	PIPE
1000.611	1305.983	.608	1306.592	1.50	4.46	.31	1306.90	.00	.57	.39	.670	.000	.00	1 .0
4.505	.0057					.0133	.06	.61	.84	.67	.013	.00	.00	PIPE
1005.116	1306.009	.670	1306.679	1.50	4.25	.28	1306.96	.00	.57	.00	.670	.000	.00	1 .0
1.954	.0057					.0142	.03	.67	.00	.67	.013	.00	.00	PIPE
1007.070	1306.020	.688	1306.708	1.50	4.25	.28	1306.99	.00	.57	.00	.670	.000	.00	1 .0
13.150	.0061					.0150	.20	.00	.00	.67	.013	.00	.00	PIPE
1020.220	1306.100	.845	1306.945	1.50	4.25	.28	1307.23	.00	.57	.00	.670	.000	.00	1 .0

8" OUTLET PIPE
100-YR STORM

Date: 8- 1-2024 Time:10:46:42

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/ I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	1305.980	.661	1306.641	3.00	8.53	1.13	1307.77	.00	.66	.16	.670	.000	.00	1 .0
	.063	.0057				.0542	.00	.66	1.00	.67	.013	.00	.00	PIPE
1000.063	1305.980	.670	1306.650	3.00	8.51	1.12	1307.77	.00	.66	.00	.670	.000	.00	1 .0
	7.007	.0057				.0569	.40	.67	.00	.67	.013	.00	.00	PIPE
1007.070	1306.020	1.051	1307.071	3.00	8.51	1.12	1308.20	.00	.66	.00	.670	.000	.00	1 .0
	13.150	.0061				.0600	.79	.00	.00	.67	.013	.00	.00	PIPE
1020.220	1306.100	1.919	1308.019	3.00	8.51	1.12	1309.14	.00	.66	.00	.670	.000	.00	1 .0

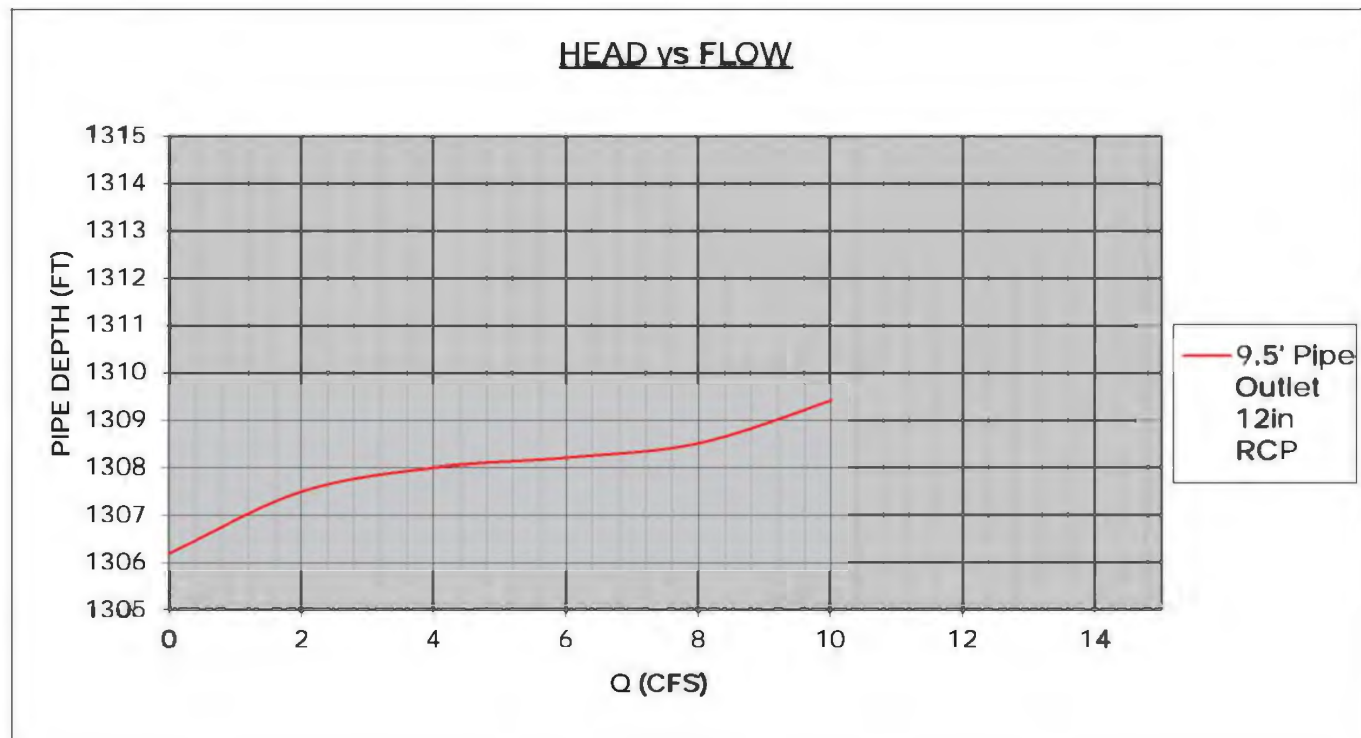
8" OUTLET PIPE
100-YR STORM

Date: 8- 1-2024 Time:10:46:42

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt./I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	1305.980	.667	1306.647	4.00	11.35	2.00	1308.65	.00	.67	.09	.670	.000	.00	1 .0
	.010	.0057				.0983	.00	.67	1.00	.67	.013	.00	.00	PIPE
1000.010	1305.980	.670	1306.650	4.00	11.35	2.00	1308.65	.00	.67	.00	.670	.000	.00	1 .0
	7.060	.0057				.1012	.71	.67	.00	.67	.013	.00	.00	PIPE
1007.070	1306.020	1.383	1307.403	4.00	11.35	2.00	1309.40	.00	.67	.00	.670	.000	.00	1 .0
	13.150	.0061				.1067	1.40	.00	.00	.67	.013	.00	.00	PIPE
1020.220	1306.100	2.989	1309.089	4.00	11.35	2.00	1311.09	.00	.67	.00	.670	.000	.00	1 .0

18" RCP Outflow line

Q (cfs)	Elev (ft)
0	1306.2
2	1307.5
4	1308
6	1308.2
8	1308.5
10	1309.4



T1	WSPG 18" OUTLET										0
T2											
T3											
SO	1000.000	1303.500	2			1306.000					
R	1022.220	1303.920	2	.013				.000	.000	0	
R	1038.120	1304.030	2	.013				-40.489	.000	0	
R	1175.350	1304.850	2	.013				.000			
R	1209.910	1305.060	2	.013				88.006			
R	1270.540	1305.980	2	.013				.000			
R	1288.680	1306.800	2	.013				.000			
SH			2								
CD	1	2	0	.000	.420	5.000	.000	.000	.00		
CD	2	4	1	.000	1.500	.000	.000	.000	.00		
Q				2.000	.0						
Q				4.000	.0						
Q				6.000	.0						
Q				8.000	.0						
Q				10.000	.0						

WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/ I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1000.000	1303.500	2.500	1306.000	2.00	1.13	.02	1306.02	.00	.53	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
22.220	.0189					.0004	.01	2.50	.00	.38	.013	.00	.00	PIPE
1022.220	1303.920	2.088	1306.008	2.00	1.13	.02	1306.03	.00	.53	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
15.900	.0069					.0004	.01	.00	.00	.49	.013	.00	.00	PIPE
1038.120	1304.030	1.986	1306.016	2.00	1.13	.02	1306.04	.00	.53	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
86.675	.0060					.0004	.03	1.99	.00	.51	.013	.00	.00	PIPE
1124.795	1304.548	1.500	1306.048	2.00	1.13	.02	1306.07	.00	.53	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
24.278	.0060					.0003	.01	1.50	.00	.51	.013	.00	.00	PIPE
1149.073	1304.693	1.360	1306.053	2.00	1.19	.02	1306.07	.00	.53	.87	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
13.780	.0060					.0003	.00	1.36	.15	.51	.013	.00	.00	PIPE
1162.853	1304.775	1.280	1306.055	2.00	1.24	.02	1306.08	.00	.53	1.06	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
11.494	.0060					.0004	.00	1.28	.18	.51	.013	.00	.00	PIPE
1174.347	1304.844	1.213	1306.057	2.00	1.31	.03	1306.08	.00	.53	1.18	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.003	.0060					.0004	.00	1.21	.20	.51	.013	.00	.00	PIPE
1175.350	1304.850	1.208	1306.058	2.00	1.31	.03	1306.08	.00	.53	1.19	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
9.832	.0061					.0004	.00	1.21	.20	.50	.013	.00	.00	PIPE
1185.182	1304.910	1.149	1306.059	2.00	1.38	.03	1306.09	.00	.53	1.27	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
8.698	.0061					.0004	.00	1.15	.23	.50	.013	.00	.00	PIPE

WSPG 18" OUTLET

Date: 8- 2-2024 Time: 8:23: 3

*****															*****	
Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt./I.D.	ZL	No With Prs/Pip		
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch		
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****		
1193.880	1304.963	1.097	1306.060	2.00	1.44	.03	1306.09	.00	.53	1.33	1.500	.000	.00	1 .0		
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
7.830	.0061					.0005	.00	1.10	.25	.50	.013	.00	.00	PIPE		
1201.710	1305.010	1.050	1306.060	2.00	1.51	.04	1306.10	.00	.53	1.37	1.500	.000	.00	1 .0		
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
7.313	.0061					.0005	.00	1.05	.27	.50	.013	.00	.00	PIPE		
1209.023	1305.055	1.006	1306.061	2.00	1.59	.04	1306.10	.00	.53	1.41	1.500	.000	.00	1 .0		
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
.887	.0061					.0006	.00	1.01	.30	.50	.013	.00	.00	PIPE		
1209.910	1305.060	1.001	1306.061	2.00	1.60	.04	1306.10	.00	.53	1.41	1.500	.000	.00	1 .0		
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
2.532	.0152					.0006	.00	1.00	.30	.40	.013	.00	.00	PIPE		
1212.443	1305.099	.960	1306.059	2.00	1.67	.04	1306.10	.00	.53	1.44	1.500	.000	.00	1 .0		
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
2.395	.0152					.0007	.00	.96	.32	.40	.013	.00	.00	PIPE		
1214.837	1305.135	.921	1306.056	2.00	1.76	.05	1306.10	.00	.53	1.46	1.500	.000	.00	1 .0		
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
2.171	.0152					.0008	.00	.92	.35	.40	.013	.00	.00	PIPE		
1217.008	1305.168	.885	1306.053	2.00	1.84	.05	1306.11	.00	.53	1.48	1.500	.000	.00	1 .0		
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
2.013	.0152					.0009	.00	.89	.38	.40	.013	.00	.00	PIPE		
1219.021	1305.198	.851	1306.049	2.00	1.93	.06	1306.11	.00	.53	1.49	1.500	.000	.00	1 .0		
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
1.851	.0152					.0010	.00	.85	.41	.40	.013	.00	.00	PIPE		
1220.872	1305.226	.819	1306.046	2.00	2.03	.06	1306.11	.00	.53	1.49	1.500	.000	.00	1 .0		
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
1.757	.0152					.0012	.00	.82	.44	.40	.013	.00	.00	PIPE		

WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/ I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1222.629	1305.253	.788	1306.041	2.00	2.12	.07	1306.11	.00	.53	1.50	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.586	.0152					.0013	.00	.79	.47	.40	.013	.00	.00	PIPE
1224.215	1305.277	.759	1306.036	2.00	2.23	.08	1306.11	.00	.53	1.50	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.482	.0152					.0015	.00	.76	.51	.40	.013	.00	.00	PIPE
1225.697	1305.300	.731	1306.031	2.00	2.34	.08	1306.12	.00	.53	1.50	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.232	.0152					.0017	.00	.73	.55	.40	.013	.00	.00	PIPE
1226.929	1305.318	.704	1306.022	2.00	2.45	.09	1306.12	.00	.53	1.50	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
HYDRAULIC JUMP														
1226.929	1305.318	.382	1305.700	2.00	5.64	.49	1306.19	.00	.53	1.31	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
16.163	.0152					.0179	.29	.38	1.91	.40	.013	.00	.00	PIPE
1243.092	1305.564	.382	1305.946	2.00	5.64	.49	1306.44	.00	.53	1.31	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
8.977	.0152					.0192	.17	.38	1.91	.40	.013	.00	.00	PIPE
1252.069	1305.700	.369	1306.069	2.00	5.91	.54	1306.61	.00	.53	1.29	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
6.213	.0152					.0220	.14	.37	2.04	.40	.013	.00	.00	PIPE
1258.282	1305.794	.357	1306.151	2.00	6.20	.60	1306.75	.00	.53	1.28	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
4.789	.0152					.0251	.12	.36	2.18	.40	.013	.00	.00	PIPE
1263.071	1305.867	.345	1306.212	2.00	6.51	.66	1306.87	.00	.53	1.26	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.962	.0152					.0287	.11	.35	2.32	.40	.013	.00	.00	PIPE

WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/ I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1267.033	1305.927	.333	1306.260	2.00	6.82	.72	1306.98	.00	.53	1.25	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.507	.0152					.0329	.12	.33	2.48	.40	.013	.00	.00	PIPE
1270.540	1305.980	.323	1306.303	2.00	7.16	.80	1307.10	.00	.53	1.23	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.229	.0452					.0336	.11	.32	2.65	.30	.013	.00	.00	PIPE
1273.769	1306.126	.329	1306.455	2.00	6.94	.75	1307.20	.00	.53	1.24	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.720	.0452					.0302	.11	.33	2.54	.30	.013	.00	.00	PIPE
1277.489	1306.294	.341	1306.635	2.00	6.62	.68	1307.32	.00	.53	1.26	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
2.698	.0452					.0264	.07	.34	2.38	.30	.013	.00	.00	PIPE
1280.187	1306.416	.352	1306.768	2.00	6.31	.62	1307.39	.00	.53	1.27	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.994	.0452					.0230	.05	.35	2.23	.30	.013	.00	.00	PIPE
1282.180	1306.506	.364	1306.870	2.00	6.02	.56	1307.43	.00	.53	1.29	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.520	.0452					.0202	.03	.36	2.09	.30	.013	.00	.00	PIPE
1283.700	1306.575	.377	1306.952	2.00	5.74	.51	1307.46	.00	.53	1.30	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.213	.0452					.0176	.02	.38	1.95	.30	.013	.00	.00	PIPE
1284.913	1306.630	.390	1307.020	2.00	5.47	.46	1307.48	.00	.53	1.32	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
.981	.0452					.0154	.02	.39	1.83	.30	.013	.00	.00	PIPE
1285.894	1306.674	.403	1307.077	2.00	5.21	.42	1307.50	.00	.53	1.33	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
.769	.0452					.0135	.01	.40	1.71	.30	.013	.00	.00	PIPE

WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

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*****
| Invert | Depth | Water | Q | Vel | Vel | Energy | Super | Critical | Flow Top | Height/ | Base Wt | | No Wth
Station | Elev | (FT) | Elev | (CFS) | (FPS) | Head | Grd.El. | Elev | Depth | Width | Dia.-FT | or I.D. | ZL | Prs/Pip
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
L/Elem | Ch Slope | | | | | | | | | | | | | |
*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|
| | | | | | | | | | | | | | |
1286.663 | 1306.709 | .417 | 1307.126 | 2.00 | 4.97 | .38 | 1307.51 | .00 | .53 | 1.34 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
.596 | .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1287.259 | 1306.736 | .432 | 1307.168 | 2.00 | 4.74 | .35 | 1307.52 | .00 | .53 | 1.36 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
.480 | .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1287.738 | 1306.757 | .447 | 1307.205 | 2.00 | 4.52 | .32 | 1307.52 | .00 | .53 | 1.37 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
.355 | .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1288.093 | 1306.774 | .463 | 1307.237 | 2.00 | 4.31 | .29 | 1307.53 | .00 | .53 | 1.39 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
.274 | .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1288.367 | 1306.786 | .479 | 1307.265 | 2.00 | 4.11 | .26 | 1307.53 | .00 | .53 | 1.40 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
.179 | .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1288.546 | 1306.794 | .496 | 1307.290 | 2.00 | 3.92 | .24 | 1307.53 | .00 | .53 | 1.41 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
.119 | .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1288.665 | 1306.799 | .513 | 1307.313 | 2.00 | 3.74 | .22 | 1307.53 | .00 | .53 | 1.42 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
.015 | .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1288.680 | 1306.800 | .533 | 1307.333 | 2.00 | 3.55 | .20 | 1307.53 | .00 | .53 | 1.44 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |

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WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1000.000	1303.500	2.500	1306.000	4.00	2.26	.08	1306.08	.00	.77	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
22.220	.0189					.0015	.03	2.50	.00	.54	.013	.00	.00	PIPE
1022.220	1303.920	2.112	1306.032	4.00	2.26	.08	1306.11	.00	.77	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
15.900	.0069					.0015	.02	.00	.00	.71	.013	.00	.00	PIPE
1038.120	1304.030	2.036	1306.066	4.00	2.26	.08	1306.15	.00	.77	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
118.438	.0060					.0014	.17	2.04	.00	.74	.013	.00	.00	PIPE
1156.558	1304.738	1.500	1306.238	4.00	2.26	.08	1306.32	.00	.77	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
18.792	.0060					.0013	.03	1.50	.00	.74	.013	.00	.00	PIPE
1175.350	1304.850	1.408	1306.258	4.00	2.32	.08	1306.34	.01	.77	.72	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
17.629	.0061					.0013	.02	1.41	.26	.74	.013	.00	.00	PIPE
1192.979	1304.957	1.315	1306.272	4.00	2.44	.09	1306.36	.01	.77	.99	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
13.323	.0061					.0014	.02	1.32	.33	.74	.013	.00	.00	PIPE
1206.302	1305.038	1.243	1306.281	4.00	2.55	.10	1306.38	.01	.77	1.13	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.608	.0061					.0014	.01	1.25	.38	.74	.013	.00	.00	PIPE
1209.910	1305.060	1.224	1306.284	4.00	2.59	.10	1306.39	.00	.77	1.16	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.593	.0152					.0015	.01	1.22	.40	.57	.013	.00	.00	PIPE
1213.503	1305.115	1.164	1306.279	4.00	2.72	.11	1306.39	.00	.77	1.25	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.158	.0152					.0017	.01	1.16	.44	.57	.013	.00	.00	PIPE

WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1216.661	1305.163	1.110	1306.273	4.00	2.85	.13	1306.40	.00	.77	1.32	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
2.666	.0152					.0019	.01	1.11	.49	.57	.013	.00	.00	PIPE
1219.327	1305.203	1.062	1306.265	4.00	2.99	.14	1306.40	.00	.77	1.36	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.871	.0152					.0021	.00	1.06	.53	.57	.013	.00	.00	PIPE
1221.198	1305.231	1.017	1306.249	4.00	3.14	.15	1306.40	.00	.77	1.40	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
HYDRAULIC JUMP														
1221.198	1305.231	.552	1305.784	4.00	6.78	.71	1306.50	.00	.77	1.45	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10.206	.0152					.0174	.18	.55	1.87	.57	.013	.00	.00	PIPE
1231.404	1305.386	.552	1305.938	4.00	6.78	.71	1306.65	.00	.77	1.45	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
15.310	.0152					.0186	.28	.55	1.87	.57	.013	.00	.00	PIPE
1246.714	1305.618	.533	1306.151	4.00	7.11	.78	1306.94	.00	.77	1.44	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
9.871	.0152					.0212	.21	.53	2.00	.57	.013	.00	.00	PIPE
1256.585	1305.768	.514	1306.282	4.00	7.46	.86	1307.15	.00	.77	1.42	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
7.688	.0152					.0242	.19	.51	2.14	.57	.013	.00	.00	PIPE
1264.273	1305.885	.497	1306.382	4.00	7.82	.95	1307.33	.00	.77	1.41	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
6.267	.0152					.0276	.17	.50	2.29	.57	.013	.00	.00	PIPE
1270.540	1305.980	.480	1306.460	4.00	8.20	1.04	1307.50	.00	.77	1.40	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
4.270	.0452					.0276	.12	.48	2.45	.43	.013	.00	.00	PIPE

WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

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*****
Station | Invert | Depth | Water | Q | Vel | Vel | Energy | Super | Critical | Flow Top | Height | Base Wt | | No Wth
| Elev | (FT) | Elev | (CFS) | (FPS) | Head | Grd.El. | Elev | Depth | Width | Dia.-FT | or I.D. | ZL | Prs/Pip
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
L/Elem | Ch Slope | | | | | SF Ave | HF | SE Dpth | Froude N | Norm Dp | "N" | X-Fall | ZR | Type Ch
*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|
1274.810 | 1306.173 | .496 | 1306.669 | 4.00 | 7.83 | .95 | 1307.62 | .00 | .77 | 1.41 | 1.500 | .000 | .00 | 1 | .0
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
3.269 | .0452 | | | | | .0243 | .08 | .50 | 2.29 | .43 | .013 | .00 | .00 | PIPE
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1278.079 | 1306.321 | .514 | 1306.835 | 4.00 | 7.46 | .86 | 1307.70 | .00 | .77 | 1.42 | 1.500 | .000 | .00 | 1 | .0
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
2.532 | .0452 | | | | | .0213 | .05 | .51 | 2.14 | .43 | .013 | .00 | .00 | PIPE
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1280.610 | 1306.435 | .532 | 1306.967 | 4.00 | 7.12 | .79 | 1307.75 | .00 | .77 | 1.44 | 1.500 | .000 | .00 | 1 | .0
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1.975 | .0452 | | | | | .0186 | .04 | .53 | 2.00 | .43 | .013 | .00 | .00 | PIPE
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1282.585 | 1306.525 | .551 | 1307.076 | 4.00 | 6.78 | .71 | 1307.79 | .00 | .77 | 1.45 | 1.500 | .000 | .00 | 1 | .0
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1.558 | .0452 | | | | | .0163 | .03 | .55 | 1.87 | .43 | .013 | .00 | .00 | PIPE
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1284.143 | 1306.595 | .571 | 1307.166 | 4.00 | 6.47 | .65 | 1307.82 | .00 | .77 | 1.46 | 1.500 | .000 | .00 | 1 | .0
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1.233 | .0452 | | | | | .0143 | .02 | .57 | 1.75 | .43 | .013 | .00 | .00 | PIPE
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1285.377 | 1306.651 | .592 | 1307.243 | 4.00 | 6.17 | .59 | 1307.83 | .00 | .77 | 1.47 | 1.500 | .000 | .00 | 1 | .0
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1.002 | .0452 | | | | | .0126 | .01 | .59 | 1.63 | .43 | .013 | .00 | .00 | PIPE
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1286.379 | 1306.696 | .613 | 1307.309 | 4.00 | 5.88 | .54 | 1307.85 | .00 | .77 | 1.47 | 1.500 | .000 | .00 | 1 | .0
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
.756 | .0452 | | | | | .0110 | .01 | .61 | 1.53 | .43 | .013 | .00 | .00 | PIPE
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1287.135 | 1306.730 | .636 | 1307.366 | 4.00 | 5.61 | .49 | 1307.85 | .00 | .77 | 1.48 | 1.500 | .000 | .00 | 1 | .0
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
.602 | .0452 | | | | | .0097 | .01 | .64 | 1.42 | .43 | .013 | .00 | .00 | PIPE
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1287.737 | 1306.757 | .659 | 1307.417 | 4.00 | 5.35 | .44 | 1307.86 | .00 | .77 | 1.49 | 1.500 | .000 | .00 | 1 | .0
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
.446 | .0452 | | | | | .0085 | .00 | .66 | 1.33 | .43 | .013 | .00 | .00 | PIPE

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WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

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*****
| Invert | Depth | Water | Q | Vel | Vel | Energy | Super | Critical | Flow Top | Height/ | Base Wt | | No Wth
Station | Elev | (FT) | Elev | (CFS) | (FPS) | Head | Grd.El. | Elev | Depth | Width | Dia.-FT | or I.D. | ZL | Prs/Pip
-|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|-
L/Elem | Ch Slope | | | | | | | | | | | | | | |
*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****
| | | | | | | | | | | | | | | |
1288.183 1306.778 .683 1307.461 4.00 5.10 .40 1307.86 .00 .77 1.49 1.500 .000 .00 1 .0
-|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|-
.283 .0452 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
1288.466 1306.790 .709 1307.500 4.00 4.86 .37 1307.87 .00 .77 1.50 1.500 .000 .00 1 .0
-|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|-
.164 .0452 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
1288.631 1306.798 .736 1307.534 4.00 4.63 .33 1307.87 .00 .77 1.50 1.500 .000 .00 1 .0
-|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|-
.049 .0452 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
1288.680 1306.800 .765 1307.566 4.00 4.41 .30 1307.87 .00 .77 1.50 1.500 .000 .00 1 .0
-|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|- -|-

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WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1000.000	1303.500	2.500	1306.000	6.00	3.40	.18	1306.18	.00	.95	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
22.220	.0189					.0033	.07	2.50	.00	.67	.013	.00	.00	PIPE
1022.220	1303.920	2.152	1306.073	6.00	3.40	.18	1306.25	.00	.95	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
15.900	.0069					.0033	.05	.00	.00	.91	.013	.00	.00	PIPE
1038.120	1304.030	2.118	1306.148	6.00	3.40	.18	1306.33	.00	.95	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
137.230	.0060					.0033	.45	2.12	.00	.96	.013	.00	.00	PIPE
1175.350	1304.850	1.746	1306.596	6.00	3.40	.18	1306.78	.00	.95	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
34.560	.0061					.0033	.11	.00	.00	.95	.013	.00	.00	PIPE
1209.910	1305.060	1.684	1306.744	6.00	3.40	.18	1306.92	.00	.95	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
15.474	.0152					.0032	.05	1.68	.00	.72	.013	.00	.00	PIPE
1225.384	1305.295	1.500	1306.795	6.00	3.40	.18	1306.97	.00	.95	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
9.958	.0152					.0030	.03	1.50	.00	.72	.013	.00	.00	PIPE
1235.341	1305.446	1.360	1306.806	6.00	3.56	.20	1307.00	.00	.95	.87	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.786	.0152					.0030	.01	1.36	.45	.72	.013	.00	.00	PIPE
1239.127	1305.503	1.280	1306.784	6.00	3.74	.22	1307.00	.00	.95	1.06	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
HYDRAULIC JUMP														
1239.127	1305.503	.657	1306.161	6.00	8.06	1.01	1307.17	.00	.95	1.49	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
11.156	.0152					.0206	.23	.66	2.01	.72	.013	.00	.00	PIPE

WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1250.283	1305.673	.657	1306.330	6.00	8.05	1.01	1307.34	.00	.95	1.49	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
11.323	.0152					.0220	.25	.66	2.00	.72	.013	.00	.00	PIPE
1261.606	1305.844	.634	1306.479	6.00	8.44	1.11	1307.58	.00	.95	1.48	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
8.934	.0152					.0251	.22	.63	2.15	.72	.013	.00	.00	PIPE
1270.540	1305.980	.612	1306.592	6.00	8.85	1.22	1307.81	.00	.95	1.47	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
2.497	.0452					.0259	.06	.61	2.30	.53	.013	.00	.00	PIPE
1273.037	1306.093	.623	1306.716	6.00	8.64	1.16	1307.88	.00	.95	1.48	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.797	.0452					.0235	.09	.62	2.22	.53	.013	.00	.00	PIPE
1276.833	1306.264	.646	1306.911	6.00	8.24	1.05	1307.96	.00	.95	1.49	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
2.964	.0452					.0206	.06	.65	2.07	.53	.013	.00	.00	PIPE
1279.797	1306.398	.669	1307.068	6.00	7.86	.96	1308.03	.00	.95	1.49	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
2.294	.0452					.0181	.04	.67	1.93	.53	.013	.00	.00	PIPE
1282.091	1306.502	.694	1307.196	6.00	7.49	.87	1308.07	.00	.95	1.50	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.784	.0452					.0159	.03	.69	1.80	.53	.013	.00	.00	PIPE
1283.875	1306.583	.721	1307.304	6.00	7.14	.79	1308.10	.00	.95	1.50	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.444	.0452					.0140	.02	.72	1.68	.53	.013	.00	.00	PIPE
1285.319	1306.648	.748	1307.396	6.00	6.81	.72	1308.12	.00	.95	1.50	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.110	.0452					.0124	.01	.75	1.57	.53	.013	.00	.00	PIPE

WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

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*****
| Invert | Depth | Water | Q | Vel | Vel | Energy | Super | Critical | Flow Top | Height/ | Base Wt | | No Wth
Station | Elev | (FT) | Elev | (CFS) | (FPS) | Head | Grd.El. | Elev | Depth | Width | Dia.-FT | or I.D. | ZL | Prs/Pip
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
L/Elem | Ch Slope | | | | | | | | | | | | | |
*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|
| | | | | | | | | | | | | | |
1286.430 1306.698 .777 1307.475 6.00 6.49 .65 1308.13 .00 .95 1.50 1.500 .000 .00 1 .0
| | | | | | | | | | | | | | |
.860 .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1287.290 1306.737 .807 1307.544 6.00 6.19 .60 1308.14 .00 .95 1.50 1.500 .000 .00 1 .0
| | | | | | | | | | | | | | |
.649 .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1287.938 1306.767 .838 1307.605 6.00 5.90 .54 1308.15 .00 .95 1.49 1.500 .000 .00 1 .0
| | | | | | | | | | | | | | |
.413 .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1288.352 1306.785 .872 1307.657 6.00 5.63 .49 1308.15 .00 .95 1.48 1.500 .000 .00 1 .0
| | | | | | | | | | | | | | |
.257 .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1288.609 1306.797 .907 1307.704 6.00 5.37 .45 1308.15 .00 .95 1.47 1.500 .000 .00 1 .0
| | | | | | | | | | | | | | |
.071 .0452 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
1288.680 1306.800 .946 1307.746 6.00 5.11 .41 1308.15 .00 .95 1.45 1.500 .000 .00 1 .0
| | | | | | | | | | | | | | |

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WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/Dia.-FT	Base Wt/or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1000.000	1303.500	2.500	1306.000	8.00	4.53	.32	1306.32	.00	1.10	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
22.220	.0189					.0058	.13	2.50	.00	.80	.013	.00	.00	PIPE
1022.220	1303.920	2.209	1306.129	8.00	4.53	.32	1306.45	.00	1.10	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
15.900	.0069					.0058	.09	.00	.00	1.13	.013	.00	.00	PIPE
1038.120	1304.030	2.234	1306.264	8.00	4.53	.32	1306.58	.00	1.10	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
137.230	.0060					.0058	.80	2.23	.00	1.21	.013	.00	.00	PIPE
1175.350	1304.850	2.210	1307.060	8.00	4.53	.32	1307.38	.00	1.10	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
34.560	.0061					.0058	.20	.00	.00	1.20	.013	.00	.00	PIPE
1209.910	1305.060	2.263	1307.323	8.00	4.53	.32	1307.64	.00	1.10	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
60.630	.0152					.0058	.35	2.26	.00	.85	.013	.00	.00	PIPE
1270.540	1305.980	1.695	1307.675	8.00	4.53	.32	1307.99	.00	1.10	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.806	.0452					.0058	.02	1.69	.00	.62	.013	.00	.00	PIPE
1274.346	1306.152	1.545	1307.697	8.00	4.53	.32	1308.02	.00	1.10	.00	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
HYDRAULIC JUMP														
1274.346	1306.152	.760	1306.912	8.00	8.90	1.23	1308.14	.00	1.10	1.50	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
1.450	.0452					.0221	.03	.76	2.03	.62	.013	.00	.00	PIPE
1275.795	1306.218	.760	1306.978	8.00	8.89	1.23	1308.21	.00	1.10	1.50	1.500	.000	.00	1 .0
- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
3.340	.0452					.0208	.07	.76	2.02	.62	.013	.00	.00	PIPE

WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

[illegible]

WATER SURFACE PROFILE LISTING

Date: 8- 2-2024 Time: 8:23: 3

WSPG 18" OUTLET

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*****
| Invert | Depth | Water | Q | Vel | Vel | Energy | Super | Critical | Flow Top | Height/ | Base Wt | | No Wth
Station | Elev | (FT) | Elev | (CFS) | (FPS) | Head | Grd.El. | Elev | Depth | Width | Dia.-FT | or I.D. | ZL | Prs/Pip
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
L/Elem | Ch Slope | | | | | | | | | | | | | |
*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|*****|
| | | | | | | | | | | | | | |
1000.000 | 1303.500 | 2.500 | 1306.000 | 10.00 | 5.66 | .50 | 1306.50 | .00 | 1.22 | .00 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
22.220 | .0189 | | | | | | | .0091 | .20 | 2.50 | .00 | .92 | .013 | .00 | .00 | PIPE
| | | | | | | | | | | | | | |
1022.220 | 1303.920 | 2.281 | 1306.201 | 10.00 | 5.66 | .50 | 1306.70 | .00 | 1.22 | .00 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
15.900 | .0069 | | | | | | | .0091 | .14 | .00 | .00 | 1.50 | .013 | .00 | .00 | PIPE
| | | | | | | | | | | | | | |
1038.120 | 1304.030 | 2.382 | 1306.412 | 10.00 | 5.66 | .50 | 1306.91 | .00 | 1.22 | .00 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
137.230 | .0060 | | | | | | | .0091 | 1.24 | 2.38 | .00 | 1.50 | .013 | .00 | .00 | PIPE
| | | | | | | | | | | | | | |
1175.350 | 1304.850 | 2.806 | 1307.656 | 10.00 | 5.66 | .50 | 1308.15 | .00 | 1.22 | .00 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
34.560 | .0061 | | | | | | | .0091 | .31 | .00 | .00 | 1.50 | .013 | .00 | .00 | PIPE
| | | | | | | | | | | | | | |
1209.910 | 1305.060 | 3.007 | 1308.067 | 10.00 | 5.66 | .50 | 1308.56 | .00 | 1.22 | .00 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
60.630 | .0152 | | | | | | | .0091 | .55 | 3.01 | .00 | .99 | .013 | .00 | .00 | PIPE
| | | | | | | | | | | | | | |
1270.540 | 1305.980 | 2.637 | 1308.617 | 10.00 | 5.66 | .50 | 1309.11 | .00 | 1.22 | .00 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |
18.140 | .0452 | | | | | | | .0091 | .16 | 2.64 | .00 | .70 | .013 | .00 | .00 | PIPE
| | | | | | | | | | | | | | |
1288.680 | 1306.800 | 1.981 | 1308.781 | 10.00 | 5.66 | .50 | 1309.28 | .00 | 1.22 | .00 | 1.500 | .000 | .00 | 1 | .0
| | | | | | | | | | | | | | |

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FLOOD HYDROGRAPH ROUTING PROGRAM
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 Study date: 08/02/24

 DIVERSIFIED MAPLE AVE
 CHAMBER ROUTING
 18" OUTLET PIPE
 100 YR STORM

Program License Serial Number 6484

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

From study/file name: MAPLE-UH Dev-25yr.rte
 *****HYDROGRAPH DATA*****
 Number of intervals = 294
 Time interval = 5.0 (Min.)
 Maximum/Peak flow rate = 31.286 (CFS)
 Total volume = 4.661 (Ac.Ft)
 Status of hydrographs being held in storage

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

+++++
 Process from Point/Station 0.000 to Point/Station 1.000
 **** RETARDING BASIN ROUTING ****

 User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 294
 Hydrograph time unit = 5.000 (Min.)
 Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)
 Initial basin storage = 0.00 (Ac.Ft)
 Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.230	0.700	0.228	0.232
2.500	1.200	8.200	1.172	1.228
3.500	1.640	10.400	1.604	1.676
4.500	1.980	11.500	1.940	2.020
4.800	2.060	12.000	2.019	2.101

 Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	7.8	15.64	23.46	31.29	Depth (Ft.)
0.083	0.06	0.00	0.000	O					0.00

0.167	0.37	0.01	0.002	O					0.00
0.250	0.79	0.02	0.006	O					0.01
0.333	0.96	0.03	0.011	O					0.02
0.417	1.02	0.05	0.018	OI					0.04
0.500	1.03	0.07	0.025	OI					0.05
0.583	1.04	0.09	0.031	OI					0.07
0.667	1.04	0.11	0.038	OI					0.08
0.750	1.05	0.13	0.044	OI					0.10
0.833	1.05	0.15	0.050	OI					0.11
0.917	1.05	0.17	0.056	OI					0.12
1.000	1.06	0.19	0.062	OI					0.14
1.083	1.06	0.21	0.068	OI					0.15
1.167	1.06	0.23	0.074	OI					0.16
1.250	1.07	0.24	0.080	OI					0.17
1.333	1.07	0.26	0.085	OI					0.19
1.417	1.07	0.28	0.091	OI					0.20
1.500	1.08	0.29	0.096	OI					0.21
1.583	1.08	0.31	0.102	OI					0.22
1.667	1.08	0.33	0.107	OI					0.23
1.750	1.09	0.34	0.112	OI					0.24
1.833	1.09	0.36	0.117	OI					0.25
1.917	1.09	0.37	0.122	OI					0.27
2.000	1.10	0.39	0.127	OI					0.28
2.083	1.10	0.40	0.132	OI					0.29
2.167	1.10	0.42	0.137	OI					0.30
2.250	1.11	0.43	0.141	OI					0.31
2.333	1.11	0.44	0.146	OI					0.32
2.417	1.11	0.46	0.151	OI					0.33
2.500	1.12	0.47	0.155	OI					0.34
2.583	1.12	0.49	0.159	OI					0.35
2.667	1.13	0.50	0.164	OI					0.36
2.750	1.13	0.51	0.168	OI					0.37
2.833	1.13	0.52	0.172	OI					0.37
2.917	1.14	0.54	0.177	OI					0.38
3.000	1.14	0.55	0.181	OI					0.39
3.083	1.15	0.56	0.185	OI					0.40
3.167	1.15	0.57	0.189	OI					0.41
3.250	1.15	0.59	0.193	OI					0.42
3.333	1.16	0.60	0.196	OI					0.43
3.417	1.16	0.61	0.200	OI					0.44
3.500	1.17	0.62	0.204	OI					0.44
3.583	1.17	0.63	0.208	OI					0.45
3.667	1.18	0.64	0.211	OI					0.46
3.750	1.18	0.65	0.215	OI					0.47
3.833	1.18	0.67	0.219	OI					0.48
3.917	1.19	0.68	0.222	OI					0.48
4.000	1.19	0.69	0.226	OI					0.49
4.083	1.20	0.70	0.229	OI					0.50
4.167	1.20	0.72	0.233	OI					0.51
4.250	1.21	0.75	0.236	OI					0.51
4.333	1.21	0.77	0.239	OI					0.52
4.417	1.22	0.79	0.242	OI					0.52
4.500	1.22	0.81	0.245	OI					0.53
4.583	1.23	0.84	0.248	OI					0.54
4.667	1.23	0.86	0.250	OI					0.54
4.750	1.24	0.88	0.253	OI					0.55
4.833	1.24	0.89	0.255	OI					0.55
4.917	1.25	0.91	0.257	OI					0.56
5.000	1.25	0.93	0.260	OI					0.56
5.083	1.26	0.95	0.262	OI					0.57
5.167	1.26	0.96	0.264	OI					0.57
5.250	1.27	0.98	0.266	IO					0.57
5.333	1.27	0.99	0.268	IO					0.58
5.417	1.28	1.01	0.270	IO					0.58
5.500	1.28	1.02	0.272	IO					0.59
5.583	1.29	1.04	0.273	IO					0.59
5.667	1.29	1.05	0.275	IO					0.59
5.750	1.30	1.06	0.277	IO					0.60
5.833	1.31	1.07	0.278	IO					0.60
5.917	1.31	1.09	0.280	IO					0.60
6.000	1.32	1.10	0.282	IO					0.61

6.083	1.32	1.11	0.283	IO					0.61
6.167	1.33	1.12	0.284	IO					0.61
6.250	1.34	1.13	0.286	IO					0.62
6.333	1.34	1.14	0.287	IO					0.62
6.417	1.35	1.15	0.289	IO					0.62
6.500	1.35	1.16	0.290	IO					0.62
6.583	1.36	1.17	0.291	IO					0.63
6.667	1.37	1.18	0.293	IO					0.63
6.750	1.37	1.19	0.294	IO					0.63
6.833	1.38	1.20	0.295	IO					0.63
6.917	1.39	1.21	0.296	IO					0.64
7.000	1.40	1.22	0.297	IO					0.64
7.083	1.40	1.23	0.299	IO					0.64
7.167	1.41	1.24	0.300	IO					0.64
7.250	1.42	1.25	0.301	IO					0.65
7.333	1.42	1.26	0.302	IO					0.65
7.417	1.43	1.27	0.303	IO					0.65
7.500	1.44	1.28	0.304	IO					0.65
7.583	1.45	1.28	0.306	IO					0.66
7.667	1.45	1.29	0.307	IO					0.66
7.750	1.46	1.30	0.308	IO					0.66
7.833	1.47	1.31	0.309	IO					0.66
7.917	1.48	1.32	0.310	IO					0.66
8.000	1.49	1.33	0.311	IO					0.67
8.083	1.50	1.34	0.312	IO					0.67
8.167	1.50	1.34	0.313	IO					0.67
8.250	1.51	1.35	0.314	IO					0.67
8.333	1.52	1.36	0.316	IO					0.68
8.417	1.53	1.37	0.317	IO					0.68
8.500	1.54	1.38	0.318	IO					0.68
8.583	1.55	1.39	0.319	IO					0.68
8.667	1.56	1.40	0.320	IO					0.69
8.750	1.57	1.40	0.321	IO					0.69
8.833	1.58	1.41	0.322	IO					0.69
8.917	1.59	1.42	0.323	IO					0.69
9.000	1.60	1.43	0.325	IO					0.69
9.083	1.61	1.44	0.326	IO					0.70
9.167	1.62	1.45	0.327	IO					0.70
9.250	1.63	1.46	0.328	IO					0.70
9.333	1.64	1.47	0.329	IO					0.70
9.417	1.65	1.48	0.330	IO					0.71
9.500	1.66	1.49	0.332	IO					0.71
9.583	1.68	1.50	0.333	IO					0.71
9.667	1.69	1.51	0.334	IO					0.71
9.750	1.70	1.52	0.335	IO					0.72
9.833	1.71	1.53	0.337	IO					0.72
9.917	1.72	1.54	0.338	IO					0.72
10.000	1.74	1.55	0.339	IO					0.73
10.083	1.75	1.56	0.341	IO					0.73
10.167	1.76	1.57	0.342	IO					0.73
10.250	1.78	1.58	0.343	IO					0.73
10.333	1.79	1.59	0.345	IO					0.74
10.417	1.81	1.60	0.346	IO					0.74
10.500	1.82	1.61	0.348	IO					0.74
10.583	1.84	1.62	0.349	IO					0.75
10.667	1.85	1.63	0.351	IO					0.75
10.750	1.87	1.64	0.352	IO					0.75
10.833	1.88	1.66	0.354	IO					0.75
10.917	1.90	1.67	0.355	IO					0.76
11.000	1.92	1.68	0.357	IO					0.76
11.083	1.93	1.69	0.358	IO					0.76
11.167	1.95	1.71	0.360	IO					0.77
11.250	1.97	1.72	0.362	IOI					0.77
11.333	1.99	1.73	0.364	IOI					0.78
11.417	2.01	1.75	0.365	IOI					0.78
11.500	2.03	1.76	0.367	IOI					0.78
11.583	2.05	1.77	0.369	IOI					0.79
11.667	2.07	1.79	0.371	IOI					0.79
11.750	2.09	1.80	0.373	IOI					0.79
11.833	2.11	1.82	0.375	IOI					0.80
11.917	2.13	1.84	0.377	IOI					0.80

12.000	2.16	1.85	0.379	OI					0.81
12.083	2.20	1.87	0.381	OI					0.81
12.167	2.34	1.89	0.384	OI					0.82
12.250	2.51	1.92	0.387	OI					0.82
12.333	2.59	1.95	0.392	OI					0.83
12.417	2.64	1.98	0.396	O					0.84
12.500	2.67	2.02	0.401	O					0.85
12.583	2.70	2.05	0.405	O					0.86
12.667	2.73	2.09	0.410	O					0.87
12.750	2.77	2.12	0.414	O					0.88
12.833	2.80	2.16	0.418	O					0.89
12.917	2.83	2.19	0.423	O					0.90
13.000	2.87	2.23	0.427	O					0.91
13.083	2.91	2.26	0.432	O					0.92
13.167	2.94	2.29	0.436	OI					0.93
13.250	2.98	2.33	0.441	OI					0.93
13.333	3.02	2.36	0.445	OI					0.94
13.417	3.07	2.40	0.450	OI					0.95
13.500	3.11	2.44	0.454	OI					0.96
13.583	3.16	2.47	0.459	OI					0.97
13.667	3.21	2.51	0.464	OI					0.98
13.750	3.26	2.55	0.469	OI					0.99
13.833	3.32	2.58	0.474	OI					1.00
13.917	3.37	2.62	0.479	OI					1.01
14.000	3.44	2.66	0.484	OI					1.02
14.083	3.50	2.71	0.489	OI					1.04
14.167	3.57	2.75	0.495	OI					1.05
14.250	3.64	2.79	0.501	OI					1.06
14.333	3.72	2.84	0.507	OI					1.07
14.417	3.80	2.89	0.513	OI					1.08
14.500	3.89	2.94	0.519	O					1.10
14.583	3.99	2.99	0.526	OI					1.11
14.667	4.09	3.04	0.533	OI					1.12
14.750	4.20	3.10	0.540	OI					1.14
14.833	4.32	3.16	0.548	OI					1.16
14.917	4.45	3.22	0.556	OI					1.17
15.000	4.60	3.29	0.565	OI					1.19
15.083	4.76	3.36	0.574	OI					1.21
15.167	4.94	3.44	0.584	O I					1.23
15.250	5.14	3.52	0.595	O I					1.25
15.333	5.37	3.61	0.607	O I					1.28
15.417	5.56	3.71	0.619	O I					1.30
15.500	5.44	3.80	0.631	O I					1.33
15.583	5.25	3.88	0.642	O I					1.35
15.667	5.47	3.96	0.651	OI					1.37
15.750	6.01	4.05	0.663	O I					1.39
15.833	6.84	4.17	0.679	O I					1.43
15.917	8.12	4.35	0.702	O I					1.47
16.000	10.40	4.60	0.734	O I					1.54
16.083	16.21	5.05	0.793	O I					1.66
16.167	28.74	5.96	0.910	O		I			1.90
16.250	31.29	7.20	1.071	OI			I		2.23
16.333	17.55	8.10	1.187	O	I				2.47
16.417	9.67	8.32	1.224	OI					2.55
16.500	6.85	8.32	1.223	IO					2.55
16.583	6.19	8.26	1.211	I O					2.53
16.667	5.43	8.16	1.195	I O					2.49
16.750	5.00	8.01	1.175	I O					2.45
16.833	4.65	7.84	1.154	I O					2.40
16.917	4.37	7.67	1.131	I OI					2.36
17.000	4.13	7.49	1.108	I OI					2.31
17.083	3.92	7.31	1.085	I OI					2.26
17.167	3.74	7.13	1.062	I OI					2.21
17.250	3.59	6.95	1.039	I OI					2.17
17.333	3.45	6.77	1.016	I O					2.12
17.417	3.33	6.60	0.993	I O					2.07
17.500	3.22	6.43	0.971	I O					2.03
17.583	3.13	6.26	0.949	I O					1.98
17.667	3.04	6.09	0.927	I O					1.94
17.750	2.95	5.93	0.907	I O					1.90
17.833	2.88	5.78	0.886	I O					1.85

