

Appendix 5.8-2 Preliminary Hydrology and Hydraulics Report

Appendices

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Inland Valley Medical Center Project
Preliminary Hydrology and Hydraulics Report
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380-260-037-5; 380-250-029-8; 380-260-001-2
36485 Inland Valley Dr.
Wildomar, CA 92595

Prepared for:
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July 2021

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INTRODUCTION

The scope of the Project is to complete a hydrology and hydraulic analysis for the storm drain improvements associated with the proposed Inland Valley Medical Center project in Wildomar, CA. The Project is located at 36485 Inland Valley Drive on the northwest corner of the intersection of Inland Valley Drive and Prielipp Road. The Project consist of a new CUP building and a hospital building expansion to be located centrally on the Inland Valley Medical Center. Other project activities will also include utility improvements, and parking lots redevelopment. The total project disturbs approximately 15 acres; however, the hydrology for the entire Medical Center was analyzed to determine the basis of design for the detention systems.

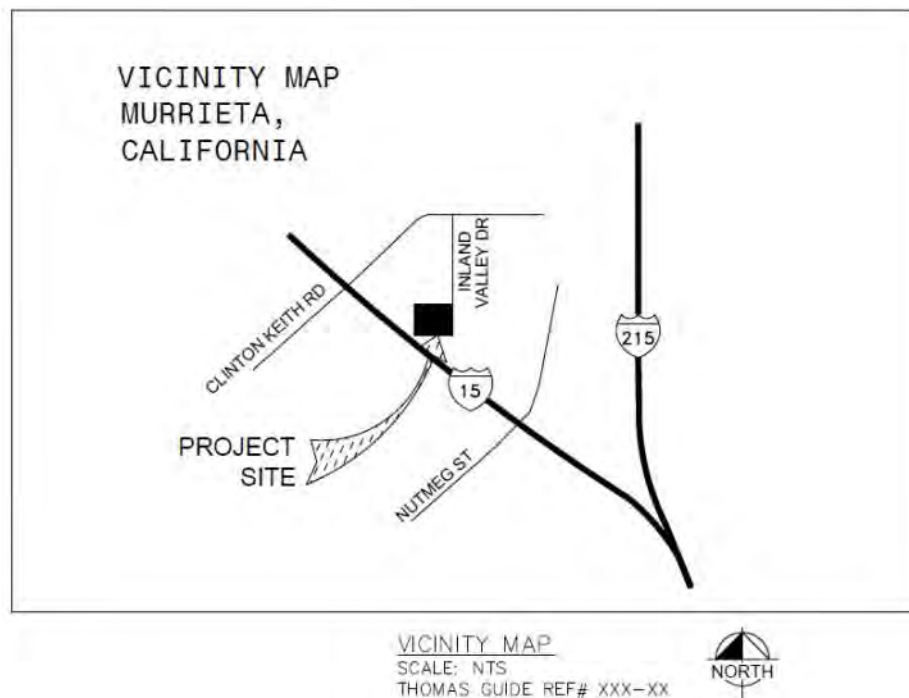


Figure 1: Inland Valley Medical Center Location

RATIONAL METHOD CALCULATIONS

The hydrology and hydraulic analyses were completed in accordance with the Riverside County Hydrology Manual. A rational method analysis in accordance with the Manual was completed to calculate the peak discharges for existing conditions and proposed project conditions. A review of the Geotechnical Investigation Report dated December 12, 2019 prepared by NOVA Services, Inc found that subsurface soils at the site consisted of relatively dense sands and stiff silts underlain by siltstone and sandstone. Additionally, infiltration tests showed that the soils have infiltration rates below 0.03 inches per hour. Soil group C is defined as soils having slow infiltration rates (high runoff potential) and was used to calculate the soil loss rates.

The land use for the project is commercial which has an impervious range percent between 80-100%. Storm depths from NOAA 14 were used for the analyses. The Advance Engineering Software (AES) Hydrosoft package was used to complete the rational method analysis.