17.917	2.81	5.62	0.867	I O				1.81
18.000	2.74	5.48	0.848	I O				1.77
18.083	2.66	5.33	0.829	I O				1.74
18.167	2.49	5.19	0.811	I O				1.70
18.250	2.29	5.04	0.792	I O				1.66
18.333	2.19	4.90	0.773	I O				1.62
18.417	2.12	4.76	0.755	I O				1.58
18.500	2.07	4.62	0.737	I O				1.54
18.583	2.03	4.49	0.720	I O				1.51
18.667	1.99	4.36	0.703	I O				1.48
18.750	1.95	4.23	0.687	I O				1.44
18.833	1.92	4.11	0.672	I O				1.41
18.917	1.89	4.00	0.657	I O				1.38
19.000	1.85	3.89	0.642	I O				1.35
19.083	1.82	3.78	0.629	I O				1.32
19.167	1.79	3.68	0.615	I O				1.29
19.250	1.77	3.58	0.603	I O				1.27
19.333	1.74	3.49	0.590	I O				1.24
19.417	1.72	3.40	0.579	I O				1.22
19.500	1.69	3.31	0.567	I O				1.20
19.583	1.67	3.22	0.556	I O				1.17
19.667	1.64	3.14	0.546	I O				1.15
19.750	1.62	3.06	0.536	I O				1.13
19.833	1.60	2.99	0.526	I O				1.11
19.917	1.58	2.92	0.517	IO				1.09
20.000	1.56	2.85	0.508	IO				1.07
20.083	1.54	2.78	0.499	IO				1.05
20.167	1.52	2.71	0.491	IO				1.04
20.250	1.51	2.65	0.483	IO				1.02
20.333	1.49	2.59	0.475	IO				1.00
20.417	1.47	2.53	0.467	IO				0.99
20.500	1.46	2.48	0.460	IO				0.97
20.583	1.44	2.43	0.453	IO				0.96
20.667	1.43	2.37	0.447	IO				0.95
20.750	1.41	2.32	0.440	IO				0.93
20.833	1.40	2.28	0.434	IO				0.92
20.917	1.38	2.23	0.428	IO				0.91
21.000	1.37	2.19	0.422	IO				0.90
21.083	1.36	2.14	0.417	IO				0.89
21.167	1.34	2.10	0.411	IO				0.87
21.250	1.33	2.06	0.406	IO				0.86
21.333	1.32	2.02	0.401	IO				0.85
21.417	1.31	1.99	0.397	IO				0.84
21.500	1.30	1.95	0.392	O				0.83
21.583	1.28	1.92	0.388	O				0.82
21.667	1.27	1.88	0.383	O				0.82
21.750	1.26	1.85	0.379	O				0.81
21.833	1.25	1.82	0.375	O				0.80
21.917	1.24	1.79	0.371	O				0.79
22.000	1.23	1.76	0.368	O				0.78
22.083	1.22	1.74	0.364	O				0.78
22.167	1.21	1.71	0.360	O				0.77
22.250	1.20	1.68	0.357	O				0.76
22.333	1.19	1.66	0.354	O				0.76
22.417	1.18	1.63	0.351	O				0.75
22.500	1.18	1.61	0.348	O				0.74
22.583	1.17	1.59	0.345	O				0.74
22.667	1.16	1.57	0.342	O				0.73
22.750	1.15	1.54	0.339	O				0.72
22.833	1.14	1.52	0.336	O				0.72
22.917	1.13	1.50	0.334	O				0.71
23.000	1.13	1.48	0.331	O				0.71
23.083	1.12	1.47	0.329	O				0.70
23.167	1.11	1.45	0.327	O				0.70
23.250	1.10	1.43	0.324	O				0.69
23.333	1.10	1.41	0.322	O				0.69
23.417	1.09	1.40	0.320	O				0.69
23.500	1.08	1.38	0.318	O				0.68
23.583	1.08	1.36	0.316	O				0.68
23.667	1.07	1.35	0.314	O				0.67
23.750	1.06	1.33	0.312	O				0.67

23.833	1.06	1.32	0.310	IO					0.67
23.917	1.05	1.31	0.308	IO					0.66
24.000	1.04	1.29	0.307	IO					0.66
24.083	0.98	1.28	0.305	IO					0.65
24.167	0.66	1.25	0.302	IO					0.65
24.250	0.24	1.21	0.296	IO					0.64
24.333	0.07	1.16	0.289	IO					0.62
24.417	0.02	1.10	0.282	IO					0.61
24.500	0.01	1.04	0.274	IO					0.59
24.583	0.00	0.99	0.267	IO					0.58
24.667	0.00	0.94	0.261	O					0.56
24.750	0.00	0.89	0.255	O					0.55
24.833	0.00	0.84	0.249	O					0.54
24.917	0.00	0.80	0.243	O					0.53
25.000	0.00	0.76	0.238	O					0.52
25.083	0.00	0.72	0.232	O					0.51
25.167	0.00	0.69	0.228	O					0.49
25.250	0.00	0.68	0.223	O					0.48
25.333	0.00	0.66	0.218	O					0.47
25.417	0.00	0.65	0.214	O					0.46
25.500	0.00	0.64	0.209	O					0.45
25.583	0.00	0.62	0.205	O					0.45
25.667	0.00	0.61	0.201	O					0.44
25.750	0.00	0.60	0.197	O					0.43
25.833	0.00	0.59	0.192	O					0.42
25.917	0.00	0.57	0.188	O					0.41
26.000	0.00	0.56	0.185	O					0.40
26.083	0.00	0.55	0.181	O					0.39
26.167	0.00	0.54	0.177	O					0.38
26.250	0.00	0.53	0.173	O					0.38
26.333	0.00	0.52	0.170	O					0.37
26.417	0.00	0.51	0.166	O					0.36
26.500	0.00	0.50	0.163	O					0.35
26.583	0.00	0.48	0.159	O					0.35
26.667	0.00	0.47	0.156	O					0.34
26.750	0.00	0.47	0.153	O					0.33
26.833	0.00	0.46	0.150	O					0.33
26.917	0.00	0.45	0.147	O					0.32
27.000	0.00	0.44	0.143	O					0.31
27.083	0.00	0.43	0.141	O					0.31
27.167	0.00	0.42	0.138	O					0.30
27.250	0.00	0.41	0.135	O					0.29
27.333	0.00	0.40	0.132	O					0.29
27.417	0.00	0.39	0.129	O					0.28
27.500	0.00	0.39	0.127	O					0.28
27.583	0.00	0.38	0.124	O					0.27
27.667	0.00	0.37	0.121	O					0.26
27.750	0.00	0.36	0.119	O					0.26
27.833	0.00	0.35	0.116	O					0.25
27.917	0.00	0.35	0.114	O					0.25
28.000	0.00	0.34	0.112	O					0.24
28.083	0.00	0.33	0.109	O					0.24
28.167	0.00	0.33	0.107	O					0.23
28.250	0.00	0.32	0.105	O					0.23
28.333	0.00	0.31	0.103	O					0.22
28.417	0.00	0.31	0.100	O					0.22
28.500	0.00	0.30	0.098	O					0.21
28.583	0.00	0.29	0.096	O					0.21
28.667	0.00	0.29	0.094	O					0.21
28.750	0.00	0.28	0.092	O					0.20
28.833	0.00	0.28	0.090	O					0.20
28.917	0.00	0.27	0.089	O					0.19
29.000	0.00	0.26	0.087	O					0.19
29.083	0.00	0.26	0.085	O					0.18
29.167	0.00	0.25	0.083	O					0.18
29.250	0.00	0.25	0.081	O					0.18
29.333	0.00	0.24	0.080	O					0.17
29.417	0.00	0.24	0.078	O					0.17
29.500	0.00	0.23	0.077	O					0.17
29.583	0.00	0.23	0.075	O					0.16
29.667	0.00	0.22	0.073	O					0.16

29.750	0.00	0.22	0.072	O					0.16
29.833	0.00	0.21	0.070	O					0.15
29.917	0.00	0.21	0.069	O					0.15
30.000	0.00	0.21	0.067	O					0.15
30.083	0.00	0.20	0.066	O					0.14
30.167	0.00	0.20	0.065	O					0.14
30.250	0.00	0.19	0.063	O					0.14
30.333	0.00	0.19	0.062	O					0.13
30.417	0.00	0.18	0.061	O					0.13
30.500	0.00	0.18	0.059	O					0.13
30.583	0.00	0.18	0.058	O					0.13
30.667	0.00	0.17	0.057	O					0.12
30.750	0.00	0.17	0.056	O					0.12
30.833	0.00	0.17	0.055	O					0.12
30.917	0.00	0.16	0.054	O					0.12
31.000	0.00	0.16	0.052	O					0.11
31.083	0.00	0.16	0.051	O					0.11
31.167	0.00	0.15	0.050	O					0.11
31.250	0.00	0.15	0.049	O					0.11
31.333	0.00	0.15	0.048	O					0.10
31.417	0.00	0.14	0.047	O					0.10
31.500	0.00	0.14	0.046	O					0.10
31.583	0.00	0.14	0.045	O					0.10
31.667	0.00	0.14	0.044	O					0.10
31.750	0.00	0.13	0.043	O					0.09
31.833	0.00	0.13	0.043	O					0.09
31.917	0.00	0.13	0.042	O					0.09
32.000	0.00	0.12	0.041	O					0.09
32.083	0.00	0.12	0.040	O					0.09
32.167	0.00	0.12	0.039	O					0.09
32.250	0.00	0.12	0.038	O					0.08
32.333	0.00	0.11	0.038	O					0.08
32.417	0.00	0.11	0.037	O					0.08
32.500	0.00	0.11	0.036	O					0.08
32.583	0.00	0.11	0.035	O					0.08
32.667	0.00	0.10	0.034	O					0.07
32.750	0.00	0.10	0.034	O					0.07
32.833	0.00	0.10	0.033	O					0.07
32.917	0.00	0.10	0.032	O					0.07
33.000	0.00	0.10	0.032	O					0.07
33.083	0.00	0.09	0.031	O					0.07
33.167	0.00	0.09	0.030	O					0.07
33.250	0.00	0.09	0.030	O					0.06
33.333	0.00	0.09	0.029	O					0.06
33.417	0.00	0.09	0.029	O					0.06
33.500	0.00	0.09	0.028	O					0.06
33.583	0.00	0.08	0.027	O					0.06
33.667	0.00	0.08	0.027	O					0.06
33.750	0.00	0.08	0.026	O					0.06
33.833	0.00	0.08	0.026	O					0.06
33.917	0.00	0.08	0.025	O					0.05
34.000	0.00	0.08	0.025	O					0.05
34.083	0.00	0.07	0.024	O					0.05
34.167	0.00	0.07	0.024	O					0.05
34.250	0.00	0.07	0.023	O					0.05
34.333	0.00	0.07	0.023	O					0.05
34.417	0.00	0.07	0.022	O					0.05
34.500	0.00	0.07	0.022	O					0.05
34.583	0.00	0.06	0.021	O					0.05
34.667	0.00	0.06	0.021	O					0.05
34.750	0.00	0.06	0.020	O					0.04
34.833	0.00	0.06	0.020	O					0.04
34.917	0.00	0.06	0.020	O					0.04
35.000	0.00	0.06	0.019	O					0.04
35.083	0.00	0.06	0.019	O					0.04
35.167	0.00	0.06	0.018	O					0.04
35.250	0.00	0.05	0.018	O					0.04
35.333	0.00	0.05	0.018	O					0.04
35.417	0.00	0.05	0.017	O					0.04
35.500	0.00	0.05	0.017	O					0.04
35.583	0.00	0.05	0.017	O					0.04

35.667	0.00	0.05	0.016	O					0.04
35.750	0.00	0.05	0.016	O					0.03
35.833	0.00	0.05	0.016	O					0.03
35.917	0.00	0.05	0.015	O					0.03
36.000	0.00	0.05	0.015	O					0.03
36.083	0.00	0.04	0.015	O					0.03
36.167	0.00	0.04	0.014	O					0.03
36.250	0.00	0.04	0.014	O					0.03
36.333	0.00	0.04	0.014	O					0.03
36.417	0.00	0.04	0.013	O					0.03
36.500	0.00	0.04	0.013	O					0.03
36.583	0.00	0.04	0.013	O					0.03
36.667	0.00	0.04	0.013	O					0.03
36.750	0.00	0.04	0.012	O					0.03
36.833	0.00	0.04	0.012	O					0.03
36.917	0.00	0.04	0.012	O					0.03
37.000	0.00	0.04	0.012	O					0.03
37.083	0.00	0.03	0.011	O					0.02
37.167	0.00	0.03	0.011	O					0.02
37.250	0.00	0.03	0.011	O					0.02
37.333	0.00	0.03	0.011	O					0.02
37.417	0.00	0.03	0.010	O					0.02
37.500	0.00	0.03	0.010	O					0.02
37.583	0.00	0.03	0.010	O					0.02
37.667	0.00	0.03	0.010	O					0.02
37.750	0.00	0.03	0.010	O					0.02
37.833	0.00	0.03	0.009	O					0.02
37.917	0.00	0.03	0.009	O					0.02
38.000	0.00	0.03	0.009	O					0.02
38.083	0.00	0.03	0.009	O					0.02
38.167	0.00	0.03	0.009	O					0.02
38.250	0.00	0.03	0.008	O					0.02
38.333	0.00	0.03	0.008	O					0.02
38.417	0.00	0.02	0.008	O					0.02
38.500	0.00	0.02	0.008	O					0.02
38.583	0.00	0.02	0.008	O					0.02
38.667	0.00	0.02	0.008	O					0.02
38.750	0.00	0.02	0.007	O					0.02
38.833	0.00	0.02	0.007	O					0.02
38.917	0.00	0.02	0.007	O					0.02
39.000	0.00	0.02	0.007	O					0.02
39.083	0.00	0.02	0.007	O					0.01
39.167	0.00	0.02	0.007	O					0.01
39.250	0.00	0.02	0.007	O					0.01
39.333	0.00	0.02	0.006	O					0.01
39.417	0.00	0.02	0.006	O					0.01
39.500	0.00	0.02	0.006	O					0.01
39.583	0.00	0.02	0.006	O					0.01
39.667	0.00	0.02	0.006	O					0.01
39.750	0.00	0.02	0.006	O					0.01
39.833	0.00	0.02	0.006	O					0.01
39.917	0.00	0.02	0.006	O					0.01
40.000	0.00	0.02	0.005	O					0.01
40.083	0.00	0.02	0.005	O					0.01
40.167	0.00	0.02	0.005	O					0.01
40.250	0.00	0.02	0.005	O					0.01
40.333	0.00	0.02	0.005	O					0.01
40.417	0.00	0.01	0.005	O					0.01
40.500	0.00	0.01	0.005	O					0.01
40.583	0.00	0.01	0.005	O					0.01
40.667	0.00	0.01	0.005	O					0.01
40.750	0.00	0.01	0.005	O					0.01
40.833	0.00	0.01	0.004	O					0.01
40.917	0.00	0.01	0.004	O					0.01
41.000	0.00	0.01	0.004	O					0.01
41.083	0.00	0.01	0.004	O					0.01
41.167	0.00	0.01	0.004	O					0.01
41.250	0.00	0.01	0.004	O					0.01
41.333	0.00	0.01	0.004	O					0.01
41.417	0.00	0.01	0.004	O					0.01
41.500	0.00	0.01	0.004	O					0.01

41.583	0.00	0.01	0.004	0					0.01
41.667	0.00	0.01	0.004	0					0.01
41.750	0.00	0.01	0.004	0					0.01
41.833	0.00	0.01	0.003	0					0.01
41.917	0.00	0.01	0.003	0					0.01
42.000	0.00	0.01	0.003	0					0.01
42.083	0.00	0.01	0.003	0					0.01
42.167	0.00	0.01	0.003	0					0.01
42.250	0.00	0.01	0.003	0					0.01
42.333	0.00	0.01	0.003	0					0.01
42.417	0.00	0.01	0.003	0					0.01
42.500	0.00	0.01	0.003	0					0.01
42.583	0.00	0.01	0.003	0					0.01
42.667	0.00	0.01	0.003	0					0.01
42.750	0.00	0.01	0.003	0					0.01
42.833	0.00	0.01	0.003	0					0.01
42.917	0.00	0.01	0.003	0					0.01
43.000	0.00	0.01	0.003	0					0.01
43.083	0.00	0.01	0.003	0					0.01
43.167	0.00	0.01	0.002	0					0.01
43.250	0.00	0.01	0.002	0					0.01
43.333	0.00	0.01	0.002	0					0.01
43.417	0.00	0.01	0.002	0					0.01
43.500	0.00	0.01	0.002	0					0.00
43.583	0.00	0.01	0.002	0					0.00
43.667	0.00	0.01	0.002	0					0.00
43.750	0.00	0.01	0.002	0					0.00
43.833	0.00	0.01	0.002	0					0.00
43.917	0.00	0.01	0.002	0					0.00
44.000	0.00	0.01	0.002	0					0.00
44.083	0.00	0.01	0.002	0					0.00
44.167	0.00	0.01	0.002	0					0.00
44.250	0.00	0.01	0.002	0					0.00
44.333	0.00	0.01	0.002	0					0.00
44.417	0.00	0.01	0.002	0					0.00
44.500	0.00	0.01	0.002	0					0.00
44.583	0.00	0.01	0.002	0					0.00
44.667	0.00	0.01	0.002	0					0.00
44.750	0.00	0.01	0.002	0					0.00
44.833	0.00	0.00	0.002	0					0.00
44.917	0.00	0.00	0.002	0					0.00
45.000	0.00	0.00	0.002	0					0.00
45.083	0.00	0.00	0.002	0					0.00
45.167	0.00	0.00	0.001	0					0.00
45.250	0.00	0.00	0.001	0					0.00
45.333	0.00	0.00	0.001	0					0.00
45.417	0.00	0.00	0.001	0					0.00
45.500	0.00	0.00	0.001	0					0.00
45.583	0.00	0.00	0.001	0					0.00
45.667	0.00	0.00	0.001	0					0.00
45.750	0.00	0.00	0.001	0					0.00
45.833	0.00	0.00	0.001	0					0.00
45.917	0.00	0.00	0.001						

47.500	0.00	0.00	0.001	O					0.00
47.583	0.00	0.00	0.001	O					0.00
47.667	0.00	0.00	0.001	O					0.00
47.750	0.00	0.00	0.001	O					0.00
47.833	0.00	0.00	0.001	O					0.00
47.917	0.00	0.00	0.001	O					0.00
48.000	0.00	0.00	0.001	O					0.00
48.083	0.00	0.00	0.001	O					0.00
48.167	0.00	0.00	0.001	O					0.00
48.250	0.00	0.00	0.001	O					0.00
48.333	0.00	0.00	0.001	O					0.00
48.417	0.00	0.00	0.001	O					0.00
48.500	0.00	0.00	0.001	O					0.00
48.583	0.00	0.00	0.001	O					0.00
48.667	0.00	0.00	0.001	O					0.00
48.750	0.00	0.00	0.001	O					0.00
48.833	0.00	0.00	0.001	O					0.00
48.917	0.00	0.00	0.001	O					0.00
49.000	0.00	0.00	0.001	O					0.00
49.083	0.00	0.00	0.001	O					0.00
49.167	0.00	0.00	0.001	O					0.00
49.250	0.00	0.00	0.001	O					0.00
49.333	0.00	0.00	0.001	O					0.00
49.417	0.00	0.00	0.001	O					0.00
49.500	0.00	0.00	0.000	O					0.00
49.583	0.00	0.00	0.000	O					0.00
49.667	0.00	0.00	0.000	O					0.00
49.750	0.00	0.00	0.000	O					0.00
49.833	0.00	0.00	0.000	O					0.00

*****HYDROGRAPH DATA*****

Number of intervals = 598

Time interval = 5.0 (Min.)

Maximum/Peak flow rate = 8.319 (CFS)

Total volume = 4.660 (Ac.Ft)

Status of hydrographs being held in storage

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

Unit Hydrograph Analysis

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Study date 07/29/24

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6484

DIVERSIFIED-MAPLE AVE
UH ANALYSIS-DEVELOPED CONDITION
100-YR STORM EVENT

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 100		
8.50	1	1.56

Rainfall data for year 100
8.50 6 3.92

Rainfall data for year 100
8.50 24 7.24

+++++

***** Area-averaged max loss rate, Fm *****

SCS curve No. (AMCII)	SCS curve NO. (AMC 3)	Area (Ac.)	Area Fraction	Fp (Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
32.0	52.0	8.50	1.000	0.785	0.100	0.079

Area-averaged adjusted loss rate Fm (In/Hr) = 0.079

***** Area-Averaged low loss rate fraction, Yb *****

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
0.85	0.100	32.0	52.0	9.23	0.275
7.65	0.900	98.0	98.0	0.20	0.967

Area-averaged catchment yield fraction, Y = 0.898

Area-averaged low loss fraction, Yb = 0.102

Direct entry of lag time by user

+++++

Watershed area = 8.50 (Ac.)
 Catchment Lag time = 0.150 hours
 Unit interval = 5.000 minutes
 Unit interval percentage of lag time = 55.6297
 Hydrograph baseflow = 0.00 (CFS)
 Average maximum watershed loss rate (Fm) = 0.079 (In/Hr)
 Average low loss rate fraction (Yb) = 0.102 (decimal)
 VALLEY DEVELOPED S-Graph Selected
 Computed peak 5-minute rainfall = 0.577 (In)
 Computed peak 30-minute rainfall = 1.182 (In)
 Specified peak 1-hour rainfall = 1.560 (In)
 Computed peak 3-hour rainfall = 2.745 (In)
 Specified peak 6-hour rainfall = 3.920 (In)
 Specified peak 24-hour rainfall = 7.240 (In)

Rainfall depth area reduction factors:

Using a total area of 8.50 (Ac.) (Ref: fig. E-4)

5-minute factor = 1.000	Adjusted rainfall = 0.577 (In)
30-minute factor = 1.000	Adjusted rainfall = 1.182 (In)
1-hour factor = 1.000	Adjusted rainfall = 1.559 (In)
3-hour factor = 1.000	Adjusted rainfall = 2.744 (In)
6-hour factor = 1.000	Adjusted rainfall = 3.920 (In)
24-hour factor = 1.000	Adjusted rainfall = 7.240 (In)

U n i t H y d r o g r a p h		
Interval	'S' Graph	Unit Hydrograph
Number	Mean values	((CFS))

	(K = 102.80 (CFS))	
1	5.627	5.784
2	36.292	31.523
3	76.965	41.811
4	93.551	17.050
5	98.195	4.775
6	99.307	1.143
7	100.000	0.712

Peak Unit	Adjusted mass rainfall	Unit rainfall
Number	(In)	(In)
1	0.5771	0.5771
2	0.7615	0.1844
3	0.8956	0.1341
4	1.0049	0.1092
5	1.0987	0.0938
6	1.1818	0.0831
7	1.2570	0.0752
8	1.3259	0.0690
9	1.3899	0.0640
10	1.4497	0.0598
11	1.5060	0.0563
12	1.5594	0.0533
13	1.6249	0.0656
14	1.6881	0.0632
15	1.7491	0.0610
16	1.8082	0.0591
17	1.8655	0.0573
18	1.9212	0.0557
19	1.9754	0.0542
20	2.0282	0.0528
21	2.0797	0.0516
22	2.1301	0.0504
23	2.1794	0.0493
24	2.2277	0.0483
25	2.2750	0.0473
26	2.3213	0.0464
27	2.3669	0.0455

28	2.4116	0.0447
29	2.4555	0.0439
30	2.4987	0.0432
31	2.5412	0.0425
32	2.5831	0.0419
33	2.6243	0.0412
34	2.6649	0.0406
35	2.7050	0.0400
36	2.7445	0.0395
37	2.7834	0.0389
38	2.8219	0.0384
39	2.8598	0.0379
40	2.8973	0.0375
41	2.9343	0.0370
42	2.9709	0.0366
43	3.0071	0.0362
44	3.0428	0.0358
45	3.0782	0.0354
46	3.1132	0.0350
47	3.1478	0.0346
48	3.1821	0.0343
49	3.2160	0.0339
50	3.2496	0.0336
51	3.2829	0.0333
52	3.3158	0.0329
53	3.3485	0.0326
54	3.3808	0.0323
55	3.4129	0.0321
56	3.4446	0.0318
57	3.4761	0.0315
58	3.5074	0.0312
59	3.5383	0.0310
60	3.5691	0.0307
61	3.5995	0.0305
62	3.6298	0.0302
63	3.6597	0.0300
64	3.6895	0.0298
65	3.7190	0.0295
66	3.7484	0.0293
67	3.7775	0.0291
68	3.8063	0.0289
69	3.8350	0.0287
70	3.8635	0.0285
71	3.8918	0.0283
72	3.9199	0.0281
73	3.9439	0.0240
74	3.9677	0.0238
75	3.9914	0.0236
76	4.0148	0.0235
77	4.0381	0.0233
78	4.0612	0.0231
79	4.0842	0.0230
80	4.1070	0.0228
81	4.1297	0.0226
82	4.1521	0.0225
83	4.1745	0.0223
84	4.1967	0.0222
85	4.2187	0.0220
86	4.2406	0.0219
87	4.2623	0.0218
88	4.2840	0.0216
89	4.3054	0.0215
90	4.3268	0.0213
91	4.3480	0.0212
92	4.3691	0.0211
93	4.3900	0.0210
94	4.4109	0.0208
95	4.4316	0.0207
96	4.4522	0.0206
97	4.4726	0.0205
98	4.4930	0.0203

99	4.5132	0.0202
100	4.5333	0.0201
101	4.5533	0.0200
102	4.5732	0.0199
103	4.5930	0.0198
104	4.6127	0.0197
105	4.6323	0.0196
106	4.6517	0.0195
107	4.6711	0.0194
108	4.6904	0.0193
109	4.7096	0.0192
110	4.7286	0.0191
111	4.7476	0.0190
112	4.7665	0.0189
113	4.7853	0.0188
114	4.8040	0.0187
115	4.8226	0.0186
116	4.8411	0.0185
117	4.8595	0.0184
118	4.8779	0.0183
119	4.8961	0.0183
120	4.9143	0.0182
121	4.9324	0.0181
122	4.9504	0.0180
123	4.9683	0.0179
124	4.9861	0.0178
125	5.0039	0.0178
126	5.0216	0.0177
127	5.0392	0.0176
128	5.0567	0.0175
129	5.0741	0.0174
130	5.0915	0.0174
131	5.1088	0.0173
132	5.1260	0.0172
133	5.1432	0.0172
134	5.1602	0.0171
135	5.1773	0.0170
136	5.1942	0.0169
137	5.2111	0.0169
138	5.2279	0.0168
139	5.2446	0.0167
140	5.2613	0.0167
141	5.2779	0.0166
142	5.2944	0.0165
143	5.3109	0.0165
144	5.3273	0.0164
145	5.3436	0.0163
146	5.3599	0.0163
147	5.3761	0.0162
148	5.3923	0.0162
149	5.4084	0.0161
150	5.4244	0.0160
151	5.4404	0.0160
152	5.4563	0.0159
153	5.4721	0.0159
154	5.4879	0.0158
155	5.5037	0.0157
156	5.5194	0.0157
157	5.5350	0.0156
158	5.5506	0.0156
159	5.5661	0.0155
160	5.5816	0.0155
161	5.5970	0.0154
162	5.6123	0.0154
163	5.6276	0.0153
164	5.6429	0.0153
165	5.6581	0.0152
166	5.6732	0.0152
167	5.6883	0.0151
168	5.7034	0.0151
169	5.7184	0.0150

170	5.7333	0.0150
171	5.7482	0.0149
172	5.7631	0.0149
173	5.7779	0.0148
174	5.7927	0.0148
175	5.8074	0.0147
176	5.8220	0.0147
177	5.8367	0.0146
178	5.8512	0.0146
179	5.8658	0.0145
180	5.8802	0.0145
181	5.8947	0.0144
182	5.9091	0.0144
183	5.9234	0.0143
184	5.9377	0.0143
185	5.9520	0.0143
186	5.9662	0.0142
187	5.9804	0.0142
188	5.9945	0.0141
189	6.0086	0.0141
190	6.0226	0.0140
191	6.0366	0.0140
192	6.0506	0.0140
193	6.0645	0.0139
194	6.0784	0.0139
195	6.0923	0.0138
196	6.1061	0.0138
197	6.1199	0.0138
198	6.1336	0.0137
199	6.1473	0.0137
200	6.1609	0.0137
201	6.1745	0.0136
202	6.1881	0.0136
203	6.2017	0.0135
204	6.2152	0.0135
205	6.2286	0.0135
206	6.2421	0.0134
207	6.2554	0.0134
208	6.2688	0.0134
209	6.2821	0.0133
210	6.2954	0.0133
211	6.3087	0.0133
212	6.3219	0.0132
213	6.3351	0.0132
214	6.3482	0.0131
215	6.3613	0.0131
216	6.3744	0.0131
217	6.3874	0.0130
218	6.4004	0.0130
219	6.4134	0.0130
220	6.4264	0.0129
221	6.4393	0.0129
222	6.4522	0.0129
223	6.4650	0.0128
224	6.4778	0.0128
225	6.4906	0.0128
226	6.5034	0.0128
227	6.5161	0.0127
228	6.5288	0.0127
229	6.5414	0.0127
230	6.5540	0.0126
231	6.5666	0.0126
232	6.5792	0.0126
233	6.5917	0.0125
234	6.6043	0.0125
235	6.6167	0.0125
236	6.6292	0.0124
237	6.6416	0.0124
238	6.6540	0.0124
239	6.6663	0.0124
240	6.6787	0.0123

241	6.6910	0.0123
242	6.7032	0.0123
243	6.7155	0.0122
244	6.7277	0.0122
245	6.7399	0.0122
246	6.7521	0.0122
247	6.7642	0.0121
248	6.7763	0.0121
249	6.7884	0.0121
250	6.8004	0.0121
251	6.8125	0.0120
252	6.8245	0.0120
253	6.8364	0.0120
254	6.8484	0.0119
255	6.8603	0.0119
256	6.8722	0.0119
257	6.8841	0.0119
258	6.8959	0.0118
259	6.9077	0.0118
260	6.9195	0.0118
261	6.9313	0.0118
262	6.9430	0.0117
263	6.9547	0.0117
264	6.9664	0.0117
265	6.9781	0.0117
266	6.9897	0.0116
267	7.0013	0.0116
268	7.0129	0.0116
269	7.0245	0.0116
270	7.0361	0.0115
271	7.0476	0.0115
272	7.0591	0.0115
273	7.0705	0.0115
274	7.0820	0.0115
275	7.0934	0.0114
276	7.1048	0.0114
277	7.1162	0.0114
278	7.1276	0.0114
279	7.1389	0.0113
280	7.1502	0.0113
281	7.1615	0.0113
282	7.1728	0.0113
283	7.1840	0.0112
284	7.1952	0.0112
285	7.2064	0.0112
286	7.2176	0.0112
287	7.2288	0.0112
288	7.2399	0.0111

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0111	0.0011	0.0100
2	0.0112	0.0011	0.0100
3	0.0112	0.0011	0.0101
4	0.0112	0.0011	0.0101
5	0.0113	0.0012	0.0101
6	0.0113	0.0012	0.0101
7	0.0113	0.0012	0.0102
8	0.0114	0.0012	0.0102
9	0.0114	0.0012	0.0102
10	0.0114	0.0012	0.0103
11	0.0115	0.0012	0.0103
12	0.0115	0.0012	0.0103
13	0.0115	0.0012	0.0104
14	0.0116	0.0012	0.0104
15	0.0116	0.0012	0.0104
16	0.0116	0.0012	0.0105
17	0.0117	0.0012	0.0105
18	0.0117	0.0012	0.0105

19	0.0118	0.0012	0.0106
20	0.0118	0.0012	0.0106
21	0.0118	0.0012	0.0106
22	0.0119	0.0012	0.0107
23	0.0119	0.0012	0.0107
24	0.0119	0.0012	0.0107
25	0.0120	0.0012	0.0108
26	0.0120	0.0012	0.0108
27	0.0121	0.0012	0.0108
28	0.0121	0.0012	0.0109
29	0.0122	0.0012	0.0109
30	0.0122	0.0012	0.0109
31	0.0122	0.0013	0.0110
32	0.0123	0.0013	0.0110
33	0.0123	0.0013	0.0111
34	0.0124	0.0013	0.0111
35	0.0124	0.0013	0.0111
36	0.0124	0.0013	0.0112
37	0.0125	0.0013	0.0112
38	0.0125	0.0013	0.0113
39	0.0126	0.0013	0.0113
40	0.0126	0.0013	0.0113
41	0.0127	0.0013	0.0114
42	0.0127	0.0013	0.0114
43	0.0128	0.0013	0.0115
44	0.0128	0.0013	0.0115
45	0.0129	0.0013	0.0116
46	0.0129	0.0013	0.0116
47	0.0130	0.0013	0.0117
48	0.0130	0.0013	0.0117
49	0.0131	0.0013	0.0117
50	0.0131	0.0013	0.0118
51	0.0132	0.0013	0.0118
52	0.0132	0.0014	0.0119
53	0.0133	0.0014	0.0119
54	0.0133	0.0014	0.0120
55	0.0134	0.0014	0.0120
56	0.0134	0.0014	0.0121
57	0.0135	0.0014	0.0121
58	0.0135	0.0014	0.0122
59	0.0136	0.0014	0.0122
60	0.0137	0.0014	0.0123
61	0.0137	0.0014	0.0123
62	0.0138	0.0014	0.0124
63	0.0138	0.0014	0.0124
64	0.0139	0.0014	0.0125
65	0.0140	0.0014	0.0125
66	0.0140	0.0014	0.0126
67	0.0141	0.0014	0.0127
68	0.0141	0.0014	0.0127
69	0.0142	0.0015	0.0128
70	0.0143	0.0015	0.0128
71	0.0143	0.0015	0.0129
72	0.0144	0.0015	0.0129
73	0.0145	0.0015	0.0130
74	0.0145	0.0015	0.0130
75	0.0146	0.0015	0.0131
76	0.0147	0.0015	0.0132
77	0.0148	0.0015	0.0132
78	0.0148	0.0015	0.0133
79	0.0149	0.0015	0.0134
80	0.0150	0.0015	0.0134
81	0.0151	0.0015	0.0135
82	0.0151	0.0015	0.0136
83	0.0152	0.0016	0.0136
84	0.0153	0.0016	0.0137
85	0.0154	0.0016	0.0138
86	0.0154	0.0016	0.0138
87	0.0155	0.0016	0.0139
88	0.0156	0.0016	0.0140
89	0.0157	0.0016	0.0141

90	0.0157	0.0016	0.0141
91	0.0159	0.0016	0.0142
92	0.0159	0.0016	0.0143
93	0.0160	0.0016	0.0144
94	0.0161	0.0016	0.0144
95	0.0162	0.0017	0.0146
96	0.0163	0.0017	0.0146
97	0.0164	0.0017	0.0147
98	0.0165	0.0017	0.0148
99	0.0166	0.0017	0.0149
100	0.0167	0.0017	0.0150
101	0.0168	0.0017	0.0151
102	0.0169	0.0017	0.0151
103	0.0170	0.0017	0.0153
104	0.0171	0.0017	0.0153
105	0.0172	0.0018	0.0155
106	0.0173	0.0018	0.0155
107	0.0174	0.0018	0.0157
108	0.0175	0.0018	0.0157
109	0.0177	0.0018	0.0159
110	0.0178	0.0018	0.0159
111	0.0179	0.0018	0.0161
112	0.0180	0.0018	0.0162
113	0.0182	0.0019	0.0163
114	0.0183	0.0019	0.0164
115	0.0184	0.0019	0.0165
116	0.0185	0.0019	0.0166
117	0.0187	0.0019	0.0168
118	0.0188	0.0019	0.0169
119	0.0190	0.0019	0.0170
120	0.0191	0.0020	0.0171
121	0.0193	0.0020	0.0173
122	0.0194	0.0020	0.0174
123	0.0196	0.0020	0.0176
124	0.0197	0.0020	0.0177
125	0.0199	0.0020	0.0179
126	0.0200	0.0020	0.0180
127	0.0202	0.0021	0.0182
128	0.0203	0.0021	0.0183
129	0.0206	0.0021	0.0185
130	0.0207	0.0021	0.0186
131	0.0210	0.0021	0.0188
132	0.0211	0.0022	0.0189
133	0.0213	0.0022	0.0192
134	0.0215	0.0022	0.0193
135	0.0218	0.0022	0.0195
136	0.0219	0.0022	0.0197
137	0.0222	0.0023	0.0199
138	0.0223	0.0023	0.0201
139	0.0226	0.0023	0.0203
140	0.0228	0.0023	0.0205
141	0.0231	0.0024	0.0208
142	0.0233	0.0024	0.0209
143	0.0236	0.0024	0.0212
144	0.0238	0.0024	0.0214
145	0.0281	0.0029	0.0252
146	0.0283	0.0029	0.0254
147	0.0287	0.0029	0.0258
148	0.0289	0.0030	0.0259
149	0.0293	0.0030	0.0263
150	0.0295	0.0030	0.0265
151	0.0300	0.0031	0.0269
152	0.0302	0.0031	0.0271
153	0.0307	0.0031	0.0276
154	0.0310	0.0032	0.0278
155	0.0315	0.0032	0.0283
156	0.0318	0.0032	0.0285
157	0.0323	0.0033	0.0290
158	0.0326	0.0033	0.0293
159	0.0333	0.0034	0.0299
160	0.0336	0.0034	0.0302

161	0.0343	0.0035	0.0308
162	0.0346	0.0035	0.0311
163	0.0354	0.0036	0.0318
164	0.0358	0.0037	0.0321
165	0.0366	0.0037	0.0328
166	0.0370	0.0038	0.0332
167	0.0379	0.0039	0.0341
168	0.0384	0.0039	0.0345
169	0.0395	0.0040	0.0355
170	0.0400	0.0041	0.0360
171	0.0412	0.0042	0.0370
172	0.0419	0.0043	0.0376
173	0.0432	0.0044	0.0388
174	0.0439	0.0045	0.0394
175	0.0455	0.0047	0.0409
176	0.0464	0.0047	0.0416
177	0.0483	0.0049	0.0433
178	0.0493	0.0050	0.0442
179	0.0516	0.0053	0.0463
180	0.0528	0.0054	0.0474
181	0.0557	0.0057	0.0500
182	0.0573	0.0059	0.0514
183	0.0610	0.0062	0.0548
184	0.0632	0.0065	0.0567
185	0.0533	0.0055	0.0479
186	0.0563	0.0058	0.0506
187	0.0640	0.0065	0.0574
188	0.0690	0.0065	0.0624
189	0.0831	0.0065	0.0766
190	0.0938	0.0065	0.0873
191	0.1341	0.0065	0.1275
192	0.1844	0.0065	0.1779
193	0.5771	0.0065	0.5706
194	0.1092	0.0065	0.1027
195	0.0752	0.0065	0.0686
196	0.0598	0.0061	0.0537
197	0.0656	0.0065	0.0590
198	0.0591	0.0060	0.0530
199	0.0542	0.0055	0.0487
200	0.0504	0.0052	0.0452
201	0.0473	0.0048	0.0425
202	0.0447	0.0046	0.0401
203	0.0425	0.0043	0.0382
204	0.0406	0.0042	0.0365
205	0.0389	0.0040	0.0350
206	0.0375	0.0038	0.0336
207	0.0362	0.0037	0.0325
208	0.0350	0.0036	0.0314
209	0.0339	0.0035	0.0305
210	0.0329	0.0034	0.0296
211	0.0321	0.0033	0.0288
212	0.0312	0.0032	0.0280
213	0.0305	0.0031	0.0274
214	0.0298	0.0030	0.0267
215	0.0291	0.0030	0.0261
216	0.0285	0.0029	0.0256
217	0.0240	0.0025	0.0215
218	0.0235	0.0024	0.0211
219	0.0230	0.0023	0.0206
220	0.0225	0.0023	0.0202
221	0.0220	0.0023	0.0198
222	0.0216	0.0022	0.0194
223	0.0212	0.0022	0.0190
224	0.0208	0.0021	0.0187
225	0.0205	0.0021	0.0184
226	0.0201	0.0021	0.0181
227	0.0198	0.0020	0.0178
228	0.0195	0.0020	0.0175
229	0.0192	0.0020	0.0172
230	0.0189	0.0019	0.0170
231	0.0186	0.0019	0.0167

232	0.0183	0.0019	0.0165
233	0.0181	0.0018	0.0162
234	0.0178	0.0018	0.0160
235	0.0176	0.0018	0.0158
236	0.0174	0.0018	0.0156
237	0.0172	0.0018	0.0154
238	0.0169	0.0017	0.0152
239	0.0167	0.0017	0.0150
240	0.0165	0.0017	0.0148
241	0.0163	0.0017	0.0147
242	0.0162	0.0017	0.0145
243	0.0160	0.0016	0.0143
244	0.0158	0.0016	0.0142
245	0.0156	0.0016	0.0140
246	0.0155	0.0016	0.0139
247	0.0153	0.0016	0.0137
248	0.0152	0.0015	0.0136
249	0.0150	0.0015	0.0135
250	0.0149	0.0015	0.0133
251	0.0147	0.0015	0.0132
252	0.0146	0.0015	0.0131
253	0.0144	0.0015	0.0130
254	0.0143	0.0015	0.0128
255	0.0142	0.0014	0.0127
256	0.0140	0.0014	0.0126
257	0.0139	0.0014	0.0125
258	0.0138	0.0014	0.0124
259	0.0137	0.0014	0.0123
260	0.0136	0.0014	0.0122
261	0.0135	0.0014	0.0121
262	0.0134	0.0014	0.0120
263	0.0133	0.0014	0.0119
264	0.0131	0.0013	0.0118
265	0.0130	0.0013	0.0117
266	0.0129	0.0013	0.0116
267	0.0128	0.0013	0.0115
268	0.0128	0.0013	0.0114
269	0.0127	0.0013	0.0114
270	0.0126	0.0013	0.0113
271	0.0125	0.0013	0.0112
272	0.0124	0.0013	0.0111
273	0.0123	0.0013	0.0110
274	0.0122	0.0012	0.0110
275	0.0121	0.0012	0.0109
276	0.0121	0.0012	0.0108
277	0.0120	0.0012	0.0107
278	0.0119	0.0012	0.0107
279	0.0118	0.0012	0.0106
280	0.0117	0.0012	0.0105
281	0.0117	0.0012	0.0105
282	0.0116	0.0012	0.0104
283	0.0115	0.0012	0.0103
284	0.0115	0.0012	0.0103
285	0.0114	0.0012	0.0102
286	0.0113	0.0012	0.0102
287	0.0112	0.0012	0.0101
288	0.0112	0.0011	0.0100

Total soil rain loss = 0.66(In)
Total effective rainfall = 6.58(In)
Peak flow rate in flood hydrograph = 31.29(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time (h+m)	Volume Ac.Ft	Q (CFS)	0	10.0	20.0	30.0	40.0
------------	--------------	---------	---	------	------	------	------

0+ 5	0.0004	0.06	Q				
0+10	0.0030	0.37	Q				
0+15	0.0084	0.79	Q				
0+20	0.0151	0.96	Q				
0+25	0.0221	1.02	VQ				
0+30	0.0291	1.03	VQ				
0+35	0.0363	1.04	VQ				
0+40	0.0435	1.04	VQ				
0+45	0.0507	1.05	VQ				
0+50	0.0579	1.05	VQ				
0+55	0.0652	1.05	VQ				
1+ 0	0.0724	1.06	VQ				
1+ 5	0.0797	1.06	VQ				
1+10	0.0870	1.06	VQ				
1+15	0.0944	1.07	VQ				
1+20	0.1017	1.07	VQ				
1+25	0.1091	1.07	VQ				
1+30	0.1165	1.08	IQ				
1+35	0.1240	1.08	IQ				
1+40	0.1314	1.08	IQ				
1+45	0.1389	1.09	IQ				
1+50	0.1464	1.09	IQ				
1+55	0.1539	1.09	IQ				
2+ 0	0.1615	1.10	IQ				
2+ 5	0.1690	1.10	IQ				
2+10	0.1766	1.10	IQ				
2+15	0.1843	1.11	IQ				
2+20	0.1919	1.11	IQ				
2+25	0.1996	1.11	IQ				
2+30	0.2073	1.12	IQ				
2+35	0.2150	1.12	IQ				
2+40	0.2228	1.13	IQ				
2+45	0.2305	1.13	IQ				
2+50	0.2384	1.13	IQV				
2+55	0.2462	1.14	IQV				
3+ 0	0.2540	1.14	IQV				
3+ 5	0.2619	1.15	IQV				
3+10	0.2699	1.15	IQV				
3+15	0.2778	1.15	IQV				
3+20	0.2858	1.16	IQV				
3+25	0.2938	1.16	IQV				
3+30	0.3018	1.17	IQV				
3+35	0.3099	1.17	IQV				
3+40	0.3180	1.18	IQV				
3+45	0.3261	1.18	IQV				
3+50	0.3342	1.18	IQV				
3+55	0.3424	1.19	IQV				
4+ 0	0.3506	1.19	IQ V				
4+ 5	0.3589	1.20	IQ V				
4+10	0.3672	1.20	IQ V				
4+15	0.3755	1.21	IQ V				
4+20	0.3838	1.21	IQ V				
4+25	0.3922	1.22	IQ V				
4+30	0.4006	1.22	IQ V				
4+35	0.4090	1.23	IQ V				
4+40	0.4175	1.23	IQ V				
4+45	0.4260	1.24	IQ V				
4+50	0.4346	1.24	IQ V				
4+55	0.4432	1.25	IQ V				
5+ 0	0.4518	1.25	IQ V				
5+ 5	0.4604	1.26	IQ V				
5+10	0.4691	1.26	IQ V				
5+15	0.4778	1.27	IQ V				
5+20	0.4866	1.27	IQ V				
5+25	0.4954	1.28	IQ V				
5+30	0.5042	1.28	IQ V				
5+35	0.5131	1.29	IQ V				
5+40	0.5220	1.29	IQ V				
5+45	0.5310	1.30	IQ V				
5+50	0.5400	1.31	IQ V				

5+55	0.5490	1.31	IQ	V				
6+ 0	0.5581	1.32	IQ	V				
6+ 5	0.5672	1.32	IQ	V				
6+10	0.5763	1.33	IQ	V				
6+15	0.5855	1.34	IQ	V				
6+20	0.5948	1.34	IQ	V				
6+25	0.6041	1.35	IQ	V				
6+30	0.6134	1.35	IQ	V				
6+35	0.6228	1.36	IQ	V				
6+40	0.6322	1.37	IQ	V				
6+45	0.6417	1.37	IQ	V				
6+50	0.6512	1.38	IQ	V				
6+55	0.6608	1.39	IQ	V				
7+ 0	0.6704	1.40	IQ	V				
7+ 5	0.6800	1.40	IQ	V				
7+10	0.6897	1.41	IQ	V				
7+15	0.6995	1.42	IQ	V				
7+20	0.7093	1.42	IQ	V				
7+25	0.7192	1.43	IQ	V				
7+30	0.7291	1.44	IQ	V				
7+35	0.7390	1.45	IQ	V				
7+40	0.7491	1.45	IQ	V				
7+45	0.7591	1.46	IQ	V				
7+50	0.7693	1.47	IQ	V				
7+55	0.7795	1.48	IQ	V				
8+ 0	0.7897	1.49	IQ	V				
8+ 5	0.8000	1.50	IQ	V				
8+10	0.8104	1.50	IQ	V				
8+15	0.8208	1.51	IQ	V				
8+20	0.8313	1.52	IQ	V				
8+25	0.8418	1.53	IQ	V				
8+30	0.8524	1.54	IQ	V				
8+35	0.8631	1.55	IQ	V				
8+40	0.8738	1.56	IQ	V				
8+45	0.8847	1.57	IQ	V				
8+50	0.8955	1.58	IQ	V				
8+55	0.9065	1.59	IQ	V				
9+ 0	0.9175	1.60	IQ	V				
9+ 5	0.9286	1.61	IQ	V				
9+10	0.9397	1.62	IQ	V				
9+15	0.9510	1.63	IQ	V				
9+20	0.9623	1.64	IQ	V				
9+25	0.9736	1.65	IQ	V				
9+30	0.9851	1.66	IQ	V				
9+35	0.9966	1.68	IQ	V				
9+40	1.0083	1.69	IQ	V				
9+45	1.0200	1.70	IQ	V				
9+50	1.0318	1.71	IQ	V				
9+55	1.0436	1.72	IQ	V				
10+ 0	1.0556	1.74	IQ	V				
10+ 5	1.0677	1.75	IQ	V				
10+10	1.0798	1.76	IQ	V				
10+15	1.0921	1.78	IQ	V				
10+20	1.1044	1.79	IQ	V				
10+25	1.1168	1.81	IQ	V				
10+30	1.1294	1.82	IQ	V				
10+35	1.1420	1.84	IQ	V				
10+40	1.1548	1.85	IQ	V				
10+45	1.1676	1.87	IQ	V				
10+50	1.1806	1.88	IQ	V				
10+55	1.1937	1.90	IQ	V				
11+ 0	1.2068	1.92	IQ	V				
11+ 5	1.2202	1.93	IQ	V				
11+10	1.2336	1.95	IQ	V				
11+15	1.2472	1.97	IQ	V				
11+20	1.2608	1.99	IQ	V				
11+25	1.2747	2.01	I Q	V				
11+30	1.2886	2.03	I Q	V				
11+35	1.3027	2.05	I Q	V				
11+40	1.3169	2.07	I Q	V				
11+45	1.3313	2.09	I Q	V				