Under existing conditions, the Medical Center consists of three major drainage areas (A, B, and C). Runoff from drainage area A enters multiple storm drain inlets that ultimately discharges to an unnamed creek that is located along the northwest perimeter of the project. Runoff that doesn't enter these inlets, sheet flows across a fully pervious hillside before entering the same unnamed creek. Runoff from drainage area B enters multiple drainage inlets and shallow earthen channels until it discharges to a culvert along the southwest perimeter of the site. The existing culvert crosses the Interstate-15 in and discharges on the south side of the Interstate. Runoff from drainage area C sheet flows south and discharges along the northbound I-15 shoulder. Rational method calculation outputs for existing conditions are included in Appendix B.

Table 1: Existing Conditions Rational Method Summary

Drainage Area	Acres (ac)	10-Year, Peak Flow Rate	100-Year, Peak Flow Rate
A	10.14	17.27	29.72
B	12.24	17.63	30.87
C	0.92	0.94	1.77
Total	23.30	35.84	62.36

For proposed conditions, the Medical Center consists of three major drainage areas (A, B, and C). Of the total drainage areas, only 15 acres will be redeveloped. Each drainage area was then subdivided and nodes were identified for the rational method calculations. Each drainage area has similar drainage patterns to that of existing conditions. However, a portion of drainage areas A and C have been rerouted via grading and proposed underground storm drain system to drainage area B. As a result, the total peak flow rate from drainage areas A and C decreased, while drainage area B increased. Additional detention calculations for drainage area B were completed and included in the Hydraulics Section below. Rational method calculation outputs for proposed conditions are included in Appendix C.

Table 2: Proposed Conditions Rational Method Summary

Drainage Area	Acres (ac)	10-Year, Peak Flow Rate	100-Year, Peak Flow Rate
A	8.86	17.12	24.97
B	13.93	25.17	42.69
C	0.51	0.78	1.30
Total	23.30	43.07	68.96

Offsite run-on areas from Inland Valley Drive and Prielipp Road will be routed around any proposed project Best Management Practices via an underground pipe. The offsite run-on areas make up approximately 35.2 acres (58.77 cfs) and consists of a portion of Prielipp Road and the area northwest of Prielipp Road and Inland Valley Drive. Under existing conditions, this area enters an existing catch basin on the north side of Prielipp Road near Inland Valley Drive before discharging the Medical Center's trapezoidal channel on the south side of the site. This trapezoidal channel ultimately discharges to a concrete swale before entering the 30-inch culvert that crosses Interstate-15.

Under proposed conditions, the offsite run-on will continue to be captured in the existing catch basin and will be diverted around the proposed project's Best Management Practices via an underground 42-inch pipe. The 42-inch pipe will also discharge to the existing concrete swale which will have energy dissipation devices for the concentrated flow. The total off-site run-off that will be conveyed to the 42-inch pipe is 59.7 cfs which consists of the off-site runoff and the detained peak flows from sub-drainage area B-3 (see Hydraulics section). Off-site hydrology calculations for the 35.2 acres were obtained from a previously approved drainage report completed by Kimley-Horn in SOU. Refer to Appendix A for an exhibit of the offsite drainage areas.

HYDRAULICS

Detention Basin Calculations

Since the proposed flow rates for drainage area B exceeded that of existing conditions, detention calculations for the two detention systems in this area have been completed. The unit hydrograph for the project was completed using the AES software. The basin routing analysis was completed with Bentley PondPack, which uses the Modified-Puls method for flow-through basin analysis.

Drainage area B was divided into five sub-drainage areas: B-1, B-2, B-3, B4 and B-5 as shown in the Proposed Hydrology Exhibit in Appendix A. Sub-drainage areas B-1 and B-2 will discharge to a detention/biofiltration pond on the south corner of the site. Sub-drainage area B-3 will discharge to underground detention system on the east side of the site. Drainage area B-4 consists of mostly run-on and a de-minimums area from the project along Inland Valley Drive and will be conveyed to the 42-inch pipe around the detention system. Drainage area B-5 consists of a vegetated slope along the southwest perimeter that cannot drain to a detention system due to grading constraints.