11+50	1.3459	2.11	Q	V				
11+55	1.3605	2.13	Q	V				
12+ 0	1.3754	2.16	Q	V				
12+ 5	1.3906	2.20	Q	V				
12+10	1.4066	2.34	Q	V				
12+15	1.4239	2.51	Q	V				
12+20	1.4418	2.59	Q	V				
12+25	1.4600	2.64	Q	V				
12+30	1.4784	2.67	Q	V				
12+35	1.4970	2.70	Q	V				
12+40	1.5158	2.73	Q	V				
12+45	1.5349	2.77	Q	V				
12+50	1.5542	2.80	Q	V				
12+55	1.5737	2.83	Q	V				
13+ 0	1.5934	2.87	Q	V				
13+ 5	1.6134	2.91	Q	V				
13+10	1.6337	2.94	Q	V				
13+15	1.6542	2.98	Q	V				
13+20	1.6751	3.02	Q	V				
13+25	1.6962	3.07	Q	V				
13+30	1.7176	3.11	Q	V				
13+35	1.7394	3.16	Q	V				
13+40	1.7615	3.21	Q	V				
13+45	1.7840	3.26	Q	V				
13+50	1.8068	3.32	Q	V				
13+55	1.8301	3.37	Q	V				
14+ 0	1.8537	3.44	Q	V				
14+ 5	1.8778	3.50	Q	V				
14+10	1.9024	3.57	Q	V				
14+15	1.9275	3.64	Q	V				
14+20	1.9531	3.72	Q	V				
14+25	1.9793	3.80	Q	V				
14+30	2.0061	3.89	Q	V				
14+35	2.0335	3.99	Q	V				
14+40	2.0617	4.09	Q	V				
14+45	2.0906	4.20	Q	V				
14+50	2.1203	4.32	Q	V				
14+55	2.1510	4.45	Q	V				
15+ 0	2.1826	4.60	Q	V				
15+ 5	2.2154	4.76	Q	V				
15+10	2.2494	4.94	Q	V				
15+15	2.2848	5.14	Q	V				
15+20	2.3218	5.37	Q	V				
15+25	2.3600	5.56	Q	V				
15+30	2.3975	5.44	Q	V				
15+35	2.4337	5.25	Q	V				
15+40	2.4714	5.47	Q	V				
15+45	2.5127	6.01	Q	V				
15+50	2.5599	6.84	Q	V				
15+55	2.6158	8.12	Q	V				
16+ 0	2.6874	10.40	Q	V				
16+ 5	2.7991	16.21		Q	V			
16+10	2.9970	28.74			V	Q		
16+15	3.2125	31.29				V	Q	
16+20	3.3333	17.55		Q		V		
16+25	3.4000	9.67		Q		V		
16+30	3.4472	6.85		Q		V		
16+35	3.4898	6.19		Q		V		
16+40	3.5271	5.43		Q		V		
16+45	3.5616	5.00		Q		V		
16+50	3.5936	4.65		Q		V		
16+55	3.6237	4.37		Q		V		
17+ 0	3.6521	4.13		Q		V		
17+ 5	3.6791	3.92		Q		V		
17+10	3.7049	3.74		Q		V		
17+15	3.7296	3.59		Q		V		
17+20	3.7534	3.45		Q		V		
17+25	3.7764	3.33		Q		V		
17+30	3.7986	3.22		Q		V		
17+35	3.8201	3.13		Q		V		
17+40	3.8410	3.04		Q		V		

17+45	3.8614	2.95	Q			V	
17+50	3.8812	2.88	Q			V	
17+55	3.9005	2.81	Q			V	
18+ 0	3.9194	2.74	Q			V	
18+ 5	3.9377	2.66	Q			V	
18+10	3.9549	2.49	Q			V	
18+15	3.9707	2.29	Q			V	
18+20	3.9858	2.19	Q			V	
18+25	4.0004	2.12	Q			V	
18+30	4.0147	2.07	Q			V	
18+35	4.0287	2.03	Q			V	
18+40	4.0424	1.99	Q			V	
18+45	4.0559	1.95	Q			V	
18+50	4.0691	1.92	Q			V	
18+55	4.0821	1.89	Q			V	
19+ 0	4.0948	1.85	Q			V	
19+ 5	4.1074	1.82	Q			V	
19+10	4.1198	1.79	Q			V	
19+15	4.1319	1.77	Q			V	
19+20	4.1439	1.74	Q			V	
19+25	4.1557	1.72	Q			V	
19+30	4.1674	1.69	Q			V	
19+35	4.1789	1.67	Q			V	
19+40	4.1902	1.64	Q			V	
19+45	4.2014	1.62	Q			V	
19+50	4.2124	1.60	Q			V	
19+55	4.2233	1.58	Q			V	
20+ 0	4.2340	1.56	Q			V	
20+ 5	4.2447	1.54	Q			V	
20+10	4.2552	1.52	Q			V	
20+15	4.2655	1.51	Q			V	
20+20	4.2758	1.49	Q			V	
20+25	4.2859	1.47	Q			V	
20+30	4.2960	1.46	Q			V	
20+35	4.3059	1.44	Q			V	
20+40	4.3157	1.43	Q			V	
20+45	4.3254	1.41	Q			V	
20+50	4.3351	1.40	Q			V	
20+55	4.3446	1.38	Q			V	
21+ 0	4.3540	1.37	Q			V	
21+ 5	4.3634	1.36	Q			V	
21+10	4.3726	1.34	Q			V	
21+15	4.3818	1.33	Q			V	
21+20	4.3909	1.32	Q			V	
21+25	4.3999	1.31	Q			V	
21+30	4.4088	1.30	Q			V	
21+35	4.4176	1.28	Q			V	
21+40	4.4264	1.27	Q			V	
21+45	4.4351	1.26	Q			V	
21+50	4.4437	1.25	Q			V	
21+55	4.4523	1.24	Q			V	
22+ 0	4.4608	1.23	Q			V	
22+ 5	4.4692	1.22	Q			V	
22+10	4.4775	1.21	Q			V	
22+15	4.4858	1.20	Q			V	
22+20	4.4940	1.19	Q			V	
22+25	4.5022	1.18	Q			V	
22+30	4.5103	1.18	Q			V	
22+35	4.5183	1.17	Q			V	
22+40	4.5263	1.16	Q			V	
22+45	4.5342	1.15	Q			V	
22+50	4.5421	1.14	Q			V	
22+55	4.5499	1.13	Q			V	
23+ 0	4.5577	1.13	Q			V	
23+ 5	4.5654	1.12	Q			V	
23+10	4.5730	1.11	Q			V	
23+15	4.5806	1.10	Q			V	
23+20	4.5882	1.10	Q			V	
23+25	4.5957	1.09	Q			V	
23+30	4.6032	1.08	Q			V	
23+35	4.6106	1.08	Q			V	

23+40	4.6179	1.07	IQ				V
23+45	4.6253	1.06	IQ				V
23+50	4.6325	1.06	IQ				V
23+55	4.6398	1.05	IQ				V
24+ 0	4.6469	1.04	IQ				V
24+ 5	4.6537	0.98	Q				V
24+10	4.6582	0.66	Q				V
24+15	4.6599	0.24	Q				V
24+20	4.6603	0.07	Q				V
24+25	4.6605	0.02	Q				V
24+30	4.6605	0.01	Q				V

FLOOD HYDROGRAPH ROUTING PROGRAM
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 Study date: 08/02/24

 DIVERSIFIED MAPLE AVE
 CHAMBER ROUTING
 18" OUTLET PIPE
 25 YR STORM

Program License Serial Number 6484

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

From study/file name: MAPLE-UH Dev-25yr.rte
 *****HYDROGRAPH DATA*****
 Number of intervals = 293
 Time interval = 5.0 (Min.)
 Maximum/Peak flow rate = 23.457 (CFS)
 Total volume = 3.539 (Ac.Ft)
 Status of hydrographs being held in storage

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

+++++
 Process from Point/Station 0.000 to Point/Station 1.000
 **** RETARDING BASIN ROUTING ****

 User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 293
 Hydrograph time unit = 5.000 (Min.)
 Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)
 Initial basin storage = 0.00 (Ac.Ft)
 Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.230	0.700	0.228	0.232
2.500	1.200	8.200	1.172	1.228
3.500	1.640	10.400	1.604	1.676
4.500	1.980	11.500	1.940	2.020
4.800	2.060	12.000	2.019	2.101

 Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	5.9	11.73	17.59	23.46	Depth (Ft.)
0.083	0.06	0.00	0.000	O					0.00

0.167	0.35	0.00	0.002	O					0.00
0.250	0.66	0.02	0.005	O					0.01
0.333	0.76	0.03	0.010	OI					0.02
0.417	0.79	0.05	0.015	OI					0.03
0.500	0.80	0.06	0.020	OI					0.04
0.583	0.80	0.08	0.025	OI					0.05
0.667	0.80	0.09	0.030	OI					0.06
0.750	0.80	0.11	0.035	OI					0.08
0.833	0.81	0.12	0.040	OI					0.09
0.917	0.81	0.13	0.044	OI					0.10
1.000	0.81	0.15	0.049	OI					0.11
1.083	0.81	0.16	0.053	OI					0.12
1.167	0.82	0.18	0.058	OI					0.13
1.250	0.82	0.19	0.062	OI					0.14
1.333	0.82	0.20	0.066	OI					0.14
1.417	0.82	0.22	0.071	OI					0.15
1.500	0.83	0.23	0.075	OI					0.16
1.583	0.83	0.24	0.079	OI					0.17
1.667	0.83	0.25	0.083	OI					0.18
1.750	0.83	0.26	0.087	OI					0.19
1.833	0.84	0.28	0.091	OI					0.20
1.917	0.84	0.29	0.095	OI					0.21
2.000	0.84	0.30	0.098	OI					0.21
2.083	0.85	0.31	0.102	OI					0.22
2.167	0.85	0.32	0.106	OI					0.23
2.250	0.85	0.33	0.109	OI					0.24
2.333	0.85	0.34	0.113	OI					0.25
2.417	0.86	0.35	0.116	OI					0.25
2.500	0.86	0.36	0.120	OI					0.26
2.583	0.86	0.38	0.123	OI					0.27
2.667	0.87	0.39	0.127	OI					0.28
2.750	0.87	0.40	0.130	OI					0.28
2.833	0.87	0.41	0.133	OI					0.29
2.917	0.87	0.41	0.136	OI					0.30
3.000	0.88	0.42	0.139	OI					0.30
3.083	0.88	0.43	0.143	OI					0.31
3.167	0.88	0.44	0.146	OI					0.32
3.250	0.89	0.45	0.149	OI					0.32
3.333	0.89	0.46	0.152	OI					0.33
3.417	0.89	0.47	0.155	OI					0.34
3.500	0.90	0.48	0.157	OI					0.34
3.583	0.90	0.49	0.160	OI					0.35
3.667	0.90	0.50	0.163	OI					0.35
3.750	0.91	0.50	0.166	OI					0.36
3.833	0.91	0.51	0.169	OI					0.37
3.917	0.91	0.52	0.171	OI					0.37
4.000	0.92	0.53	0.174	OI					0.38
4.083	0.92	0.54	0.177	OI					0.38
4.167	0.92	0.55	0.179	OI					0.39
4.250	0.93	0.55	0.182	OI					0.40
4.333	0.93	0.56	0.184	OI					0.40
4.417	0.93	0.57	0.187	OI					0.41
4.500	0.94	0.58	0.189	OI					0.41
4.583	0.94	0.58	0.192	OI					0.42
4.667	0.95	0.59	0.194	OI					0.42
4.750	0.95	0.60	0.197	OI					0.43
4.833	0.95	0.61	0.199	OI					0.43
4.917	0.96	0.61	0.202	OI					0.44
5.000	0.96	0.62	0.204	OI					0.44
5.083	0.96	0.63	0.206	OI					0.45
5.167	0.97	0.63	0.209	OI					0.45
5.250	0.97	0.64	0.211	OI					0.46
5.333	0.98	0.65	0.213	OI					0.46
5.417	0.98	0.66	0.215	OI					0.47
5.500	0.99	0.66	0.218	OI					0.47
5.583	0.99	0.67	0.220	OI					0.48
5.667	0.99	0.68	0.222	OI					0.48
5.750	1.00	0.68	0.224	OI					0.49
5.833	1.00	0.69	0.226	OI					0.49
5.917	1.01	0.70	0.229	OI					0.50
6.000	1.01	0.71	0.231	OI					0.50

6.083	1.02	0.72	0.233	OI					0.51
6.167	1.02	0.74	0.235	IO					0.51
6.250	1.03	0.75	0.237	IO					0.51
6.333	1.03	0.77	0.239	IO					0.52
6.417	1.04	0.78	0.240	IO					0.52
6.500	1.04	0.79	0.242	IO					0.52
6.583	1.05	0.81	0.244	IO					0.53
6.667	1.05	0.82	0.245	IO					0.53
6.750	1.06	0.83	0.247	IO					0.53
6.833	1.06	0.84	0.248	IO					0.54
6.917	1.07	0.85	0.250	IO					0.54
7.000	1.07	0.87	0.251	IO					0.54
7.083	1.08	0.88	0.253	IO					0.55
7.167	1.08	0.89	0.254	IO					0.55
7.250	1.09	0.90	0.255	IO					0.55
7.333	1.09	0.91	0.257	IO					0.56
7.417	1.10	0.92	0.258	IO					0.56
7.500	1.10	0.93	0.259	IO					0.56
7.583	1.11	0.94	0.260	IO					0.56
7.667	1.12	0.94	0.262	IO					0.57
7.750	1.12	0.95	0.263	IO					0.57
7.833	1.13	0.96	0.264	IO					0.57
7.917	1.13	0.97	0.265	IO					0.57
8.000	1.14	0.98	0.266	IO					0.57
8.083	1.15	0.99	0.267	IO					0.58
8.167	1.15	1.00	0.268	IO					0.58
8.250	1.16	1.01	0.269	IO					0.58
8.333	1.17	1.01	0.271	IO					0.58
8.417	1.17	1.02	0.272	IO					0.59
8.500	1.18	1.03	0.273	IO					0.59
8.583	1.19	1.04	0.274	IO					0.59
8.667	1.20	1.05	0.275	IO					0.59
8.750	1.20	1.05	0.276	IO					0.59
8.833	1.21	1.06	0.277	IO					0.60
8.917	1.22	1.07	0.278	IO					0.60
9.000	1.23	1.08	0.279	IO					0.60
9.083	1.23	1.09	0.280	IO					0.60
9.167	1.24	1.09	0.281	IO					0.60
9.250	1.25	1.10	0.282	IO					0.61
9.333	1.26	1.11	0.283	IO					0.61
9.417	1.27	1.12	0.284	IO					0.61
9.500	1.28	1.13	0.285	IO					0.61
9.583	1.28	1.13	0.286	IO					0.62
9.667	1.29	1.14	0.287	IO					0.62
9.750	1.30	1.15	0.288	IO					0.62
9.833	1.31	1.16	0.289	IO					0.62
9.917	1.32	1.17	0.290	IO					0.62
10.000	1.33	1.17	0.291	IO					0.63
10.083	1.34	1.18	0.292	IO					0.63
10.167	1.35	1.19	0.293	IO					0.63
10.250	1.36	1.20	0.295	IO					0.63
10.333	1.37	1.21	0.296	IO					0.64
10.417	1.38	1.22	0.297	IO					0.64
10.500	1.39	1.23	0.298	IO					0.64
10.583	1.41	1.23	0.299	IO					0.64
10.667	1.42	1.24	0.300	IO					0.65
10.750	1.43	1.25	0.302	IO					0.65
10.833	1.44	1.26	0.303	IO					0.65
10.917	1.45	1.27	0.304	IO					0.65
11.000	1.47	1.28	0.305	IOI					0.66
11.083	1.48	1.29	0.307	IOI					0.66
11.167	1.49	1.30	0.308	IOI					0.66
11.250	1.51	1.31	0.309	IOI					0.66
11.333	1.52	1.32	0.311	IOI					0.67
11.417	1.54	1.33	0.312	IOI					0.67
11.500	1.55	1.34	0.313	IOI					0.67
11.583	1.57	1.36	0.315	IOI					0.67
11.667	1.58	1.37	0.316	IOI					0.68
11.750	1.60	1.38	0.318	IOI					0.68
11.833	1.61	1.39	0.319	IOI					0.68
11.917	1.63	1.40	0.321	IOI					0.69

12.000	1.65	1.41	0.322	OI					0.69
12.083	1.69	1.43	0.324	OI					0.69
12.167	1.83	1.44	0.326	OI					0.70
12.250	1.97	1.47	0.329	O					0.70
12.333	2.03	1.50	0.333	O					0.71
12.417	2.06	1.52	0.337	O					0.72
12.500	2.08	1.55	0.340	O					0.73
12.583	2.11	1.58	0.344	O					0.73
12.667	2.13	1.61	0.348	O					0.74
12.750	2.15	1.64	0.351	O					0.75
12.833	2.18	1.66	0.355	O					0.76
12.917	2.20	1.69	0.358	OI					0.76
13.000	2.23	1.72	0.362	OI					0.77
13.083	2.26	1.75	0.365	OI					0.78
13.167	2.29	1.77	0.369	OI					0.79
13.250	2.32	1.80	0.372	OI					0.79
13.333	2.35	1.83	0.376	OI					0.80
13.417	2.38	1.86	0.379	OI					0.81
13.500	2.41	1.88	0.383	OI					0.82
13.583	2.45	1.91	0.387	OI					0.82
13.667	2.49	1.94	0.390	OI					0.83
13.750	2.53	1.97	0.394	OI					0.84
13.833	2.57	2.00	0.398	OI					0.85
13.917	2.61	2.03	0.402	OI					0.85
14.000	2.66	2.06	0.406	OI					0.86
14.083	2.70	2.09	0.410	OI					0.87
14.167	2.76	2.13	0.415	OI					0.88
14.250	2.81	2.16	0.419	OI					0.89
14.333	2.87	2.20	0.424	OI					0.90
14.417	2.93	2.23	0.428	O					0.91
14.500	3.00	2.27	0.433	OI					0.92
14.583	3.07	2.31	0.438	OI					0.93
14.667	3.15	2.35	0.444	OI					0.94
14.750	3.23	2.40	0.449	OI					0.95
14.833	3.32	2.44	0.455	OI					0.96
14.917	3.42	2.49	0.461	OI					0.98
15.000	3.53	2.54	0.468	OI					0.99
15.083	3.65	2.59	0.475	OI					1.01
15.167	3.78	2.65	0.482	O I					1.02
15.250	3.93	2.71	0.491	O I					1.04
15.333	4.11	2.78	0.499	O I					1.06
15.417	4.22	2.85	0.509	O I					1.07
15.500	4.03	2.92	0.517	O I					1.09
15.583	3.84	2.97	0.524	OI					1.11
15.667	4.04	3.02	0.530	OI					1.12
15.750	4.45	3.09	0.539	O I					1.14
15.833	5.09	3.17	0.550	O I					1.16
15.917	6.08	3.30	0.566	O I					1.19
16.000	7.96	3.49	0.591	O I					1.24
16.083	12.83	3.85	0.637	O	I				1.34
16.167	23.46	4.59	0.733	O			I		1.54
16.250	22.31	5.54	0.856	OI			I		1.79
16.333	11.12	5.62	0.931	O	I				1.95
16.417	6.06	5.68	0.948	O					1.98
16.500	4.92	5.77	0.942	I O					1.97
16.583	4.33	5.81	0.932	I O					1.95
16.667	4.03	5.83	0.919	I O					1.92
16.750	3.74	5.81	0.904	I O					1.89
16.833	3.50	5.80	0.889	I O					1.86
16.917	3.29	5.67	0.873	I O					1.83
17.000	3.12	5.54	0.856	I O					1.79
17.083	2.98	5.41	0.840	I O					1.76
17.167	2.85	5.28	0.823	I O					1.72
17.250	2.74	5.16	0.806	I O					1.69
17.333	2.64	5.03	0.790	I O					1.65
17.417	2.55	4.90	0.773	I O					1.62
17.500	2.47	4.78	0.757	I O					1.59
17.583	2.40	4.66	0.742	I O					1.56
17.667	2.34	4.54	0.726	I O					1.52
17.750	2.28	4.42	0.711	I O					1.49
17.833	2.22	4.31	0.697	I O					1.46

17.917	2.17	4.20	0.683	I O				1.43
18.000	2.12	4.09	0.669	I O				1.40
18.083	2.05	3.99	0.655	I O				1.38
18.167	1.89	3.88	0.642	I O				1.35
18.250	1.73	3.78	0.628	I O				1.32
18.333	1.65	3.67	0.614	I O				1.29
18.417	1.61	3.56	0.600	I O				1.26
18.500	1.58	3.46	0.587	I O				1.24
18.583	1.54	3.36	0.574	I O				1.21
18.667	1.52	3.27	0.562	I O				1.18
18.750	1.49	3.18	0.550	I O				1.16
18.833	1.46	3.09	0.539	I O				1.14
18.917	1.44	3.00	0.528	I O				1.11
19.000	1.41	2.92	0.517	I O				1.09
19.083	1.39	2.84	0.507	I O				1.07
19.167	1.37	2.77	0.497	I O				1.05
19.250	1.35	2.69	0.488	I O				1.03
19.333	1.33	2.62	0.479	I O				1.01
19.417	1.31	2.56	0.470	I O				0.99
19.500	1.29	2.49	0.461	I O				0.98
19.583	1.27	2.43	0.453	I O				0.96
19.667	1.25	2.37	0.446	I O				0.94
19.750	1.24	2.31	0.438	I O				0.93
19.833	1.22	2.25	0.431	I O				0.91
19.917	1.21	2.20	0.424	IO				0.90
20.000	1.19	2.15	0.417	IO				0.89
20.083	1.18	2.10	0.411	IO				0.87
20.167	1.16	2.05	0.405	IO				0.86
20.250	1.15	2.00	0.399	IO				0.85
20.333	1.14	1.96	0.393	IO				0.84
20.417	1.13	1.92	0.387	IO				0.82
20.500	1.11	1.87	0.382	IO				0.81
20.583	1.10	1.83	0.377	IO				0.80
20.667	1.09	1.80	0.372	IO				0.79
20.750	1.08	1.76	0.367	IO				0.78
20.833	1.07	1.72	0.362	IO				0.77
20.917	1.06	1.69	0.358	IO				0.76
21.000	1.05	1.66	0.354	IO				0.76
21.083	1.04	1.62	0.350	IO				0.75
21.167	1.03	1.59	0.346	IO				0.74
21.250	1.02	1.56	0.342	IO				0.73
21.333	1.01	1.54	0.338	IO				0.72
21.417	1.00	1.51	0.335	IO				0.72
21.500	0.99	1.48	0.331	IO				0.71
21.583	0.98	1.46	0.328	O				0.70
21.667	0.98	1.43	0.325	O				0.70
21.750	0.97	1.41	0.322	O				0.69
21.833	0.96	1.38	0.319	O				0.68
21.917	0.95	1.36	0.316	O				0.68
22.000	0.94	1.34	0.313	O				0.67
22.083	0.94	1.32	0.310	O				0.67
22.167	0.93	1.30	0.308	O				0.66
22.250	0.92	1.28	0.305	O				0.65
22.333	0.92	1.26	0.303	O				0.65
22.417	0.91	1.24	0.300	O				0.64
22.500	0.90	1.23	0.298	O				0.64
22.583	0.90	1.21	0.296	O				0.64
22.667	0.89	1.19	0.294	O				0.63
22.750	0.88	1.18	0.292	O				0.63
22.833	0.88	1.16	0.290	O				0.62
22.917	0.87	1.15	0.288	O				0.62
23.000	0.86	1.13	0.286	O				0.62
23.083	0.86	1.12	0.284	O				0.61
23.167	0.85	1.10	0.282	O				0.61
23.250	0.85	1.09	0.281	O				0.60
23.333	0.84	1.08	0.279	O				0.60
23.417	0.84	1.07	0.277	O				0.60
23.500	0.83	1.05	0.276	O				0.59
23.583	0.83	1.04	0.274	O				0.59
23.667	0.82	1.03	0.273	O				0.59
23.750	0.82	1.02	0.271	O				0.59

23.833	0.81	1.01	0.270	IO					0.58
23.917	0.81	1.00	0.269	IO					0.58
24.000	0.80	0.99	0.267	IO					0.58
24.083	0.74	0.98	0.266	IO					0.57
24.167	0.44	0.96	0.263	IO					0.57
24.250	0.13	0.92	0.259	IO					0.56
24.333	0.03	0.88	0.253	IO					0.55
24.417	0.01	0.83	0.247	IO					0.54
24.500	0.00	0.79	0.242	IO					0.52
24.583	0.00	0.75	0.236	IO					0.51
24.667	0.00	0.71	0.231	O					0.50
24.750	0.00	0.69	0.227	O					0.49
24.833	0.00	0.68	0.222	O					0.48
24.917	0.00	0.66	0.217	O					0.47
25.000	0.00	0.65	0.213	O					0.46
25.083	0.00	0.63	0.208	O					0.45
25.167	0.00	0.62	0.204	O					0.44
25.250	0.00	0.61	0.200	O					0.43
25.333	0.00	0.60	0.196	O					0.43
25.417	0.00	0.58	0.192	O					0.42
25.500	0.00	0.57	0.188	O					0.41
25.583	0.00	0.56	0.184	O					0.40
25.667	0.00	0.55	0.180	O					0.39
25.750	0.00	0.54	0.176	O					0.38
25.833	0.00	0.53	0.173	O					0.38
25.917	0.00	0.51	0.169	O					0.37
26.000	0.00	0.50	0.165	O					0.36
26.083	0.00	0.49	0.162	O					0.35
26.167	0.00	0.48	0.159	O					0.34
26.250	0.00	0.47	0.155	O					0.34
26.333	0.00	0.46	0.152	O					0.33
26.417	0.00	0.45	0.149	O					0.32
26.500	0.00	0.44	0.146	O					0.32
26.583	0.00	0.43	0.143	O					0.31
26.667	0.00	0.43	0.140	O					0.30
26.750	0.00	0.42	0.137	O					0.30
26.833	0.00	0.41	0.134	O					0.29
26.917	0.00	0.40	0.131	O					0.29
27.000	0.00	0.39	0.129	O					0.28
27.083	0.00	0.38	0.126	O					0.27
27.167	0.00	0.38	0.123	O					0.27
27.250	0.00	0.37	0.121	O					0.26
27.333	0.00	0.36	0.118	O					0.26
27.417	0.00	0.35	0.116	O					0.25
27.500	0.00	0.35	0.113	O					0.25
27.583	0.00	0.34	0.111	O					0.24
27.667	0.00	0.33	0.109	O					0.24
27.750	0.00	0.32	0.107	O					0.23
27.833	0.00	0.32	0.104	O					0.23
27.917	0.00	0.31	0.102	O					0.22
28.000	0.00	0.30	0.100	O					0.22
28.083	0.00	0.30	0.098	O					0.21
28.167	0.00	0.29	0.096	O					0.21
28.250	0.00	0.29	0.094	O					0.20
28.333	0.00	0.28	0.092	O					0.20
28.417	0.00	0.27	0.090	O					0.20
28.500	0.00	0.27	0.088	O					0.19
28.583	0.00	0.26	0.086	O					0.19
28.667	0.00	0.26	0.085	O					0.18
28.750	0.00	0.25	0.083	O					0.18
28.833	0.00	0.25	0.081	O					0.18
28.917	0.00	0.24	0.079	O					0.17
29.000	0.00	0.24	0.078	O					0.17
29.083	0.00	0.23	0.076	O					0.17
29.167	0.00	0.23	0.075	O					0.16
29.250	0.00	0.22	0.073	O					0.16
29.333	0.00	0.22	0.072	O					0.16
29.417	0.00	0.21	0.070	O					0.15
29.500	0.00	0.21	0.069	O					0.15
29.583	0.00	0.20	0.067	O					0.15
29.667	0.00	0.20	0.066	O					0.14

29.750	0.00	0.20	0.064	O					0.14
29.833	0.00	0.19	0.063	O					0.14
29.917	0.00	0.19	0.062	O					0.13
30.000	0.00	0.18	0.061	O					0.13
30.083	0.00	0.18	0.059	O					0.13
30.167	0.00	0.18	0.058	O					0.13
30.250	0.00	0.17	0.057	O					0.12
30.333	0.00	0.17	0.056	O					0.12
30.417	0.00	0.17	0.054	O					0.12
30.500	0.00	0.16	0.053	O					0.12
30.583	0.00	0.16	0.052	O					0.11
30.667	0.00	0.16	0.051	O					0.11
30.750	0.00	0.15	0.050	O					0.11
30.833	0.00	0.15	0.049	O					0.11
30.917	0.00	0.15	0.048	O					0.10
31.000	0.00	0.14	0.047	O					0.10
31.083	0.00	0.14	0.046	O					0.10
31.167	0.00	0.14	0.045	O					0.10
31.250	0.00	0.13	0.044	O					0.10
31.333	0.00	0.13	0.043	O					0.09
31.417	0.00	0.13	0.042	O					0.09
31.500	0.00	0.13	0.041	O					0.09
31.583	0.00	0.12	0.041	O					0.09
31.667	0.00	0.12	0.040	O					0.09
31.750	0.00	0.12	0.039	O					0.08
31.833	0.00	0.12	0.038	O					0.08
31.917	0.00	0.11	0.037	O					0.08
32.000	0.00	0.11	0.037	O					0.08
32.083	0.00	0.11	0.036	O					0.08
32.167	0.00	0.11	0.035	O					0.08
32.250	0.00	0.10	0.034	O					0.07
32.333	0.00	0.10	0.034	O					0.07
32.417	0.00	0.10	0.033	O					0.07
32.500	0.00	0.10	0.032	O					0.07
32.583	0.00	0.10	0.032	O					0.07
32.667	0.00	0.09	0.031	O					0.07
32.750	0.00	0.09	0.030	O					0.07
32.833	0.00	0.09	0.030	O					0.06
32.917	0.00	0.09	0.029	O					0.06
33.000	0.00	0.09	0.028	O					0.06
33.083	0.00	0.08	0.028	O					0.06
33.167	0.00	0.08	0.027	O					0.06
33.250	0.00	0.08	0.027	O					0.06
33.333	0.00	0.08	0.026	O					0.06
33.417	0.00	0.08	0.026	O					0.06
33.500	0.00	0.08	0.025	O					0.05
33.583	0.00	0.07	0.025	O					0.05
33.667	0.00	0.07	0.024	O					0.05
33.750	0.00	0.07	0.024	O					0.05
33.833	0.00	0.07	0.023	O					0.05
33.917	0.00	0.07	0.023	O					0.05
34.000	0.00	0.07	0.022	O					0.05
34.083	0.00	0.07	0.022	O					0.05
34.167	0.00	0.06	0.021	O					0.05
34.250	0.00	0.06	0.021	O					0.05
34.333	0.00	0.06	0.020	O					0.04
34.417	0.00	0.06	0.020	O					0.04
34.500	0.00	0.06	0.020	O					0.04
34.583	0.00	0.06	0.019	O					0.04
34.667	0.00	0.06	0.019	O					0.04
34.750	0.00	0.06	0.018	O					0.04
34.833	0.00	0.05	0.018	O					0.04
34.917	0.00	0.05	0.018	O					0.04
35.000	0.00	0.05	0.017	O					0.04
35.083	0.00	0.05	0.017	O					0.04
35.167	0.00	0.05	0.016	O					0.04
35.250	0.00	0.05	0.016	O					0.04
35.333	0.00	0.05	0.016	O					0.03
35.417	0.00	0.05	0.015	O					0.03
35.500	0.00	0.05	0.015	O					0.03
35.583	0.00	0.05	0.015	O					0.03

35.667	0.00	0.04	0.015	0					0.03
35.750	0.00	0.04	0.014	0					0.03
35.833	0.00	0.04	0.014	0					0.03
35.917	0.00	0.04	0.014	0					0.03
36.000	0.00	0.04	0.013	0					0.03
36.083	0.00	0.04	0.013	0					0.03
36.167	0.00	0.04	0.013	0					0.03
36.250	0.00	0.04	0.013	0					0.03
36.333	0.00	0.04	0.012	0					0.03
36.417	0.00	0.04	0.012	0					0.03
36.500	0.00	0.04	0.012	0					0.03
36.583	0.00	0.04	0.012	0					0.03
36.667	0.00	0.03	0.011	0					0.02
36.750	0.00	0.03	0.011	0					0.02
36.833	0.00	0.03	0.011	0					0.02
36.917	0.00	0.03	0.011	0					0.02
37.000	0.00	0.03	0.010	0					0.02
37.083	0.00	0.03	0.010	0					0.02
37.167	0.00	0.03	0.010	0					0.02
37.250	0.00	0.03	0.010	0					0.02
37.333	0.00	0.03	0.010	0					0.02
37.417	0.00	0.03	0.009	0					0.02
37.500	0.00	0.03	0.009	0					0.02
37.583	0.00	0.03	0.009	0					0.02
37.667	0.00	0.03	0.009	0					0.02
37.750	0.00	0.03	0.009	0					0.02
37.833	0.00	0.03	0.008	0					0.02
37.917	0.00	0.03	0.008	0					0.02
38.000	0.00	0.02	0.008	0					0.02
38.083	0.00	0.02	0.008	0					0.02
38.167	0.00	0.02	0.008	0					0.02
38.250	0.00	0.02	0.008	0					0.02
38.333	0.00	0.02	0.007	0					0.02
38.417	0.00	0.02	0.007	0					0.02
38.500	0.00	0.02	0.007	0					0.02
38.583	0.00	0.02	0.007	0					0.02
38.667	0.00	0.02	0.007	0					0.01
38.750	0.00	0.02	0.007	0					0.01
38.833	0.00	0.02	0.007	0					0.01
38.917	0.00	0.02	0.006	0					0.01
39.000	0.00	0.02	0.006	0					0.01
39.083	0.00	0.02	0.006	0					0.01
39.167	0.00	0.02	0.006	0					0.01
39.250	0.00	0.02	0.006	0					0.01
39.333	0.00	0.02	0.006	0					0.01
39.417	0.00	0.02	0.006	0					0.01
39.500	0.00	0.02	0.006	0					0.01
39.583	0.00	0.02	0.005	0					0.01
39.667	0.00	0.02	0.005	0					0.01
39.750	0.00	0.02	0.005	0					0.01
39.833	0.00	0.02	0.005	0					0.01
39.917	0.00	0.02	0.005	0					0.01
40.000	0.00	0.01	0.005						

41.583	0.00	0.01	0.003	0					0.01
41.667	0.00	0.01	0.003	0					0.01
41.750	0.00	0.01	0.003	0					0.01
41.833	0.00	0.01	0.003	0					0.01
41.917	0.00	0.01	0.003	0					0.01
42.000	0.00	0.01	0.003	0					0.01
42.083	0.00	0.01	0.003	0					0.01
42.167	0.00	0.01	0.003	0					0.01
42.250	0.00	0.01	0.003	0					0.01
42.333	0.00	0.01	0.003	0					0.01
42.417	0.00	0.01	0.003	0					0.01
42.500	0.00	0.01	0.003	0					0.01
42.583	0.00	0.01	0.003	0					0.01
42.667	0.00	0.01	0.003	0					0.01
42.750	0.00	0.01	0.002	0					0.01
42.833	0.00	0.01	0.002	0					0.01
42.917	0.00	0.01	0.002	0					0.01
43.000	0.00	0.01	0.002	0					0.00
43.083	0.00	0.01	0.002	0					0.00
43.167	0.00	0.01	0.002	0					0.00
43.250	0.00	0.01	0.002	0					0.00
43.333	0.00	0.01	0.002	0					0.00
43.417	0.00	0.01	0.002	0					0.00
43.500	0.00	0.01	0.002	0					0.00
43.583	0.00	0.01	0.002	0					0.00
43.667	0.00	0.01	0.002	0					0.00
43.750	0.00	0.01	0.002	0					0.00
43.833	0.00	0.01	0.002	0					0.00
43.917	0.00	0.01	0.002	0					0.00
44.000	0.00	0.01	0.002	0					0.00
44.083	0.00	0.01	0.002	0					0.00
44.167	0.00	0.01	0.002	0					0.00
44.250	0.00	0.01	0.002	0					0.00
44.333	0.00	0.01	0.002	0					0.00
44.417	0.00	0.00	0.002	0					0.00
44.500	0.00	0.00	0.002	0					0.00
44.583	0.00	0.00	0.002	0					0.00
44.667	0.00	0.00	0.002	0					0.00
44.750	0.00	0.00	0.001	0					0.00
44.833	0.00	0.00	0.001	0					0.00
44.917	0.00	0.00	0.001	0					0.00
45.000	0.00	0.00	0.001	0					0.00
45.083	0.00	0.00	0.001	0					0.00
45.167	0.00	0.00	0.001	0					0.00
45.250	0.00	0.00	0.001	0					0.00
45.333	0.00	0.00	0.001	0					0.00
45.417	0.00	0.00	0.001	0					0.00
45.500	0.00	0.00	0.001	0					0.00
45.583	0.00	0.00	0.001	0					0.00
45.667	0.00	0.00	0.001	0					0.00
45.750	0.00	0.00	0.001	0					0.00
45.833	0.00	0.00	0.001	0					0.00
45.917	0.00	0.00	0.001						

47.500	0.00	0.00	0.001	O					0.00
47.583	0.00	0.00	0.001	O					0.00
47.667	0.00	0.00	0.001	O					0.00
47.750	0.00	0.00	0.001	O					0.00
47.833	0.00	0.00	0.001	O					0.00
47.917	0.00	0.00	0.001	O					0.00
48.000	0.00	0.00	0.001	O					0.00
48.083	0.00	0.00	0.001	O					0.00
48.167	0.00	0.00	0.001	O					0.00
48.250	0.00	0.00	0.001	O					0.00
48.333	0.00	0.00	0.001	O					0.00
48.417	0.00	0.00	0.001	O					0.00
48.500	0.00	0.00	0.001	O					0.00
48.583	0.00	0.00	0.001	O					0.00
48.667	0.00	0.00	0.001	O					0.00
48.750	0.00	0.00	0.001	O					0.00
48.833	0.00	0.00	0.001	O					0.00
48.917	0.00	0.00	0.001	O					0.00
49.000	0.00	0.00	0.001	O					0.00
49.083	0.00	0.00	0.000	O					0.00
49.167	0.00	0.00	0.000	O					0.00
49.250	0.00	0.00	0.000	O					0.00
49.333	0.00	0.00	0.000	O					0.00
49.417	0.00	0.00	0.000	O					0.00

*****HYDROGRAPH DATA*****

Number of intervals = 593

Time interval = 5.0 (Min.)

Maximum/Peak flow rate = 6.248 (CFS)

Total volume = 3.539 (Ac.Ft)

Status of hydrographs being held in storage

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

Unit Hydrograph Analysis

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Study date 03/08/24

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6484

DIVERSIFIED-MAPLE AVE
UH ANALYSIS-DEVELOPED CONDITION
25-YR STORM EVENT

Storm Event Year = 25

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 25		
8.20	1	1.20

Rainfall data for year 25
8.20 6 3.11

Rainfall data for year 25
8.20 24 5.79

+++++

***** Area-averaged max loss rate, Fm *****

SCS curve No. (AMCII)	SCS curve NO. (AMC 3)	Area (Ac.)	Area Fraction	Fp (Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
32.0	52.0	8.20	1.000	0.785	0.100	0.079

Area-averaged adjusted loss rate Fm (In/Hr) = 0.079

***** Area-Averaged low loss rate fraction, Yb *****

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC3)	S	Pervious Yield Fr
0.82	0.100	32.0	52.0	9.23	0.204
7.38	0.900	98.0	98.0	0.20	0.959

Area-averaged catchment yield fraction, Y = 0.883

Area-averaged low loss fraction, Yb = 0.117

Direct entry of lag time by user

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Watershed area = 8.20 (Ac.)
 Catchment Lag time = 0.134 hours
 Unit interval = 5.000 minutes
 Unit interval percentage of lag time = 62.1891
 Hydrograph baseflow = 0.00 (CFS)
 Average maximum watershed loss rate (Fm) = 0.079 (In/Hr)
 Average low loss rate fraction (Yb) = 0.117 (decimal)
 VALLEY DEVELOPED S-Graph Selected
 Computed peak 5-minute rainfall = 0.444 (In)
 Computed peak 30-minute rainfall = 0.909 (In)
 Specified peak 1-hour rainfall = 1.200 (In)
 Computed peak 3-hour rainfall = 2.152 (In)
 Specified peak 6-hour rainfall = 3.110 (In)
 Specified peak 24-hour rainfall = 5.790 (In)

Rainfall depth area reduction factors:

Using a total area of 8.20 (Ac.) (Ref: fig. E-4)

5-minute factor = 1.000	Adjusted rainfall = 0.444 (In)
30-minute factor = 1.000	Adjusted rainfall = 0.909 (In)
1-hour factor = 1.000	Adjusted rainfall = 1.200 (In)
3-hour factor = 1.000	Adjusted rainfall = 2.152 (In)
6-hour factor = 1.000	Adjusted rainfall = 3.110 (In)
24-hour factor = 1.000	Adjusted rainfall = 5.790 (In)

U n i t H y d r o g r a p h		
Interval	'S' Graph	Unit Hydrograph
Number	Mean values	((CFS))

	(K = 99.17 (CFS))	
1	6.986	6.928
2	44.333	37.037
3	83.691	39.031
4	96.281	12.485
5	98.837	2.535
6	100.000	1.153

Peak Unit	Adjusted mass rainfall	Unit rainfall
Number	(In)	(In)
1	0.4440	0.4440
2	0.5858	0.1418
3	0.6890	0.1031
4	0.7730	0.0840
5	0.8451	0.0722
6	0.9091	0.0639
7	0.9669	0.0578
8	1.0199	0.0530
9	1.0692	0.0492
10	1.1152	0.0460
11	1.1585	0.0433
12	1.1995	0.0410
13	1.2517	0.0522
14	1.3020	0.0503
15	1.3507	0.0487
16	1.3978	0.0472
17	1.4436	0.0458
18	1.4882	0.0446
19	1.5316	0.0434
20	1.5740	0.0424
21	1.6153	0.0414
22	1.6558	0.0405
23	1.6954	0.0396
24	1.7342	0.0388
25	1.7723	0.0381
26	1.8096	0.0374
27	1.8463	0.0367
28	1.8824	0.0361

29	1.9178	0.0355
30	1.9527	0.0349
31	1.9871	0.0343
32	2.0209	0.0338
33	2.0542	0.0333
34	2.0871	0.0329
35	2.1195	0.0324
36	2.1515	0.0320
37	2.1831	0.0316
38	2.2142	0.0312
39	2.2450	0.0308
40	2.2754	0.0304
41	2.3055	0.0301
42	2.3352	0.0297
43	2.3646	0.0294
44	2.3937	0.0291
45	2.4225	0.0288
46	2.4509	0.0285
47	2.4791	0.0282
48	2.5070	0.0279
49	2.5346	0.0276
50	2.5620	0.0274
51	2.5891	0.0271
52	2.6160	0.0269
53	2.6426	0.0266
54	2.6690	0.0264
55	2.6951	0.0262
56	2.7210	0.0259
57	2.7468	0.0257
58	2.7723	0.0255
59	2.7976	0.0253
60	2.8227	0.0251
61	2.8476	0.0249
62	2.8723	0.0247
63	2.8968	0.0245
64	2.9212	0.0244
65	2.9454	0.0242
66	2.9694	0.0240
67	2.9932	0.0238
68	3.0169	0.0237
69	3.0404	0.0235
70	3.0637	0.0233
71	3.0869	0.0232
72	3.1099	0.0230
73	3.1292	0.0193
74	3.1484	0.0191
75	3.1674	0.0190
76	3.1862	0.0189
77	3.2050	0.0187
78	3.2235	0.0186
79	3.2420	0.0185
80	3.2603	0.0183
81	3.2786	0.0182
82	3.2966	0.0181
83	3.3146	0.0180
84	3.3325	0.0178
85	3.3502	0.0177
86	3.3678	0.0176
87	3.3853	0.0175
88	3.4027	0.0174
89	3.4200	0.0173
90	3.4371	0.0172
91	3.4542	0.0171
92	3.4712	0.0170
93	3.4880	0.0169
94	3.5048	0.0168
95	3.5215	0.0167
96	3.5380	0.0166
97	3.5545	0.0165
98	3.5709	0.0164
99	3.5872	0.0163

100	3.6034	0.0162
101	3.6195	0.0161
102	3.6355	0.0160
103	3.6515	0.0159
104	3.6673	0.0159
105	3.6831	0.0158
106	3.6988	0.0157
107	3.7144	0.0156
108	3.7299	0.0155
109	3.7453	0.0154
110	3.7607	0.0154
111	3.7760	0.0153
112	3.7912	0.0152
113	3.8064	0.0151
114	3.8214	0.0151
115	3.8364	0.0150
116	3.8513	0.0149
117	3.8662	0.0149
118	3.8810	0.0148
119	3.8957	0.0147
120	3.9103	0.0146
121	3.9249	0.0146
122	3.9394	0.0145
123	3.9538	0.0144
124	3.9682	0.0144
125	3.9825	0.0143
126	3.9968	0.0143
127	4.0110	0.0142
128	4.0251	0.0141
129	4.0392	0.0141
130	4.0532	0.0140
131	4.0671	0.0139
132	4.0810	0.0139
133	4.0949	0.0138
134	4.1086	0.0138
135	4.1224	0.0137
136	4.1360	0.0137
137	4.1496	0.0136
138	4.1632	0.0136
139	4.1767	0.0135
140	4.1901	0.0134
141	4.2035	0.0134
142	4.2169	0.0133
143	4.2301	0.0133
144	4.2434	0.0132
145	4.2566	0.0132
146	4.2697	0.0131
147	4.2828	0.0131
148	4.2958	0.0130
149	4.3088	0.0130
150	4.3218	0.0129
151	4.3346	0.0129
152	4.3475	0.0128
153	4.3603	0.0128
154	4.3730	0.0128
155	4.3858	0.0127
156	4.3984	0.0127
157	4.4110	0.0126
158	4.4236	0.0126
159	4.4361	0.0125
160	4.4486	0.0125
161	4.4611	0.0124
162	4.4735	0.0124
163	4.4858	0.0124
164	4.4982	0.0123
165	4.5104	0.0123
166	4.5227	0.0122
167	4.5349	0.0122
168	4.5470	0.0122
169	4.5591	0.0121
170	4.5712	0.0121

171	4.5832	0.0120
172	4.5952	0.0120
173	4.6072	0.0120
174	4.6191	0.0119
175	4.6310	0.0119
176	4.6428	0.0118
177	4.6547	0.0118
178	4.6664	0.0118
179	4.6782	0.0117
180	4.6899	0.0117
181	4.7015	0.0117
182	4.7132	0.0116
183	4.7247	0.0116
184	4.7363	0.0116
185	4.7478	0.0115
186	4.7593	0.0115
187	4.7708	0.0115
188	4.7822	0.0114
189	4.7936	0.0114
190	4.8049	0.0114
191	4.8163	0.0113
192	4.8275	0.0113
193	4.8388	0.0113
194	4.8500	0.0112
195	4.8612	0.0112
196	4.8724	0.0112
197	4.8835	0.0111
198	4.8946	0.0111
199	4.9057	0.0111
200	4.9167	0.0110
201	4.9277	0.0110
202	4.9387	0.0110
203	4.9496	0.0109
204	4.9606	0.0109
205	4.9714	0.0109
206	4.9823	0.0109
207	4.9931	0.0108
208	5.0039	0.0108
209	5.0147	0.0108
210	5.0254	0.0107
211	5.0362	0.0107
212	5.0468	0.0107
213	5.0575	0.0107
214	5.0681	0.0106
215	5.0787	0.0106
216	5.0893	0.0106
217	5.0999	0.0106
218	5.1104	0.0105
219	5.1209	0.0105
220	5.1314	0.0105
221	5.1418	0.0104
222	5.1522	0.0104
223	5.1626	0.0104
224	5.1730	0.0104
225	5.1833	0.0103
226	5.1936	0.0103
227	5.2039	0.0103
228	5.2142	0.0103
229	5.2244	0.0102
230	5.2346	0.0102
231	5.2448	0.0102
232	5.2550	0.0102
233	5.2652	0.0101
234	5.2753	0.0101
235	5.2854	0.0101
236	5.2954	0.0101
237	5.3055	0.0100
238	5.3155	0.0100
239	5.3255	0.0100
240	5.3355	0.0100
241	5.3454	0.0100

242	5.3554	0.0099
243	5.3653	0.0099
244	5.3752	0.0099
245	5.3850	0.0099
246	5.3949	0.0098
247	5.4047	0.0098
248	5.4145	0.0098
249	5.4243	0.0098
250	5.4340	0.0098
251	5.4438	0.0097
252	5.4535	0.0097
253	5.4632	0.0097
254	5.4728	0.0097
255	5.4825	0.0096
256	5.4921	0.0096
257	5.5017	0.0096
258	5.5113	0.0096
259	5.5209	0.0096
260	5.5304	0.0095
261	5.5400	0.0095
262	5.5495	0.0095
263	5.5590	0.0095
264	5.5684	0.0095
265	5.5779	0.0094
266	5.5873	0.0094
267	5.5967	0.0094
268	5.6061	0.0094
269	5.6155	0.0094
270	5.6248	0.0093
271	5.6341	0.0093
272	5.6435	0.0093
273	5.6527	0.0093
274	5.6620	0.0093
275	5.6713	0.0093
276	5.6805	0.0092
277	5.6897	0.0092
278	5.6989	0.0092
279	5.7081	0.0092
280	5.7173	0.0092
281	5.7264	0.0091
282	5.7355	0.0091
283	5.7447	0.0091
284	5.7537	0.0091
285	5.7628	0.0091
286	5.7719	0.0091
287	5.7809	0.0090
288	5.7899	0.0090

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0090	0.0011	0.0080
2	0.0090	0.0011	0.0080
3	0.0091	0.0011	0.0080
4	0.0091	0.0011	0.0080
5	0.0091	0.0011	0.0081
6	0.0091	0.0011	0.0081
7	0.0092	0.0011	0.0081
8	0.0092	0.0011	0.0081
9	0.0092	0.0011	0.0082
10	0.0093	0.0011	0.0082
11	0.0093	0.0011	0.0082
12	0.0093	0.0011	0.0082
13	0.0093	0.0011	0.0083
14	0.0094	0.0011	0.0083
15	0.0094	0.0011	0.0083
16	0.0094	0.0011	0.0083
17	0.0095	0.0011	0.0084
18	0.0095	0.0011	0.0084
19	0.0095	0.0011	0.0084

20	0.0095	0.0011	0.0084
21	0.0096	0.0011	0.0085
22	0.0096	0.0011	0.0085
23	0.0096	0.0011	0.0085
24	0.0097	0.0011	0.0085
25	0.0097	0.0011	0.0086
26	0.0097	0.0011	0.0086
27	0.0098	0.0011	0.0086
28	0.0098	0.0011	0.0087
29	0.0098	0.0011	0.0087
30	0.0099	0.0012	0.0087
31	0.0099	0.0012	0.0088
32	0.0099	0.0012	0.0088
33	0.0100	0.0012	0.0088
34	0.0100	0.0012	0.0088
35	0.0100	0.0012	0.0089
36	0.0101	0.0012	0.0089
37	0.0101	0.0012	0.0089
38	0.0101	0.0012	0.0090
39	0.0102	0.0012	0.0090
40	0.0102	0.0012	0.0090
41	0.0103	0.0012	0.0091
42	0.0103	0.0012	0.0091
43	0.0103	0.0012	0.0091
44	0.0104	0.0012	0.0092
45	0.0104	0.0012	0.0092
46	0.0104	0.0012	0.0092
47	0.0105	0.0012	0.0093
48	0.0105	0.0012	0.0093
49	0.0106	0.0012	0.0093
50	0.0106	0.0012	0.0094
51	0.0107	0.0012	0.0094
52	0.0107	0.0012	0.0094
53	0.0107	0.0013	0.0095
54	0.0108	0.0013	0.0095
55	0.0108	0.0013	0.0096
56	0.0109	0.0013	0.0096
57	0.0109	0.0013	0.0096
58	0.0109	0.0013	0.0097
59	0.0110	0.0013	0.0097
60	0.0110	0.0013	0.0098
61	0.0111	0.0013	0.0098
62	0.0111	0.0013	0.0098
63	0.0112	0.0013	0.0099
64	0.0112	0.0013	0.0099
65	0.0113	0.0013	0.0100
66	0.0113	0.0013	0.0100
67	0.0114	0.0013	0.0101
68	0.0114	0.0013	0.0101
69	0.0115	0.0013	0.0101
70	0.0115	0.0013	0.0102
71	0.0116	0.0014	0.0102
72	0.0116	0.0014	0.0103
73	0.0117	0.0014	0.0103
74	0.0117	0.0014	0.0104
75	0.0118	0.0014	0.0104
76	0.0118	0.0014	0.0105
77	0.0119	0.0014	0.0105
78	0.0120	0.0014	0.0106
79	0.0120	0.0014	0.0106
80	0.0121	0.0014	0.0107
81	0.0122	0.0014	0.0107
82	0.0122	0.0014	0.0108
83	0.0123	0.0014	0.0108
84	0.0123	0.0014	0.0109
85	0.0124	0.0014	0.0110
86	0.0124	0.0015	0.0110
87	0.0125	0.0015	0.0111
88	0.0126	0.0015	0.0111
89	0.0127	0.0015	0.0112
90	0.0127	0.0015	0.0112

91	0.0128	0.0015	0.0113
92	0.0128	0.0015	0.0113
93	0.0129	0.0015	0.0114
94	0.0130	0.0015	0.0115
95	0.0131	0.0015	0.0116
96	0.0131	0.0015	0.0116
97	0.0132	0.0015	0.0117
98	0.0133	0.0015	0.0117
99	0.0134	0.0016	0.0118
100	0.0134	0.0016	0.0119
101	0.0136	0.0016	0.0120
102	0.0136	0.0016	0.0120
103	0.0137	0.0016	0.0121
104	0.0138	0.0016	0.0122
105	0.0139	0.0016	0.0123
106	0.0139	0.0016	0.0123
107	0.0141	0.0016	0.0124
108	0.0141	0.0016	0.0125
109	0.0143	0.0017	0.0126
110	0.0143	0.0017	0.0126
111	0.0144	0.0017	0.0128
112	0.0145	0.0017	0.0128
113	0.0146	0.0017	0.0129
114	0.0147	0.0017	0.0130
115	0.0149	0.0017	0.0131
116	0.0149	0.0017	0.0132
117	0.0151	0.0018	0.0133
118	0.0151	0.0018	0.0134
119	0.0153	0.0018	0.0135
120	0.0154	0.0018	0.0136
121	0.0155	0.0018	0.0137
122	0.0156	0.0018	0.0138
123	0.0158	0.0018	0.0139
124	0.0159	0.0018	0.0140
125	0.0160	0.0019	0.0142
126	0.0161	0.0019	0.0142
127	0.0163	0.0019	0.0144
128	0.0164	0.0019	0.0145
129	0.0166	0.0019	0.0146
130	0.0167	0.0019	0.0147
131	0.0169	0.0020	0.0149
132	0.0170	0.0020	0.0150
133	0.0172	0.0020	0.0152
134	0.0173	0.0020	0.0153
135	0.0175	0.0020	0.0155
136	0.0176	0.0021	0.0156
137	0.0178	0.0021	0.0158
138	0.0180	0.0021	0.0159
139	0.0182	0.0021	0.0161
140	0.0183	0.0021	0.0162
141	0.0186	0.0022	0.0164
142	0.0187	0.0022	0.0165
143	0.0190	0.0022	0.0168
144	0.0191	0.0022	0.0169
145	0.0230	0.0027	0.0203
146	0.0232	0.0027	0.0205
147	0.0235	0.0027	0.0208
148	0.0237	0.0028	0.0209
149	0.0240	0.0028	0.0212
150	0.0242	0.0028	0.0214
151	0.0245	0.0029	0.0217
152	0.0247	0.0029	0.0218
153	0.0251	0.0029	0.0222
154	0.0253	0.0030	0.0224
155	0.0257	0.0030	0.0227
156	0.0259	0.0030	0.0229
157	0.0264	0.0031	0.0233
158	0.0266	0.0031	0.0235
159	0.0271	0.0032	0.0239
160	0.0274	0.0032	0.0242
161	0.0279	0.0033	0.0246

162	0.0282	0.0033	0.0249
163	0.0288	0.0034	0.0254
164	0.0291	0.0034	0.0257
165	0.0297	0.0035	0.0263
166	0.0301	0.0035	0.0266
167	0.0308	0.0036	0.0272
168	0.0312	0.0036	0.0275
169	0.0320	0.0037	0.0283
170	0.0324	0.0038	0.0286
171	0.0333	0.0039	0.0295
172	0.0338	0.0039	0.0299
173	0.0349	0.0041	0.0308
174	0.0355	0.0041	0.0313
175	0.0367	0.0043	0.0324
176	0.0374	0.0044	0.0330
177	0.0388	0.0045	0.0343
178	0.0396	0.0046	0.0350
179	0.0414	0.0048	0.0365
180	0.0424	0.0049	0.0374
181	0.0446	0.0052	0.0394
182	0.0458	0.0053	0.0405
183	0.0487	0.0057	0.0430
184	0.0503	0.0059	0.0444
185	0.0410	0.0048	0.0362
186	0.0433	0.0051	0.0383
187	0.0492	0.0057	0.0435
188	0.0530	0.0062	0.0469
189	0.0639	0.0065	0.0574
190	0.0722	0.0065	0.0656
191	0.1031	0.0065	0.0966
192	0.1418	0.0065	0.1353
193	0.4440	0.0065	0.4374
194	0.0840	0.0065	0.0775
195	0.0578	0.0065	0.0513
196	0.0460	0.0054	0.0407
197	0.0522	0.0061	0.0461
198	0.0472	0.0055	0.0417
199	0.0434	0.0051	0.0383
200	0.0405	0.0047	0.0357
201	0.0381	0.0044	0.0336
202	0.0361	0.0042	0.0319
203	0.0343	0.0040	0.0303
204	0.0329	0.0038	0.0290
205	0.0316	0.0037	0.0279
206	0.0304	0.0035	0.0269
207	0.0294	0.0034	0.0260
208	0.0285	0.0033	0.0251
209	0.0276	0.0032	0.0244
210	0.0269	0.0031	0.0237
211	0.0262	0.0030	0.0231
212	0.0255	0.0030	0.0225
213	0.0249	0.0029	0.0220
214	0.0244	0.0028	0.0215
215	0.0238	0.0028	0.0211
216	0.0233	0.0027	0.0206
217	0.0193	0.0022	0.0170
218	0.0189	0.0022	0.0167
219	0.0185	0.0022	0.0163
220	0.0181	0.0021	0.0160
221	0.0177	0.0021	0.0157
222	0.0174	0.0020	0.0154
223	0.0171	0.0020	0.0151
224	0.0168	0.0020	0.0148
225	0.0165	0.0019	0.0146
226	0.0162	0.0019	0.0143
227	0.0159	0.0019	0.0141
228	0.0157	0.0018	0.0139
229	0.0154	0.0018	0.0136
230	0.0152	0.0018	0.0134
231	0.0150	0.0017	0.0132
232	0.0148	0.0017	0.0131

233	0.0146	0.0017	0.0129
234	0.0144	0.0017	0.0127
235	0.0142	0.0017	0.0125
236	0.0140	0.0016	0.0124
237	0.0138	0.0016	0.0122
238	0.0137	0.0016	0.0121
239	0.0135	0.0016	0.0119
240	0.0133	0.0016	0.0118
241	0.0132	0.0015	0.0116
242	0.0130	0.0015	0.0115
243	0.0129	0.0015	0.0114
244	0.0128	0.0015	0.0113
245	0.0126	0.0015	0.0111
246	0.0125	0.0015	0.0110
247	0.0124	0.0014	0.0109
248	0.0122	0.0014	0.0108
249	0.0121	0.0014	0.0107
250	0.0120	0.0014	0.0106
251	0.0119	0.0014	0.0105
252	0.0118	0.0014	0.0104
253	0.0117	0.0014	0.0103
254	0.0116	0.0013	0.0102
255	0.0115	0.0013	0.0101
256	0.0114	0.0013	0.0100
257	0.0113	0.0013	0.0099
258	0.0112	0.0013	0.0099
259	0.0111	0.0013	0.0098
260	0.0110	0.0013	0.0097
261	0.0109	0.0013	0.0096
262	0.0108	0.0013	0.0095
263	0.0107	0.0012	0.0095
264	0.0106	0.0012	0.0094
265	0.0106	0.0012	0.0093
266	0.0105	0.0012	0.0092
267	0.0104	0.0012	0.0092
268	0.0103	0.0012	0.0091
269	0.0102	0.0012	0.0090
270	0.0102	0.0012	0.0090
271	0.0101	0.0012	0.0089
272	0.0100	0.0012	0.0089
273	0.0100	0.0012	0.0088
274	0.0099	0.0012	0.0087
275	0.0098	0.0011	0.0087
276	0.0098	0.0011	0.0086
277	0.0097	0.0011	0.0086
278	0.0096	0.0011	0.0085
279	0.0096	0.0011	0.0085
280	0.0095	0.0011	0.0084
281	0.0094	0.0011	0.0083
282	0.0094	0.0011	0.0083
283	0.0093	0.0011	0.0082
284	0.0093	0.0011	0.0082
285	0.0092	0.0011	0.0081
286	0.0092	0.0011	0.0081
287	0.0091	0.0011	0.0080
288	0.0091	0.0011	0.0080

 Total soil rain loss = 0.61(In)
 Total effective rainfall = 5.18(In)
 Peak flow rate in flood hydrograph = 23.46(CFS)

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

 Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume	Ac.Ft	Q(CFS)	0	7.5	15.0	22.5	30.0

0+ 5	0.0004	0.06	Q				
0+10	0.0028	0.35	Q				
0+15	0.0074	0.66	Q				
0+20	0.0126	0.76	VQ				
0+25	0.0180	0.79	VQ				
0+30	0.0235	0.80	VQ				
0+35	0.0290	0.80	VQ				
0+40	0.0346	0.80	VQ				
0+45	0.0401	0.80	VQ				
0+50	0.0457	0.81	VQ				
0+55	0.0512	0.81	VQ				
1+ 0	0.0568	0.81	VQ				
1+ 5	0.0624	0.81	VQ				
1+10	0.0681	0.82	VQ				
1+15	0.0737	0.82	VQ				
1+20	0.0794	0.82	VQ				
1+25	0.0850	0.82	VQ				
1+30	0.0907	0.83	IQ				
1+35	0.0965	0.83	IQ				
1+40	0.1022	0.83	IQ				
1+45	0.1079	0.83	IQ				
1+50	0.1137	0.84	IQ				
1+55	0.1195	0.84	IQ				
2+ 0	0.1253	0.84	IQ				
2+ 5	0.1311	0.85	IQ				
2+10	0.1370	0.85	IQ				
2+15	0.1428	0.85	IQ				
2+20	0.1487	0.85	IQ				
2+25	0.1546	0.86	IQ				
2+30	0.1605	0.86	IQ				
2+35	0.1665	0.86	IQ				
2+40	0.1724	0.87	IQ				
2+45	0.1784	0.87	IQV				
2+50	0.1844	0.87	IQV				
2+55	0.1904	0.87	IQV				
3+ 0	0.1965	0.88	IQV				
3+ 5	0.2026	0.88	IQV				
3+10	0.2086	0.88	IQV				
3+15	0.2148	0.89	IQV				
3+20	0.2209	0.89	IQV				
3+25	0.2270	0.89	IQV				
3+30	0.2332	0.90	IQV				
3+35	0.2394	0.90	IQV				
3+40	0.2456	0.90	IQV				
3+45	0.2519	0.91	IQV				
3+50	0.2581	0.91	IQV				
3+55	0.2644	0.91	IQV				
4+ 0	0.2707	0.92	IQ V				
4+ 5	0.2771	0.92	IQ V				
4+10	0.2834	0.92	IQ V				
4+15	0.2898	0.93	IQ V				
4+20	0.2962	0.93	IQ V				
4+25	0.3027	0.93	IQ V				
4+30	0.3091	0.94	IQ V				
4+35	0.3156	0.94	IQ V				
4+40	0.3221	0.95	IQ V				
4+45	0.3287	0.95	IQ V				
4+50	0.3352	0.95	IQ V				
4+55	0.3418	0.96	IQ V				
5+ 0	0.3484	0.96	IQ V				
5+ 5	0.3551	0.96	IQ V				
5+10	0.3617	0.97	IQ V				
5+15	0.3684	0.97	IQ V				
5+20	0.3752	0.98	IQ V				
5+25	0.3819	0.98	IQ V				
5+30	0.3887	0.99	IQ V				
5+35	0.3955	0.99	IQ V				
5+40	0.4024	0.99	IQ V				
5+45	0.4093	1.00	IQ V				
5+50	0.4162	1.00	IQ V				
5+55	0.4231	1.01	IQ V				

6+ 0	0.4301	1.01	IQ	V				
6+ 5	0.4371	1.02	IQ	V				
6+10	0.4441	1.02	IQ	V				
6+15	0.4512	1.03	IQ	V				
6+20	0.4583	1.03	IQ	V				
6+25	0.4654	1.04	IQ	V				
6+30	0.4725	1.04	IQ	V				
6+35	0.4797	1.05	IQ	V				
6+40	0.4870	1.05	IQ	V				
6+45	0.4942	1.06	IQ	V				
6+50	0.5015	1.06	IQ	V				
6+55	0.5089	1.07	IQ	V				
7+ 0	0.5163	1.07	IQ	V				
7+ 5	0.5237	1.08	IQ	V				
7+10	0.5311	1.08	IQ	V				
7+15	0.5386	1.09	IQ	V				
7+20	0.5461	1.09	IQ	V				
7+25	0.5537	1.10	IQ	V				
7+30	0.5613	1.10	IQ	V				
7+35	0.5690	1.11	IQ	V				
7+40	0.5766	1.12	IQ	V				
7+45	0.5844	1.12	IQ	V				
7+50	0.5921	1.13	IQ	V				
7+55	0.6000	1.13	IQ	V				
8+ 0	0.6078	1.14	IQ	V				
8+ 5	0.6157	1.15	IQ	V				
8+10	0.6237	1.15	IQ	V				
8+15	0.6317	1.16	IQ	V				
8+20	0.6397	1.17	IQ	V				
8+25	0.6478	1.17	IQ	V				
8+30	0.6559	1.18	IQ	V				
8+35	0.6641	1.19	IQ	V				
8+40	0.6723	1.20	IQ	V				
8+45	0.6806	1.20	IQ	V				
8+50	0.6890	1.21	IQ	V				
8+55	0.6973	1.22	IQ	V				
9+ 0	0.7058	1.23	IQ	V				
9+ 5	0.7143	1.23	IQ	V				
9+10	0.7228	1.24	IQ	V				
9+15	0.7314	1.25	IQ	V				
9+20	0.7401	1.26	IQ	V				
9+25	0.7488	1.27	IQ	V				
9+30	0.7576	1.28	IQ	V				
9+35	0.7665	1.28	IQ	V				
9+40	0.7754	1.29	IQ	V				
9+45	0.7843	1.30	IQ	V				
9+50	0.7934	1.31	IQ	V				
9+55	0.8025	1.32	IQ	V				
10+ 0	0.8116	1.33	IQ	V				
10+ 5	0.8209	1.34	IQ	V				
10+10	0.8302	1.35	IQ	V				
10+15	0.8395	1.36	IQ	V				
10+20	0.8490	1.37	IQ	V				
10+25	0.8585	1.38	IQ	V				
10+30	0.8681	1.39	IQ	V				
10+35	0.8778	1.41	IQ	V				
10+40	0.8876	1.42	IQ	V				
10+45	0.8974	1.43	IQ	V				
10+50	0.9073	1.44	IQ	V				
10+55	0.9173	1.45	IQ	V				
11+ 0	0.9274	1.47	IQ	V				
11+ 5	0.9376	1.48	IQ	V				
11+10	0.9479	1.49	IQ	V				
11+15	0.9583	1.51	I Q	V				
11+20	0.9688	1.52	I Q	V				
11+25	0.9793	1.54	I Q	V				
11+30	0.9900	1.55	I Q	V				
11+35	1.0008	1.57	I Q	V				
11+40	1.0117	1.58	I Q	V				
11+45	1.0227	1.60	I Q	V				
11+50	1.0338	1.61	I Q	V				

11+55	1.0450	1.63	Q	V				
12+ 0	1.0564	1.65	Q	V				
12+ 5	1.0680	1.69	Q	V				
12+10	1.0806	1.83	Q	V				
12+15	1.0942	1.97	Q	V				
12+20	1.1081	2.03	Q	V				
12+25	1.1223	2.06	Q	V				
12+30	1.1367	2.08	Q	V				
12+35	1.1512	2.11	Q	V				
12+40	1.1658	2.13	Q	V				
12+45	1.1807	2.15	Q	V				
12+50	1.1957	2.18	Q	V				
12+55	1.2108	2.20	Q	V				
13+ 0	1.2262	2.23	Q	V				
13+ 5	1.2417	2.26	Q	V				
13+10	1.2575	2.29	Q	V				
13+15	1.2734	2.32	Q	V				
13+20	1.2896	2.35	Q	V				
13+25	1.3060	2.38	Q	V				
13+30	1.3226	2.41	Q	V				
13+35	1.3395	2.45	Q	V				
13+40	1.3566	2.49	Q	V				
13+45	1.3740	2.53	Q	V				
13+50	1.3917	2.57	Q	V				
13+55	1.4097	2.61	Q	V				
14+ 0	1.4280	2.66	Q	V				
14+ 5	1.4466	2.70	Q	V				
14+10	1.4656	2.76	Q	V				
14+15	1.4850	2.81	Q	V				
14+20	1.5047	2.87	Q	V				
14+25	1.5249	2.93	Q	V				
14+30	1.5456	3.00	Q	V				
14+35	1.5667	3.07	Q	V				
14+40	1.5884	3.15	Q	V				
14+45	1.6106	3.23	Q	V				
14+50	1.6334	3.32	Q	V				
14+55	1.6570	3.42	Q	V				
15+ 0	1.6813	3.53	Q	V				
15+ 5	1.7064	3.65	Q	V				
15+10	1.7324	3.78	Q	V				
15+15	1.7595	3.93	Q	V				
15+20	1.7878	4.11	Q	V				
15+25	1.8169	4.22	Q	V				
15+30	1.8446	4.03	Q	V				
15+35	1.8711	3.84	Q	V				
15+40	1.8990	4.04	Q	V				
15+45	1.9296	4.45	Q	V				
15+50	1.9647	5.09	Q	V				
15+55	2.0066	6.08	Q	V				
16+ 0	2.0614	7.96	Q	V				
16+ 5	2.1498	12.83		Q	V			
16+10	2.3113	23.46			V	Q		
16+15	2.4649	22.31			V	Q		
16+20	2.5415	11.12		Q		V		
16+25	2.5833	6.06	Q			V		
16+30	2.6172	4.92	Q			V		
16+35	2.6470	4.33	Q			V		
16+40	2.6748	4.03	Q			V		
16+45	2.7005	3.74	Q			V		
16+50	2.7246	3.50	Q			V		
16+55	2.7473	3.29	Q			V		
17+ 0	2.7688	3.12	Q			V		
17+ 5	2.7893	2.98	Q			V		
17+10	2.8089	2.85	Q			V		
17+15	2.8278	2.74	Q			V		
17+20	2.8460	2.64	Q			V		
17+25	2.8636	2.55	Q			V		
17+30	2.8806	2.47	Q			V		
17+35	2.8972	2.40	Q			V		
17+40	2.9133	2.34	Q			V		
17+45	2.9289	2.28	Q			V		

17+50	2.9442	2.22	Q			V	
17+55	2.9592	2.17	Q			V	
18+ 0	2.9738	2.12	Q			V	
18+ 5	2.9879	2.05	Q			V	
18+10	3.0010	1.89	Q			V	
18+15	3.0129	1.73	Q			V	
18+20	3.0243	1.65	Q			V	
18+25	3.0354	1.61	Q			V	
18+30	3.0462	1.58	Q			V	
18+35	3.0569	1.54	Q			V	
18+40	3.0673	1.52	Q			V	
18+45	3.0775	1.49	Q			V	
18+50	3.0876	1.46	Q			V	
18+55	3.0975	1.44	Q			V	
19+ 0	3.1072	1.41	Q			V	
19+ 5	3.1168	1.39	Q			V	
19+10	3.1262	1.37	Q			V	
19+15	3.1355	1.35	Q			V	
19+20	3.1446	1.33	Q			V	
19+25	3.1537	1.31	Q			V	
19+30	3.1625	1.29	Q			V	
19+35	3.1713	1.27	Q			V	
19+40	3.1799	1.25	Q			V	
19+45	3.1885	1.24	Q			V	
19+50	3.1969	1.22	Q			V	
19+55	3.2052	1.21	Q			V	
20+ 0	3.2134	1.19	Q			V	
20+ 5	3.2215	1.18	Q			V	
20+10	3.2296	1.16	Q			V	
20+15	3.2375	1.15	Q			V	
20+20	3.2453	1.14	Q			V	
20+25	3.2531	1.13	Q			V	
20+30	3.2608	1.11	Q			V	
20+35	3.2684	1.10	Q			V	
20+40	3.2759	1.09	Q			V	
20+45	3.2833	1.08	Q			V	
20+50	3.2907	1.07	Q			V	
20+55	3.2979	1.06	Q			V	
21+ 0	3.3052	1.05	Q			V	
21+ 5	3.3123	1.04	Q			V	
21+10	3.3194	1.03	Q			V	
21+15	3.3264	1.02	Q			V	
21+20	3.3334	1.01	Q			V	
21+25	3.3403	1.00	Q			V	
21+30	3.3471	0.99	Q			V	
21+35	3.3539	0.98	Q			V	
21+40	3.3606	0.98	Q			V	
21+45	3.3673	0.97	Q			V	
21+50	3.3739	0.96	Q			V	
21+55	3.3804	0.95	Q			V	
22+ 0	3.3869	0.94	Q			V	
22+ 5	3.3934	0.94	Q			V	
22+10	3.3998	0.93	Q			V	
22+15	3.4061	0.92	Q			V	
22+20	3.4124	0.92	Q			V	
22+25	3.4187	0.91	Q			V	
22+30	3.4249	0.90	Q			V	
22+35	3.4311	0.90	Q			V	
22+40	3.4372	0.89	Q			V	
22+45	3.4433	0.88	Q			V	
22+50	3.4493	0.88	Q			V	
22+55	3.4553	0.87	Q			V	
23+ 0	3.4612	0.86	Q			V	
23+ 5	3.4672	0.86	Q			V	
23+10	3.4730	0.85	Q			V	
23+15	3.4789	0.85	Q			V	
23+20	3.4847	0.84	Q			V	
23+25	3.4904	0.84	Q			V	
23+30	3.4961	0.83	Q			V	
23+35	3.5018	0.83	Q			V	
23+40	3.5075	0.82	Q			V	

23+45	3.5131	0.82	IQ				V
23+50	3.5187	0.81	IQ				V
23+55	3.5242	0.81	IQ				V
24+ 0	3.5298	0.80	IQ				V
24+ 5	3.5349	0.74	Q				V
24+10	3.5379	0.44	Q				V
24+15	3.5388	0.13	Q				V
24+20	3.5390	0.03	Q				V
24+25	3.5391	0.01	Q				V

FLOOD HYDROGRAPH ROUTING PROGRAM
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 Study date: 08/02/24

 DIVERSIFIED MAPLE AVE
 CHAMBER ROUTING
 8" OUTLET PIPE
 10 YR STORM

Program License Serial Number 6484

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

From study/file name: MAPLE-UH Dev-10yr.rte
 *****HYDROGRAPH DATA*****
 Number of intervals = 293
 Time interval = 5.0 (Min.)
 Maximum/Peak flow rate = 18.899 (CFS)
 Total volume = 2.858 (Ac.Ft)
 Status of hydrographs being held in storage

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

+++++
 Process from Point/Station 0.000 to Point/Station 1.000
 **** RETARDING BASIN ROUTING ****

 User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 293
 Hydrograph time unit = 5.000 (Min.)
 Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)
 Initial basin storage = 0.00 (Ac.Ft)
 Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.230	0.520	0.228	0.232
2.500	1.200	1.200	1.196	1.204
4.500	1.980	1.200	1.976	1.984
4.800	2.060	1.200	2.056	2.064

 Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	4.7	9.45	14.17	18.90	Depth (Ft.)
0.083	0.04	0.00	0.000	O					0.00
0.167	0.28	0.00	0.001	O					0.00

0.250	0.54	0.01	0.004	O					0.01
0.333	0.62	0.02	0.008	OI					0.02
0.417	0.64	0.03	0.012	OI					0.03
0.500	0.65	0.04	0.016	OI					0.04
0.583	0.65	0.05	0.021	OI					0.04
0.667	0.65	0.06	0.025	OI					0.05
0.750	0.65	0.06	0.029	OI					0.06
0.833	0.65	0.07	0.033	OI					0.07
0.917	0.66	0.08	0.037	OI					0.08
1.000	0.66	0.09	0.041	OI					0.09
1.083	0.66	0.10	0.045	OI					0.10
1.167	0.66	0.11	0.048	OI					0.11
1.250	0.66	0.12	0.052	OI					0.11
1.333	0.67	0.13	0.056	OI					0.12
1.417	0.67	0.13	0.060	OI					0.13
1.500	0.67	0.14	0.063	OI					0.14
1.583	0.67	0.15	0.067	OI					0.15
1.667	0.68	0.16	0.070	OI					0.15
1.750	0.68	0.17	0.074	OI					0.16
1.833	0.68	0.18	0.077	OI					0.17
1.917	0.68	0.18	0.081	OI					0.18
2.000	0.68	0.19	0.084	OI					0.18
2.083	0.69	0.20	0.088	OI					0.19
2.167	0.69	0.21	0.091	OI					0.20
2.250	0.69	0.21	0.094	OI					0.21
2.333	0.69	0.22	0.098	OI					0.21
2.417	0.69	0.23	0.101	OI					0.22
2.500	0.70	0.24	0.104	OI					0.23
2.583	0.70	0.24	0.107	OI					0.23
2.667	0.70	0.25	0.110	OI					0.24
2.750	0.70	0.26	0.113	OI					0.25
2.833	0.71	0.26	0.117	OI					0.25
2.917	0.71	0.27	0.120	OI					0.26
3.000	0.71	0.28	0.123	OI					0.27
3.083	0.71	0.28	0.126	OI					0.27
3.167	0.72	0.29	0.128	OI					0.28
3.250	0.72	0.30	0.131	OI					0.29
3.333	0.72	0.30	0.134	OI					0.29
3.417	0.72	0.31	0.137	OI					0.30
3.500	0.73	0.32	0.140	OI					0.30
3.583	0.73	0.32	0.143	OI					0.31
3.667	0.73	0.33	0.146	OI					0.32
3.750	0.73	0.34	0.148	OI					0.32
3.833	0.74	0.34	0.151	OI					0.33
3.917	0.74	0.35	0.154	OI					0.33
4.000	0.74	0.35	0.157	OI					0.34
4.083	0.75	0.36	0.159	OI					0.35
4.167	0.75	0.37	0.162	OI					0.35
4.250	0.75	0.37	0.164	OI					0.36
4.333	0.75	0.38	0.167	OI					0.36
4.417	0.76	0.38	0.170	OI					0.37
4.500	0.76	0.39	0.172	OI					0.37
4.583	0.76	0.40	0.175	OI					0.38
4.667	0.77	0.40	0.177	OI					0.39
4.750	0.77	0.41	0.180	OI					0.39
4.833	0.77	0.41	0.182	OI					0.40
4.917	0.78	0.42	0.185	OI					0.40
5.000	0.78	0.42	0.187	OI					0.41
5.083	0.78	0.43	0.190	OI					0.41
5.167	0.79	0.43	0.192	OI					0.42
5.250	0.79	0.44	0.194	OI					0.42
5.333	0.79	0.45	0.197	OI					0.43
5.417	0.80	0.45	0.199	OI					0.43
5.500	0.80	0.46	0.202	OI					0.44
5.583	0.80	0.46	0.204	OI					0.44
5.667	0.81	0.47	0.206	OI					0.45
5.750	0.81	0.47	0.209	OI					0.45
5.833	0.81	0.48	0.211	OI					0.46
5.917	0.82	0.48	0.213	OI					0.46
6.000	0.82	0.49	0.216	OI					0.47
6.083	0.82	0.49	0.218	OI					0.47

6.167	0.83	0.50	0.220	OI					0.48
6.250	0.83	0.50	0.222	OI					0.48
6.333	0.83	0.51	0.225	OI					0.49
6.417	0.84	0.51	0.227	OI					0.49
6.500	0.84	0.52	0.229	OI					0.50
6.583	0.85	0.52	0.231	OI					0.50
6.667	0.85	0.52	0.234	OI					0.51
6.750	0.85	0.52	0.236	OI					0.51
6.833	0.86	0.53	0.238	OI					0.52
6.917	0.86	0.53	0.240	OI					0.52
7.000	0.87	0.53	0.243	OI					0.53
7.083	0.87	0.53	0.245	OI					0.53
7.167	0.88	0.53	0.248	OI					0.54
7.250	0.88	0.53	0.250	OI					0.54
7.333	0.89	0.54	0.252	OI					0.55
7.417	0.89	0.54	0.255	OI					0.55
7.500	0.89	0.54	0.257	OI					0.56
7.583	0.90	0.54	0.260	OI					0.56
7.667	0.90	0.54	0.262	OI					0.57
7.750	0.91	0.54	0.265	OI					0.57
7.833	0.91	0.55	0.267	OI					0.58
7.917	0.92	0.55	0.270	OI					0.58
8.000	0.92	0.55	0.272	OI					0.59
8.083	0.93	0.55	0.275	OI					0.59
8.167	0.93	0.55	0.277	OI					0.60
8.250	0.94	0.56	0.280	OI					0.60
8.333	0.95	0.56	0.283	OI					0.61
8.417	0.95	0.56	0.285	OI					0.61
8.500	0.96	0.56	0.288	OI					0.62
8.583	0.96	0.56	0.291	OI					0.63
8.667	0.97	0.56	0.294	OI					0.63
8.750	0.97	0.57	0.296	OI					0.64
8.833	0.98	0.57	0.299	OI					0.64
8.917	0.99	0.57	0.302	OI					0.65
9.000	0.99	0.57	0.305	OI					0.65
9.083	1.00	0.57	0.308	OI					0.66
9.167	1.01	0.58	0.311	OI					0.67
9.250	1.01	0.58	0.314	OI					0.67
9.333	1.02	0.58	0.317	OI					0.68
9.417	1.03	0.58	0.320	OI					0.69
9.500	1.03	0.59	0.323	OI					0.69
9.583	1.04	0.59	0.326	OI					0.70
9.667	1.05	0.59	0.329	OI					0.70
9.750	1.05	0.59	0.332	IO					0.71
9.833	1.06	0.59	0.335	IO					0.72
9.917	1.07	0.60	0.339	IO					0.72
10.000	1.08	0.60	0.342	IO					0.73
10.083	1.09	0.60	0.345	IO					0.74
10.167	1.09	0.60	0.349	IO					0.74
10.250	1.10	0.61	0.352	IO					0.75
10.333	1.11	0.61	0.356	IO					0.76
10.417	1.12	0.61	0.359	IO					0.77
10.500	1.13	0.61	0.363	IO					0.77
10.583	1.14	0.62	0.366	IO					0.78
10.667	1.15	0.62	0.370	IO					0.79
10.750	1.16	0.62	0.373	IO					0.80
10.833	1.17	0.62	0.377	IO					0.80
10.917	1.18	0.63	0.381	IO					0.81
11.000	1.19	0.63	0.385	IOI					0.82
11.083	1.20	0.63	0.389	IOI					0.83
11.167	1.21	0.63	0.392	IOI					0.83
11.250	1.22	0.64	0.396	IOI					0.84
11.333	1.23	0.64	0.400	IOI					0.85
11.417	1.24	0.64	0.405	IOI					0.86
11.500	1.25	0.65	0.409	IOI					0.87
11.583	1.27	0.65	0.413	IOI					0.88
11.667	1.28	0.65	0.417	IOI					0.89
11.750	1.29	0.65	0.422	IOI					0.90
11.833	1.31	0.66	0.426	IOI					0.90
11.917	1.32	0.66	0.431	IOI					0.91
12.000	1.33	0.66	0.435	IOI					0.92

12.083	1.37	0.67	0.440	OI					0.93
12.167	1.48	0.67	0.445	OI					0.94
12.250	1.61	0.67	0.451	OI					0.96
12.333	1.66	0.68	0.458	OI					0.97
12.417	1.68	0.68	0.464	OI					0.98
12.500	1.70	0.69	0.471	OI					1.00
12.583	1.72	0.69	0.478	OI					1.01
12.667	1.74	0.70	0.485	OI					1.03
12.750	1.76	0.70	0.493	OI					1.04
12.833	1.78	0.71	0.500	O I					1.06
12.917	1.80	0.71	0.507	O I					1.07
13.000	1.82	0.72	0.515	O I					1.09
13.083	1.84	0.72	0.522	O I					1.10
13.167	1.86	0.73	0.530	O I					1.12
13.250	1.89	0.74	0.538	O I					1.14
13.333	1.91	0.74	0.546	O I					1.15
13.417	1.94	0.75	0.554	O I					1.17
13.500	1.96	0.75	0.562	O I					1.19
13.583	1.99	0.76	0.571	O I					1.20
13.667	2.02	0.76	0.579	O I					1.22
13.750	2.05	0.77	0.588	O I					1.24
13.833	2.09	0.78	0.597	O I					1.26
13.917	2.12	0.78	0.606	O I					1.28
14.000	2.16	0.79	0.615	O I					1.29
14.083	2.20	0.80	0.625	O I					1.31
14.167	2.24	0.80	0.635	O I					1.33
14.250	2.28	0.81	0.645	O I					1.36
14.333	2.33	0.82	0.655	O I					1.38
14.417	2.38	0.83	0.666	O I					1.40
14.500	2.43	0.83	0.676	O I					1.42
14.583	2.49	0.84	0.688	O I					1.44
14.667	2.55	0.85	0.699	O I					1.47
14.750	2.61	0.86	0.711	O I					1.49
14.833	2.69	0.87	0.723	O I					1.52
14.917	2.76	0.87	0.736	O I					1.54
15.000	2.85	0.88	0.749	O I					1.57
15.083	2.95	0.89	0.763	O I					1.60
15.167	3.05	0.90	0.778	O I					1.63
15.250	3.17	0.91	0.793	O I					1.66
15.333	3.31	0.93	0.809	O I					1.69
15.417	3.40	0.94	0.826	O I					1.73
15.500	3.22	0.95	0.842	O I					1.76
15.583	3.06	0.96	0.857	O I					1.79
15.667	3.21	0.97	0.872	O I					1.82
15.750	3.52	0.98	0.888	O I					1.86
15.833	4.00	0.99	0.907	O I					1.90
15.917	4.74	1.01	0.931	O I					1.94
16.000	6.25	1.03	0.961	O I		I			2.01
16.083	10.22	1.07	1.011	O			I		2.11
16.167	18.90	1.13	1.104	O				I	2.30
16.250	17.97	1.20	1.222	O				I	2.56
16.333	8.88	1.20	1.307	O		I			2.77
16.417	4.81	1.20	1.345	O	I				2.87
16.500	3.93	1.20	1.367	O I					2.93
16.583	3.48	1.20	1.385	O I					2.97
16.667	3.25	1.20	1.399	O I					3.01
16.750	3.02	1.20	1.413	O I					3.05
16.833	2.83	1.20	1.425	O I					3.08
16.917	2.67	1.20	1.435	O I					3.10
17.000	2.53	1.20	1.445	O I					3.13
17.083	2.41	1.20	1.454	O I					3.15
17.167	2.31	1.20	1.462	OI					3.17
17.250	2.22	1.20	1.469	OI					3.19
17.333	2.15	1.20	1.476	OI					3.21
17.417	2.08	1.20	1.482	OI					3.22
17.500	2.01	1.20	1.488	OI					3.24
17.583	1.96	1.20	1.493	OI					3.25
17.667	1.90	1.20	1.498	OI					3.26
17.750	1.85	1.20	1.503	OI					3.28
17.833	1.81	1.20	1.507	OI					3.29
17.917	1.77	1.20	1.511	O					3.30

18.000	1.73	1.20	1.515	O					3.31
18.083	1.67	1.20	1.519	O					3.32
18.167	1.54	1.20	1.521	O					3.32
18.250	1.40	1.20	1.523	O					3.33
18.333	1.34	1.20	1.525	O					3.33
18.417	1.30	1.20	1.525	O					3.33
18.500	1.27	1.20	1.526	O					3.34
18.583	1.25	1.20	1.526	O					3.34
18.667	1.23	1.20	1.527	O					3.34
18.750	1.20	1.20	1.527	O					3.34
18.833	1.18	1.20	1.527	O					3.34
18.917	1.16	1.20	1.527	IO					3.34
19.000	1.14	1.20	1.526	IO					3.34
19.083	1.12	1.20	1.526	IO					3.34
19.167	1.11	1.20	1.525	IO					3.33
19.250	1.09	1.20	1.524	IO					3.33
19.333	1.07	1.20	1.524	IO					3.33
19.417	1.06	1.20	1.523	IO					3.33
19.500	1.04	1.20	1.522	IO					3.32
19.583	1.03	1.20	1.521	IO					3.32
19.667	1.02	1.20	1.519	IO					3.32
19.750	1.00	1.20	1.518	IO					3.32
19.833	0.99	1.20	1.517	IO					3.31
19.917	0.98	1.20	1.515	IO					3.31
20.000	0.97	1.20	1.514	IO					3.30
20.083	0.95	1.20	1.512	IO					3.30
20.167	0.94	1.20	1.510	IO					3.30
20.250	0.93	1.20	1.508	IO					3.29
20.333	0.92	1.20	1.507	IO					3.29
20.417	0.91	1.20	1.505	IO					3.28
20.500	0.90	1.20	1.503	IO					3.28
20.583	0.89	1.20	1.500	IO					3.27
20.667	0.88	1.20	1.498	IO					3.26
20.750	0.87	1.20	1.496	IO					3.26
20.833	0.87	1.20	1.494	IO					3.25
20.917	0.86	1.20	1.491	IO					3.25
21.000	0.85	1.20	1.489	IO					3.24
21.083	0.84	1.20	1.487	IO					3.24
21.167	0.83	1.20	1.484	IO					3.23
21.250	0.83	1.20	1.482	IO					3.22
21.333	0.82	1.20	1.479	IO					3.22
21.417	0.81	1.20	1.476	IO					3.21
21.500	0.80	1.20	1.474	IO					3.20
21.583	0.80	1.20	1.471	IO					3.19
21.667	0.79	1.20	1.468	IO					3.19
21.750	0.78	1.20	1.465	IO					3.18
21.833	0.78	1.20	1.462	IO					3.17
21.917	0.77	1.20	1.459	IO					3.17
22.000	0.77	1.20	1.456	IO					3.16
22.083	0.76	1.20	1.453	IO					3.15
22.167	0.75	1.20	1.450	IO					3.14
22.250	0.75	1.20	1.447	IO					3.13
22.333	0.74	1.20	1.444	IO					3.13
22.417	0.74	1.20	1.441	IO					3.12
22.500	0.73	1.20	1.438	IO					3.11
22.583	0.73	1.20	1.435	IO					3.10
22.667	0.72	1.20	1.431	IO					3.09
22.750	0.72	1.20	1.428	IO					3.08
22.833	0.71	1.20	1.425	IO					3.08
22.917	0.71	1.20	1.421	IO					3.07
23.000	0.70	1.20	1.418	IO					3.06
23.083	0.70	1.20	1.414	IO					3.05
23.167	0.69	1.20	1.411	IO					3.04
23.250	0.69	1.20	1.407	IO					3.03
23.333	0.68	1.20	1.404	IO					3.02
23.417	0.68	1.20	1.400	IO					3.01
23.500	0.67	1.20	1.397	IO					3.00
23.583	0.67	1.20	1.393	IO					2.99
23.667	0.67	1.20	1.389	IO					2.99
23.750	0.66	1.20	1.386	IO					2.98
23.833	0.66	1.20	1.382	IO					2.97

23.917	0.65	1.20	1.378	IO					2.96
24.000	0.65	1.20	1.374	IO					2.95
24.083	0.60	1.20	1.370	IO					2.94
24.167	0.36	1.20	1.365	I O					2.92
24.250	0.11	1.20	1.359	I O					2.91
24.333	0.02	1.20	1.351	I O					2.89
24.417	0.01	1.20	1.343	I O					2.87
24.500	0.00	1.20	1.335	I O					2.85
24.583	0.00	1.20	1.326	I O					2.82
24.667	0.00	1.20	1.318	I O					2.80
24.750	0.00	1.20	1.310	I O					2.78
24.833	0.00	1.20	1.302	I O					2.76
24.917	0.00	1.20	1.293	I O					2.74
25.000	0.00	1.20	1.285	I O					2.72
25.083	0.00	1.20	1.277	I O					2.70
25.167	0.00	1.20	1.268	I O					2.68
25.250	0.00	1.20	1.260	I O					2.65
25.333	0.00	1.20	1.252	I O					2.63
25.417	0.00	1.20	1.244	I O					2.61
25.500	0.00	1.20	1.235	I O					2.59
25.583	0.00	1.20	1.227	I O					2.57
25.667	0.00	1.20	1.219	I O					2.55
25.750	0.00	1.20	1.211	I O					2.53
25.833	0.00	1.20	1.202	I O					2.51
25.917	0.00	1.20	1.194	I O					2.49
26.000	0.00	1.19	1.186	I O					2.47
26.083	0.00	1.18	1.178	I O					2.45
26.167	0.00	1.18	1.170	IO					2.44
26.250	0.00	1.17	1.161	IO					2.42
26.333	0.00	1.17	1.153	IO					2.40
26.417	0.00	1.16	1.145	IO					2.39
26.500	0.00	1.16	1.137	IO					2.37
26.583	0.00	1.15	1.129	IO					2.35
26.667	0.00	1.15	1.122	IO					2.34
26.750	0.00	1.14	1.114	IO					2.32
26.833	0.00	1.13	1.106	IO					2.31
26.917	0.00	1.13	1.098	IO					2.29
27.000	0.00	1.12	1.090	IO					2.27
27.083	0.00	1.12	1.083	IO					2.26
27.167	0.00	1.11	1.075	IO					2.24
27.250	0.00	1.11	1.067	IO					2.23
27.333	0.00	1.10	1.060	IO					2.21
27.417	0.00	1.10	1.052	IO					2.20
27.500	0.00	1.09	1.045	IO					2.18
27.583	0.00	1.09	1.037	IO					2.16
27.667	0.00	1.08	1.030	IO					2.15
27.750	0.00	1.08	1.022	IO					2.13
27.833	0.00	1.07	1.015	IO					2.12
27.917	0.00	1.07	1.007	IO					2.10
28.000	0.00	1.06	1.000	IO					2.09
28.083	0.00	1.05	0.993	IO					2.07
28.167	0.00	1.05	0.986	IO					2.06
28.250	0.00	1.04	0.978	IO					2.04
28.333	0.00	1.04	0.971	IO					2.03
28.417	0.00	1.03	0.964	IO					2.01
28.500	0.00	1.03	0.957	IO					2.00
28.583	0.00	1.02	0.950	IO					1.98
28.667	0.00	1.02	0.943	IO					1.97
28.750	0.00	1.01	0.936	IO					1.96
28.833	0.00	1.01	0.929	IO					1.94
28.917	0.00	1.01	0.922	IO					1.93
29.000	0.00	1.00	0.915	IO					1.91
29.083	0.00	1.00	0.908	IO					1.90
29.167	0.00	0.99	0.901	IO					1.88
29.250	0.00	0.99	0.895	IO					1.87
29.333	0.00	0.98	0.888	IO					1.86
29.417	0.00	0.98	0.881	IO					1.84
29.500	0.00	0.97	0.874	IO					1.83
29.583	0.00	0.97	0.868	IO					1.81
29.667	0.00	0.96	0.861	IO					1.80
29.750	0.00	0.96	0.854	IO					1.79