The detention systems were sized to meet hydromodification requirements using the Santa Margarita Region Hydrology Model (SMRHM) software. The detention system and outlet structures configurations and geometry determined by the SMRHM software were then used to route the 10 and 100-year peak flows in PondPack. Table 3 below shows the existing vs. proposed peak flow rates for major drainage area B. Unit hydrograph calculation outputs are included in Appendix D while PondPack routing calculations are included in Appendix E.

Table 3: Detention Runoff Calculation Summary

	Sub-Drainage Area	Area (ac)	Detained/Design Flow Rate (cfs)			
			10-yr, 1-hr	10-yr, 24-hr	100-yr, 1-hr	100-yr, 24-hr
Existing Conditions	B	12.24	15.24	4.59	26.83	8.42
Proposed Conditions	B-1 & B-2*	7.79	0.46	0.47	0.47	0.76
	B-3*	3.89	0.03	0.05	0.04	2.14
	B-4	1.30	1.59	0.62	2.71	1.02
	B-5	0.95	1.51	0.47	2.56	0.77
	Total B	13.93	3.59	1.61	5.81	4.69

*Peak flow rates included are the peak flow rates after routing through the detention basin has occurred.

Table 4: Detention Summary

Sub-Drainage Area	Orifice		Weir		Riser Rim Elevation (ft)	System Invert (ft)	100-yr Water Surface Elevation (ft)
	Diam (in)	Invert (ft)	Elevation (Ft)	Notch Information			
B-1 & B-2	1	1318.50	1322.00	V-notch (90deg)	1323.00 54"	1318.00	1323.05
B-3	1	1319.74	1324.24	Rectangular (Length 1.71-ft)	1325.74	1319.74	1324.77

The detention basin systems will outlet to an existing concrete swale before discharging to the I-15 culvert. The outlet from each detention basin will discharge via a riser with an orifice and notch weir to limit the flows similar to existing conditions. The storm drain and basin routing calculations are included in Appendix D.

The total proposed flow rates from the Medical Center are expected to be less than that of existing conditions by implementing the detention systems in drainage area B. Table 5 includes a summary of the existing and proposed flow rates for the Medical Center. Note that the detention system in Drainage Area A was also sized to meet hydromodification requirements but will convey the full peak flow rate up to the 100-year storm event as shown in the PondPack calculations in Appendix E.

Catch Basin Calculations

Catch basin capacity calculations were completed using Bentley's Flow Master software which uses HEC-22 Urban Drainage Design Manual (FHWA, 2009) methodology. The catch basins were designed for the 100-year 24-hour storm event (rational method) and to limit the maximum ponding depth at the catch basins below 6 inches. Different inlet types/sizes have been proposed throughout the site as shown in Table 5 below. A copy of the inlet calculations using the largest flow rates for each size are included in Appendix D. A summary of each catch basin size at each concentration node is also included in Appendix E.

Table 5: Catch Basin Summary

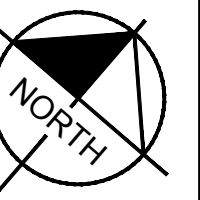
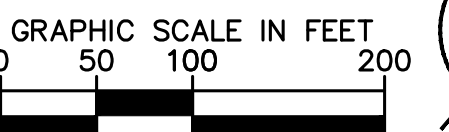
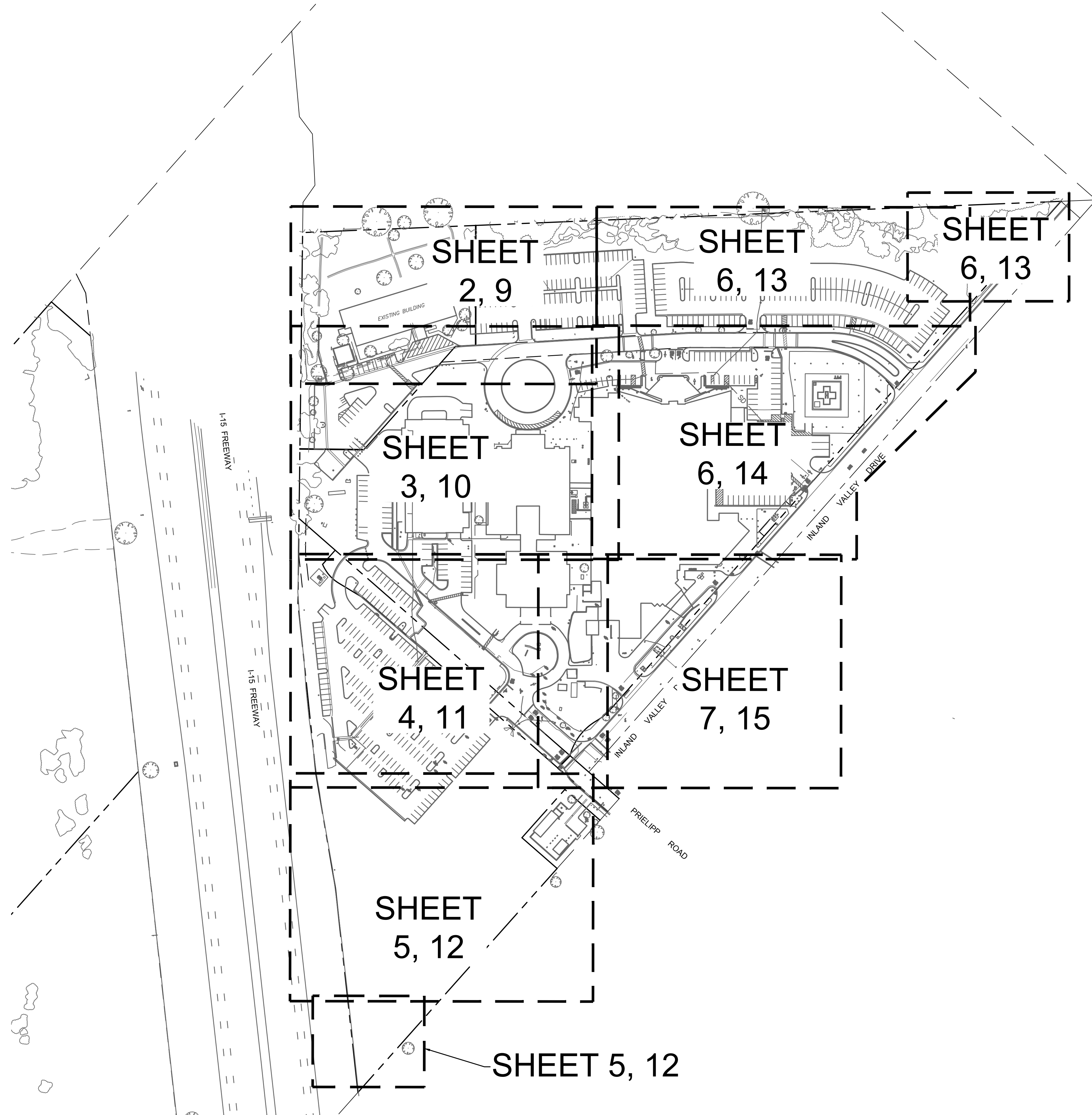
Downstream Node	100-year Peak Flow (cfs)	Catch Basin Size	Downstream Node	100-year Peak Flow (cfs)	Catch Basin Size
112	0.29	1'x1' grate	154	2.81	7' curb
114	0.33	1'x1' grate	157	1.18	7' curb
117	1.98	2'x2' grate	160	0.84	3.5' curb
126	0.65	1'x1' grate	162	2.71	7' curb
129	0.91	1'x1' grate	165	1.56	7' curb
195	0.18	3.5' curb	168	2.18	7' curb
197	0.29	3.5' curb	171	2.17	7' curb
138	2.89	7' curb	174	0.76	1'x1' grate
140	0.22	3.5' curb	177	2.26	1'x1' grate
143	1.12	3.5' curb	180	0.56	1'x1' grate
145	0.99	3.5' curb	183	2.18	7' curb
148	2.42	7' curb	186	0.77	3.5' curb
151	1.24	7' curb	191	2.96	7' curb
154	2.81	7' curb	191	2.96	7' curb

Storm Drain Pipe Calculation

Hydraulic calculations for sizing storm drain were completed using Manning's equation. Each proposed storm drain lateral has been sized using Flow Master and AES to convey the 100-year peak flow from the rational method calculations. Capacity calculations for each pipe are included in Appendix E. The overflow pipes for each detention system were sized for the 100-year peak flow calculated in the routing analysis.