29.833	0.00	0.95	0.848	IO					1.77
29.917	0.00	0.95	0.841	IO					1.76
30.000	0.00	0.94	0.835	IO					1.75
30.083	0.00	0.94	0.828	IO					1.73
30.167	0.00	0.93	0.822	IO					1.72
30.250	0.00	0.93	0.815	IO					1.71
30.333	0.00	0.93	0.809	IO					1.69
30.417	0.00	0.92	0.803	IO					1.68
30.500	0.00	0.92	0.796	IO					1.67
30.583	0.00	0.91	0.790	IO					1.65
30.667	0.00	0.91	0.784	IO					1.64
30.750	0.00	0.90	0.777	IO					1.63
30.833	0.00	0.90	0.771	IO					1.62
30.917	0.00	0.90	0.765	IO					1.60
31.000	0.00	0.89	0.759	IO					1.59
31.083	0.00	0.89	0.753	IO					1.58
31.167	0.00	0.88	0.747	IO					1.57
31.250	0.00	0.88	0.741	IO					1.55
31.333	0.00	0.87	0.735	IO					1.54
31.417	0.00	0.87	0.729	IO					1.53
31.500	0.00	0.87	0.723	IO					1.52
31.583	0.00	0.86	0.717	IO					1.50
31.667	0.00	0.86	0.711	IO					1.49
31.750	0.00	0.85	0.705	IO					1.48
31.833	0.00	0.85	0.699	IO					1.47
31.917	0.00	0.84	0.693	IO					1.46
32.000	0.00	0.84	0.687	IO					1.44
32.083	0.00	0.84	0.682	IO					1.43
32.167	0.00	0.83	0.676	IO					1.42
32.250	0.00	0.83	0.670	IO					1.41
32.333	0.00	0.82	0.664	IO					1.40
32.417	0.00	0.82	0.659	IO					1.38
32.500	0.00	0.82	0.653	IO					1.37
32.583	0.00	0.81	0.648	IO					1.36
32.667	0.00	0.81	0.642	IO					1.35
32.750	0.00	0.80	0.636	IO					1.34
32.833	0.00	0.80	0.631	IO					1.33
32.917	0.00	0.80	0.625	IO					1.32
33.000	0.00	0.79	0.620	IO					1.30
33.083	0.00	0.79	0.614	IO					1.29
33.167	0.00	0.79	0.609	IO					1.28
33.250	0.00	0.78	0.604	IO					1.27
33.333	0.00	0.78	0.598	IO					1.26
33.417	0.00	0.77	0.593	IO					1.25
33.500	0.00	0.77	0.588	IO					1.24
33.583	0.00	0.77	0.582	IO					1.23
33.667	0.00	0.76	0.577	IO					1.22
33.750	0.00	0.76	0.572	IO					1.20
33.833	0.00	0.76	0.567	IO					1.19
33.917	0.00	0.75	0.561	IO					1.18
34.000	0.00	0.75	0.556	IO					1.17
34.083	0.00	0.75	0.551	IO					1.16
34.167	0.00	0.74	0.546	IO					1.15
34.250	0.00	0.74	0.541	IO					1.14
34.333	0.00	0.73	0.536	IO					1.13
34.417	0.00	0.73	0.531	IO					1.12
34.500	0.00	0.73	0.526	IO					1.11
34.583	0.00	0.72	0.521	IO					1.10
34.667	0.00	0.72	0.516	IO					1.09
34.750	0.00	0.72	0.511	IO					1.08
34.833	0.00	0.71	0.506	IO					1.07
34.917	0.00	0.71	0.501	IO					1.06
35.000	0.00	0.71	0.496	IO					1.05
35.083	0.00	0.70	0.491	IO					1.04
35.167	0.00	0.70	0.486	IO					1.03
35.250	0.00	0.70	0.482	IO					1.02
35.333	0.00	0.69	0.477	IO					1.01
35.417	0.00	0.69	0.472	IO					1.00
35.500	0.00	0.69	0.467	IO					0.99
35.583	0.00	0.68	0.463	IO					0.98
35.667	0.00	0.68	0.458	IO					0.97

35.750	0.00	0.68	0.453	IO					0.96
35.833	0.00	0.67	0.449	IO					0.95
35.917	0.00	0.67	0.444	IO					0.94
36.000	0.00	0.67	0.439	IO					0.93
36.083	0.00	0.66	0.435	IO					0.92
36.167	0.00	0.66	0.430	IO					0.91
36.250	0.00	0.66	0.426	IO					0.90
36.333	0.00	0.65	0.421	IO					0.89
36.417	0.00	0.65	0.417	IO					0.88
36.500	0.00	0.65	0.412	IO					0.88
36.583	0.00	0.64	0.408	IO					0.87
36.667	0.00	0.64	0.403	IO					0.86
36.750	0.00	0.64	0.399	IO					0.85
36.833	0.00	0.64	0.395	IO					0.84
36.917	0.00	0.63	0.390	IO					0.83
37.000	0.00	0.63	0.386	IO					0.82
37.083	0.00	0.63	0.381	IO					0.81
37.167	0.00	0.62	0.377	IO					0.80
37.250	0.00	0.62	0.373	IO					0.79
37.333	0.00	0.62	0.369	IO					0.79
37.417	0.00	0.61	0.364	IO					0.78
37.500	0.00	0.61	0.360	IO					0.77
37.583	0.00	0.61	0.356	IO					0.76
37.667	0.00	0.61	0.352	IO					0.75
37.750	0.00	0.60	0.348	IO					0.74
37.833	0.00	0.60	0.344	IO					0.73
37.917	0.00	0.60	0.339	IO					0.73
38.000	0.00	0.59	0.335	IO					0.72
38.083	0.00	0.59	0.331	IO					0.71
38.167	0.00	0.59	0.327	O					0.70
38.250	0.00	0.59	0.323	O					0.69
38.333	0.00	0.58	0.319	O					0.68
38.417	0.00	0.58	0.315	O					0.68
38.500	0.00	0.58	0.311	O					0.67
38.583	0.00	0.57	0.307	O					0.66
38.667	0.00	0.57	0.303	O					0.65
38.750	0.00	0.57	0.299	O					0.64
38.833	0.00	0.57	0.295	O					0.63
38.917	0.00	0.56	0.291	O					0.63
39.000	0.00	0.56	0.288	O					0.62
39.083	0.00	0.56	0.284	O					0.61
39.167	0.00	0.55	0.280	O					0.60
39.250	0.00	0.55	0.276	O					0.60
39.333	0.00	0.55	0.272	O					0.59
39.417	0.00	0.55	0.269	O					0.58
39.500	0.00	0.54	0.265	O					0.57
39.583	0.00	0.54	0.261	O					0.56
39.667	0.00	0.54	0.257	O					0.56
39.750	0.00	0.54	0.254	O					0.55
39.833	0.00	0.53	0.250	O					0.54
39.917	0.00	0.53	0.246	O					0.53
40.000	0.00	0.53	0.243	O					0.53
40.083	0.00	0.53	0.239	O					0.52
40.167	0.00	0.52	0.235	O					0.51
40.250	0.00	0.52	0.232	O					0.50
40.333	0.00	0.52	0.228	O					0.50
40.417	0.00	0.51	0.225	O					0.49
40.500	0.00	0.50	0.221	O					0.48
40.583	0.00	0.49	0.218	O					0.47
40.667	0.00	0.48	0.214	O					0.47
40.750	0.00	0.48	0.211	O					0.46
40.833	0.00	0.47	0.208	O					0.45
40.917	0.00	0.46	0.205	O					0.44
41.000	0.00	0.46	0.201	O					0.44
41.083	0.00	0.45	0.198	O					0.43
41.167	0.00	0.44	0.195	O					0.42
41.250	0.00	0.43	0.192	O					0.42
41.333	0.00	0.43	0.189	O					0.41
41.417	0.00	0.42	0.186	O					0.41
41.500	0.00	0.41	0.183	O					0.40
41.583	0.00	0.41	0.181	O					0.39

41.667	0.00	0.40	0.178	O					0.39
41.750	0.00	0.40	0.175	O					0.38
41.833	0.00	0.39	0.172	O					0.37
41.917	0.00	0.38	0.170	O					0.37
42.000	0.00	0.38	0.167	O					0.36
42.083	0.00	0.37	0.165	O					0.36
42.167	0.00	0.37	0.162	O					0.35
42.250	0.00	0.36	0.160	O					0.35
42.333	0.00	0.36	0.157	O					0.34
42.417	0.00	0.35	0.155	O					0.34
42.500	0.00	0.34	0.152	O					0.33
42.583	0.00	0.34	0.150	O					0.33
42.667	0.00	0.33	0.148	O					0.32
42.750	0.00	0.33	0.145	O					0.32
42.833	0.00	0.32	0.143	O					0.31
42.917	0.00	0.32	0.141	O					0.31
43.000	0.00	0.31	0.139	O					0.30
43.083	0.00	0.31	0.137	O					0.30
43.167	0.00	0.30	0.134	O					0.29
43.250	0.00	0.30	0.132	O					0.29
43.333	0.00	0.29	0.130	O					0.28
43.417	0.00	0.29	0.128	O					0.28
43.500	0.00	0.29	0.126	O					0.27
43.583	0.00	0.28	0.124	O					0.27
43.667	0.00	0.28	0.122	O					0.27
43.750	0.00	0.27	0.121	O					0.26
43.833	0.00	0.27	0.119	O					0.26
43.917	0.00	0.26	0.117	O					0.25
44.000	0.00	0.26	0.115	O					0.25
44.083	0.00	0.26	0.113	O					0.25
44.167	0.00	0.25	0.111	O					0.24
44.250	0.00	0.25	0.110	O					0.24
44.333	0.00	0.24	0.108	O					0.23
44.417	0.00	0.24	0.106	O					0.23
44.500	0.00	0.24	0.105	O					0.23
44.583	0.00	0.23	0.103	O					0.22
44.667	0.00	0.23	0.102	O					0.22
44.750	0.00	0.23	0.100	O					0.22
44.833	0.00	0.22	0.098	O					0.21
44.917	0.00	0.22	0.097	O					0.21
45.000	0.00	0.22	0.095	O					0.21
45.083	0.00	0.21	0.094	O					0.20
45.167	0.00	0.21	0.092	O					0.20
45.250	0.00	0.21	0.091	O					0.20
45.333	0.00	0.20	0.090	O					0.19
45.417	0.00	0.20	0.088	O					0.19
45.500	0.00	0.20	0.087	O					0.19
45.583	0.00	0.19	0.086	O					0.19
45.667	0.00	0.19	0.084	O					0.18
45.750	0.00	0.19	0.083	O					0.18
45.833	0.00	0.18	0.082	O					0.18
45.917	0.00	0.18	0.080	O					0.17
46.000	0.00	0.18	0.079	O					0.17
46.083	0.00	0.18	0.078	O					0.17
46.167	0.00	0.17	0.077	O					0.17
46.250	0.00	0.17	0.076	O					0.16
46.333	0.00	0.17	0.074	O					0.16
46.417	0.00	0.17	0.073	O					0.16
46.500	0.00	0.16	0.072	O					0.16
46.583	0.00	0.16	0.071	O					0.15
46.667	0.00	0.16	0.070	O					0.15
46.750	0.00	0.16	0.069	O					0.15
46.833	0.00	0.15	0.068	O					0.15
46.917	0.00	0.15	0.067	O					0.14
47.000	0.00	0.15	0.066	O					0.14
47.083	0.00	0.15	0.065	O					0.14
47.167	0.00	0.14	0.064	O					0.14
47.250	0.00	0.14	0.063	O					0.14
47.333	0.00	0.14	0.062	O					0.13
47.417	0.00	0.14	0.061	O					0.13
47.500	0.00	0.14	0.060	O					0.13

47.583	0.00	0.13	0.059	O					0.13
47.667	0.00	0.13	0.058	O					0.13
47.750	0.00	0.13	0.057	O					0.12
47.833	0.00	0.13	0.056	O					0.12
47.917	0.00	0.13	0.055	O					0.12
48.000	0.00	0.12	0.054	O					0.12
48.083	0.00	0.12	0.054	O					0.12
48.167	0.00	0.12	0.053	O					0.11
48.250	0.00	0.12	0.052	O					0.11
48.333	0.00	0.12	0.051	O					0.11
48.417	0.00	0.11	0.050	O					0.11
48.500	0.00	0.11	0.050	O					0.11
48.583	0.00	0.11	0.049	O					0.11
48.667	0.00	0.11	0.048	O					0.10
48.750	0.00	0.11	0.047	O					0.10
48.833	0.00	0.11	0.047	O					0.10
48.917	0.00	0.10	0.046	O					0.10
49.000	0.00	0.10	0.045	O					0.10
49.083	0.00	0.10	0.044	O					0.10
49.167	0.00	0.10	0.044	O					0.10
49.250	0.00	0.10	0.043	O					0.09
49.333	0.00	0.10	0.042	O					0.09
49.417	0.00	0.09	0.042	O					0.09
49.500	0.00	0.09	0.041	O					0.09
49.583	0.00	0.09	0.041	O					0.09
49.667	0.00	0.09	0.040	O					0.09
49.750	0.00	0.09	0.039	O					0.09
49.833	0.00	0.09	0.039	O					0.08
49.917	0.00	0.09	0.038	O					0.08
50.000	0.00	0.08	0.037	O					0.08
50.083	0.00	0.08	0.037	O					0.08
50.167	0.00	0.08	0.036	O					0.08
50.250	0.00	0.08	0.036	O					0.08
50.333	0.00	0.08	0.035	O					0.08
50.417	0.00	0.08	0.035	O					0.08
50.500	0.00	0.08	0.034	O					0.07
50.583	0.00	0.08	0.034	O					0.07
50.667	0.00	0.07	0.033	O					0.07
50.750	0.00	0.07	0.033	O					0.07
50.833	0.00	0.07	0.032	O					0.07
50.917	0.00	0.07	0.032	O					0.07
51.000	0.00	0.07	0.031	O					0.07
51.083	0.00	0.07	0.031	O					0.07
51.167	0.00	0.07	0.030	O					0.07
51.250	0.00	0.07	0.030	O					0.06
51.333	0.00	0.07	0.029	O					0.06
51.417	0.00	0.07	0.029	O					0.06
51.500	0.00	0.06	0.028	O					0.06
51.583	0.00	0.06	0.028	O					0.06
51.667	0.00	0.06	0.027	O					0.06
51.750	0.00	0.06	0.027	O					0.06
51.833	0.00	0.06	0.027	O					0.06
51.917	0.00	0.06	0.026	O					0.06
52.000	0.00	0.06	0.026	O					0.06
52.083	0.00	0.06	0.025	O					0.06
52.167	0.00	0.06	0.025	O					0.05
52.250	0.00	0.06	0.025	O					0.05
52.333	0.00	0.05	0.024	O					0.05
52.417	0.00	0.05	0.024	O					0.05
52.500	0.00	0.05	0.023	O					0.05
52.583	0.00	0.05	0.023	O					0.05
52.667	0.00	0.05	0.023	O					0.05
52.750	0.00	0.05	0.022	O					0.05
52.833	0.00	0.05	0.022	O					0.05
52.917	0.00	0.05	0.022	O					0.05
53.000	0.00	0.05	0.021	O					0.05
53.083	0.00	0.05	0.021	O					0.05
53.167	0.00	0.05	0.021	O					0.05
53.250	0.00	0.05	0.020	O					0.04
53.333	0.00	0.05	0.020	O					0.04
53.417	0.00	0.04	0.020	O					0.04

53.500	0.00	0.04	0.019	○					0.04
53.583	0.00	0.04	0.019	○					0.04
53.667	0.00	0.04	0.019	○					0.04
53.750	0.00	0.04	0.019	○					0.04
53.833	0.00	0.04	0.018	○					0.04
53.917	0.00	0.04	0.018	○					0.04
54.000	0.00	0.04	0.018	○					0.04
54.083	0.00	0.04	0.017	○					0.04
54.167	0.00	0.04	0.017	○					0.04
54.250	0.00	0.04	0.017	○					0.04
54.333	0.00	0.04	0.017	○					0.04
54.417	0.00	0.04	0.016	○					0.04
54.500	0.00	0.04	0.016	○					0.04
54.583	0.00	0.04	0.016	○					0.03
54.667	0.00	0.04	0.016	○					0.03
54.750	0.00	0.03	0.015	○					0.03
54.833	0.00	0.03	0.015	○					0.03
54.917	0.00	0.03	0.015	○					0.03
55.000	0.00	0.03	0.015	○					0.03
55.083	0.00	0.03	0.014	○					0.03
55.167	0.00	0.03	0.014	○					0.03
55.250	0.00	0.03	0.014	○					0.03
55.333	0.00	0.03	0.014	○					0.03
55.417	0.00	0.03	0.014	○					0.03
55.500	0.00	0.03	0.013	○					0.03
55.583	0.00	0.03	0.013	○					0.03
55.667	0.00	0.03	0.013	○					0.03
55.750	0.00	0.03	0.013	○					0.03
55.833	0.00	0.03	0.013	○					0.03
55.917	0.00	0.03	0.012	○					0.03
56.000	0.00	0.03	0.012	○					0.03
56.083	0.00	0.03	0.012	○					0.03
56.167	0.00	0.03	0.012	○					0.03
56.250	0.00	0.03	0.012	○					0.03
56.333	0.00	0.03	0.011	○					0.02
56.417	0.00	0.03	0.011	○					0.02
56.500	0.00	0.03	0.011	○					0.02
56.583	0.00	0.02	0.011	○					0.02
56.667	0.00	0.02	0.011	○					0.02
56.750	0.00	0.02	0.011	○					0.02
56.833	0.00	0.02	0.010	○					0.02
56.917	0.00	0.02	0.010	○					0.02
57.000	0.00	0.02	0.010	○					0.02
57.083	0.00	0.02	0.010	○					0.02
57.167	0.00	0.02	0.010	○					0.02
57.250	0.00	0.02	0.010	○					0.02
57.333	0.00	0.02	0.010	○					0.02
57.417	0.00	0.02	0.009	○					0.02
57.500	0.00	0.02	0.009	○					0.02
57.583	0.00	0.02	0.009	○					0.02
57.667	0.00	0.02	0.009	○					0.02
57.750	0.00	0.02	0.009	○					0.02
57.833	0.00	0.02	0.009	○					0.02
57.917	0.00	0.02	0.009	○					0.02
58.000	0.00	0.02	0.008	○					0.02
58.083	0.00	0.02	0.008	○					0.02
58.167	0.00	0.02	0.008	○					0.02
58.250	0.00	0.02	0.008	○					0.02
58.333	0.00	0.02	0.008	○					0.02
58.417	0.00	0.02	0.008	○					0.02
58.500	0.00	0.02	0.008	○					0.02
58.583	0.00	0.02	0.008	○					0.02
58.667	0.00	0.02	0.007	○					0.02
58.750	0.00	0.02	0.007	○					0.02
58.833	0.00	0.02	0.007	○					0.02
58.917	0.00	0.02	0.007	○					0.02
59.000	0.00	0.02	0.007	○					0.02
59.083	0.00	0.02	0.007	○					0.01
59.167	0.00	0.02	0.007	○					0.01
59.250	0.00	0.02	0.007	○					0.01
59.333	0.00	0.01	0.007	○					0.01

59.417	0.00	0.01	0.006	0					0.01
59.500	0.00	0.01	0.006	0					0.01
59.583	0.00	0.01	0.006	0					0.01
59.667	0.00	0.01	0.006	0					0.01
59.750	0.00	0.01	0.006	0					0.01
59.833	0.00	0.01	0.006	0					0.01
59.917	0.00	0.01	0.006	0					0.01
60.000	0.00	0.01	0.006	0					0.01
60.083	0.00	0.01	0.006	0					0.01
60.167	0.00	0.01	0.006	0					0.01
60.250	0.00	0.01	0.006	0					0.01
60.333	0.00	0.01	0.005	0					0.01
60.417	0.00	0.01	0.005	0					0.01
60.500	0.00	0.01	0.005	0					0.01
60.583	0.00	0.01	0.005	0					0.01
60.667	0.00	0.01	0.005	0					0.01
60.750	0.00	0.01	0.005	0					0.01
60.833	0.00	0.01	0.005	0					0.01
60.917	0.00	0.01	0.005	0					0.01
61.000	0.00	0.01	0.005	0					0.01
61.083	0.00	0.01	0.005	0					0.01
61.167	0.00	0.01	0.005	0					0.01
61.250	0.00	0.01	0.005	0					0.01
61.333	0.00	0.01	0.005	0					0.01
61.417	0.00	0.01	0.004	0					0.01
61.500	0.00	0.01	0.004	0					0.01
61.583	0.00	0.01	0.004	0					0.01
61.667	0.00	0.01	0.004	0					0.01
61.750	0.00	0.01	0.004	0					0.01
61.833	0.00	0.01	0.004	0					0.01
61.917	0.00	0.01	0.004	0					0.01
62.000	0.00	0.01	0.004	0					0.01
62.083	0.00	0.01	0.004	0					0.01
62.167	0.00	0.01	0.004	0					0.01
62.250	0.00	0.01	0.004	0					0.01
62.333	0.00	0.01	0.004	0					0.01
62.417	0.00	0.01	0.004	0					0.01
62.500	0.00	0.01	0.004	0					0.01
62.583	0.00	0.01	0.004	0					0.01
62.667	0.00	0.01	0.004	0					0.01
62.750	0.00	0.01	0.003	0					0.01
62.833	0.00	0.01	0.003	0					0.01
62.917	0.00	0.01	0.003	0					0.01
63.000	0.00	0.01	0.003	0					0.01
63.083	0.00	0.01	0.003	0					0.01
63.167	0.00	0.01	0.003	0					0.01
63.250	0.00	0.01	0.003	0					0.01
63.333	0.00	0.01	0.003	0					0.01
63.417	0.00	0.01	0.003	0					0.01
63.500	0.00	0.01	0.003	0					0.01
63.583	0.00	0.01	0.003	0					0.01
63.667	0.00	0.01	0.003	0					0.01
63.750	0.00	0.01	0.003						

65.333	0.00	0.00	0.002	0					0.00
65.417	0.00	0.00	0.002	0					0.00
65.500	0.00	0.00	0.002	0					0.00
65.583	0.00	0.00	0.002	0					0.00
65.667	0.00	0.00	0.002	0					0.00
65.750	0.00	0.00	0.002	0					0.00
65.833	0.00	0.00	0.002	0					0.00
65.917	0.00	0.00	0.002	0					0.00
66.000	0.00	0.00	0.002	0					0.00
66.083	0.00	0.00	0.002	0					0.00
66.167	0.00	0.00	0.002	0					0.00
66.250	0.00	0.00	0.002	0					0.00
66.333	0.00	0.00	0.002	0					0.00
66.417	0.00	0.00	0.002	0					0.00
66.500	0.00	0.00	0.002	0					0.00
66.583	0.00	0.00	0.002	0					0.00
66.667	0.00	0.00	0.002	0					0.00
66.750	0.00	0.00	0.002	0					0.00
66.833	0.00	0.00	0.002	0					0.00
66.917	0.00	0.00	0.002	0					0.00
67.000	0.00	0.00	0.002	0					0.00
67.083	0.00	0.00	0.002	0					0.00
67.167	0.00	0.00	0.002	0					0.00
67.250	0.00	0.00	0.001	0					0.00
67.333	0.00	0.00	0.001	0					0.00
67.417	0.00	0.00	0.001	0					0.00
67.500	0.00	0.00	0.001	0					0.00
67.583	0.00	0.00	0.001	0					0.00
67.667	0.00	0.00	0.001	0					0.00
67.750	0.00	0.00	0.001	0					0.00
67.833	0.00	0.00	0.001	0					0.00
67.917	0.00	0.00	0.001	0					0.00
68.000	0.00	0.00	0.001	0					0.00
68.083	0.00	0.00	0.001	0					0.00
68.167	0.00	0.00	0.001	0					0.00
68.250	0.00	0.00	0.001	0					0.00
68.333	0.00	0.00	0.001	0					0.00
68.417	0.00	0.00	0.001	0					0.00
68.500	0.00	0.00	0.001	0					0.00
68.583	0.00	0.00	0.001	0					0.00
68.667	0.00	0.00	0.001	0					0.00
68.750	0.00	0.00	0.001	0					0.00
68.833	0.00	0.00	0.001	0					0.00
68.917	0.00	0.00	0.001	0					0.00
69.000	0.00	0.00	0.001	0					0.00
69.083	0.00	0.00	0.001	0					0.00
69.167	0.00	0.00	0.001	0					0.00
69.250	0.00	0.00	0.001	0					0.00
69.333	0.00	0.00	0.001	0					0.00
69.417	0.00	0.00	0.001	0					0.00
69.500	0.00	0.00	0.001	0					0.00
69.583	0.00	0.00	0.001	0					0.00
69.667	0.00	0.00	0.001						

71.250	0.00	0.00	0.001	O					0.00
71.333	0.00	0.00	0.001	O					0.00
71.417	0.00	0.00	0.001	O					0.00
71.500	0.00	0.00	0.001	O					0.00
71.583	0.00	0.00	0.001	O					0.00
71.667	0.00	0.00	0.001	O					0.00
71.750	0.00	0.00	0.001	O					0.00
71.833	0.00	0.00	0.001	O					0.00
71.917	0.00	0.00	0.001	O					0.00
72.000	0.00	0.00	0.001	O					0.00
72.083	0.00	0.00	0.001	O					0.00
72.167	0.00	0.00	0.001	O					0.00
72.250	0.00	0.00	0.001	O					0.00
72.333	0.00	0.00	0.001	O					0.00
72.417	0.00	0.00	0.001	O					0.00
72.500	0.00	0.00	0.001	O					0.00
72.583	0.00	0.00	0.001	O					0.00
72.667	0.00	0.00	0.001	O					0.00
72.750	0.00	0.00	0.001	O					0.00
72.833	0.00	0.00	0.001	O					0.00
72.917	0.00	0.00	0.001	O					0.00
73.000	0.00	0.00	0.001	O					0.00
73.083	0.00	0.00	0.001	O					0.00
73.167	0.00	0.00	0.000	O					0.00
73.250	0.00	0.00	0.000	O					0.00
73.333	0.00	0.00	0.000	O					0.00
73.417	0.00	0.00	0.000	O					0.00
73.500	0.00	0.00	0.000	O					0.00
73.583	0.00	0.00	0.000	O					0.00

*****HYDROGRAPH DATA*****

Number of intervals = 883

Time interval = 5.0 (Min.)

Maximum/Peak flow rate = 1.200 (CFS)

Total volume = 2.858 (Ac.Ft)

Status of hydrographs being held in storage

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

Unit Hydrograph Analysis

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Study date 03/08/24

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6484

DIVERSIFIED-MAPLE AVE
UH ANALYSIS-DEVELOPED CONDITION
10-YR STORM EVENT

Storm Event Year = 10

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
8.20	1	0.98

Rainfall data for year 10
8.20 6 2.58

Rainfall data for year 10
8.20 24 4.82

+++++

***** Area-averaged max loss rate, Fm *****

SCS curve No. (AMCII)	SCS curve NO. (AMC 2)	Area (Ac.)	Area Fraction	Fp (Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
32.0	32.0	8.20	1.000	0.978	0.100	0.098

Area-averaged adjusted loss rate Fm (In/Hr) = 0.098

***** Area-Averaged low loss rate fraction, Yb *****

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
0.82	0.100	32.0	32.0	21.25	0.003
7.38	0.900	98.0	98.0	0.20	0.951

Area-averaged catchment yield fraction, Y = 0.856

Area-averaged low loss fraction, Yb = 0.144

Direct entry of lag time by user

+++++

Watershed area = 8.20 (Ac.)
 Catchment Lag time = 0.134 hours
 Unit interval = 5.000 minutes
 Unit interval percentage of lag time = 62.1891
 Hydrograph baseflow = 0.00 (CFS)
 Average maximum watershed loss rate (Fm) = 0.098 (In/Hr)
 Average low loss rate fraction (Yb) = 0.144 (decimal)
 VALLEY DEVELOPED S-Graph Selected
 Computed peak 5-minute rainfall = 0.363 (In)
 Computed peak 30-minute rainfall = 0.743 (In)
 Specified peak 1-hour rainfall = 0.981 (In)
 Computed peak 3-hour rainfall = 1.775 (In)
 Specified peak 6-hour rainfall = 2.580 (In)
 Specified peak 24-hour rainfall = 4.820 (In)

Rainfall depth area reduction factors:

Using a total area of 8.20 (Ac.) (Ref: fig. E-4)

5-minute factor = 1.000	Adjusted rainfall = 0.363 (In)
30-minute factor = 1.000	Adjusted rainfall = 0.743 (In)
1-hour factor = 1.000	Adjusted rainfall = 0.981 (In)
3-hour factor = 1.000	Adjusted rainfall = 1.775 (In)
6-hour factor = 1.000	Adjusted rainfall = 2.580 (In)
24-hour factor = 1.000	Adjusted rainfall = 4.820 (In)

U n i t H y d r o g r a p h		
Interval	'S' Graph	Unit Hydrograph
Number	Mean values	((CFS))

	(K = 99.17 (CFS))	
1	6.986	6.928
2	44.333	37.037
3	83.691	39.031
4	96.281	12.485
5	98.837	2.535
6	100.000	1.153

Peak Unit	Adjusted mass rainfall	Unit rainfall
Number	(In)	(In)
1	0.3629	0.3629
2	0.4789	0.1160
3	0.5632	0.0843
4	0.6319	0.0687
5	0.6909	0.0590
6	0.7432	0.0523
7	0.7904	0.0473
8	0.8338	0.0434
9	0.8740	0.0402
10	0.9117	0.0376
11	0.9471	0.0354
12	0.9806	0.0335
13	1.0239	0.0433
14	1.0657	0.0418
15	1.1062	0.0405
16	1.1454	0.0392
17	1.1835	0.0381
18	1.2206	0.0371
19	1.2568	0.0362
20	1.2921	0.0353
21	1.3266	0.0345
22	1.3603	0.0337
23	1.3934	0.0330
24	1.4258	0.0324
25	1.4576	0.0318
26	1.4888	0.0312
27	1.5194	0.0307
28	1.5495	0.0301

29	1.5792	0.0296
30	1.6084	0.0292
31	1.6371	0.0287
32	1.6654	0.0283
33	1.6933	0.0279
34	1.7208	0.0275
35	1.7480	0.0271
36	1.7748	0.0268
37	1.8012	0.0264
38	1.8273	0.0261
39	1.8531	0.0258
40	1.8786	0.0255
41	1.9038	0.0252
42	1.9287	0.0249
43	1.9534	0.0247
44	1.9778	0.0244
45	2.0019	0.0241
46	2.0258	0.0239
47	2.0494	0.0237
48	2.0729	0.0234
49	2.0961	0.0232
50	2.1190	0.0230
51	2.1418	0.0228
52	2.1644	0.0226
53	2.1867	0.0224
54	2.2089	0.0222
55	2.2309	0.0220
56	2.2527	0.0218
57	2.2743	0.0216
58	2.2958	0.0214
59	2.3170	0.0213
60	2.3382	0.0211
61	2.3591	0.0210
62	2.3799	0.0208
63	2.4005	0.0206
64	2.4210	0.0205
65	2.4414	0.0203
66	2.4616	0.0202
67	2.4816	0.0201
68	2.5016	0.0199
69	2.5213	0.0198
70	2.5410	0.0197
71	2.5605	0.0195
72	2.5799	0.0194
73	2.5960	0.0161
74	2.6120	0.0160
75	2.6279	0.0159
76	2.6436	0.0157
77	2.6592	0.0156
78	2.6747	0.0155
79	2.6901	0.0154
80	2.7054	0.0153
81	2.7206	0.0152
82	2.7357	0.0151
83	2.7507	0.0150
84	2.7656	0.0149
85	2.7804	0.0148
86	2.7951	0.0147
87	2.8097	0.0146
88	2.8242	0.0145
89	2.8387	0.0144
90	2.8530	0.0143
91	2.8672	0.0142
92	2.8814	0.0142
93	2.8955	0.0141
94	2.9095	0.0140
95	2.9234	0.0139
96	2.9372	0.0138
97	2.9510	0.0138
98	2.9647	0.0137
99	2.9783	0.0136

100	2.9918	0.0135
101	3.0052	0.0135
102	3.0186	0.0134
103	3.0319	0.0133
104	3.0451	0.0132
105	3.0583	0.0132
106	3.0714	0.0131
107	3.0844	0.0130
108	3.0974	0.0130
109	3.1103	0.0129
110	3.1231	0.0128
111	3.1359	0.0128
112	3.1486	0.0127
113	3.1613	0.0126
114	3.1738	0.0126
115	3.1864	0.0125
116	3.1988	0.0125
117	3.2112	0.0124
118	3.2236	0.0123
119	3.2359	0.0123
120	3.2481	0.0122
121	3.2603	0.0122
122	3.2724	0.0121
123	3.2844	0.0121
124	3.2965	0.0120
125	3.3084	0.0120
126	3.3203	0.0119
127	3.3322	0.0119
128	3.3440	0.0118
129	3.3557	0.0118
130	3.3674	0.0117
131	3.3791	0.0117
132	3.3907	0.0116
133	3.4023	0.0116
134	3.4138	0.0115
135	3.4252	0.0115
136	3.4366	0.0114
137	3.4480	0.0114
138	3.4593	0.0113
139	3.4706	0.0113
140	3.4818	0.0112
141	3.4930	0.0112
142	3.5042	0.0111
143	3.5153	0.0111
144	3.5264	0.0111
145	3.5374	0.0110
146	3.5483	0.0110
147	3.5593	0.0109
148	3.5702	0.0109
149	3.5810	0.0109
150	3.5919	0.0108
151	3.6026	0.0108
152	3.6134	0.0107
153	3.6241	0.0107
154	3.6347	0.0107
155	3.6453	0.0106
156	3.6559	0.0106
157	3.6665	0.0105
158	3.6770	0.0105
159	3.6875	0.0105
160	3.6979	0.0104
161	3.7083	0.0104
162	3.7187	0.0104
163	3.7290	0.0103
164	3.7393	0.0103
165	3.7496	0.0103
166	3.7598	0.0102
167	3.7700	0.0102
168	3.7801	0.0102
169	3.7903	0.0101
170	3.8004	0.0101

171	3.8104	0.0101
172	3.8205	0.0100
173	3.8305	0.0100
174	3.8404	0.0100
175	3.8504	0.0099
176	3.8603	0.0099
177	3.8701	0.0099
178	3.8800	0.0098
179	3.8898	0.0098
180	3.8996	0.0098
181	3.9093	0.0098
182	3.9190	0.0097
183	3.9287	0.0097
184	3.9384	0.0097
185	3.9480	0.0096
186	3.9576	0.0096
187	3.9672	0.0096
188	3.9768	0.0096
189	3.9863	0.0095
190	3.9958	0.0095
191	4.0053	0.0095
192	4.0147	0.0094
193	4.0241	0.0094
194	4.0335	0.0094
195	4.0429	0.0094
196	4.0522	0.0093
197	4.0615	0.0093
198	4.0708	0.0093
199	4.0800	0.0093
200	4.0893	0.0092
201	4.0985	0.0092
202	4.1077	0.0092
203	4.1168	0.0092
204	4.1259	0.0091
205	4.1351	0.0091
206	4.1441	0.0091
207	4.1532	0.0091
208	4.1622	0.0090
209	4.1712	0.0090
210	4.1802	0.0090
211	4.1892	0.0090
212	4.1981	0.0089
213	4.2070	0.0089
214	4.2159	0.0089
215	4.2248	0.0089
216	4.2336	0.0088
217	4.2425	0.0088
218	4.2513	0.0088
219	4.2601	0.0088
220	4.2688	0.0088
221	4.2776	0.0087
222	4.2863	0.0087
223	4.2950	0.0087
224	4.3036	0.0087
225	4.3123	0.0087
226	4.3209	0.0086
227	4.3295	0.0086
228	4.3381	0.0086
229	4.3467	0.0086
230	4.3552	0.0085
231	4.3638	0.0085
232	4.3723	0.0085
233	4.3808	0.0085
234	4.3892	0.0085
235	4.3977	0.0084
236	4.4061	0.0084
237	4.4145	0.0084
238	4.4229	0.0084
239	4.4313	0.0084
240	4.4396	0.0083
241	4.4479	0.0083

242	4.4562	0.0083
243	4.4645	0.0083
244	4.4728	0.0083
245	4.4811	0.0083
246	4.4893	0.0082
247	4.4975	0.0082
248	4.5057	0.0082
249	4.5139	0.0082
250	4.5221	0.0082
251	4.5302	0.0081
252	4.5383	0.0081
253	4.5465	0.0081
254	4.5545	0.0081
255	4.5626	0.0081
256	4.5707	0.0081
257	4.5787	0.0080
258	4.5867	0.0080
259	4.5948	0.0080
260	4.6027	0.0080
261	4.6107	0.0080
262	4.6187	0.0080
263	4.6266	0.0079
264	4.6345	0.0079
265	4.6424	0.0079
266	4.6503	0.0079
267	4.6582	0.0079
268	4.6661	0.0079
269	4.6739	0.0078
270	4.6817	0.0078
271	4.6895	0.0078
272	4.6973	0.0078
273	4.7051	0.0078
274	4.7129	0.0078
275	4.7206	0.0077
276	4.7283	0.0077
277	4.7361	0.0077
278	4.7438	0.0077
279	4.7515	0.0077
280	4.7591	0.0077
281	4.7668	0.0077
282	4.7744	0.0076
283	4.7820	0.0076
284	4.7897	0.0076
285	4.7972	0.0076
286	4.8048	0.0076
287	4.8124	0.0076
288	4.8200	0.0076

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0076	0.0011	0.0065
2	0.0076	0.0011	0.0065
3	0.0076	0.0011	0.0065
4	0.0076	0.0011	0.0065
5	0.0076	0.0011	0.0065
6	0.0077	0.0011	0.0066
7	0.0077	0.0011	0.0066
8	0.0077	0.0011	0.0066
9	0.0077	0.0011	0.0066
10	0.0077	0.0011	0.0066
11	0.0078	0.0011	0.0067
12	0.0078	0.0011	0.0067
13	0.0078	0.0011	0.0067
14	0.0078	0.0011	0.0067
15	0.0079	0.0011	0.0067
16	0.0079	0.0011	0.0068
17	0.0079	0.0011	0.0068
18	0.0079	0.0011	0.0068
19	0.0080	0.0011	0.0068

20	0.0080	0.0011	0.0068
21	0.0080	0.0012	0.0069
22	0.0080	0.0012	0.0069
23	0.0081	0.0012	0.0069
24	0.0081	0.0012	0.0069
25	0.0081	0.0012	0.0070
26	0.0081	0.0012	0.0070
27	0.0082	0.0012	0.0070
28	0.0082	0.0012	0.0070
29	0.0082	0.0012	0.0071
30	0.0083	0.0012	0.0071
31	0.0083	0.0012	0.0071
32	0.0083	0.0012	0.0071
33	0.0083	0.0012	0.0071
34	0.0084	0.0012	0.0072
35	0.0084	0.0012	0.0072
36	0.0084	0.0012	0.0072
37	0.0085	0.0012	0.0072
38	0.0085	0.0012	0.0073
39	0.0085	0.0012	0.0073
40	0.0085	0.0012	0.0073
41	0.0086	0.0012	0.0074
42	0.0086	0.0012	0.0074
43	0.0087	0.0012	0.0074
44	0.0087	0.0012	0.0074
45	0.0087	0.0013	0.0075
46	0.0087	0.0013	0.0075
47	0.0088	0.0013	0.0075
48	0.0088	0.0013	0.0075
49	0.0088	0.0013	0.0076
50	0.0089	0.0013	0.0076
51	0.0089	0.0013	0.0076
52	0.0089	0.0013	0.0077
53	0.0090	0.0013	0.0077
54	0.0090	0.0013	0.0077
55	0.0091	0.0013	0.0078
56	0.0091	0.0013	0.0078
57	0.0091	0.0013	0.0078
58	0.0092	0.0013	0.0078
59	0.0092	0.0013	0.0079
60	0.0092	0.0013	0.0079
61	0.0093	0.0013	0.0079
62	0.0093	0.0013	0.0080
63	0.0094	0.0013	0.0080
64	0.0094	0.0014	0.0080
65	0.0094	0.0014	0.0081
66	0.0095	0.0014	0.0081
67	0.0095	0.0014	0.0082
68	0.0096	0.0014	0.0082
69	0.0096	0.0014	0.0082
70	0.0096	0.0014	0.0082
71	0.0097	0.0014	0.0083
72	0.0097	0.0014	0.0083
73	0.0098	0.0014	0.0084
74	0.0098	0.0014	0.0084
75	0.0099	0.0014	0.0085
76	0.0099	0.0014	0.0085
77	0.0100	0.0014	0.0085
78	0.0100	0.0014	0.0086
79	0.0101	0.0014	0.0086
80	0.0101	0.0015	0.0086
81	0.0102	0.0015	0.0087
82	0.0102	0.0015	0.0087
83	0.0103	0.0015	0.0088
84	0.0103	0.0015	0.0088
85	0.0104	0.0015	0.0089
86	0.0104	0.0015	0.0089
87	0.0105	0.0015	0.0090
88	0.0105	0.0015	0.0090
89	0.0106	0.0015	0.0091
90	0.0106	0.0015	0.0091

91	0.0107	0.0015	0.0092
92	0.0107	0.0015	0.0092
93	0.0108	0.0016	0.0093
94	0.0109	0.0016	0.0093
95	0.0109	0.0016	0.0094
96	0.0110	0.0016	0.0094
97	0.0111	0.0016	0.0095
98	0.0111	0.0016	0.0095
99	0.0112	0.0016	0.0096
100	0.0112	0.0016	0.0096
101	0.0113	0.0016	0.0097
102	0.0114	0.0016	0.0097
103	0.0115	0.0016	0.0098
104	0.0115	0.0017	0.0099
105	0.0116	0.0017	0.0099
106	0.0117	0.0017	0.0100
107	0.0118	0.0017	0.0101
108	0.0118	0.0017	0.0101
109	0.0119	0.0017	0.0102
110	0.0120	0.0017	0.0102
111	0.0121	0.0017	0.0103
112	0.0121	0.0017	0.0104
113	0.0122	0.0018	0.0105
114	0.0123	0.0018	0.0105
115	0.0124	0.0018	0.0106
116	0.0125	0.0018	0.0107
117	0.0126	0.0018	0.0108
118	0.0126	0.0018	0.0108
119	0.0128	0.0018	0.0109
120	0.0128	0.0018	0.0110
121	0.0130	0.0019	0.0111
122	0.0130	0.0019	0.0112
123	0.0132	0.0019	0.0113
124	0.0132	0.0019	0.0113
125	0.0134	0.0019	0.0115
126	0.0135	0.0019	0.0115
127	0.0136	0.0020	0.0116
128	0.0137	0.0020	0.0117
129	0.0138	0.0020	0.0118
130	0.0139	0.0020	0.0119
131	0.0141	0.0020	0.0121
132	0.0142	0.0020	0.0121
133	0.0143	0.0021	0.0123
134	0.0144	0.0021	0.0123
135	0.0146	0.0021	0.0125
136	0.0147	0.0021	0.0126
137	0.0149	0.0021	0.0127
138	0.0150	0.0022	0.0128
139	0.0152	0.0022	0.0130
140	0.0153	0.0022	0.0131
141	0.0155	0.0022	0.0133
142	0.0156	0.0022	0.0134
143	0.0159	0.0023	0.0136
144	0.0160	0.0023	0.0137
145	0.0194	0.0028	0.0166
146	0.0195	0.0028	0.0167
147	0.0198	0.0028	0.0169
148	0.0199	0.0029	0.0171
149	0.0202	0.0029	0.0173
150	0.0203	0.0029	0.0174
151	0.0206	0.0030	0.0177
152	0.0208	0.0030	0.0178
153	0.0211	0.0030	0.0181
154	0.0213	0.0031	0.0182
155	0.0216	0.0031	0.0185
156	0.0218	0.0031	0.0187
157	0.0222	0.0032	0.0190
158	0.0224	0.0032	0.0191
159	0.0228	0.0033	0.0195
160	0.0230	0.0033	0.0197
161	0.0234	0.0034	0.0201

162	0.0237	0.0034	0.0202
163	0.0241	0.0035	0.0207
164	0.0244	0.0035	0.0209
165	0.0249	0.0036	0.0213
166	0.0252	0.0036	0.0216
167	0.0258	0.0037	0.0221
168	0.0261	0.0038	0.0224
169	0.0268	0.0039	0.0229
170	0.0271	0.0039	0.0232
171	0.0279	0.0040	0.0239
172	0.0283	0.0041	0.0242
173	0.0292	0.0042	0.0250
174	0.0296	0.0043	0.0254
175	0.0307	0.0044	0.0262
176	0.0312	0.0045	0.0267
177	0.0324	0.0047	0.0277
178	0.0330	0.0048	0.0283
179	0.0345	0.0050	0.0295
180	0.0353	0.0051	0.0302
181	0.0371	0.0053	0.0318
182	0.0381	0.0055	0.0326
183	0.0405	0.0058	0.0346
184	0.0418	0.0060	0.0358
185	0.0335	0.0048	0.0287
186	0.0354	0.0051	0.0303
187	0.0402	0.0058	0.0344
188	0.0434	0.0062	0.0371
189	0.0523	0.0075	0.0448
190	0.0590	0.0081	0.0508
191	0.0843	0.0081	0.0762
192	0.1160	0.0081	0.1078
193	0.3629	0.0081	0.3548
194	0.0687	0.0081	0.0605
195	0.0473	0.0068	0.0405
196	0.0376	0.0054	0.0322
197	0.0433	0.0062	0.0371
198	0.0392	0.0056	0.0336
199	0.0362	0.0052	0.0310
200	0.0337	0.0049	0.0289
201	0.0318	0.0046	0.0272
202	0.0301	0.0043	0.0258
203	0.0287	0.0041	0.0246
204	0.0275	0.0040	0.0236
205	0.0264	0.0038	0.0226
206	0.0255	0.0037	0.0218
207	0.0247	0.0035	0.0211
208	0.0239	0.0034	0.0205
209	0.0232	0.0033	0.0199
210	0.0226	0.0032	0.0193
211	0.0220	0.0032	0.0188
212	0.0214	0.0031	0.0184
213	0.0210	0.0030	0.0179
214	0.0205	0.0029	0.0175
215	0.0201	0.0029	0.0172
216	0.0197	0.0028	0.0168
217	0.0161	0.0023	0.0138
218	0.0157	0.0023	0.0135
219	0.0154	0.0022	0.0132
220	0.0151	0.0022	0.0129
221	0.0148	0.0021	0.0127
222	0.0145	0.0021	0.0124
223	0.0142	0.0020	0.0122
224	0.0140	0.0020	0.0120
225	0.0138	0.0020	0.0118
226	0.0135	0.0019	0.0116
227	0.0133	0.0019	0.0114
228	0.0131	0.0019	0.0112
229	0.0129	0.0019	0.0110
230	0.0127	0.0018	0.0109
231	0.0125	0.0018	0.0107
232	0.0123	0.0018	0.0106