APPENDIX A: EXHIBITS

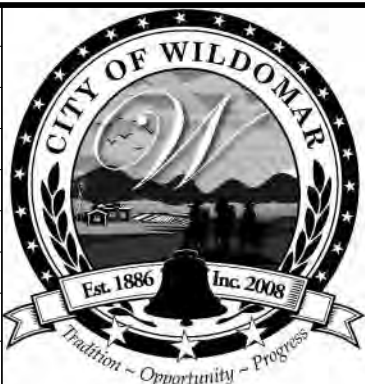
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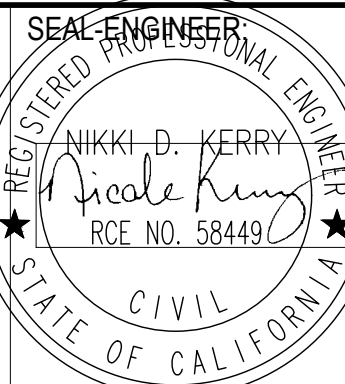
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 BENCHMARK #999
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 HYDROLOGY INDEX MAP

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- DENOTES RATIONAL METHOD AREA BOUNDARY
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- NODE NUMBER

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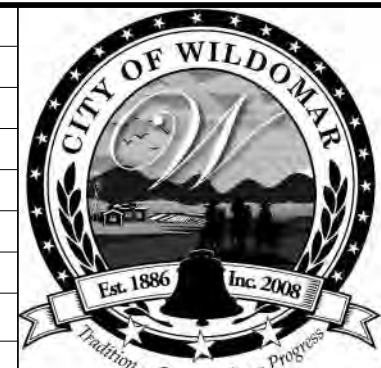
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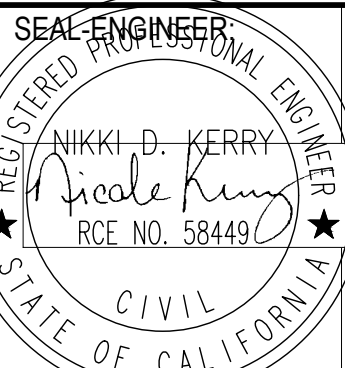
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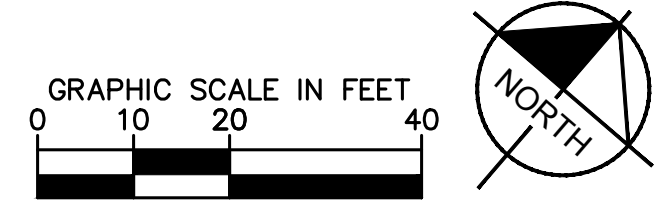