233	0.0122	0.0018	0.0104
234	0.0120	0.0017	0.0103
235	0.0119	0.0017	0.0101
236	0.0117	0.0017	0.0100
237	0.0116	0.0017	0.0099
238	0.0114	0.0016	0.0098
239	0.0113	0.0016	0.0097
240	0.0111	0.0016	0.0095
241	0.0110	0.0016	0.0094
242	0.0109	0.0016	0.0093
243	0.0108	0.0016	0.0092
244	0.0107	0.0015	0.0091
245	0.0105	0.0015	0.0090
246	0.0104	0.0015	0.0089
247	0.0103	0.0015	0.0088
248	0.0102	0.0015	0.0088
249	0.0101	0.0015	0.0087
250	0.0100	0.0014	0.0086
251	0.0099	0.0014	0.0085
252	0.0098	0.0014	0.0084
253	0.0098	0.0014	0.0083
254	0.0097	0.0014	0.0083
255	0.0096	0.0014	0.0082
256	0.0095	0.0014	0.0081
257	0.0094	0.0014	0.0081
258	0.0093	0.0013	0.0080
259	0.0093	0.0013	0.0079
260	0.0092	0.0013	0.0079
261	0.0091	0.0013	0.0078
262	0.0090	0.0013	0.0077
263	0.0090	0.0013	0.0077
264	0.0089	0.0013	0.0076
265	0.0088	0.0013	0.0076
266	0.0088	0.0013	0.0075
267	0.0087	0.0013	0.0074
268	0.0086	0.0012	0.0074
269	0.0086	0.0012	0.0073
270	0.0085	0.0012	0.0073
271	0.0084	0.0012	0.0072
272	0.0084	0.0012	0.0072
273	0.0083	0.0012	0.0071
274	0.0083	0.0012	0.0071
275	0.0082	0.0012	0.0070
276	0.0082	0.0012	0.0070
277	0.0081	0.0012	0.0069
278	0.0081	0.0012	0.0069
279	0.0080	0.0012	0.0069
280	0.0080	0.0011	0.0068
281	0.0079	0.0011	0.0068
282	0.0079	0.0011	0.0067
283	0.0078	0.0011	0.0067
284	0.0078	0.0011	0.0066
285	0.0077	0.0011	0.0066
286	0.0077	0.0011	0.0066
287	0.0076	0.0011	0.0065
288	0.0076	0.0011	0.0065

Total soil rain loss = 0.63(In)
 Total effective rainfall = 4.19(In)
 Peak flow rate in flood hydrograph = 18.90(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	5.0	10.0	15.0	20.0

0+ 5	0.0003	0.04	Q				
0+10	0.0023	0.28	Q				
0+15	0.0060	0.54	VQ				
0+20	0.0102	0.62	VQ				
0+25	0.0146	0.64	VQ				
0+30	0.0191	0.65	VQ				
0+35	0.0236	0.65	VQ				
0+40	0.0280	0.65	VQ				
0+45	0.0325	0.65	VQ				
0+50	0.0370	0.65	VQ				
0+55	0.0416	0.66	VQ				
1+ 0	0.0461	0.66	VQ				
1+ 5	0.0506	0.66	VQ				
1+10	0.0552	0.66	VQ				
1+15	0.0598	0.66	VQ				
1+20	0.0644	0.67	VQ				
1+25	0.0690	0.67	VQ				
1+30	0.0736	0.67	IQ				
1+35	0.0782	0.67	IQ				
1+40	0.0829	0.68	IQ				
1+45	0.0876	0.68	IQ				
1+50	0.0922	0.68	IQ				
1+55	0.0969	0.68	IQ				
2+ 0	0.1016	0.68	IQ				
2+ 5	0.1064	0.69	IQ				
2+10	0.1111	0.69	IQ				
2+15	0.1159	0.69	IQ				
2+20	0.1206	0.69	IQ				
2+25	0.1254	0.69	IQ				
2+30	0.1302	0.70	IQ				
2+35	0.1350	0.70	IQ				
2+40	0.1399	0.70	IQ				
2+45	0.1447	0.70	IQV				
2+50	0.1496	0.71	IQV				
2+55	0.1545	0.71	IQV				
3+ 0	0.1594	0.71	IQV				
3+ 5	0.1643	0.71	IQV				
3+10	0.1692	0.72	IQV				
3+15	0.1742	0.72	IQV				
3+20	0.1792	0.72	IQV				
3+25	0.1841	0.72	IQV				
3+30	0.1891	0.73	IQV				
3+35	0.1942	0.73	IQV				
3+40	0.1992	0.73	IQV				
3+45	0.2043	0.73	IQV				
3+50	0.2094	0.74	IQV				
3+55	0.2145	0.74	IQ V				
4+ 0	0.2196	0.74	IQ V				
4+ 5	0.2247	0.75	IQ V				
4+10	0.2299	0.75	IQ V				
4+15	0.2350	0.75	IQ V				
4+20	0.2402	0.75	IQ V				
4+25	0.2455	0.76	IQ V				
4+30	0.2507	0.76	IQ V				
4+35	0.2559	0.76	IQ V				
4+40	0.2612	0.77	IQ V				
4+45	0.2665	0.77	IQ V				
4+50	0.2718	0.77	IQ V				
4+55	0.2772	0.78	IQ V				
5+ 0	0.2826	0.78	IQ V				
5+ 5	0.2879	0.78	IQ V				
5+10	0.2933	0.79	IQ V				
5+15	0.2988	0.79	IQ V				
5+20	0.3042	0.79	IQ V				
5+25	0.3097	0.80	IQ V				
5+30	0.3152	0.80	IQ V				
5+35	0.3207	0.80	IQ V				
5+40	0.3263	0.81	IQ V				
5+45	0.3318	0.81	IQ V				
5+50	0.3374	0.81	IQ V				
5+55	0.3431	0.82	IQ V				

6+ 0	0.3487	0.82	IQ	V				
6+ 5	0.3544	0.82	IQ	V				
6+10	0.3601	0.83	IQ	V				
6+15	0.3658	0.83	IQ	V				
6+20	0.3716	0.83	IQ	V				
6+25	0.3773	0.84	IQ	V				
6+30	0.3831	0.84	IQ	V				
6+35	0.3890	0.85	IQ	V				
6+40	0.3948	0.85	IQ	V				
6+45	0.4007	0.85	IQ	V				
6+50	0.4066	0.86	IQ	V				
6+55	0.4126	0.86	IQ	V				
7+ 0	0.4186	0.87	IQ	V				
7+ 5	0.4246	0.87	IQ	V				
7+10	0.4306	0.88	IQ	V				
7+15	0.4367	0.88	IQ	V				
7+20	0.4428	0.89	IQ	V				
7+25	0.4489	0.89	IQ	V				
7+30	0.4550	0.89	IQ	V				
7+35	0.4612	0.90	IQ	V				
7+40	0.4675	0.90	IQ	V				
7+45	0.4737	0.91	IQ	V				
7+50	0.4800	0.91	IQ	V				
7+55	0.4863	0.92	IQ	V				
8+ 0	0.4927	0.92	IQ	V				
8+ 5	0.4991	0.93	IQ	V				
8+10	0.5055	0.93	IQ	V				
8+15	0.5120	0.94	IQ	V				
8+20	0.5185	0.95	IQ	V				
8+25	0.5251	0.95	IQ	V				
8+30	0.5317	0.96	IQ	V				
8+35	0.5383	0.96	IQ	V				
8+40	0.5450	0.97	IQ	V				
8+45	0.5517	0.97	IQ	V				
8+50	0.5584	0.98	IQ	V				
8+55	0.5652	0.99	IQ	V				
9+ 0	0.5720	0.99	IQ	V				
9+ 5	0.5789	1.00	IQ	V				
9+10	0.5859	1.01	I Q	V				
9+15	0.5928	1.01	I Q	V				
9+20	0.5998	1.02	I Q	V				
9+25	0.6069	1.03	I Q	V				
9+30	0.6140	1.03	I Q	V				
9+35	0.6212	1.04	I Q	V				
9+40	0.6284	1.05	I Q	V				
9+45	0.6356	1.05	I Q	V				
9+50	0.6429	1.06	I Q	V				
9+55	0.6503	1.07	I Q	V				
10+ 0	0.6577	1.08	I Q	V				
10+ 5	0.6652	1.09	I Q	V				
10+10	0.6727	1.09	I Q	V				
10+15	0.6803	1.10	I Q	V				
10+20	0.6880	1.11	I Q	V				
10+25	0.6957	1.12	I Q	V				
10+30	0.7034	1.13	I Q	V				
10+35	0.7113	1.14	I Q	V				
10+40	0.7192	1.15	I Q	V				
10+45	0.7271	1.16	I Q	V				
10+50	0.7352	1.17	I Q	V				
10+55	0.7433	1.18	I Q	V				
11+ 0	0.7514	1.19	I Q	V				
11+ 5	0.7597	1.20	I Q	V				
11+10	0.7680	1.21	I Q	V				
11+15	0.7764	1.22	I Q	V				
11+20	0.7849	1.23	I Q	V				
11+25	0.7934	1.24	I Q	I V				
11+30	0.8021	1.25	I Q	I V				
11+35	0.8108	1.27	I Q	I V				
11+40	0.8196	1.28	I Q	I V				
11+45	0.8285	1.29	I Q	I V				
11+50	0.8375	1.31	I Q	I V				

11+55	0.8466	1.32		Q		V							
12+ 0	0.8557	1.33		Q		V							
12+ 5	0.8652	1.37		Q		V							
12+10	0.8754	1.48		Q		V							
12+15	0.8864	1.61		Q		V							
12+20	0.8978	1.66		Q		V							
12+25	0.9094	1.68		Q		V							
12+30	0.9211	1.70		Q		V							
12+35	0.9329	1.72		Q		V							
12+40	0.9449	1.74		Q		V							
12+45	0.9570	1.76		Q		V							
12+50	0.9692	1.78		Q		V							
12+55	0.9816	1.80		Q		V							
13+ 0	0.9941	1.82		Q		V							
13+ 5	1.0068	1.84		Q		V							
13+10	1.0196	1.86		Q		V							
13+15	1.0326	1.89		Q		V							
13+20	1.0457	1.91		Q		V							
13+25	1.0591	1.94		Q		V							
13+30	1.0726	1.96		Q		V							
13+35	1.0863	1.99		Q		V							
13+40	1.1003	2.02		Q		V							
13+45	1.1144	2.05		Q		V							
13+50	1.1288	2.09		Q		V							
13+55	1.1434	2.12		Q		V							
14+ 0	1.1583	2.16		Q		V							
14+ 5	1.1734	2.20		Q		V							
14+10	1.1888	2.24		Q		V							
14+15	1.2045	2.28		Q		V							
14+20	1.2205	2.33		Q		V							
14+25	1.2369	2.38		Q		V							
14+30	1.2537	2.43		Q		V							
14+35	1.2708	2.49		Q		V							
14+40	1.2883	2.55		Q		V							
14+45	1.3063	2.61		Q		V							
14+50	1.3248	2.69		Q		V							
14+55	1.3439	2.76		Q		V							
15+ 0	1.3635	2.85		Q		V							
15+ 5	1.3838	2.95		Q		V							
15+10	1.4048	3.05		Q		V							
15+15	1.4267	3.17		Q		V							
15+20	1.4495	3.31		Q		V							
15+25	1.4729	3.40		Q		V							
15+30	1.4951	3.22		Q		V							
15+35	1.5161	3.06		Q		V							
15+40	1.5382	3.21		Q		V							
15+45	1.5625	3.52		Q		V							
15+50	1.5900	4.00		Q		V							
15+55	1.6227	4.74		Q		V							
16+ 0	1.6657	6.25				Q				V			
16+ 5	1.7361	10.22						Q		V			
16+10	1.8662	18.90								V			
16+15	1.9900	17.97								V		Q	
16+20	2.0511	8.88				Q				V			
16+25	2.0842	4.81				Q				V			
16+30	2.1113	3.93				Q				V			
16+35	2.1352	3.48				Q				V			
16+40	2.1576	3.25				Q				V			
16+45	2.1784	3.02				Q				V			
16+50	2.1979	2.83				Q				V			
16+55	2.2162	2.67				Q				V			
17+ 0	2.2337	2.53				Q				V			
17+ 5	2.2503	2.41				Q				V			
17+10	2.2662	2.31				Q				V			
17+15	2.2815	2.22				Q				V			
17+20	2.2963	2.15				Q				V			
17+25	2.3106	2.08				Q				V			
17+30	2.3245	2.01				Q				V			
17+35	2.3379	1.96				Q				V			
17+40	2.3510	1.90				Q				V			
17+45	2.3638	1.85				Q				V			

17+50	2.3763	1.81	Q			V	
17+55	2.3884	1.77	Q			V	
18+ 0	2.4004	1.73	Q			V	
18+ 5	2.4119	1.67	Q			V	
18+10	2.4225	1.54	Q			V	
18+15	2.4322	1.40	Q			V	
18+20	2.4414	1.34	Q			V	
18+25	2.4504	1.30	Q			V	
18+30	2.4591	1.27	Q			V	
18+35	2.4677	1.25	Q			V	
18+40	2.4762	1.23	Q			V	
18+45	2.4845	1.20	Q			V	
18+50	2.4926	1.18	Q			V	
18+55	2.5006	1.16	Q			V	
19+ 0	2.5085	1.14	Q			V	
19+ 5	2.5162	1.12	Q			V	
19+10	2.5239	1.11	Q			V	
19+15	2.5314	1.09	Q			V	
19+20	2.5388	1.07	Q			V	
19+25	2.5461	1.06	Q			V	
19+30	2.5532	1.04	Q			V	
19+35	2.5603	1.03	Q			V	
19+40	2.5673	1.02	Q			V	
19+45	2.5742	1.00	Q			V	
19+50	2.5811	0.99	Q			V	
19+55	2.5878	0.98	Q			V	
20+ 0	2.5944	0.97	Q			V	
20+ 5	2.6010	0.95	Q			V	
20+10	2.6075	0.94	Q			V	
20+15	2.6139	0.93	Q			V	
20+20	2.6203	0.92	Q			V	
20+25	2.6266	0.91	Q			V	
20+30	2.6328	0.90	Q			V	
20+35	2.6389	0.89	Q			V	
20+40	2.6450	0.88	Q			V	
20+45	2.6510	0.87	Q			V	
20+50	2.6570	0.87	Q			V	
20+55	2.6629	0.86	Q			V	
21+ 0	2.6688	0.85	Q			V	
21+ 5	2.6746	0.84	Q			V	
21+10	2.6803	0.83	Q			V	
21+15	2.6860	0.83	Q			V	
21+20	2.6916	0.82	Q			V	
21+25	2.6972	0.81	Q			V	
21+30	2.7027	0.80	Q			V	
21+35	2.7082	0.80	Q			V	
21+40	2.7137	0.79	Q			V	
21+45	2.7191	0.78	Q			V	
21+50	2.7244	0.78	Q			V	
21+55	2.7297	0.77	Q			V	
22+ 0	2.7350	0.77	Q			V	
22+ 5	2.7402	0.76	Q			V	
22+10	2.7454	0.75	Q			V	
22+15	2.7506	0.75	Q			V	
22+20	2.7557	0.74	Q			V	
22+25	2.7608	0.74	Q			V	
22+30	2.7658	0.73	Q			V	
22+35	2.7708	0.73	Q			V	
22+40	2.7758	0.72	Q			V	
22+45	2.7807	0.72	Q			V	
22+50	2.7856	0.71	Q			V	
22+55	2.7904	0.71	Q			V	
23+ 0	2.7953	0.70	Q			V	
23+ 5	2.8001	0.70	Q			V	
23+10	2.8048	0.69	Q			V	
23+15	2.8096	0.69	Q			V	
23+20	2.8143	0.68	Q			V	
23+25	2.8189	0.68	Q			V	
23+30	2.8236	0.67	Q			V	
23+35	2.8282	0.67	Q			V	
23+40	2.8328	0.67	Q			V	

23+45	2.8373	0.66	IQ				V
23+50	2.8419	0.66	IQ				V
23+55	2.8464	0.65	IQ				V
24+ 0	2.8509	0.65	IQ				V
24+ 5	2.8550	0.60	IQ				V
24+10	2.8575	0.36	Q				V
24+15	2.8582	0.11	Q				V
24+20	2.8584	0.02	Q				V
24+25	2.8584	0.01	Q				V

FLOOD HYDROGRAPH ROUTING PROGRAM
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 Study date: 08/01/24

 DIVERSIFIED MAPLE AVE
 CHAMBER ROUTING
 8" OUTLET PIPE

Program License Serial Number 6484

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

From study/file name: MAPLE-UH Dev-2yr.rte
 *****HYDROGRAPH DATA*****
 Number of intervals = 293
 Time interval = 5.0 (Min.)
 Maximum/Peak flow rate = 11.701 (CFS)
 Total volume = 1.811 (Ac.Ft)
 Status of hydrographs being held in storage

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

+++++
 Process from Point/Station 0.000 to Point/Station 1.000
 **** RETARDING BASIN ROUTING ****

 User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 293
 Hydrograph time unit = 5.000 (Min.)
 Initial depth in storage basin = 0.00 (Ft.)

Initial basin depth = 0.00 (Ft.)
 Initial basin storage = 0.00 (Ac.Ft)
 Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.230	0.520	0.228	0.232
2.500	1.200	1.200	1.196	1.204
4.500	1.980	1.200	1.976	1.984
4.800	2.060	1.200	2.056	2.064

 Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)					Depth (Ft.)
0.083	0.03	0.00	0.000	O				0.00
0.167	0.18	0.00	0.001	O				0.00

0.250	0.34	0.01	0.003	O					0.01
0.333	0.39	0.01	0.005	OI					0.01
0.417	0.40	0.02	0.008	OI					0.02
0.500	0.41	0.02	0.010	OI					0.02
0.583	0.41	0.03	0.013	OI					0.03
0.667	0.41	0.03	0.015	OI					0.03
0.750	0.41	0.04	0.018	OI					0.04
0.833	0.41	0.05	0.021	OI					0.04
0.917	0.41	0.05	0.023	OI					0.05
1.000	0.41	0.06	0.026	OI					0.06
1.083	0.42	0.06	0.028	OI					0.06
1.167	0.42	0.07	0.030	OI					0.07
1.250	0.42	0.07	0.033	OI					0.07
1.333	0.42	0.08	0.035	OI					0.08
1.417	0.42	0.08	0.037	OI					0.08
1.500	0.42	0.09	0.040	OI					0.09
1.583	0.42	0.09	0.042	OI					0.09
1.667	0.42	0.10	0.044	OI					0.10
1.750	0.43	0.11	0.046	OI					0.10
1.833	0.43	0.11	0.049	OI					0.11
1.917	0.43	0.11	0.051	OI					0.11
2.000	0.43	0.12	0.053	OI					0.12
2.083	0.43	0.12	0.055	OI					0.12
2.167	0.43	0.13	0.057	OI					0.12
2.250	0.43	0.13	0.059	OI					0.13
2.333	0.44	0.14	0.061	OI					0.13
2.417	0.44	0.14	0.063	OI					0.14
2.500	0.44	0.15	0.065	OI					0.14
2.583	0.44	0.15	0.067	OI					0.15
2.667	0.44	0.16	0.069	OI					0.15
2.750	0.44	0.16	0.071	OI					0.16
2.833	0.44	0.17	0.073	OI					0.16
2.917	0.45	0.17	0.075	OI					0.16
3.000	0.45	0.17	0.077	OI					0.17
3.083	0.45	0.18	0.079	OI					0.17
3.167	0.45	0.18	0.081	OI					0.18
3.250	0.45	0.19	0.083	OI					0.18
3.333	0.45	0.19	0.084	OI					0.18
3.417	0.46	0.19	0.086	OI					0.19
3.500	0.46	0.20	0.088	OI					0.19
3.583	0.46	0.20	0.090	OI					0.20
3.667	0.46	0.21	0.092	OI					0.20
3.750	0.46	0.21	0.093	OI					0.20
3.833	0.46	0.21	0.095	OI					0.21
3.917	0.47	0.22	0.097	OI					0.21
4.000	0.47	0.22	0.098	OI					0.21
4.083	0.47	0.23	0.100	OI					0.22
4.167	0.47	0.23	0.102	OI					0.22
4.250	0.47	0.23	0.103	OI					0.22
4.333	0.47	0.24	0.105	OI					0.23
4.417	0.48	0.24	0.107	OI					0.23
4.500	0.48	0.24	0.108	OI					0.24
4.583	0.48	0.25	0.110	OI					0.24
4.667	0.48	0.25	0.112	OI					0.24
4.750	0.48	0.26	0.113	OI					0.25
4.833	0.49	0.26	0.115	OI					0.25
4.917	0.49	0.26	0.116	OI					0.25
5.000	0.49	0.27	0.118	OI					0.26
5.083	0.49	0.27	0.119	OI					0.26
5.167	0.49	0.27	0.121	OI					0.26
5.250	0.50	0.28	0.122	OI					0.27
5.333	0.50	0.28	0.124	OI					0.27
5.417	0.50	0.28	0.125	OI					0.27
5.500	0.50	0.29	0.127	OI					0.28
5.583	0.50	0.29	0.128	OI					0.28
5.667	0.51	0.29	0.130	OI					0.28
5.750	0.51	0.30	0.131	OI					0.29
5.833	0.51	0.30	0.133	OI					0.29
5.917	0.51	0.30	0.134	OI					0.29
6.000	0.52	0.31	0.136	OI					0.29
6.083	0.52	0.31	0.137	OI					0.30

6.167	0.52	0.31	0.139	OI					0.30
6.250	0.52	0.32	0.140	OI					0.30
6.333	0.53	0.32	0.141	OI					0.31
6.417	0.53	0.32	0.143	OI					0.31
6.500	0.53	0.33	0.144	OI					0.31
6.583	0.53	0.33	0.146	OI					0.32
6.667	0.54	0.33	0.147	OI					0.32
6.750	0.54	0.34	0.148	OI					0.32
6.833	0.54	0.34	0.150	OI					0.33
6.917	0.54	0.34	0.151	OI					0.33
7.000	0.55	0.34	0.153	OI					0.33
7.083	0.55	0.35	0.154	OI					0.33
7.167	0.55	0.35	0.155	OI					0.34
7.250	0.55	0.35	0.157	OI					0.34
7.333	0.56	0.36	0.158	OI					0.34
7.417	0.56	0.36	0.159	OI					0.35
7.500	0.56	0.36	0.161	OI					0.35
7.583	0.57	0.37	0.162	IO					0.35
7.667	0.57	0.37	0.164	IO					0.36
7.750	0.57	0.37	0.165	IO					0.36
7.833	0.58	0.38	0.166	IO					0.36
7.917	0.58	0.38	0.168	IO					0.36
8.000	0.58	0.38	0.169	IO					0.37
8.083	0.59	0.39	0.171	IO					0.37
8.167	0.59	0.39	0.172	IO					0.37
8.250	0.59	0.39	0.173	IO					0.38
8.333	0.60	0.39	0.175	IO					0.38
8.417	0.60	0.40	0.176	IO					0.38
8.500	0.60	0.40	0.177	IO					0.39
8.583	0.61	0.40	0.179	IO					0.39
8.667	0.61	0.41	0.180	IO					0.39
8.750	0.61	0.41	0.182	IO					0.39
8.833	0.62	0.41	0.183	IO					0.40
8.917	0.62	0.42	0.184	IO					0.40
9.000	0.63	0.42	0.186	IO					0.40
9.083	0.63	0.42	0.187	IO					0.41
9.167	0.63	0.43	0.189	IO					0.41
9.250	0.64	0.43	0.190	IO					0.41
9.333	0.64	0.43	0.192	IO					0.42
9.417	0.65	0.44	0.193	IO					0.42
9.500	0.65	0.44	0.194	IO					0.42
9.583	0.66	0.44	0.196	IO					0.43
9.667	0.66	0.45	0.197	IO					0.43
9.750	0.66	0.45	0.199	IO					0.43
9.833	0.67	0.45	0.200	IO					0.44
9.917	0.67	0.46	0.202	IO					0.44
10.000	0.68	0.46	0.203	IO					0.44
10.083	0.68	0.46	0.205	IO					0.45
10.167	0.69	0.47	0.206	IO					0.45
10.250	0.70	0.47	0.208	IO					0.45
10.333	0.70	0.47	0.209	IO					0.46
10.417	0.71	0.48	0.211	IO					0.46
10.500	0.71	0.48	0.213	IO					0.46
10.583	0.72	0.48	0.214	IO					0.47
10.667	0.72	0.49	0.216	IO					0.47
10.750	0.73	0.49	0.217	IO					0.47
10.833	0.74	0.50	0.219	IOI					0.48
10.917	0.74	0.50	0.221	IOI					0.48
11.000	0.75	0.50	0.222	IOI					0.48
11.083	0.76	0.51	0.224	IOI					0.49
11.167	0.76	0.51	0.226	IOI					0.49
11.250	0.77	0.51	0.228	IOI					0.49
11.333	0.78	0.52	0.229	IOI					0.50
11.417	0.78	0.52	0.231	IOI					0.50
11.500	0.79	0.52	0.233	IOI					0.51
11.583	0.80	0.52	0.235	IOI					0.51
11.667	0.81	0.52	0.237	IOI					0.51
11.750	0.82	0.53	0.239	IOI					0.52
11.833	0.82	0.53	0.241	IOI					0.52
11.917	0.83	0.53	0.243	IOI					0.53
12.000	0.84	0.53	0.245	IOI					0.53

12.083	0.87	0.53	0.247	OI					0.54
12.167	0.95	0.53	0.250	OI					0.54
12.250	1.05	0.54	0.253	OI					0.55
12.333	1.08	0.54	0.257	OI					0.56
12.417	1.10	0.54	0.260	O I					0.56
12.500	1.11	0.54	0.264	O I					0.57
12.583	1.12	0.55	0.268	O I					0.58
12.667	1.13	0.55	0.272	O I					0.59
12.750	1.15	0.55	0.276	O I					0.60
12.833	1.16	0.56	0.280	O I					0.60
12.917	1.17	0.56	0.285	O I					0.61
13.000	1.19	0.56	0.289	O I					0.62
13.083	1.20	0.56	0.293	O I					0.63
13.167	1.21	0.57	0.298	O I					0.64
13.250	1.23	0.57	0.302	O I					0.65
13.333	1.25	0.57	0.307	O I					0.66
13.417	1.26	0.58	0.311	O I					0.67
13.500	1.28	0.58	0.316	O I					0.68
13.583	1.30	0.58	0.321	O I					0.69
13.667	1.32	0.59	0.326	O I					0.70
13.750	1.34	0.59	0.331	O I					0.71
13.833	1.36	0.59	0.336	O I					0.72
13.917	1.38	0.60	0.342	O I					0.73
14.000	1.40	0.60	0.347	O I					0.74
14.083	1.43	0.61	0.353	O I					0.75
14.167	1.45	0.61	0.358	O I					0.76
14.250	1.48	0.61	0.364	O I					0.78
14.333	1.51	0.62	0.370	O I					0.79
14.417	1.54	0.62	0.376	O I					0.80
14.500	1.57	0.63	0.383	O I					0.82
14.583	1.61	0.63	0.389	O I					0.83
14.667	1.65	0.64	0.396	O I					0.84
14.750	1.69	0.64	0.403	O I					0.86
14.833	1.73	0.65	0.411	O I					0.87
14.917	1.78	0.65	0.418	O I					0.89
15.000	1.83	0.66	0.426	O I					0.90
15.083	1.89	0.66	0.435	O I					0.92
15.167	1.96	0.67	0.443	O I					0.94
15.250	2.03	0.68	0.452	O I					0.96
15.333	2.12	0.68	0.462	O I					0.98
15.417	2.17	0.69	0.472	O I					1.00
15.500	2.04	0.70	0.482	O I					1.02
15.583	1.91	0.70	0.491	O I					1.04
15.667	1.99	0.71	0.499	O I					1.05
15.750	2.19	0.72	0.509	O I					1.07
15.833	2.48	0.72	0.520	O I					1.10
15.917	2.92	0.73	0.533	O I					1.13
16.000	3.79	0.75	0.551	O I					1.16
16.083	6.22	0.77	0.581	O I					1.22
16.167	11.70	0.81	0.637	O I					1.34
16.250	11.26	0.86	0.710	O I					1.49
16.333	5.56	0.89	0.762	O I					1.60
16.417	3.01	0.91	0.786	O I					1.65
16.500	2.48	0.92	0.798	O I					1.67
16.583	2.21	0.93	0.808	O I					1.69
16.667	2.08	0.93	0.816	O I					1.71
16.750	1.94	0.94	0.824	O I					1.72
16.833	1.82	0.94	0.830	O I					1.74
16.917	1.72	0.94	0.836	O I					1.75
17.000	1.64	0.95	0.841	O I					1.76
17.083	1.56	0.95	0.845	O I					1.77
17.167	1.50	0.95	0.849	O I					1.78
17.250	1.44	0.96	0.853	OI					1.78
17.333	1.39	0.96	0.856	OI					1.79
17.417	1.35	0.96	0.859	OI					1.80
17.500	1.31	0.96	0.862	OI					1.80
17.583	1.27	0.96	0.864	OI					1.81
17.667	1.24	0.97	0.866	OI					1.81
17.750	1.21	0.97	0.868	OI					1.81
17.833	1.18	0.97	0.869	OI					1.82
17.917	1.16	0.97	0.871	OI					1.82

18.000	1.13	0.97	0.872	OI					1.82
18.083	1.09	0.97	0.873	O					1.83
18.167	1.00	0.97	0.873	O					1.83
18.250	0.89	0.97	0.873	O					1.83
18.333	0.85	0.97	0.872	O					1.82
18.417	0.82	0.97	0.871	O					1.82
18.500	0.81	0.97	0.870	O					1.82
18.583	0.79	0.97	0.869	O					1.82
18.667	0.77	0.97	0.868	O					1.82
18.750	0.76	0.97	0.867	O					1.81
18.833	0.75	0.97	0.865	O					1.81
18.917	0.73	0.96	0.864	O					1.81
19.000	0.72	0.96	0.862	IO					1.80
19.083	0.71	0.96	0.860	IO					1.80
19.167	0.70	0.96	0.858	IO					1.80
19.250	0.69	0.96	0.857	IO					1.79
19.333	0.68	0.96	0.855	IO					1.79
19.417	0.67	0.96	0.853	IO					1.78
19.500	0.66	0.96	0.851	IO					1.78
19.583	0.65	0.95	0.849	IO					1.78
19.667	0.64	0.95	0.847	IO					1.77
19.750	0.63	0.95	0.844	IO					1.77
19.833	0.62	0.95	0.842	IO					1.76
19.917	0.62	0.95	0.840	IO					1.76
20.000	0.61	0.95	0.838	IO					1.75
20.083	0.60	0.94	0.835	IO					1.75
20.167	0.59	0.94	0.833	IO					1.74
20.250	0.59	0.94	0.830	IO					1.74
20.333	0.58	0.94	0.828	IO					1.73
20.417	0.57	0.94	0.826	IO					1.73
20.500	0.57	0.94	0.823	IO					1.72
20.583	0.56	0.93	0.820	IO					1.72
20.667	0.56	0.93	0.818	IO					1.71
20.750	0.55	0.93	0.815	IO					1.71
20.833	0.55	0.93	0.813	IO					1.70
20.917	0.54	0.93	0.810	IO					1.70
21.000	0.53	0.92	0.807	IO					1.69
21.083	0.53	0.92	0.805	IO					1.68
21.167	0.52	0.92	0.802	IO					1.68
21.250	0.52	0.92	0.799	IO					1.67
21.333	0.52	0.92	0.796	IO					1.67
21.417	0.51	0.92	0.794	IO					1.66
21.500	0.51	0.91	0.791	IO					1.66
21.583	0.50	0.91	0.788	IO					1.65
21.667	0.50	0.91	0.785	IO					1.64
21.750	0.49	0.91	0.782	IO					1.64
21.833	0.49	0.91	0.780	IO					1.63
21.917	0.49	0.90	0.777	IO					1.63
22.000	0.48	0.90	0.774	IO					1.62
22.083	0.48	0.90	0.771	IO					1.62
22.167	0.47	0.90	0.768	IO					1.61
22.250	0.47	0.90	0.765	IO					1.60
22.333	0.47	0.89	0.762	IO					1.60
22.417	0.46	0.89	0.759	IO					1.59
22.500	0.46	0.89	0.756	IO					1.59
22.583	0.46	0.89	0.753	IO					1.58
22.667	0.45	0.88	0.750	IO					1.57
22.750	0.45	0.88	0.747	IO					1.57
22.833	0.45	0.88	0.744	IO					1.56
22.917	0.44	0.88	0.741	IO					1.55
23.000	0.44	0.88	0.738	IO					1.55
23.083	0.44	0.87	0.735	IO					1.54
23.167	0.44	0.87	0.732	IO					1.54
23.250	0.43	0.87	0.729	IO					1.53
23.333	0.43	0.87	0.726	IO					1.52
23.417	0.43	0.87	0.723	IO					1.52
23.500	0.42	0.86	0.720	IO					1.51
23.583	0.42	0.86	0.717	IO					1.50
23.667	0.42	0.86	0.714	IO					1.50
23.750	0.42	0.86	0.711	IO					1.49
23.833	0.41	0.86	0.708	IO					1.49

23.917	0.41	0.85	0.705	IO					1.48
24.000	0.41	0.85	0.702	IO					1.47
24.083	0.38	0.85	0.699	IO					1.47
24.167	0.23	0.85	0.695	I O					1.46
24.250	0.07	0.84	0.690	I O					1.45
24.333	0.02	0.84	0.685	I O					1.44
24.417	0.00	0.83	0.679	I O					1.43
24.500	0.00	0.83	0.673	I O					1.41
24.583	0.00	0.83	0.668	I O					1.40
24.667	0.00	0.82	0.662	I O					1.39
24.750	0.00	0.82	0.656	I O					1.38
24.833	0.00	0.82	0.651	I O					1.37
24.917	0.00	0.81	0.645	I O					1.36
25.000	0.00	0.81	0.640	I O					1.34
25.083	0.00	0.80	0.634	I O					1.33
25.167	0.00	0.80	0.629	I O					1.32
25.250	0.00	0.80	0.623	I O					1.31
25.333	0.00	0.79	0.618	I O					1.30
25.417	0.00	0.79	0.612	I O					1.29
25.500	0.00	0.78	0.607	I O					1.28
25.583	0.00	0.78	0.601	I O					1.27
25.667	0.00	0.78	0.596	I O					1.25
25.750	0.00	0.77	0.591	I O					1.24
25.833	0.00	0.77	0.585	I O					1.23
25.917	0.00	0.77	0.580	I O					1.22
26.000	0.00	0.76	0.575	I O					1.21
26.083	0.00	0.76	0.570	I O					1.20
26.167	0.00	0.75	0.564	I O					1.19
26.250	0.00	0.75	0.559	I O					1.18
26.333	0.00	0.75	0.554	I O					1.17
26.417	0.00	0.74	0.549	I O					1.16
26.500	0.00	0.74	0.544	I O					1.15
26.583	0.00	0.74	0.539	I O					1.14
26.667	0.00	0.73	0.534	I O					1.13
26.750	0.00	0.73	0.529	IO					1.12
26.833	0.00	0.73	0.524	IO					1.11
26.917	0.00	0.72	0.519	IO					1.10
27.000	0.00	0.72	0.514	IO					1.08
27.083	0.00	0.72	0.509	IO					1.07
27.167	0.00	0.71	0.504	IO					1.06
27.250	0.00	0.71	0.499	IO					1.05
27.333	0.00	0.71	0.494	IO					1.04
27.417	0.00	0.70	0.489	IO					1.03
27.500	0.00	0.70	0.484	IO					1.02
27.583	0.00	0.69	0.480	IO					1.01
27.667	0.00	0.69	0.475	IO					1.00
27.750	0.00	0.69	0.470	IO					0.99
27.833	0.00	0.68	0.465	IO					0.99
27.917	0.00	0.68	0.461	IO					0.98
28.000	0.00	0.68	0.456	IO					0.97
28.083	0.00	0.68	0.451	IO					0.96
28.167	0.00	0.67	0.447	IO					0.95
28.250	0.00	0.67	0.442	IO					0.94
28.333	0.00	0.67	0.437	IO					0.93
28.417	0.00	0.66	0.433	IO					0.92
28.500	0.00	0.66	0.428	IO					0.91
28.583	0.00	0.66	0.424	IO					0.90
28.667	0.00	0.65	0.419	IO					0.89
28.750	0.00	0.65	0.415	IO					0.88
28.833	0.00	0.65	0.410	IO					0.87
28.917	0.00	0.64	0.406	IO					0.86
29.000	0.00	0.64	0.401	IO					0.85
29.083	0.00	0.64	0.397	IO					0.84
29.167	0.00	0.63	0.393	IO					0.84
29.250	0.00	0.63	0.388	IO					0.83
29.333	0.00	0.63	0.384	IO					0.82
29.417	0.00	0.62	0.380	IO					0.81
29.500	0.00	0.62	0.375	IO					0.80
29.583	0.00	0.62	0.371	IO					0.79
29.667	0.00	0.62	0.367	IO					0.78
29.750	0.00	0.61	0.363	IO					0.77

29.833	0.00	0.61	0.358	IO					0.76
29.917	0.00	0.61	0.354	IO					0.76
30.000	0.00	0.60	0.350	IO					0.75
30.083	0.00	0.60	0.346	IO					0.74
30.167	0.00	0.60	0.342	IO					0.73
30.250	0.00	0.60	0.338	IO					0.72
30.333	0.00	0.59	0.334	IO					0.71
30.417	0.00	0.59	0.330	IO					0.71
30.500	0.00	0.59	0.325	IO					0.70
30.583	0.00	0.58	0.321	IO					0.69
30.667	0.00	0.58	0.317	IO					0.68
30.750	0.00	0.58	0.313	IO					0.67
30.833	0.00	0.58	0.309	IO					0.66
30.917	0.00	0.57	0.305	IO					0.66
31.000	0.00	0.57	0.302	IO					0.65
31.083	0.00	0.57	0.298	IO					0.64
31.167	0.00	0.56	0.294	IO					0.63
31.250	0.00	0.56	0.290	IO					0.62
31.333	0.00	0.56	0.286	IO					0.62
31.417	0.00	0.56	0.282	IO					0.61
31.500	0.00	0.55	0.278	IO					0.60
31.583	0.00	0.55	0.275	IO					0.59
31.667	0.00	0.55	0.271	IO					0.58
31.750	0.00	0.55	0.267	IO					0.58
31.833	0.00	0.54	0.263	IO					0.57
31.917	0.00	0.54	0.259	IO					0.56
32.000	0.00	0.54	0.256	IO					0.55
32.083	0.00	0.54	0.252	IO					0.55
32.167	0.00	0.53	0.248	IO					0.54
32.250	0.00	0.53	0.245	IO					0.53
32.333	0.00	0.53	0.241	IO					0.52
32.417	0.00	0.53	0.237	IO					0.52
32.500	0.00	0.52	0.234	IO					0.51
32.583	0.00	0.52	0.230	IO					0.50
32.667	0.00	0.51	0.227	IO					0.49
32.750	0.00	0.50	0.223	IO					0.49
32.833	0.00	0.50	0.220	IO					0.48
32.917	0.00	0.49	0.216	IO					0.47
33.000	0.00	0.48	0.213	IO					0.46
33.083	0.00	0.47	0.210	IO					0.46
33.167	0.00	0.47	0.206	IO					0.45
33.250	0.00	0.46	0.203	IO					0.44
33.333	0.00	0.45	0.200	IO					0.44
33.417	0.00	0.45	0.197	IO					0.43
33.500	0.00	0.44	0.194	IO					0.42
33.583	0.00	0.43	0.191	IO					0.42
33.667	0.00	0.43	0.188	IO					0.41
33.750	0.00	0.42	0.185	IO					0.40
33.833	0.00	0.41	0.182	IO					0.40
33.917	0.00	0.41	0.179	IO					0.39
34.000	0.00	0.40	0.177	IO					0.38
34.083	0.00	0.39	0.174	IO					0.38
34.167	0.00	0.39	0.171	IO					0.37
34.250	0.00	0.38	0.169	IO					0.37
34.333	0.00	0.38	0.166	IO					0.36
34.417	0.00	0.37	0.163	IO					0.36
34.500	0.00	0.36	0.161	O					0.35
34.583	0.00	0.36	0.158	O					0.34
34.667	0.00	0.35	0.156	O					0.34
34.750	0.00	0.35	0.154	O					0.33
34.833	0.00	0.34	0.151	O					0.33
34.917	0.00	0.34	0.149	O					0.32
35.000	0.00	0.33	0.147	O					0.32
35.083	0.00	0.33	0.144	O					0.31
35.167	0.00	0.32	0.142	O					0.31
35.250	0.00	0.32	0.140	O					0.30
35.333	0.00	0.31	0.138	O					0.30
35.417	0.00	0.31	0.136	O					0.29
35.500	0.00	0.30	0.134	O					0.29
35.583	0.00	0.30	0.131	O					0.29
35.667	0.00	0.29	0.129	O					0.28

35.750	0.00	0.29	0.127	O					0.28
35.833	0.00	0.28	0.125	O					0.27
35.917	0.00	0.28	0.124	O					0.27
36.000	0.00	0.27	0.122	O					0.26
36.083	0.00	0.27	0.120	O					0.26
36.167	0.00	0.27	0.118	O					0.26
36.250	0.00	0.26	0.116	O					0.25
36.333	0.00	0.26	0.114	O					0.25
36.417	0.00	0.25	0.113	O					0.24
36.500	0.00	0.25	0.111	O					0.24
36.583	0.00	0.25	0.109	O					0.24
36.667	0.00	0.24	0.107	O					0.23
36.750	0.00	0.24	0.106	O					0.23
36.833	0.00	0.24	0.104	O					0.23
36.917	0.00	0.23	0.102	O					0.22
37.000	0.00	0.23	0.101	O					0.22
37.083	0.00	0.22	0.099	O					0.22
37.167	0.00	0.22	0.098	O					0.21
37.250	0.00	0.22	0.096	O					0.21
37.333	0.00	0.21	0.095	O					0.21
37.417	0.00	0.21	0.093	O					0.20
37.500	0.00	0.21	0.092	O					0.20
37.583	0.00	0.20	0.090	O					0.20
37.667	0.00	0.20	0.089	O					0.19
37.750	0.00	0.20	0.088	O					0.19
37.833	0.00	0.20	0.086	O					0.19
37.917	0.00	0.19	0.085	O					0.18
38.000	0.00	0.19	0.084	O					0.18
38.083	0.00	0.19	0.082	O					0.18
38.167	0.00	0.18	0.081	O					0.18
38.250	0.00	0.18	0.080	O					0.17
38.333	0.00	0.18	0.079	O					0.17
38.417	0.00	0.18	0.077	O					0.17
38.500	0.00	0.17	0.076	O					0.17
38.583	0.00	0.17	0.075	O					0.16
38.667	0.00	0.17	0.074	O					0.16
38.750	0.00	0.16	0.073	O					0.16
38.833	0.00	0.16	0.072	O					0.16
38.917	0.00	0.16	0.071	O					0.15
39.000	0.00	0.16	0.069	O					0.15
39.083	0.00	0.15	0.068	O					0.15
39.167	0.00	0.15	0.067	O					0.15
39.250	0.00	0.15	0.066	O					0.14
39.333	0.00	0.15	0.065	O					0.14
39.417	0.00	0.15	0.064	O					0.14
39.500	0.00	0.14	0.063	O					0.14
39.583	0.00	0.14	0.062	O					0.14
39.667	0.00	0.14	0.061	O					0.13
39.750	0.00	0.14	0.060	O					0.13
39.833	0.00	0.13	0.059	O					0.13
39.917	0.00	0.13	0.058	O					0.13
40.000	0.00	0.13	0.058	O					0.13
40.083	0.00	0.13	0.057	O					0.12
40.167	0.00	0.13	0.056	O					0.12
40.250	0.00	0.12	0.055	O					0.12
40.333	0.00	0.12	0.054	O					0.12
40.417	0.00	0.12	0.053	O					0.12
40.500	0.00	0.12	0.052	O					0.11
40.583	0.00	0.12	0.052	O					0.11
40.667	0.00	0.11	0.051	O					0.11
40.750	0.00	0.11	0.050	O					0.11
40.833	0.00	0.11	0.049	O					0.11
40.917	0.00	0.11	0.049	O					0.11
41.000	0.00	0.11	0.048	O					0.10
41.083	0.00	0.11	0.047	O					0.10
41.167	0.00	0.10	0.046	O					0.10
41.250	0.00	0.10	0.046	O					0.10
41.333	0.00	0.10	0.045	O					0.10
41.417	0.00	0.10	0.044	O					0.10
41.500	0.00	0.10	0.044	O					0.09
41.583	0.00	0.10	0.043	O					0.09

41.667	0.00	0.10	0.042	○					0.09
41.750	0.00	0.09	0.042	○					0.09
41.833	0.00	0.09	0.041	○					0.09
41.917	0.00	0.09	0.040	○					0.09
42.000	0.00	0.09	0.040	○					0.09
42.083	0.00	0.09	0.039	○					0.08
42.167	0.00	0.09	0.038	○					0.08
42.250	0.00	0.09	0.038	○					0.08
42.333	0.00	0.08	0.037	○					0.08
42.417	0.00	0.08	0.037	○					0.08
42.500	0.00	0.08	0.036	○					0.08
42.583	0.00	0.08	0.036	○					0.08
42.667	0.00	0.08	0.035	○					0.08
42.750	0.00	0.08	0.034	○					0.07
42.833	0.00	0.08	0.034	○					0.07
42.917	0.00	0.08	0.033	○					0.07
43.000	0.00	0.07	0.033	○					0.07
43.083	0.00	0.07	0.032	○					0.07
43.167	0.00	0.07	0.032	○					0.07
43.250	0.00	0.07	0.031	○					0.07
43.333	0.00	0.07	0.031	○					0.07
43.417	0.00	0.07	0.030	○					0.07
43.500	0.00	0.07	0.030	○					0.07
43.583	0.00	0.07	0.029	○					0.06
43.667	0.00	0.07	0.029	○					0.06
43.750	0.00	0.06	0.029	○					0.06
43.833	0.00	0.06	0.028	○					0.06
43.917	0.00	0.06	0.028	○					0.06
44.000	0.00	0.06	0.027	○					0.06
44.083	0.00	0.06	0.027	○					0.06
44.167	0.00	0.06	0.026	○					0.06
44.250	0.00	0.06	0.026	○					0.06
44.333	0.00	0.06	0.026	○					0.06
44.417	0.00	0.06	0.025	○					0.05
44.500	0.00	0.06	0.025	○					0.05
44.583	0.00	0.06	0.024	○					0.05
44.667	0.00	0.05	0.024	○					0.05
44.750	0.00	0.05	0.024	○					0.05
44.833	0.00	0.05	0.023	○					0.05
44.917	0.00	0.05	0.023	○					0.05
45.000	0.00	0.05	0.023	○					0.05
45.083	0.00	0.05	0.022	○					0.05
45.167	0.00	0.05	0.022	○					0.05
45.250	0.00	0.05	0.022	○					0.05
45.333	0.00	0.05	0.021	○					0.05
45.417	0.00	0.05	0.021	○					0.05
45.500	0.00	0.05	0.021	○					0.04
45.583	0.00	0.05	0.020	○					0.04
45.667	0.00	0.05	0.020	○					0.04
45.750	0.00	0.04	0.020	○					0.04
45.833	0.00	0.04	0.019	○					0.04
45.917	0.00	0.04	0.019	○					0.04
46.000	0.00	0.04	0.019	○					0.04
46.083	0.00	0.04	0.018	○					0.04
46.167	0.00	0.04	0.018	○					0.04
46.250	0.00	0.04	0.018	○					0.04
46.333	0.00	0.04	0.018	○					0.04
46.417	0.00	0.04	0.017	○					0.04
46.500	0.00	0.04	0.017	○					0.04
46.583	0.00	0.04	0.017	○					0.04
46.667	0.00	0.04	0.017	○					0.04
46.750	0.00	0.04	0.016	○					0.04
46.833	0.00	0.04	0.016	○					0.03
46.917	0.00	0.04	0.016	○					0.03
47.000	0.00	0.04	0.016	○					0.03
47.083	0.00	0.03	0.015	○					0.03
47.167	0.00	0.03	0.015	○					0.03
47.250	0.00	0.03	0.015	○					0.03
47.333	0.00	0.03	0.015	○					0.03
47.417	0.00	0.03	0.014	○					0.03
47.500	0.00	0.03	0.014	○					0.03

47.583	0.00	0.03	0.014	○					0.03
47.667	0.00	0.03	0.014	○					0.03
47.750	0.00	0.03	0.014	○					0.03
47.833	0.00	0.03	0.013	○					0.03
47.917	0.00	0.03	0.013	○					0.03
48.000	0.00	0.03	0.013	○					0.03
48.083	0.00	0.03	0.013	○					0.03
48.167	0.00	0.03	0.013	○					0.03
48.250	0.00	0.03	0.012	○					0.03
48.333	0.00	0.03	0.012	○					0.03
48.417	0.00	0.03	0.012	○					0.03
48.500	0.00	0.03	0.012	○					0.03
48.583	0.00	0.03	0.012	○					0.03
48.667	0.00	0.03	0.011	○					0.02
48.750	0.00	0.03	0.011	○					0.02
48.833	0.00	0.02	0.011	○					0.02
48.917	0.00	0.02	0.011	○					0.02
49.000	0.00	0.02	0.011	○					0.02
49.083	0.00	0.02	0.011	○					0.02
49.167	0.00	0.02	0.010	○					0.02
49.250	0.00	0.02	0.010	○					0.02
49.333	0.00	0.02	0.010	○					0.02
49.417	0.00	0.02	0.010	○					0.02
49.500	0.00	0.02	0.010	○					0.02
49.583	0.00	0.02	0.010	○					0.02
49.667	0.00	0.02	0.009	○					0.02
49.750	0.00	0.02	0.009	○					0.02
49.833	0.00	0.02	0.009	○					0.02
49.917	0.00	0.02	0.009	○					0.02
50.000	0.00	0.02	0.009	○					0.02
50.083	0.00	0.02	0.009	○					0.02
50.167	0.00	0.02	0.009	○					0.02
50.250	0.00	0.02	0.008	○					0.02
50.333	0.00	0.02	0.008	○					0.02
50.417	0.00	0.02	0.008	○					0.02
50.500	0.00	0.02	0.008	○					0.02
50.583	0.00	0.02	0.008	○					0.02
50.667	0.00	0.02	0.008	○					0.02
50.750	0.00	0.02	0.008	○					0.02
50.833	0.00	0.02	0.008	○					0.02
50.917	0.00	0.02	0.007	○					0.02
51.000	0.00	0.02	0.007	○					0.02
51.083	0.00	0.02	0.007	○					0.02
51.167	0.00	0.02	0.007	○					0.02
51.250	0.00	0.02	0.007	○					0.02
51.333	0.00	0.02	0.007	○					0.02
51.417	0.00	0.02	0.007	○					0.01
51.500	0.00	0.02	0.007	○					0.01
51.583	0.00	0.01	0.007	○					0.01
51.667	0.00	0.01	0.007	○					0.01
51.750	0.00	0.01	0.006	○					0.01
51.833	0.00	0.01	0.006	○					0.01
51.917	0.00	0.01	0.006	○					0.01
52.000	0.00	0.01	0.006	○					0.01
52.083	0.00	0.01	0.006	○					0.01
52.167	0.00	0.01	0.006	○					0.01
52.250	0.00	0.01	0.006	○					0.01
52.333	0.00	0.01	0.006	○					0.01
52.417	0.00	0.01	0.006	○					0.01
52.500	0.00	0.01	0.006	○					0.01
52.583	0.00	0.01	0.005	○					0.01
52.667	0.00	0.01	0.005	○					0.01
52.750	0.00	0.01	0.005	○					0.01
52.833	0.00	0.01	0.005	○					0.01
52.917	0.00	0.01	0.005	○					0.01
53.000	0.00	0.01	0.005	○					0.01
53.083	0.00	0.01	0.005	○					0.01
53.167	0.00	0.01	0.005	○					0.01
53.250	0.00	0.01	0.005	○					0.01
53.333	0.00	0.01	0.005	○					0.01
53.417	0.00	0.01	0.005	○					0.01

53.500	0.00	0.01	0.005	0					0.01
53.583	0.00	0.01	0.005	0					0.01
53.667	0.00	0.01	0.004	0					0.01
53.750	0.00	0.01	0.004	0					0.01
53.833	0.00	0.01	0.004	0					0.01
53.917	0.00	0.01	0.004	0					0.01
54.000	0.00	0.01	0.004	0					0.01
54.083	0.00	0.01	0.004	0					0.01
54.167	0.00	0.01	0.004	0					0.01
54.250	0.00	0.01	0.004	0					0.01
54.333	0.00	0.01	0.004	0					0.01
54.417	0.00	0.01	0.004	0					0.01
54.500	0.00	0.01	0.004	0					0.01
54.583	0.00	0.01	0.004	0					0.01
54.667	0.00	0.01	0.004	0					0.01
54.750	0.00	0.01	0.004	0					0.01
54.833	0.00	0.01	0.004	0					0.01
54.917	0.00	0.01	0.004	0					0.01
55.000	0.00	0.01	0.003	0					0.01
55.083	0.00	0.01	0.003	0					0.01
55.167	0.00	0.01	0.003	0					0.01
55.250	0.00	0.01	0.003	0					0.01
55.333	0.00	0.01	0.003	0					0.01
55.417	0.00	0.01	0.003	0					0.01
55.500	0.00	0.01	0.003	0					0.01
55.583	0.00	0.01	0.003	0					0.01
55.667	0.00	0.01	0.003	0					0.01
55.750	0.00	0.01	0.003	0					0.01
55.833	0.00	0.01	0.003	0					0.01
55.917	0.00	0.01	0.003	0					0.01
56.000	0.00	0.01	0.003	0					0.01
56.083	0.00	0.01	0.003	0					0.01
56.167	0.00	0.01	0.003	0					0.01
56.250	0.00	0.01	0.003	0					0.01
56.333	0.00	0.01	0.003	0					0.01
56.417	0.00	0.01	0.003	0					0.01
56.500	0.00	0.01	0.003	0					0.01
56.583	0.00	0.01	0.003	0					0.01
56.667	0.00	0.01	0.003	0					0.01
56.750	0.00	0.01	0.003	0					0.01
56.833	0.00	0.01	0.002	0					0.01
56.917	0.00	0.01	0.002	0					0.01
57.000	0.00	0.01	0.002	0					0.01
57.083	0.00	0.01	0.002	0					0.01
57.167	0.00	0.01	0.002	0					0.01
57.250	0.00	0.01	0.002	0					0.00
57.333	0.00	0.01	0.002	0					0.00
57.417	0.00	0.01	0.002	0					0.00
57.500	0.00	0.00	0.002	0					0.00
57.583	0.00	0.00	0.002	0					0.00
57.667	0.00	0.00	0.002	0					0.00
57.750	0.00	0.00	0.002	0					0.00
57.833	0.00	0.00	0.002						

59.417	0.00	0.00	0.002	0					0.00
59.500	0.00	0.00	0.002	0					0.00
59.583	0.00	0.00	0.001	0					0.00
59.667	0.00	0.00	0.001	0					0.00
59.750	0.00	0.00	0.001	0					0.00
59.833	0.00	0.00	0.001	0					0.00
59.917	0.00	0.00	0.001	0					0.00
60.000	0.00	0.00	0.001	0					0.00
60.083	0.00	0.00	0.001	0					0.00
60.167	0.00	0.00	0.001	0					0.00
60.250	0.00	0.00	0.001	0					0.00
60.333	0.00	0.00	0.001	0					0.00
60.417	0.00	0.00	0.001	0					0.00
60.500	0.00	0.00	0.001	0					0.00
60.583	0.00	0.00	0.001	0					0.00
60.667	0.00	0.00	0.001	0					0.00
60.750	0.00	0.00	0.001	0					0.00
60.833	0.00	0.00	0.001	0					0.00
60.917	0.00	0.00	0.001	0					0.00
61.000	0.00	0.00	0.001	0					0.00
61.083	0.00	0.00	0.001	0					0.00
61.167	0.00	0.00	0.001	0					0.00
61.250	0.00	0.00	0.001	0					0.00
61.333	0.00	0.00	0.001	0					0.00
61.417	0.00	0.00	0.001	0					0.00
61.500	0.00	0.00	0.001	0					0.00
61.583	0.00	0.00	0.001	0					0.00
61.667	0.00	0.00	0.001	0					0.00
61.750	0.00	0.00	0.001	0					0.00
61.833	0.00	0.00	0.001	0					0.00
61.917	0.00	0.00	0.001	0					0.00
62.000	0.00	0.00	0.001	0					0.00
62.083	0.00	0.00	0.001	0					0.00
62.167	0.00	0.00	0.001	0					0.00
62.250	0.00	0.00	0.001	0					0.00
62.333	0.00	0.00	0.001	0					0.00
62.417	0.00	0.00	0.001	0					0.00
62.500	0.00	0.00	0.001	0					0.00
62.583	0.00	0.00	0.001	0					0.00
62.667	0.00	0.00	0.001	0					0.00
62.750	0.00	0.00	0.001	0					0.00
62.833	0.00	0.00	0.001	0					0.00
62.917	0.00	0.00	0.001	0					0.00
63.000	0.00	0.00	0.001	0					0.00
63.083	0.00	0.00	0.001	0					0.00
63.167	0.00	0.00	0.001	0					0.00
63.250	0.00	0.00	0.001	0					0.00
63.333	0.00	0.00	0.001	0					0.00
63.417	0.00	0.00	0.001	0					0.00
63.500	0.00	0.00	0.001	0					0.00
63.583	0.00	0.00	0.001	0					0.00
63.667	0.00	0.00	0.001	0					0.00
63.750	0.00	0.00	0.001						

65.333	0.00	0.00	0.001	O					0.00
65.417	0.00	0.00	0.000	O					0.00
65.500	0.00	0.00	0.000	O					0.00
65.583	0.00	0.00	0.000	O					0.00
65.667	0.00	0.00	0.000	O					0.00
65.750	0.00	0.00	0.000	O					0.00
65.833	0.00	0.00	0.000	O					0.00
65.917	0.00	0.00	0.000	O					0.00

*****HYDROGRAPH DATA*****

Number of intervals = 791

Time interval = 5.0 (Min.)

Maximum/Peak flow rate = 0.971 (CFS)

Total volume = 1.811 (Ac.Ft)

Status of hydrographs being held in storage

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

Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0

Study date 03/07/24

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6484

DIVERSIFIED-MAPLE AVE
UH ANALYSIS-DEVELOPED CONDITION
2-YR STORM EVENT

Storm Event Year = 2

Antecedent Moisture Condition = 2

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 2		
8.20	1	0.63

Rainfall data for year 2
8.20 6 1.69

Rainfall data for year 2
8.20 24 3.14

+++++
***** Area-averaged max loss rate, Fm *****

SCS curve No. (AMCII)	SCS curve NO. (AMC 2)	Area (Ac.)	Area Fraction	Fp (Fig C6) (In/Hr)	Ap (dec.)	Fm (In/Hr)
32.0	32.0	8.20	1.000	0.978	0.100	0.098

Area-averaged adjusted loss rate Fm (In/Hr) = 0.098

***** Area-Averaged low loss rate fraction, Yb *****

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC2)	S	Pervious Yield Fr
0.82	0.100	32.0	32.0	15.70	0.000
7.38	0.900	98.0	98.0	0.20	0.926

Area-averaged catchment yield fraction, Y = 0.833

Area-averaged low loss fraction, Yb = 0.167

Direct entry of lag time by user

+++++

Watershed area = 8.20 (Ac.)
 Catchment Lag time = 0.135 hours
 Unit interval = 5.000 minutes
 Unit interval percentage of lag time = 61.7284
 Hydrograph baseflow = 0.00 (CFS)
 Average maximum watershed loss rate (Fm) = 0.098 (In/Hr)
 Average low loss rate fraction (Yb) = 0.167 (decimal)
 VALLEY DEVELOPED S-Graph Selected
 Computed peak 5-minute rainfall = 0.232 (In)
 Computed peak 30-minute rainfall = 0.474 (In)
 Specified peak 1-hour rainfall = 0.626 (In)
 Computed peak 3-hour rainfall = 1.151 (In)
 Specified peak 6-hour rainfall = 1.690 (In)
 Specified peak 24-hour rainfall = 3.140 (In)

Rainfall depth area reduction factors:

Using a total area of 8.20 (Ac.) (Ref: fig. E-4)

5-minute factor = 1.000	Adjusted rainfall = 0.232 (In)
30-minute factor = 1.000	Adjusted rainfall = 0.474 (In)
1-hour factor = 1.000	Adjusted rainfall = 0.626 (In)
3-hour factor = 1.000	Adjusted rainfall = 1.151 (In)
6-hour factor = 1.000	Adjusted rainfall = 1.690 (In)
24-hour factor = 1.000	Adjusted rainfall = 3.140 (In)

U n i t H y d r o g r a p h		
Interval	'S' Graph	Unit Hydrograph
Number	Mean values	((CFS))

	(K = 99.17 (CFS))	
1	6.887	6.829
2	43.768	36.575
3	83.294	39.197
4	96.136	12.736
5	98.800	2.642
6	100.000	1.190

Peak Unit	Adjusted mass rainfall	Unit rainfall
Number	(In)	(In)
1	0.2316	0.2316
2	0.3056	0.0740
3	0.3594	0.0538
4	0.4032	0.0438
5	0.4409	0.0376
6	0.4742	0.0334
7	0.5044	0.0302
8	0.5321	0.0277
9	0.5577	0.0257
10	0.5817	0.0240
11	0.6044	0.0226
12	0.6258	0.0214
13	0.6542	0.0284
14	0.6816	0.0274
15	0.7082	0.0266
16	0.7340	0.0258
17	0.7591	0.0251
18	0.7835	0.0244
19	0.8074	0.0239
20	0.8307	0.0233
21	0.8535	0.0228
22	0.8758	0.0223
23	0.8976	0.0219
24	0.9191	0.0214
25	0.9401	0.0210
26	0.9608	0.0207
27	0.9811	0.0203
28	1.0011	0.0200

29	1.0208	0.0197
30	1.0402	0.0194
31	1.0592	0.0191
32	1.0781	0.0188
33	1.0966	0.0186
34	1.1149	0.0183
35	1.1330	0.0181
36	1.1508	0.0178
37	1.1684	0.0176
38	1.1858	0.0174
39	1.2030	0.0172
40	1.2200	0.0170
41	1.2369	0.0168
42	1.2535	0.0166
43	1.2699	0.0165
44	1.2862	0.0163
45	1.3024	0.0161
46	1.3183	0.0160
47	1.3341	0.0158
48	1.3498	0.0157
49	1.3653	0.0155
50	1.3807	0.0154
51	1.3959	0.0152
52	1.4110	0.0151
53	1.4260	0.0150
54	1.4409	0.0149
55	1.4556	0.0147
56	1.4702	0.0146
57	1.4847	0.0145
58	1.4991	0.0144
59	1.5133	0.0143
60	1.5275	0.0142
61	1.5416	0.0141
62	1.5555	0.0140
63	1.5694	0.0139
64	1.5831	0.0138
65	1.5968	0.0137
66	1.6104	0.0136
67	1.6239	0.0135
68	1.6373	0.0134
69	1.6506	0.0133
70	1.6638	0.0132
71	1.6769	0.0131
72	1.6900	0.0131
73	1.7004	0.0104
74	1.7108	0.0104
75	1.7211	0.0103
76	1.7313	0.0102
77	1.7414	0.0101
78	1.7515	0.0101
79	1.7615	0.0100
80	1.7714	0.0099
81	1.7813	0.0099
82	1.7911	0.0098
83	1.8008	0.0097
84	1.8105	0.0097
85	1.8201	0.0096
86	1.8296	0.0095
87	1.8391	0.0095
88	1.8485	0.0094
89	1.8579	0.0094
90	1.8672	0.0093
91	1.8764	0.0092
92	1.8856	0.0092
93	1.8947	0.0091
94	1.9038	0.0091
95	1.9128	0.0090
96	1.9218	0.0090
97	1.9307	0.0089
98	1.9396	0.0089
99	1.9484	0.0088

100	1.9572	0.0088
101	1.9659	0.0087
102	1.9746	0.0087
103	1.9832	0.0086
104	1.9918	0.0086
105	2.0003	0.0085
106	2.0088	0.0085
107	2.0173	0.0084
108	2.0257	0.0084
109	2.0340	0.0084
110	2.0423	0.0083
111	2.0506	0.0083
112	2.0589	0.0082
113	2.0670	0.0082
114	2.0752	0.0082
115	2.0833	0.0081
116	2.0914	0.0081
117	2.0994	0.0080
118	2.1074	0.0080
119	2.1154	0.0080
120	2.1233	0.0079
121	2.1312	0.0079
122	2.1391	0.0079
123	2.1469	0.0078
124	2.1547	0.0078
125	2.1624	0.0077
126	2.1701	0.0077
127	2.1778	0.0077
128	2.1855	0.0076
129	2.1931	0.0076
130	2.2006	0.0076
131	2.2082	0.0075
132	2.2157	0.0075
133	2.2232	0.0075
134	2.2307	0.0075
135	2.2381	0.0074
136	2.2455	0.0074
137	2.2528	0.0074
138	2.2602	0.0073
139	2.2675	0.0073
140	2.2747	0.0073
141	2.2820	0.0072
142	2.2892	0.0072
143	2.2964	0.0072
144	2.3036	0.0072
145	2.3107	0.0071
146	2.3178	0.0071
147	2.3249	0.0071
148	2.3319	0.0071
149	2.3390	0.0070
150	2.3460	0.0070
151	2.3529	0.0070
152	2.3599	0.0070
153	2.3668	0.0069
154	2.3737	0.0069
155	2.3806	0.0069
156	2.3875	0.0069
157	2.3943	0.0068
158	2.4011	0.0068
159	2.4079	0.0068
160	2.4146	0.0068
161	2.4214	0.0067
162	2.4281	0.0067
163	2.4347	0.0067
164	2.4414	0.0067
165	2.4481	0.0066
166	2.4547	0.0066
167	2.4613	0.0066
168	2.4678	0.0066
169	2.4744	0.0066
170	2.4809	0.0065

171	2.4874	0.0065
172	2.4939	0.0065
173	2.5004	0.0065
174	2.5068	0.0064
175	2.5133	0.0064
176	2.5197	0.0064
177	2.5261	0.0064
178	2.5324	0.0064
179	2.5388	0.0063
180	2.5451	0.0063
181	2.5514	0.0063
182	2.5577	0.0063
183	2.5640	0.0063
184	2.5702	0.0063
185	2.5765	0.0062
186	2.5827	0.0062
187	2.5889	0.0062
188	2.5951	0.0062
189	2.6012	0.0062
190	2.6074	0.0061
191	2.6135	0.0061
192	2.6196	0.0061
193	2.6257	0.0061
194	2.6317	0.0061
195	2.6378	0.0061
196	2.6438	0.0060
197	2.6499	0.0060
198	2.6559	0.0060
199	2.6618	0.0060
200	2.6678	0.0060
201	2.6738	0.0060
202	2.6797	0.0059
203	2.6856	0.0059
204	2.6915	0.0059
205	2.6974	0.0059
206	2.7033	0.0059
207	2.7091	0.0059
208	2.7150	0.0058
209	2.7208	0.0058
210	2.7266	0.0058
211	2.7324	0.0058
212	2.7382	0.0058
213	2.7440	0.0058
214	2.7497	0.0057
215	2.7554	0.0057
216	2.7612	0.0057
217	2.7669	0.0057
218	2.7726	0.0057
219	2.7782	0.0057
220	2.7839	0.0057
221	2.7895	0.0056
222	2.7952	0.0056
223	2.8008	0.0056
224	2.8064	0.0056
225	2.8120	0.0056
226	2.8176	0.0056
227	2.8231	0.0056
228	2.8287	0.0056
229	2.8342	0.0055
230	2.8398	0.0055
231	2.8453	0.0055
232	2.8508	0.0055
233	2.8562	0.0055
234	2.8617	0.0055
235	2.8672	0.0055
236	2.8726	0.0054
237	2.8781	0.0054
238	2.8835	0.0054
239	2.8889	0.0054
240	2.8943	0.0054
241	2.8997	0.0054

242	2.9050	0.0054
243	2.9104	0.0054
244	2.9157	0.0053
245	2.9211	0.0053
246	2.9264	0.0053
247	2.9317	0.0053
248	2.9370	0.0053
249	2.9423	0.0053
250	2.9476	0.0053
251	2.9528	0.0053
252	2.9581	0.0053
253	2.9633	0.0052
254	2.9685	0.0052
255	2.9738	0.0052
256	2.9790	0.0052
257	2.9842	0.0052
258	2.9893	0.0052
259	2.9945	0.0052
260	2.9997	0.0052
261	3.0048	0.0052
262	3.0100	0.0051
263	3.0151	0.0051
264	3.0202	0.0051
265	3.0253	0.0051
266	3.0304	0.0051
267	3.0355	0.0051
268	3.0406	0.0051
269	3.0456	0.0051
270	3.0507	0.0051
271	3.0557	0.0050
272	3.0608	0.0050
273	3.0658	0.0050
274	3.0708	0.0050
275	3.0758	0.0050
276	3.0808	0.0050
277	3.0858	0.0050
278	3.0908	0.0050
279	3.0957	0.0050
280	3.1007	0.0050
281	3.1056	0.0049
282	3.1106	0.0049
283	3.1155	0.0049
284	3.1204	0.0049
285	3.1253	0.0049
286	3.1302	0.0049
287	3.1351	0.0049
288	3.1400	0.0049

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0049	0.0008	0.0041
2	0.0049	0.0008	0.0041
3	0.0049	0.0008	0.0041
4	0.0049	0.0008	0.0041
5	0.0049	0.0008	0.0041
6	0.0049	0.0008	0.0041
7	0.0050	0.0008	0.0041
8	0.0050	0.0008	0.0041
9	0.0050	0.0008	0.0042
10	0.0050	0.0008	0.0042
11	0.0050	0.0008	0.0042
12	0.0050	0.0008	0.0042
13	0.0051	0.0008	0.0042
14	0.0051	0.0008	0.0042
15	0.0051	0.0008	0.0042
16	0.0051	0.0008	0.0042
17	0.0051	0.0009	0.0043
18	0.0051	0.0009	0.0043
19	0.0052	0.0009	0.0043

20	0.0052	0.0009	0.0043
21	0.0052	0.0009	0.0043
22	0.0052	0.0009	0.0043
23	0.0052	0.0009	0.0043
24	0.0052	0.0009	0.0044
25	0.0053	0.0009	0.0044
26	0.0053	0.0009	0.0044
27	0.0053	0.0009	0.0044
28	0.0053	0.0009	0.0044
29	0.0053	0.0009	0.0044
30	0.0053	0.0009	0.0044
31	0.0054	0.0009	0.0045
32	0.0054	0.0009	0.0045
33	0.0054	0.0009	0.0045
34	0.0054	0.0009	0.0045
35	0.0054	0.0009	0.0045
36	0.0054	0.0009	0.0045
37	0.0055	0.0009	0.0046
38	0.0055	0.0009	0.0046
39	0.0055	0.0009	0.0046
40	0.0055	0.0009	0.0046
41	0.0056	0.0009	0.0046
42	0.0056	0.0009	0.0046
43	0.0056	0.0009	0.0047
44	0.0056	0.0009	0.0047
45	0.0056	0.0009	0.0047
46	0.0056	0.0009	0.0047
47	0.0057	0.0009	0.0047
48	0.0057	0.0009	0.0047
49	0.0057	0.0010	0.0048
50	0.0057	0.0010	0.0048
51	0.0058	0.0010	0.0048
52	0.0058	0.0010	0.0048
53	0.0058	0.0010	0.0048
54	0.0058	0.0010	0.0049
55	0.0059	0.0010	0.0049
56	0.0059	0.0010	0.0049
57	0.0059	0.0010	0.0049
58	0.0059	0.0010	0.0049
59	0.0060	0.0010	0.0050
60	0.0060	0.0010	0.0050
61	0.0060	0.0010	0.0050
62	0.0060	0.0010	0.0050
63	0.0061	0.0010	0.0050
64	0.0061	0.0010	0.0051
65	0.0061	0.0010	0.0051
66	0.0061	0.0010	0.0051
67	0.0062	0.0010	0.0051
68	0.0062	0.0010	0.0051
69	0.0062	0.0010	0.0052
70	0.0062	0.0010	0.0052
71	0.0063	0.0010	0.0052
72	0.0063	0.0010	0.0052
73	0.0063	0.0011	0.0053
74	0.0063	0.0011	0.0053
75	0.0064	0.0011	0.0053
76	0.0064	0.0011	0.0053
77	0.0064	0.0011	0.0054
78	0.0065	0.0011	0.0054
79	0.0065	0.0011	0.0054
80	0.0065	0.0011	0.0054
81	0.0066	0.0011	0.0055
82	0.0066	0.0011	0.0055
83	0.0066	0.0011	0.0055
84	0.0067	0.0011	0.0056
85	0.0067	0.0011	0.0056
86	0.0067	0.0011	0.0056
87	0.0068	0.0011	0.0057
88	0.0068	0.0011	0.0057
89	0.0069	0.0011	0.0057
90	0.0069	0.0011	0.0057

91	0.0069	0.0012	0.0058
92	0.0070	0.0012	0.0058
93	0.0070	0.0012	0.0058
94	0.0070	0.0012	0.0059
95	0.0071	0.0012	0.0059
96	0.0071	0.0012	0.0059
97	0.0072	0.0012	0.0060
98	0.0072	0.0012	0.0060
99	0.0072	0.0012	0.0060
100	0.0073	0.0012	0.0061
101	0.0073	0.0012	0.0061
102	0.0074	0.0012	0.0061
103	0.0074	0.0012	0.0062
104	0.0075	0.0012	0.0062
105	0.0075	0.0013	0.0063
106	0.0075	0.0013	0.0063
107	0.0076	0.0013	0.0063
108	0.0076	0.0013	0.0064
109	0.0077	0.0013	0.0064
110	0.0077	0.0013	0.0065
111	0.0078	0.0013	0.0065
112	0.0079	0.0013	0.0065
113	0.0079	0.0013	0.0066
114	0.0080	0.0013	0.0066
115	0.0080	0.0013	0.0067
116	0.0081	0.0013	0.0067
117	0.0082	0.0014	0.0068
118	0.0082	0.0014	0.0068
119	0.0083	0.0014	0.0069
120	0.0083	0.0014	0.0069
121	0.0084	0.0014	0.0070
122	0.0084	0.0014	0.0070
123	0.0085	0.0014	0.0071
124	0.0086	0.0014	0.0072
125	0.0087	0.0014	0.0072
126	0.0087	0.0015	0.0073
127	0.0088	0.0015	0.0074
128	0.0089	0.0015	0.0074
129	0.0090	0.0015	0.0075
130	0.0090	0.0015	0.0075
131	0.0091	0.0015	0.0076
132	0.0092	0.0015	0.0077
133	0.0093	0.0015	0.0078
134	0.0094	0.0016	0.0078
135	0.0095	0.0016	0.0079
136	0.0095	0.0016	0.0079
137	0.0097	0.0016	0.0081
138	0.0097	0.0016	0.0081
139	0.0099	0.0016	0.0082
140	0.0099	0.0017	0.0083
141	0.0101	0.0017	0.0084
142	0.0101	0.0017	0.0085
143	0.0103	0.0017	0.0086
144	0.0104	0.0017	0.0086
145	0.0131	0.0022	0.0109
146	0.0131	0.0022	0.0109
147	0.0133	0.0022	0.0111
148	0.0134	0.0022	0.0112
149	0.0136	0.0023	0.0113
150	0.0137	0.0023	0.0114
151	0.0139	0.0023	0.0115
152	0.0140	0.0023	0.0116
153	0.0142	0.0024	0.0118
154	0.0143	0.0024	0.0119
155	0.0145	0.0024	0.0121
156	0.0146	0.0024	0.0122
157	0.0149	0.0025	0.0124
158	0.0150	0.0025	0.0125
159	0.0152	0.0025	0.0127
160	0.0154	0.0026	0.0128
161	0.0157	0.0026	0.0131

162	0.0158	0.0026	0.0132
163	0.0161	0.0027	0.0134
164	0.0163	0.0027	0.0136
165	0.0166	0.0028	0.0139
166	0.0168	0.0028	0.0140
167	0.0172	0.0029	0.0143
168	0.0174	0.0029	0.0145
169	0.0178	0.0030	0.0149
170	0.0181	0.0030	0.0151
171	0.0186	0.0031	0.0155
172	0.0188	0.0031	0.0157
173	0.0194	0.0032	0.0161
174	0.0197	0.0033	0.0164
175	0.0203	0.0034	0.0169
176	0.0207	0.0034	0.0172
177	0.0214	0.0036	0.0179
178	0.0219	0.0036	0.0182
179	0.0228	0.0038	0.0190
180	0.0233	0.0039	0.0194
181	0.0244	0.0041	0.0204
182	0.0251	0.0042	0.0209
183	0.0266	0.0044	0.0222
184	0.0274	0.0046	0.0229
185	0.0214	0.0036	0.0178
186	0.0226	0.0038	0.0188
187	0.0257	0.0043	0.0214
188	0.0277	0.0046	0.0231
189	0.0334	0.0056	0.0278
190	0.0376	0.0063	0.0314
191	0.0538	0.0081	0.0457
192	0.0740	0.0081	0.0658
193	0.2316	0.0081	0.2234
194	0.0438	0.0073	0.0365
195	0.0302	0.0050	0.0251
196	0.0240	0.0040	0.0200
197	0.0284	0.0047	0.0237
198	0.0258	0.0043	0.0215
199	0.0239	0.0040	0.0199
200	0.0223	0.0037	0.0186
201	0.0210	0.0035	0.0175
202	0.0200	0.0033	0.0167
203	0.0191	0.0032	0.0159
204	0.0183	0.0030	0.0153
205	0.0176	0.0029	0.0147
206	0.0170	0.0028	0.0142
207	0.0165	0.0027	0.0137
208	0.0160	0.0027	0.0133
209	0.0155	0.0026	0.0129
210	0.0151	0.0025	0.0126
211	0.0147	0.0025	0.0123
212	0.0144	0.0024	0.0120
213	0.0141	0.0023	0.0117
214	0.0138	0.0023	0.0115
215	0.0135	0.0022	0.0112
216	0.0132	0.0022	0.0110
217	0.0104	0.0017	0.0087
218	0.0102	0.0017	0.0085
219	0.0100	0.0017	0.0083
220	0.0098	0.0016	0.0082
221	0.0096	0.0016	0.0080
222	0.0094	0.0016	0.0078
223	0.0092	0.0015	0.0077
224	0.0091	0.0015	0.0076
225	0.0089	0.0015	0.0074
226	0.0088	0.0015	0.0073
227	0.0086	0.0014	0.0072
228	0.0085	0.0014	0.0071
229	0.0084	0.0014	0.0070
230	0.0082	0.0014	0.0069
231	0.0081	0.0014	0.0068
232	0.0080	0.0013	0.0067

233	0.0079	0.0013	0.0066
234	0.0078	0.0013	0.0065
235	0.0077	0.0013	0.0064
236	0.0076	0.0013	0.0063
237	0.0075	0.0012	0.0062
238	0.0074	0.0012	0.0062
239	0.0073	0.0012	0.0061
240	0.0072	0.0012	0.0060
241	0.0071	0.0012	0.0059
242	0.0071	0.0012	0.0059
243	0.0070	0.0012	0.0058
244	0.0069	0.0011	0.0058
245	0.0068	0.0011	0.0057
246	0.0068	0.0011	0.0056
247	0.0067	0.0011	0.0056
248	0.0066	0.0011	0.0055
249	0.0066	0.0011	0.0055
250	0.0065	0.0011	0.0054
251	0.0064	0.0011	0.0054
252	0.0064	0.0011	0.0053
253	0.0063	0.0011	0.0053
254	0.0063	0.0010	0.0052
255	0.0062	0.0010	0.0052
256	0.0061	0.0010	0.0051
257	0.0061	0.0010	0.0051
258	0.0060	0.0010	0.0050
259	0.0060	0.0010	0.0050
260	0.0059	0.0010	0.0049
261	0.0059	0.0010	0.0049
262	0.0058	0.0010	0.0049
263	0.0058	0.0010	0.0048
264	0.0057	0.0010	0.0048
265	0.0057	0.0010	0.0048
266	0.0057	0.0009	0.0047
267	0.0056	0.0009	0.0047
268	0.0056	0.0009	0.0046
269	0.0055	0.0009	0.0046
270	0.0055	0.0009	0.0046
271	0.0055	0.0009	0.0045
272	0.0054	0.0009	0.0045
273	0.0054	0.0009	0.0045
274	0.0053	0.0009	0.0045
275	0.0053	0.0009	0.0044
276	0.0053	0.0009	0.0044
277	0.0052	0.0009	0.0044
278	0.0052	0.0009	0.0043
279	0.0052	0.0009	0.0043
280	0.0051	0.0009	0.0043
281	0.0051	0.0009	0.0043
282	0.0051	0.0008	0.0042
283	0.0050	0.0008	0.0042
284	0.0050	0.0008	0.0042
285	0.0050	0.0008	0.0042
286	0.0050	0.0008	0.0041
287	0.0049	0.0008	0.0041
288	0.0049	0.0008	0.0041

Total soil rain loss = 0.49(In)
 Total effective rainfall = 2.65(In)
 Peak flow rate in flood hydrograph = 11.70(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	5.0	10.0	15.0	20.0

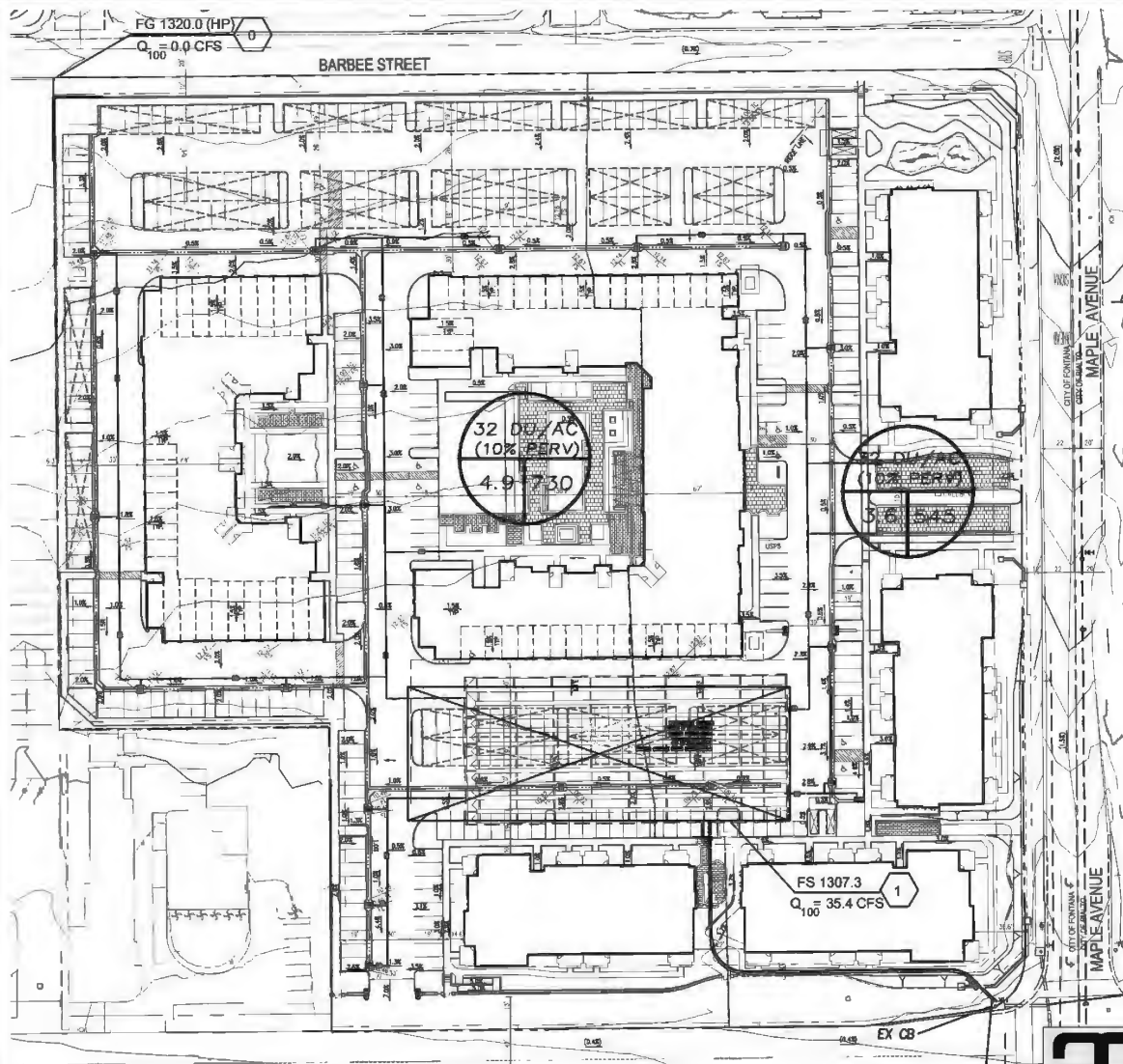
0+ 5	0.0002	0.03	Q				
0+10	0.0014	0.18	Q				
0+15	0.0037	0.34	Q				
0+20	0.0064	0.39	Q				
0+25	0.0092	0.40	Q				
0+30	0.0120	0.41	Q				
0+35	0.0148	0.41	Q				
0+40	0.0176	0.41	Q				
0+45	0.0204	0.41	Q				
0+50	0.0232	0.41	Q				
0+55	0.0261	0.41	Q				
1+ 0	0.0289	0.41	Q				
1+ 5	0.0318	0.42	Q				
1+10	0.0347	0.42	Q				
1+15	0.0376	0.42	Q				
1+20	0.0404	0.42	Q				
1+25	0.0433	0.42	Q				
1+30	0.0462	0.42	QV				
1+35	0.0492	0.42	QV				
1+40	0.0521	0.42	QV				
1+45	0.0550	0.43	QV				
1+50	0.0580	0.43	QV				
1+55	0.0609	0.43	QV				
2+ 0	0.0639	0.43	QV				
2+ 5	0.0668	0.43	QV				
2+10	0.0698	0.43	QV				
2+15	0.0728	0.43	QV				
2+20	0.0758	0.44	QV				
2+25	0.0788	0.44	QV				
2+30	0.0818	0.44	QV				
2+35	0.0849	0.44	QV				
2+40	0.0879	0.44	QV				
2+45	0.0910	0.44	Q V				
2+50	0.0940	0.44	Q V				
2+55	0.0971	0.45	Q V				
3+ 0	0.1002	0.45	Q V				
3+ 5	0.1033	0.45	Q V				
3+10	0.1064	0.45	Q V				
3+15	0.1095	0.45	Q V				
3+20	0.1126	0.45	Q V				
3+25	0.1158	0.46	Q V				
3+30	0.1189	0.46	Q V				
3+35	0.1221	0.46	Q V				
3+40	0.1252	0.46	Q V				
3+45	0.1284	0.46	Q V				
3+50	0.1316	0.46	Q V				
3+55	0.1348	0.47	Q V				
4+ 0	0.1381	0.47	Q V				
4+ 5	0.1413	0.47	Q V				
4+10	0.1445	0.47	Q V				
4+15	0.1478	0.47	Q V				
4+20	0.1511	0.47	Q V				
4+25	0.1543	0.48	Q V				
4+30	0.1576	0.48	Q V				
4+35	0.1609	0.48	Q V				
4+40	0.1643	0.48	Q V				
4+45	0.1676	0.48	Q V				
4+50	0.1710	0.49	Q V				
4+55	0.1743	0.49	Q V				
5+ 0	0.1777	0.49	Q V				
5+ 5	0.1811	0.49	Q V				
5+10	0.1845	0.49	Q V				
5+15	0.1879	0.50	Q V				
5+20	0.1913	0.50	Q V				
5+25	0.1948	0.50	IQ V				
5+30	0.1982	0.50	IQ V				
5+35	0.2017	0.50	IQ V				
5+40	0.2052	0.51	IQ V				
5+45	0.2087	0.51	IQ V				
5+50	0.2122	0.51	IQ V				
5+55	0.2158	0.51	IQ V				

6+ 0	0.2193	0.52	IQ	V				
6+ 5	0.2229	0.52	IQ	V				
6+10	0.2265	0.52	IQ	V				
6+15	0.2301	0.52	IQ	V				
6+20	0.2337	0.53	IQ	V				
6+25	0.2374	0.53	IQ	V				
6+30	0.2410	0.53	IQ	V				
6+35	0.2447	0.53	IQ	V				
6+40	0.2484	0.54	IQ	V				
6+45	0.2521	0.54	IQ	V				
6+50	0.2558	0.54	IQ	V				
6+55	0.2596	0.54	IQ	V				
7+ 0	0.2633	0.55	IQ	V				
7+ 5	0.2671	0.55	IQ	V				
7+10	0.2709	0.55	IQ	V				
7+15	0.2747	0.55	IQ	V				
7+20	0.2786	0.56	IQ	V				
7+25	0.2824	0.56	IQ	V				
7+30	0.2863	0.56	IQ	V				
7+35	0.2902	0.57	IQ	V				
7+40	0.2941	0.57	IQ	V				
7+45	0.2981	0.57	IQ	V				
7+50	0.3021	0.58	IQ	V				
7+55	0.3060	0.58	IQ	V				
8+ 0	0.3101	0.58	IQ	V				
8+ 5	0.3141	0.59	IQ	V				
8+10	0.3181	0.59	IQ	V				
8+15	0.3222	0.59	IQ	V				
8+20	0.3263	0.60	IQ	V				
8+25	0.3305	0.60	IQ	V				
8+30	0.3346	0.60	IQ	V				
8+35	0.3388	0.61	IQ	V				
8+40	0.3430	0.61	IQ	V				
8+45	0.3472	0.61	IQ	V				
8+50	0.3515	0.62	IQ	V				
8+55	0.3558	0.62	IQ	V				
9+ 0	0.3601	0.63	IQ	V				
9+ 5	0.3644	0.63	IQ	V				
9+10	0.3688	0.63	IQ	V				
9+15	0.3732	0.64	IQ	V				
9+20	0.3776	0.64	IQ	V				
9+25	0.3820	0.65	IQ	V				
9+30	0.3865	0.65	IQ	V				
9+35	0.3910	0.66	IQ	V				
9+40	0.3956	0.66	IQ	V				
9+45	0.4002	0.66	IQ	V				
9+50	0.4048	0.67	IQ	V				
9+55	0.4094	0.67	IQ	V				
10+ 0	0.4141	0.68	IQ	V				
10+ 5	0.4188	0.68	IQ	V				
10+10	0.4236	0.69	IQ	V				
10+15	0.4284	0.70	IQ	V				
10+20	0.4332	0.70	IQ	V				
10+25	0.4381	0.71	IQ	V				
10+30	0.4430	0.71	IQ	V				
10+35	0.4479	0.72	IQ	V				
10+40	0.4529	0.72	IQ	V				
10+45	0.4579	0.73	IQ	V				
10+50	0.4630	0.74	IQ	V				
10+55	0.4681	0.74	IQ	V				
11+ 0	0.4733	0.75	IQ	V				
11+ 5	0.4785	0.76	IQ	V				
11+10	0.4837	0.76	IQ	V				
11+15	0.4890	0.77	IQ	V				
11+20	0.4944	0.78	IQ	V				
11+25	0.4998	0.78	IQ	V				
11+30	0.5052	0.79	IQ	V				
11+35	0.5107	0.80	IQ	V				
11+40	0.5163	0.81	IQ	V				
11+45	0.5219	0.82	IQ	V				
11+50	0.5276	0.82	IQ	V				

11+55	0.5333	0.83	Q	V			
12+ 0	0.5391	0.84	Q	V			
12+ 5	0.5451	0.87	Q	V			
12+10	0.5517	0.95	Q	V			
12+15	0.5589	1.05	Q	V			
12+20	0.5663	1.08	Q	V			
12+25	0.5739	1.10	Q	V			
12+30	0.5815	1.11	Q	V			
12+35	0.5893	1.12	Q	V			
12+40	0.5971	1.13	Q	V			
12+45	0.6050	1.15	Q	V			
12+50	0.6130	1.16	Q	V			
12+55	0.6210	1.17	Q	V			
13+ 0	0.6292	1.19	Q	V			
13+ 5	0.6375	1.20	Q	V			
13+10	0.6458	1.21	Q	V			
13+15	0.6543	1.23	Q	V			
13+20	0.6629	1.25	Q	V			
13+25	0.6716	1.26	Q	V			
13+30	0.6804	1.28	Q	V			
13+35	0.6893	1.30	Q	V			
13+40	0.6984	1.32	Q	V			
13+45	0.7076	1.34	Q	V			
13+50	0.7169	1.36	Q	V			
13+55	0.7264	1.38	Q	V			
14+ 0	0.7361	1.40	Q	V			
14+ 5	0.7459	1.43	Q	V			
14+10	0.7559	1.45	Q	V			
14+15	0.7660	1.48	Q	V			
14+20	0.7764	1.51	Q	V			
14+25	0.7870	1.54	Q	V			
14+30	0.7978	1.57	Q	V			
14+35	0.8089	1.61	Q	V			
14+40	0.8202	1.65	Q	V			
14+45	0.8319	1.69	Q	V			
14+50	0.8438	1.73	Q	V			
14+55	0.8560	1.78	Q	V			
15+ 0	0.8687	1.83	Q	V			
15+ 5	0.8817	1.89	Q	V			
15+10	0.8952	1.96	Q	V			
15+15	0.9092	2.03	Q	V			
15+20	0.9238	2.12	Q	V			
15+25	0.9388	2.17	Q	V			
15+30	0.9528	2.04	Q	V			
15+35	0.9660	1.91	Q	V			
15+40	0.9797	1.99	Q	V			
15+45	0.9947	2.19	Q	V			
15+50	1.0118	2.48	Q	V			
15+55	1.0319	2.92	Q	V			
16+ 0	1.0580	3.79	Q	V			
16+ 5	1.1009	6.22	Q	V			
16+10	1.1815	11.70	Q	V			
16+15	1.2591	11.26	Q	V			
16+20	1.2974	5.56	Q	V			
16+25	1.3181	3.01	Q	V			
16+30	1.3352	2.48	Q	V			
16+35	1.3504	2.21	Q	V			
16+40	1.3648	2.08	Q	V			
16+45	1.3781	1.94	Q	V			
16+50	1.3907	1.82	Q	V			
16+55	1.4025	1.72	Q	V			
17+ 0	1.4138	1.64	Q	V			
17+ 5	1.4245	1.56	Q	V			
17+10	1.4349	1.50	Q	V			
17+15	1.4448	1.44	Q	V			
17+20	1.4544	1.39	Q	V			
17+25	1.4637	1.35	Q	V			
17+30	1.4727	1.31	Q	V			
17+35	1.4815	1.27	Q	V			
17+40	1.4901	1.24	Q	V			
17+45	1.4984	1.21	Q	V			

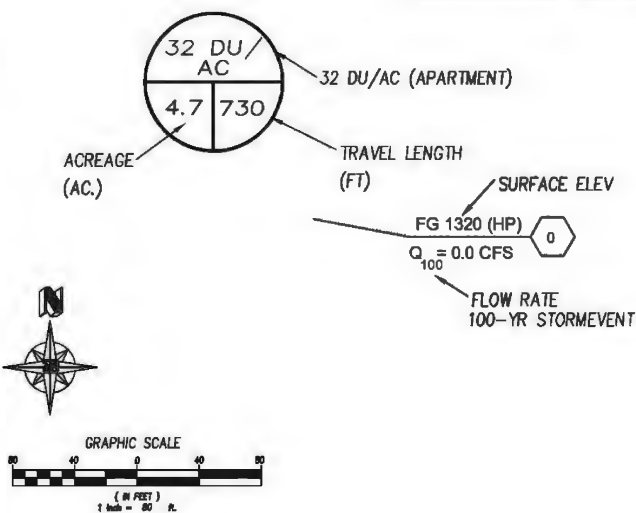
17+50	1.5065	1.18	I Q				V	
17+55	1.5145	1.16	I Q				V	
18+ 0	1.5223	1.13	I Q				V	
18+ 5	1.5298	1.09	I Q				V	
18+10	1.5367	1.00	I Q				V	
18+15	1.5428	0.89	I Q				V	
18+20	1.5487	0.85	I Q				V	
18+25	1.5543	0.82	I Q				V	
18+30	1.5599	0.81	I Q				V	
18+35	1.5653	0.79	I Q				V	
18+40	1.5706	0.77	I Q				V	
18+45	1.5759	0.76	I Q				V	
18+50	1.5810	0.75	I Q				V	
18+55	1.5861	0.73	I Q				V	
19+ 0	1.5910	0.72	I Q				V	
19+ 5	1.5959	0.71	I Q				V	
19+10	1.6008	0.70	I Q				V	
19+15	1.6055	0.69	I Q				V	
19+20	1.6102	0.68	I Q				V	
19+25	1.6148	0.67	I Q				V	
19+30	1.6193	0.66	I Q				V	
19+35	1.6238	0.65	I Q				V	
19+40	1.6282	0.64	I Q				V	
19+45	1.6325	0.63	I Q				V	
19+50	1.6368	0.62	I Q				V	
19+55	1.6411	0.62	I Q				V	
20+ 0	1.6453	0.61	I Q				V	
20+ 5	1.6494	0.60	I Q				V	
20+10	1.6535	0.59	I Q				V	
20+15	1.6576	0.59	I Q				V	
20+20	1.6616	0.58	I Q				V	
20+25	1.6655	0.57	I Q				V	
20+30	1.6694	0.57	I Q				V	
20+35	1.6733	0.56	I Q				V	
20+40	1.6772	0.56	I Q				V	
20+45	1.6810	0.55	I Q				V	
20+50	1.6847	0.55	I Q				V	
20+55	1.6884	0.54	I Q				V	
21+ 0	1.6921	0.53	I Q				V	
21+ 5	1.6958	0.53	I Q				V	
21+10	1.6994	0.52	I Q				V	
21+15	1.7030	0.52	I Q				V	
21+20	1.7065	0.52	I Q				V	
21+25	1.7100	0.51	I Q				V	
21+30	1.7135	0.51	I Q				V	
21+35	1.7170	0.50	I Q				V	
21+40	1.7204	0.50	Q				V	
21+45	1.7238	0.49	Q				V	
21+50	1.7272	0.49	Q				V	
21+55	1.7305	0.49	Q				V	
22+ 0	1.7338	0.48	Q				V	
22+ 5	1.7371	0.48	Q				V	
22+10	1.7404	0.47	Q				V	
22+15	1.7436	0.47	Q				V	
22+20	1.7468	0.47	Q				V	
22+25	1.7500	0.46	Q				V	
22+30	1.7532	0.46	Q				V	
22+35	1.7564	0.46	Q				V	
22+40	1.7595	0.45	Q				V	
22+45	1.7626	0.45	Q				V	
22+50	1.7657	0.45	Q				V	
22+55	1.7687	0.44	Q				V	
23+ 0	1.7718	0.44	Q				V	
23+ 5	1.7748	0.44	Q				V	
23+10	1.7778	0.44	Q				V	
23+15	1.7807	0.43	Q				V	
23+20	1.7837	0.43	Q				V	
23+25	1.7866	0.43	Q				V	
23+30	1.7896	0.42	Q				V	
23+35	1.7925	0.42	Q				V	
23+40	1.7953	0.42	Q				V	

23+45	1.7982	0.42	Q				V
23+50	1.8011	0.41	Q				V
23+55	1.8039	0.41	Q				V
24+ 0	1.8067	0.41	Q				V
24+ 5	1.8093	0.38	Q				V
24+10	1.8109	0.23	Q				V
24+15	1.8114	0.07	Q				V
24+20	1.8115	0.02	Q				V
24+25	1.8115	0.00	Q				V



DRAINAGE EXHIBIT-DEVELOPED CONDITION

2 FS 1305.5
 $Q_{100} = 35.4 \text{ CFS}$
 $Q_{MIT} = 8.3 \text{ CFS} < 8.7 \text{ CFS}$
 $(90\% Q_{100} \text{ IN EX})$



TTM-20704, FOOTHILL BLD. & MAPLE AVE APARTMENT

Prepared By:

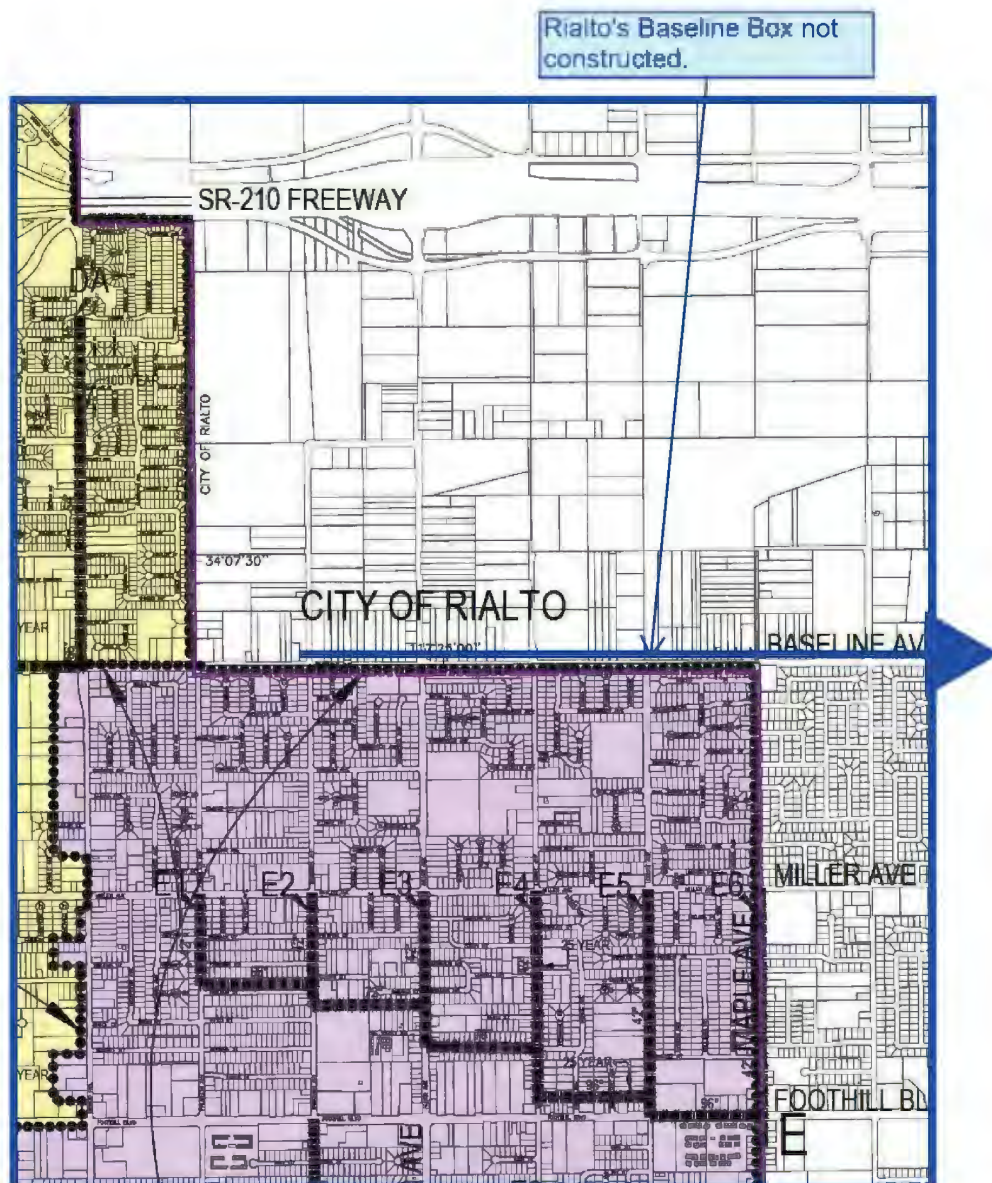
ALLARD ENGINEERING

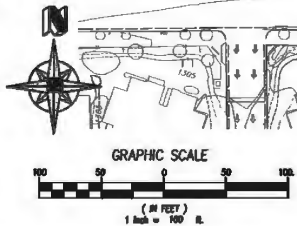
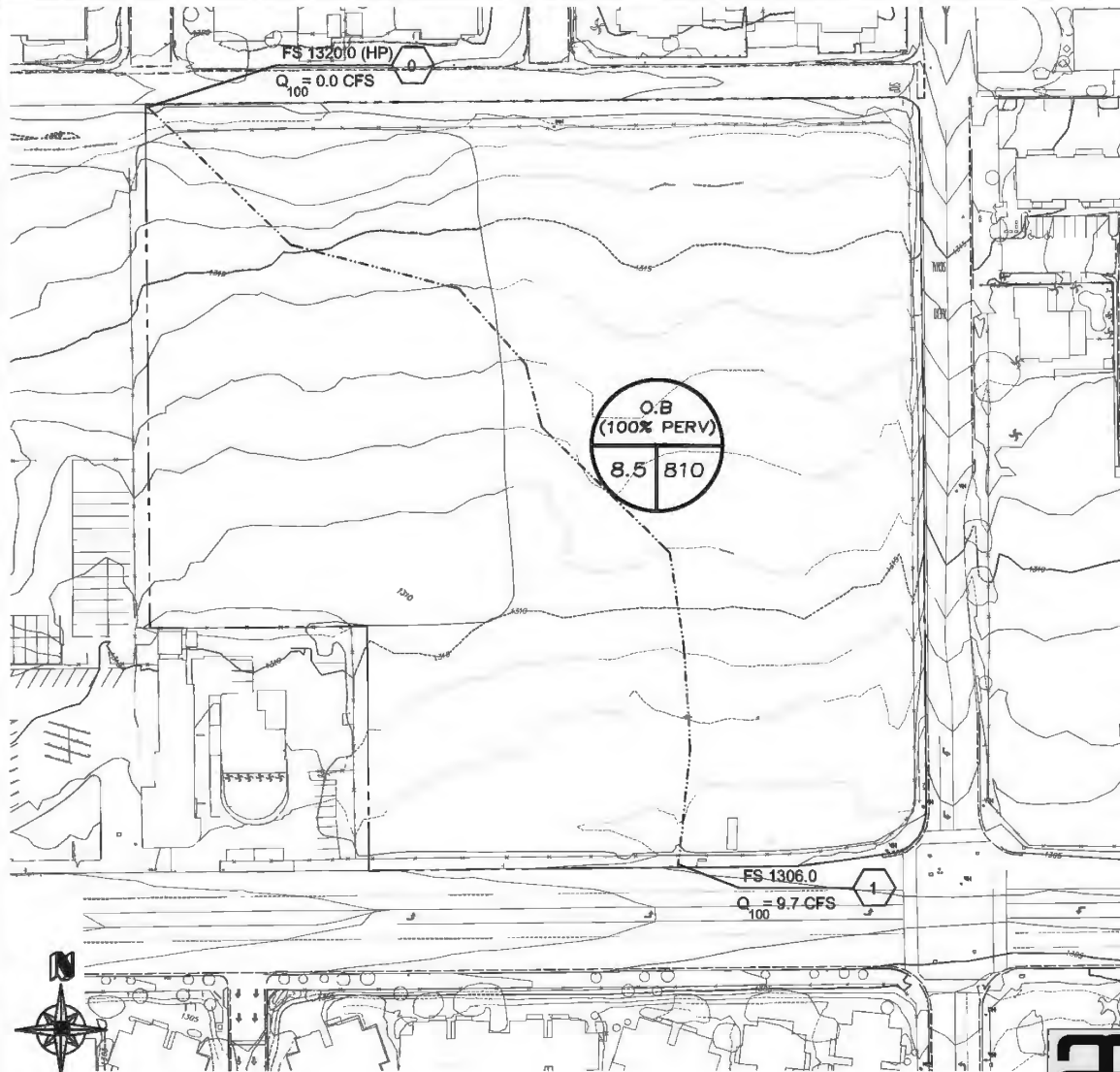
Civil Engineering - Land Surveying - Land Planning
 16866 Seville Avenue
 Fontana, California 92335
 PHONE (909) 356-1815 Fax (909) 356-1795

PREPARED FOR:

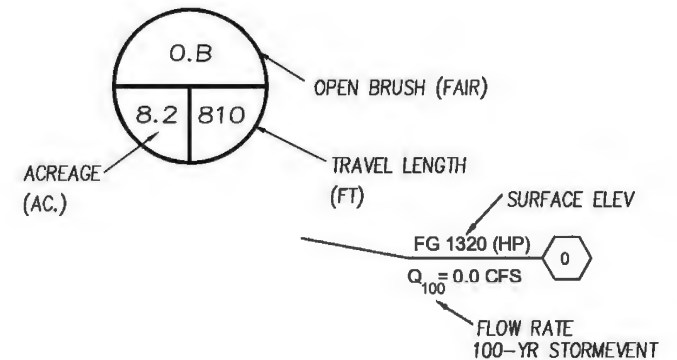
DIVERSIFIED PACIFIC COMMUNITIES
 10621 CIVIC CENTER DRIVE
 RANCHO CUCAMONGA, CA 91730
 PH: (909) 481-1150

Pre-developed Condition





DRAINAGE EXHIBIT-PRE-DEVELOPED CONDITION



TTM-20704, FOOTHILL BLBD. & MAPLE AVE APARTMENT

Prepared By:

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PREPARED FOR:

DIVERSIFIED PACIFIC COMMUNITIES
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PH: (909) 481-1150





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RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
(Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
(c) Copyright 1983-2016 Advanced Engineering Software (aes)
Ver. 23.0 Release Date: 07/01/2016 License ID 1400

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Analysis prepared by:

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***** DESCRIPTION OF STUDY *****
* OFFSITE AREA HYDROLOGY *
* 100-YR STORM EVENT *
* EXISTING CONDITION *
*****

```

FILE NAME: OFFSITE.DAT
TIME/DATE OF STUDY: 10:20 08/09/2024

=====

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

=====

--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT(YEAR) = 100.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 48.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL

SLOPE OF INTENSITY DURATION CURVE(LOG(I;IN/HR) vs. LOG(Tc;MIN)) = 0.6000
USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.5600

ANTECEDENT MOISTURE CONDITION (AMC) III ASSUMED FOR RATIONAL METHOD

USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL

NO.	WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL: IN- / OUT-/PARK- SIDE / SIDE/ WAY	CURB HEIGHT (FT)	GUTTER-GEOMETRIES: WIDTH LIP (FT) (FT)	MANNING HIKE FACTOR (n)
1	30.0	20.0	0.018/0.018/0.020	0.67	2.00 0.0313	0.167 0.0150

GLOBAL STREET FLOW-DEPTH CONSTRAINTS:

1. Relative Flow-Depth = 0.00 FEET
as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
2. (Depth)*(Velocity) Constraint = 6.0 (FT*FT/S)

*SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

*USER-SPECIFIED MINIMUM TOPOGRAPHIC SLOPE ADJUSTMENT NOT SELECTED

```

*****
FLOW PROCESS FROM NODE      0.00 TO NODE      1.00 IS CODE = 21

```

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

=====

INITIAL SUBAREA FLOW-LENGTH(FEET) = 800.00
ELEVATION DATA: UPSTREAM(FEET) = 1346.00 DOWNSTREAM(FEET) = 1338.00

$T_c = K * [(LENGTH^{**} 3.00) / (ELEVATION CHANGE)]^{**0.20}$

SUBAREA ANALYSIS USED MINIMUM T_c (MIN.) = 15.001

* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.584

SUBAREA T_c AND LOSS RATE DATA(AMC III):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	T_c (MIN.)
-------------------------------	-------------------	-----------------	-----------------	-----------------	-----------	-----------------

RESIDENTIAL "3-4 DWELLINGS/ACRE"	A	5.00	0.74	0.600	52	15.00
-------------------------------------	---	------	------	-------	----	-------

SUBAREA AVERAGE PERVIOUS LOSS RATE, F_p (INCH/HR) = 0.74

SUBAREA AVERAGE PERVIOUS AREA FRACTION, A_p = 0.600

```

SUBAREA RUNOFF(CFS) =      14.12
TOTAL AREA(ACRES) =      5.00   PEAK FLOW RATE(CFS) =      14.12

*****
FLOW PROCESS FROM NODE      1.00 TO NODE      1.00 IS CODE = 81
-----
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
=====
MAINLINE Tc(MIN.) =      15.00
* 100 YEAR RAINFALL INTENSITY(INCH/HR) =      3.584
SUBAREA LOSS RATE DATA(AMC III):
DEVELOPMENT TYPE/      SCS SOIL      AREA      Fp      Ap      SCS
LAND USE      GROUP      (ACRES)      (INCH/HR)      (DECIMAL)      CN
COMMERCIAL      A      8.00      0.74      0.100      52
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) =      0.74
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap =      0.100
SUBAREA AREA(ACRES) =      8.00      SUBAREA RUNOFF(CFS) =      25.27
EFFECTIVE AREA(ACRES) =      13.00      AREA-AVERAGED Fm(INCH/HR) =      0.22
AREA-AVERAGED Fp(INCH/HR) =      0.74      AREA-AVERAGED Ap =      0.29
TOTAL AREA(ACRES) =      13.0      PEAK FLOW RATE(CFS) =      39.39

*****
FLOW PROCESS FROM NODE      1.00 TO NODE      2.00 IS CODE = 61
-----
>>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>(STANDARD CURB SECTION USED)<<<<<
=====
UPSTREAM ELEVATION(FEET) = 1338.00 DOWNSTREAM ELEVATION(FEET) = 1317.00
STREET LENGTH(FEET) = 1198.00 CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 22.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 12.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.020
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.020

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      116.29
***STREET FLOWING FULL***
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.76
HALFSTREET FLOOD WIDTH(FEET) = 26.48
AVERAGE FLOW VELOCITY(FEET/SEC.) = 6.68
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 5.05
STREET FLOW TRAVEL TIME(MIN.) = 2.99 Tc(MIN.) = 17.99
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.213
SUBAREA LOSS RATE DATA(AMC III):
DEVELOPMENT TYPE/      SCS SOIL      AREA      Fp      Ap      SCS
LAND USE      GROUP      (ACRES)      (INCH/HR)      (DECIMAL)      CN
COMMERCIAL      A      11.00      0.74      0.100      52
RESIDENTIAL
"3-4 DWELLINGS/ACRE"      A      49.00      0.74      0.600      52
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.74
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.508
SUBAREA AREA(ACRES) = 60.00 SUBAREA RUNOFF(CFS) = 153.16
EFFECTIVE AREA(ACRES) = 73.00 AREA-AVERAGED Fm(INCH/HR) = 0.35
AREA-AVERAGED Fp(INCH/HR) = 0.74 AREA-AVERAGED Ap = 0.47
TOTAL AREA(ACRES) = 73.0 PEAK FLOW RATE(CFS) = 188.22

END OF SUBAREA STREET FLOW HYDRAULICS:
DEPTH(FEET) = 0.88 HALFSTREET FLOOD WIDTH(FEET) = 32.59
FLOW VELOCITY(FEET/SEC.) = 7.64 DEPTH*VELOCITY(FT*FT/SEC.) = 6.71
*NOTE: INITIAL SUBAREA NOMOGRAPH WITH SUBAREA PARAMETERS,
AND L = 1198.0 FT WITH ELEVATION-DROP = 21.0 FT, IS 205.1 CFS,
WHICH EXCEEDS THE TOP-OF-CURB STREET CAPACITY AT NODE 2.00
LONGEST FLOWPATH FROM NODE 0.00 TO NODE 2.00 = 1998.00 FEET.

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FLOW PROCESS FROM NODE      2.00 TO NODE      3.00 IS CODE =  61
-----
>>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
>>>>>(STANDARD CURB SECTION USED)<<<<<
=====
UPSTREAM ELEVATION(FEET) = 1317.00  DOWNSTREAM ELEVATION(FEET) = 1304.00
STREET LENGTH(FEET) = 732.00  CURB HEIGHT(INCHES) = 8.0
STREET HALFWIDTH(FEET) = 22.00

DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 12.00
INSIDE STREET CROSSFALL(DECIMAL) = 0.020
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.020

SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF = 1
STREET PARKWAY CROSSFALL(DECIMAL) = 0.020
Manning's FRICTION FACTOR for Streetflow Section(curbs-to-curbs) = 0.0150
Manning's FRICTION FACTOR for Back-of-Walk Flow Section = 0.0200

**TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 196.61
***STREET FLOWING FULL***
STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
STREET FLOW DEPTH(FEET) = 0.89
HALFSTREET FLOOD WIDTH(FEET) = 33.13
AVERAGE FLOW VELOCITY(FEET/SEC.) = 7.76
PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) = 6.90
STREET FLOW TRAVEL TIME(MIN.) = 1.57  Tc(MIN.) = 19.56
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.056
SUBAREA LOSS RATE DATA(AMC III):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
COMMERCIAL              A      1.00      0.74      0.100      52
RESIDENTIAL
"3-4 DWELLINGS/ACRE"    A      6.00      0.74      0.600      52
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.74
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.529
SUBAREA AREA(ACRES) = 7.00  SUBAREA RUNOFF(CFS) = 16.78
EFFECTIVE AREA(ACRES) = 80.00  AREA-AVERAGED Fm(INCH/HR) = 0.35
AREA-AVERAGED Fp(INCH/HR) = 0.74  AREA-AVERAGED Ap = 0.48
TOTAL AREA(ACRES) = 80.0  PEAK FLOW RATE(CFS) = 194.64

END OF SUBAREA STREET FLOW HYDRAULICS:
DEPTH(FEET) = 0.89  HALFSTREET FLOOD WIDTH(FEET) = 32.95
FLOW VELOCITY(FEET/SEC.) = 7.75  DEPTH*VELOCITY(FT*FT/SEC.) = 6.87
LONGEST FLOWPATH FROM NODE 0.00 TO NODE 3.00 = 2730.00 FEET.
=====
END OF STUDY SUMMARY:
TOTAL AREA(ACRES) = 80.0  TC(MIN.) = 19.56
EFFECTIVE AREA(ACRES) = 80.00  AREA-AVERAGED Fm(INCH/HR) = 0.35
AREA-AVERAGED Fp(INCH/HR) = 0.74  AREA-AVERAGED Ap = 0.475
PEAK FLOW RATE(CFS) = 194.64
=====
END OF RATIONAL METHOD ANALYSIS

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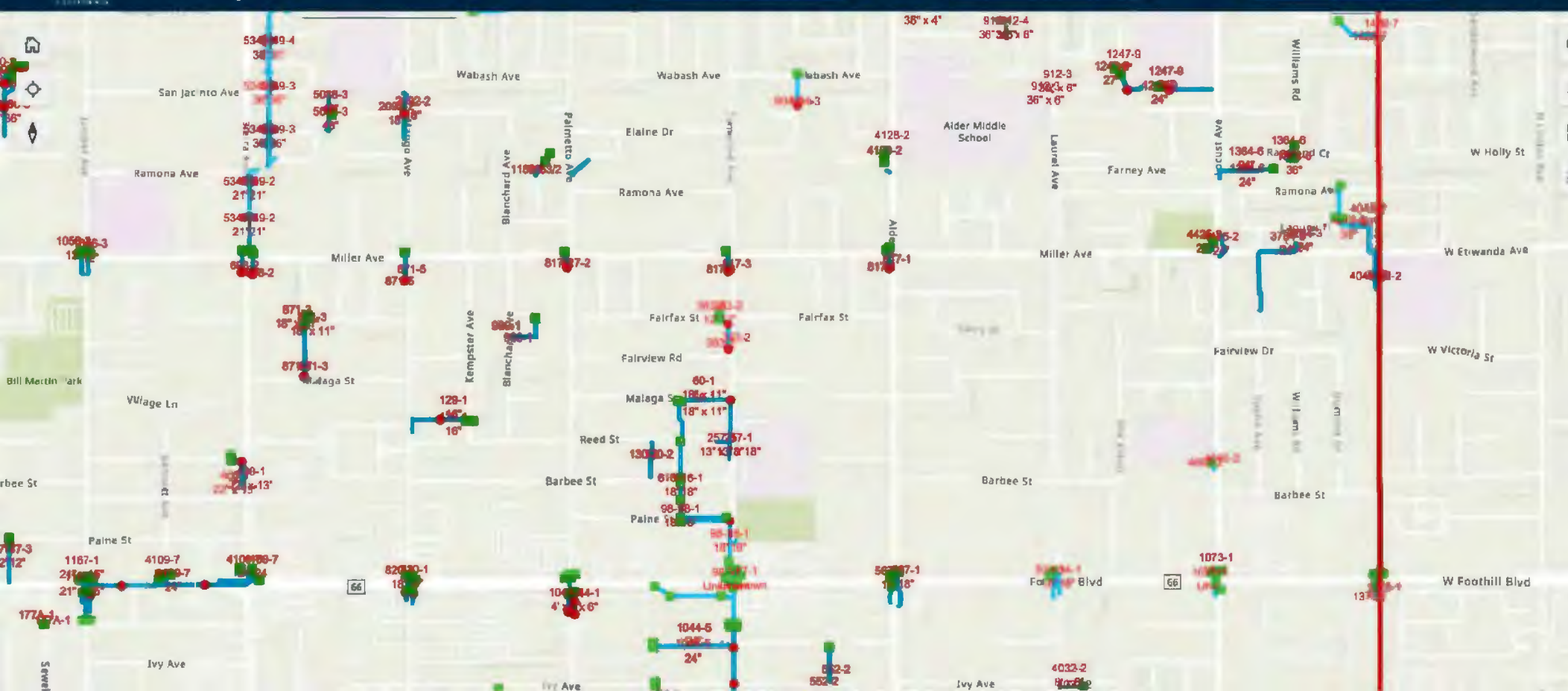
City of Fontana

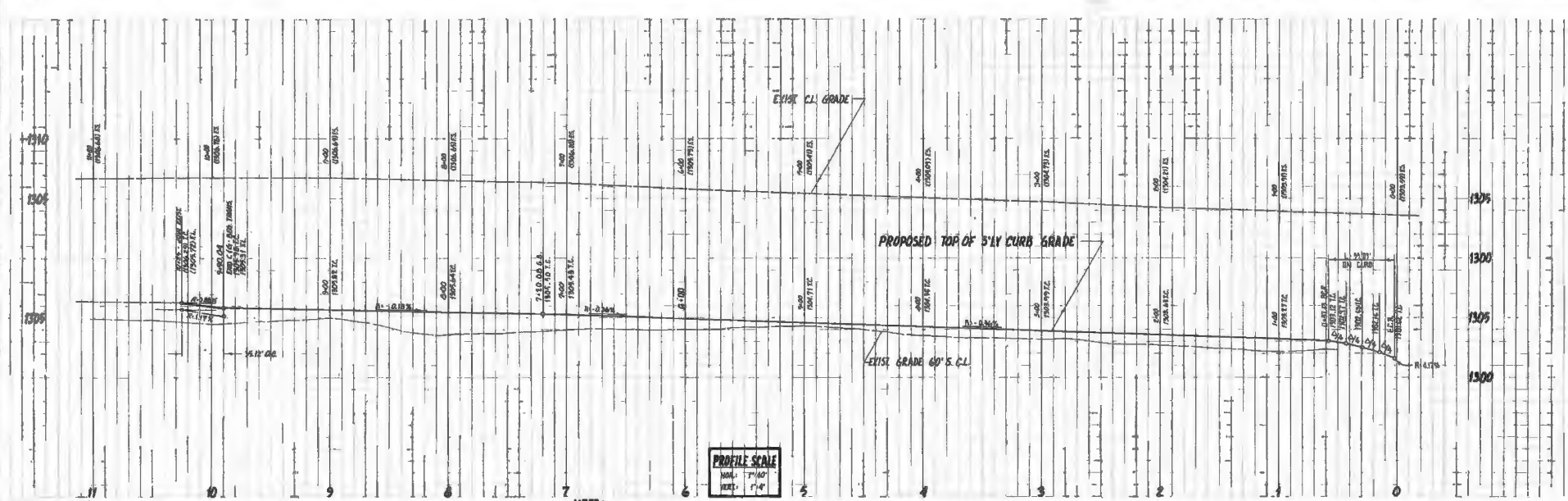
Improvement Plans

Sewer

Storm Drain

Street Improvements

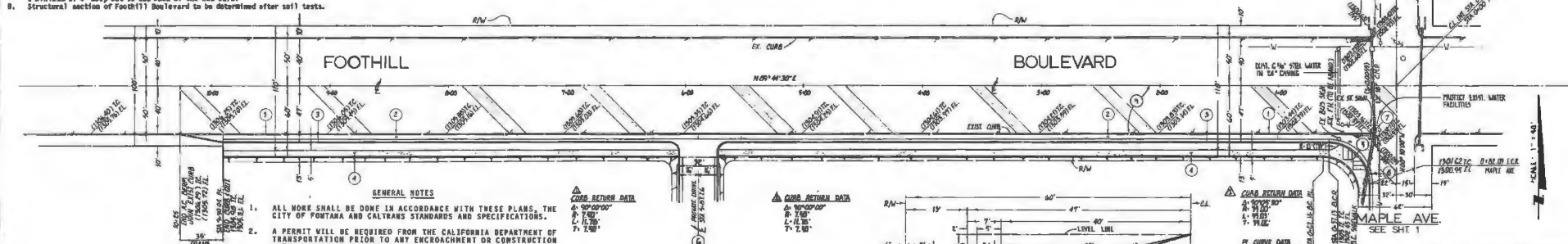




GENERAL NOTES (Cont.)

- Structural section indicated for highway is for estimating only. Actual section to be determined after grading and appropriate lab tests. A T.I. of 8.5 should be used in the design of the highway section and a T.I. of 6.0 for the shoulder.
- Requirements for base material shall be determined by testing and shall be a minimum of 4" deep out to the back of the new curb.
- Structural section of Foothill Boulevard to be determined after soil tests.

NOTE:
CONTRACTOR SHALL NOTIFY ALL UTILITY AGENCIES PRIOR TO CONSTRUCTION. ALL UTILITIES ARE NOT SHOWN HEREIN.

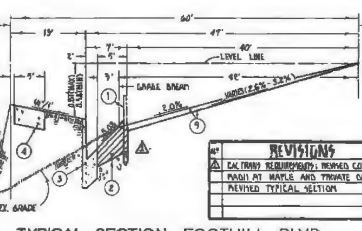


- GENERAL NOTES**
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS, THE CITY OF FONTANA AND CALTRANS STANDARDS AND SPECIFICATIONS.
 - A PERMIT WILL BE REQUIRED FROM THE CALIFORNIA DEPARTMENT OF TRANSPORTATION PRIOR TO ANY ENCROACHMENT OR CONSTRUCTION WITHIN CALTRANS EASEMENTS OR RIGHTS-OF-WAY.
 - IF ASPHALT CONCRETE IS TO BE PLACED DIRECTLY ON SUBGRADE OF ROAD OR DRAINAGE FACILITIES, A SOIL STABILANT REGISTERED BY THE E.P.A. FOR USE UNDER A.C. AND P.C.C. SHALL BE UNIFORMLY APPLIED AT THE MANUFACTURER'S RECOMMENDED RATE OR THE RATE SPECIFIED IN SECTION 15, WHICHEVER IS GREATER, FOR THE FULL PAVEMENT WIDTH PRIOR TO PAVING.
 - ALL PIPELINES OR SUBSTRUCTURES OF ANY KIND, AND TELEPHONE OR POWER POLES, WATER METERS, VALVES, HYDRANTS, IRRIGATION STRUCTURES, ETC., SHOWN OR NOT SHOWN ON THESE PLANS WITHIN THE LIMITS OF THIS DEVELOPMENT OR IN ADJACENT AREAS WHERE IMPROVEMENT WORK IS TO BE DONE, SHALL BE REMOVED OR RELOCATED AT DEVELOPER'S EXPENSE, AND AT NO COST TO THE CITY OF FONTANA. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL AGENCIES CONCERNED, BEFORE BEGINNING CONSTRUCTION.
 - AS-BUILT PLANS SHALL BE PROVIDED TO THE CITY OF FONTANA BY THE CONTRACTOR.

- CONSTRUCTION NOTES**
- SMOOTH & REINFORCE EXIST. CURB
 - CONSTRUCT A.C. PAVING PER GENERAL NOTE #6 HEREON
 - CONSTRUCT 6" CURB & GUTTER PER CALTRANS STD.
 - CONSTRUCT 4" REC. SIDEWALK
 - CONSTRUCT WHEEL CHAIR RAMP PER CALTRANS STD.
 - CONSTRUCT SIDEWALK PER CITY 102-L: 1/4" X 1/2" X 1/2"
 - CONSTRUCT CURB/STORM STRUCTURE PER CITY STD. 102
 - CONSTRUCT REINFORCED CONCRETE CURB/STORM PER DETAIL
 - CONSTRUCT VARIABLE THICKNESS A.C. OVERLAY IN REQUIRED BY FIELD INSPECTION

QUANTITIES:

LOAD LF	5,189.52
900 LC	4,700.56
1 EA	1 EA
1 EA	1 EA
93 LC	93 LC
1 EA	1 EA



REVISIONS

NO.	DESCRIPTION	DATE	APP.
1	CALTRANS RECOMMENDED REINFORCED CONCRETE BOX	10-10-13	J.T.J.
2	PAVED AT MAPLE AND TRINITY DRIVE		
3	REVISED TYPICAL SECTION		

DESIGNED BY: ROBIN B. HAMERS & ASSOC., INC.
CIVIL ENGINEERING
2034 E. 17TH STREET, SUITE 200
FONTANA, CA 92337
(951) 840-1100

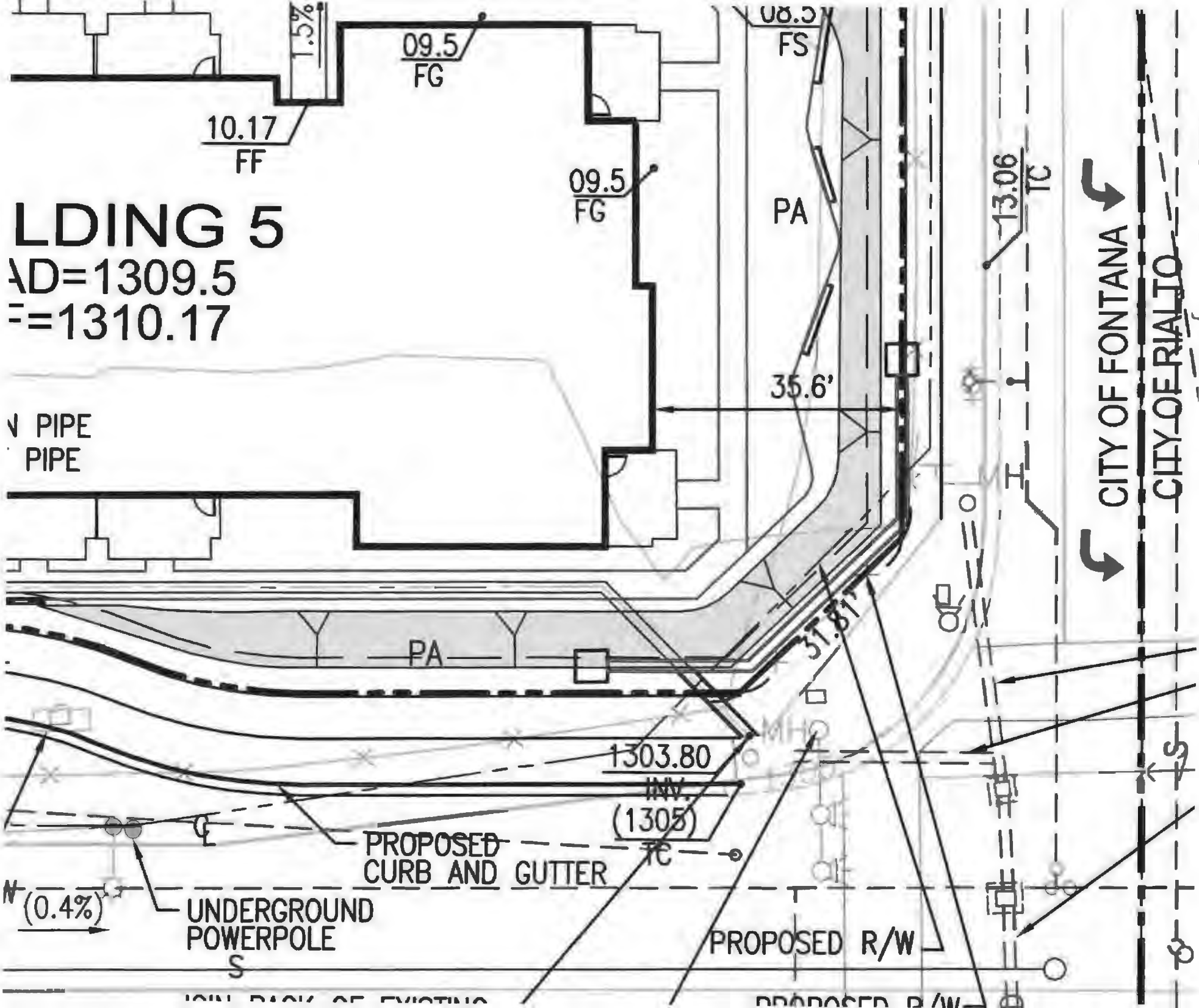
CITY OF FONTANA, CALIFORNIA
PUBLIC WORKS DEPARTMENT
FOOTHILL BOULEVARD
STREET IMPROVEMENT
SCALE: 1" = 40'
DATE: 10/10/13
APPROVED BY: J.T.J. E.C.

LDING 5

AD=1309.5

FF=1310.17

PIPE
PIPE



```
*****
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Analysis prepared by:

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TIME/DATE OF STUDY: 15:49 08/09/2024
=====
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Problem Descriptions:
MAPLE AVE AT FOOTHILL

```
*****
>>>>STREETFLOW MODEL INPUT INFORMATION<<<<
-----
```

```
CONSTANT STREET GRADE(FEET/FEET) = 0.020000
CONSTANT STREET FLOW(CFS) = 194.60
AVERAGE STREETFLOW FRICTION FACTOR(MANNING) = 0.015000
CONSTANT SYMMETRICAL STREET HALF-WIDTH(FEET) = 21.00
DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 10.00
INTERIOR STREET CROSSFALL(DECIMAL) = 0.020000
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.020000
CONSTANT SYMMETRICAL CURB HEIGHT(FEET) = 0.67
CONSTANT SYMMETRICAL GUTTER-WIDTH(FEET) = 1.50
CONSTANT SYMMETRICAL GUTTER-LIP(FEET) = 0.03125
CONSTANT SYMMETRICAL GUTTER-HIKE(FEET) = 0.16700
FLOW ASSUMED TO FILL STREET EVENLY ON BOTH SIDES
```

STREET FLOWING FULL

```
=====
STREET FLOW MODEL RESULTS:
-----
```

```
NOTE: STREET FLOW EXCEEDS TOP OF CURB.
      THE FOLLOWING STREET FLOW RESULTS ARE BASED ON THE ASSUMPTION
      THAT NEGLIBLE FLOW OCCURS OUTSIDE OF THE STREET CHANNEL.
      THAT IS, ALL FLOW ALONG THE PARKWAY, ETC., IS NEGLECTED.
STREET FLOW DEPTH(FEET) = 0.89
HALFSTREET FLOOD WIDTH(FEET) = 21.00
AVERAGE FLOW VELOCITY(FEET/SEC.) = 8.91
PRODUCT OF DEPTH&VELOCITY = 7.94
=====
```

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Analysis prepared by:

TIME/DATE OF STUDY: 14:26 08/09/2024

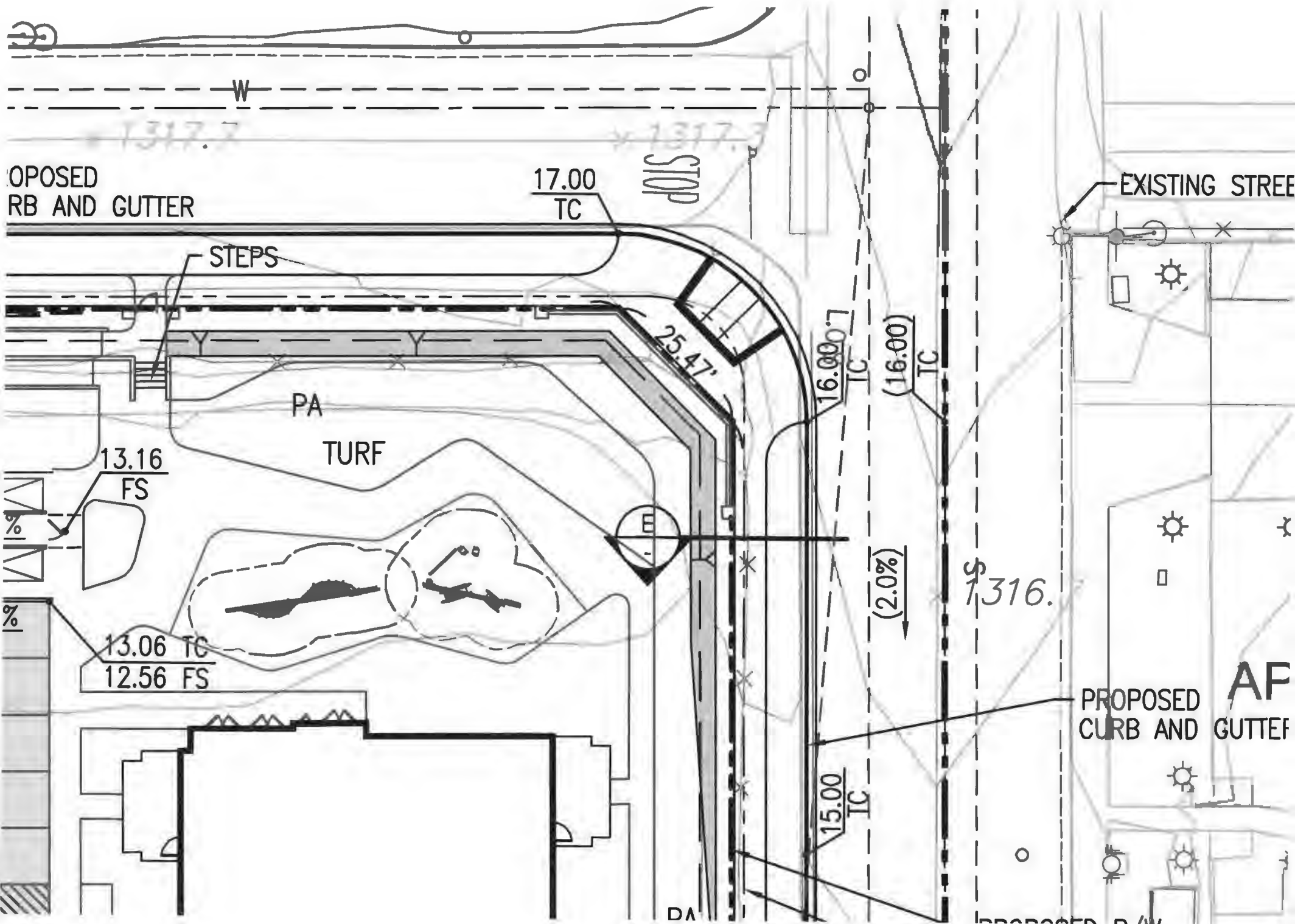
Problem Descriptions:
STREET CAPACITY WATER DEPTH CALC
FOOTHILL BLD AT MAPLE AVE
SECTION D-D'

>>>>STREETFLOW MODEL INPUT INFORMATION<<<<

CONSTANT STREET GRADE(FEET/FEET) = 0.020000
CONSTANT STREET FLOW(CFS) = 194.60
AVERAGE STREETFLOW FRICTION FACTOR(MANNING) = 0.015000
CONSTANT SYMMETRICAL STREET HALF-WIDTH(FEET) = 47.00
DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 20.00
INTERIOR STREET CROSSFALL(DECIMAL) = 0.020000
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.020000
CONSTANT SYMMETRICAL CURB HEIGHT(FEET) = 0.67
CONSTANT SYMMETRICAL GUTTER-WIDTH(FEET) = 1.50
CONSTANT SYMMETRICAL GUTTER-LIP(FEET) = 0.03125
CONSTANT SYMMETRICAL GUTTER-HIKE(FEET) = 0.16700
FLOW ASSUMED TO FILL STREET EVENLY ON BOTH SIDES

STREET FLOW MODEL RESULTS:

NOTE: STREET FLOW EXCEEDS TOP OF CURB.
THE FOLLOWING STREET FLOW RESULTS ARE BASED ON THE ASSUMPTION
THAT NEGLIBLE FLOW OCCURS OUTSIDE OF THE STREET CHANNEL.
THAT IS, ALL FLOW ALONG THE PARKWAY, ETC., IS NEGLECTED.
STREET FLOW DEPTH(FEET) = 0.90
HALFSTREET FLOOD WIDTH(FEET) = 36.69
AVERAGE FLOW VELOCITY(FEET/SEC.) = 7.15
PRODUCT OF DEPTH&VELOCITY = 6.45



PROPOSED
RB AND GUTTER

STEPS

PA

TURF

13.16
FS

13.06 TC
12.56 FS

17.00
TC

STOP

25.47'

E

16.00 TC

(16.00) TC

(2.0%)

15.00
TC

1316.7

PROPOSED
CURB AND GUTTER

EXISTING STREET

AF

DA

```
*****
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Analysis prepared by:

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TIME/DATE OF STUDY: 13:19 08/12/2024
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Problem Descriptions:

BARBEE ST CAPACITY
FOR AREA DRAIN TO BARBEE ST (32 AC)

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*****
>>>>STREETFLOW MODEL INPUT INFORMATION<<<<
=====
```

```
CONSTANT STREET GRADE(FEET/FEET) = 0.006000
CONSTANT STREET FLOW(CFS) = 77.50
AVERAGE STREETFLOW FRICTION FACTOR(MANNING) = 0.015000
CONSTANT SYMMETRICAL STREET HALF-WIDTH(FEET) = 20.00
DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 10.00
INTERIOR STREET CROSSFALL(DECIMAL) = 0.020000
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.020000
CONSTANT SYMMETRICAL CURB HEIGHT(FEET) = 0.50
CONSTANT SYMMETRICAL GUTTER-WIDTH(FEET) = 1.50
CONSTANT SYMMETRICAL GUTTER-LIP(FEET) = 0.03125
CONSTANT SYMMETRICAL GUTTER-HIKE(FEET) = 0.12500
FLOW ASSUMED TO FILL STREET ON ONE SIDE, AND THEN SPLITS
```

STREET FLOWING FULL

```
=====
STREET FLOW MODEL RESULTS:
=====
```

```
NOTE: STREET FLOW EXCEEDS TOP OF CURB.
      THE FOLLOWING STREET FLOW RESULTS ARE BASED ON THE ASSUMPTION
      THAT NEGLIBLE FLOW OCCURS OUTSIDE OF THE STREET CHANNEL.
      THAT IS, ALL FLOW ALONG THE PARKWAY, ETC., IS NEGLECTED.
STREET FLOW DEPTH(FEET) = 0.77
HALFSTREET FLOOD WIDTH(FEET) = 20.00
AVERAGE FLOW VELOCITY(FEET/SEC.) = 4.31
PRODUCT OF DEPTH&VELOCITY = 3.32
=====
```

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*****
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Analysis prepared by:

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TIME/DATE OF STUDY: 16:15 08/09/2024
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Problem Descriptions:
MAPPLE AT BARBEE ST

```
*****
>>>>STREETFLOW MODEL INPUT INFORMATION<<<<
-----
```

```
CONSTANT STREET GRADE(FEET/FEET) = 0.020000
CONSTANT STREET FLOW(CFS) = 188.20
AVERAGE STREETFLOW FRICTION FACTOR(MANNING) = 0.015000
CONSTANT SYMMETRICAL STREET HALF-WIDTH(FEET) = 21.00
DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) = 10.00
INTERIOR STREET CROSSFALL(DECIMAL) = 0.020000
OUTSIDE STREET CROSSFALL(DECIMAL) = 0.020000
CONSTANT SYMMETRICAL CURB HEIGHT(FEET) = 0.67
CONSTANT SYMMETRICAL GUTTER-WIDTH(FEET) = 1.50
CONSTANT SYMMETRICAL GUTTER-LIP(FEET) = 0.03125
CONSTANT SYMMETRICAL GUTTER-HIKE(FEET) = 0.16700
FLOW ASSUMED TO FILL STREET EVENLY ON BOTH SIDES
```

STREET FLOWING FULL

```
=====
STREET FLOW MODEL RESULTS:
-----
```

```
NOTE: STREET FLOW EXCEEDS TOP OF CURB.
      THE FOLLOWING STREET FLOW RESULTS ARE BASED ON THE ASSUMPTION
      THAT NEGLIBLE FLOW OCCURS OUTSIDE OF THE STREET CHANNEL.
      THAT IS, ALL FLOW ALONG THE PARKWAY, ETC., IS NEGLECTED.
STREET FLOW DEPTH(FEET) = 0.89
HALFSTREET FLOOD WIDTH(FEET) = 21.00
AVERAGE FLOW VELOCITY(FEET/SEC.) = 8.62
PRODUCT OF DEPTH&VELOCITY = 7.68
=====
```