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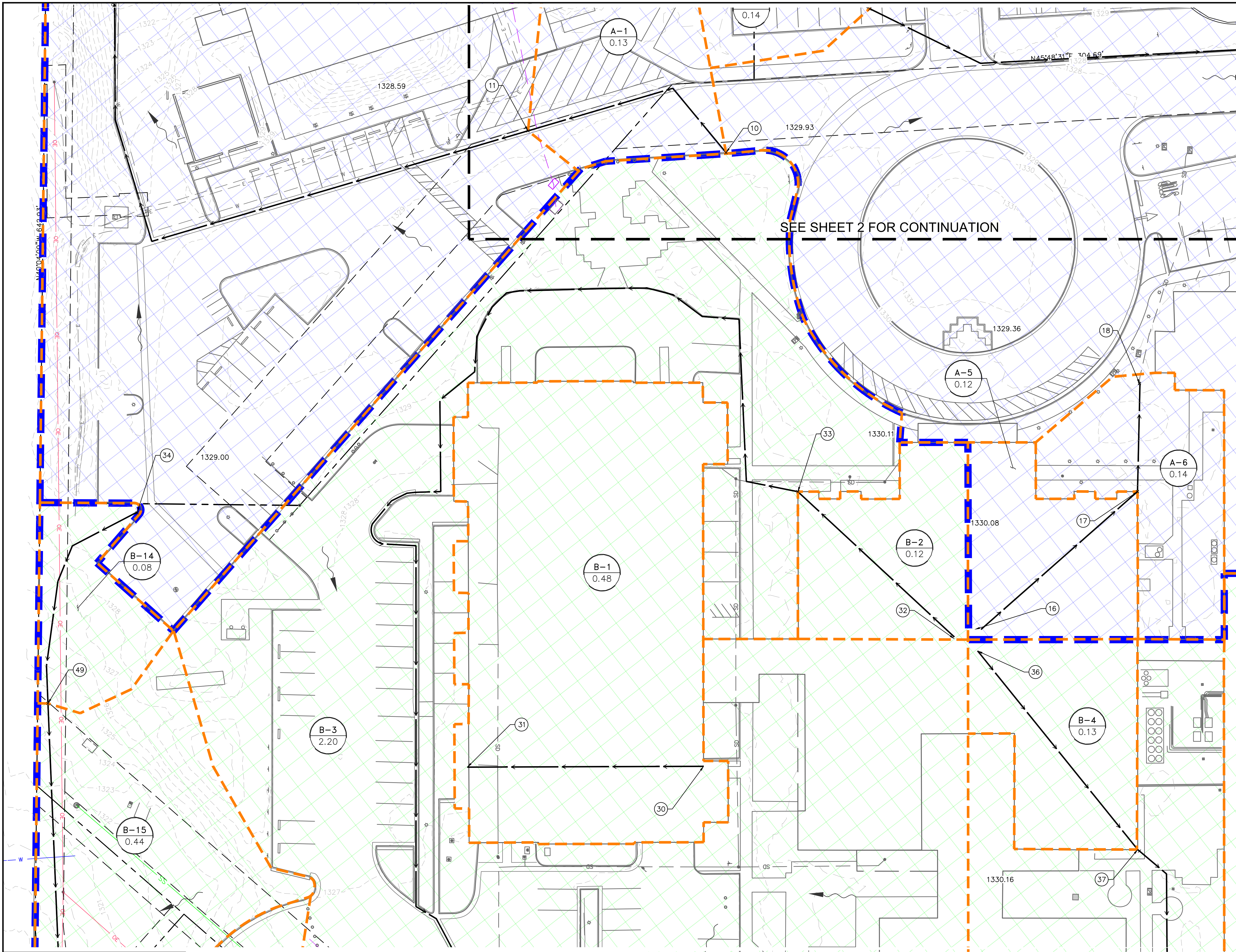
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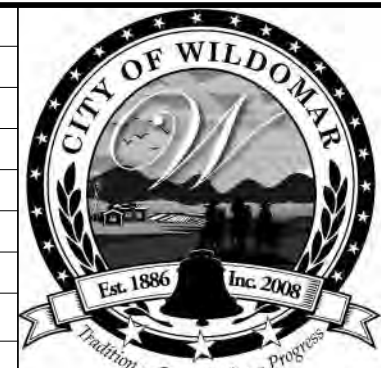
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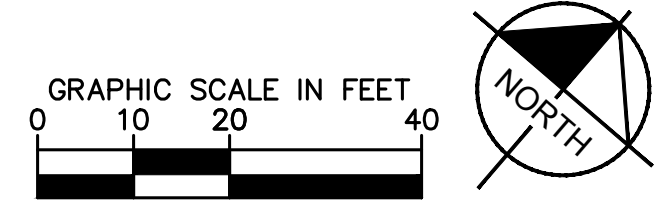


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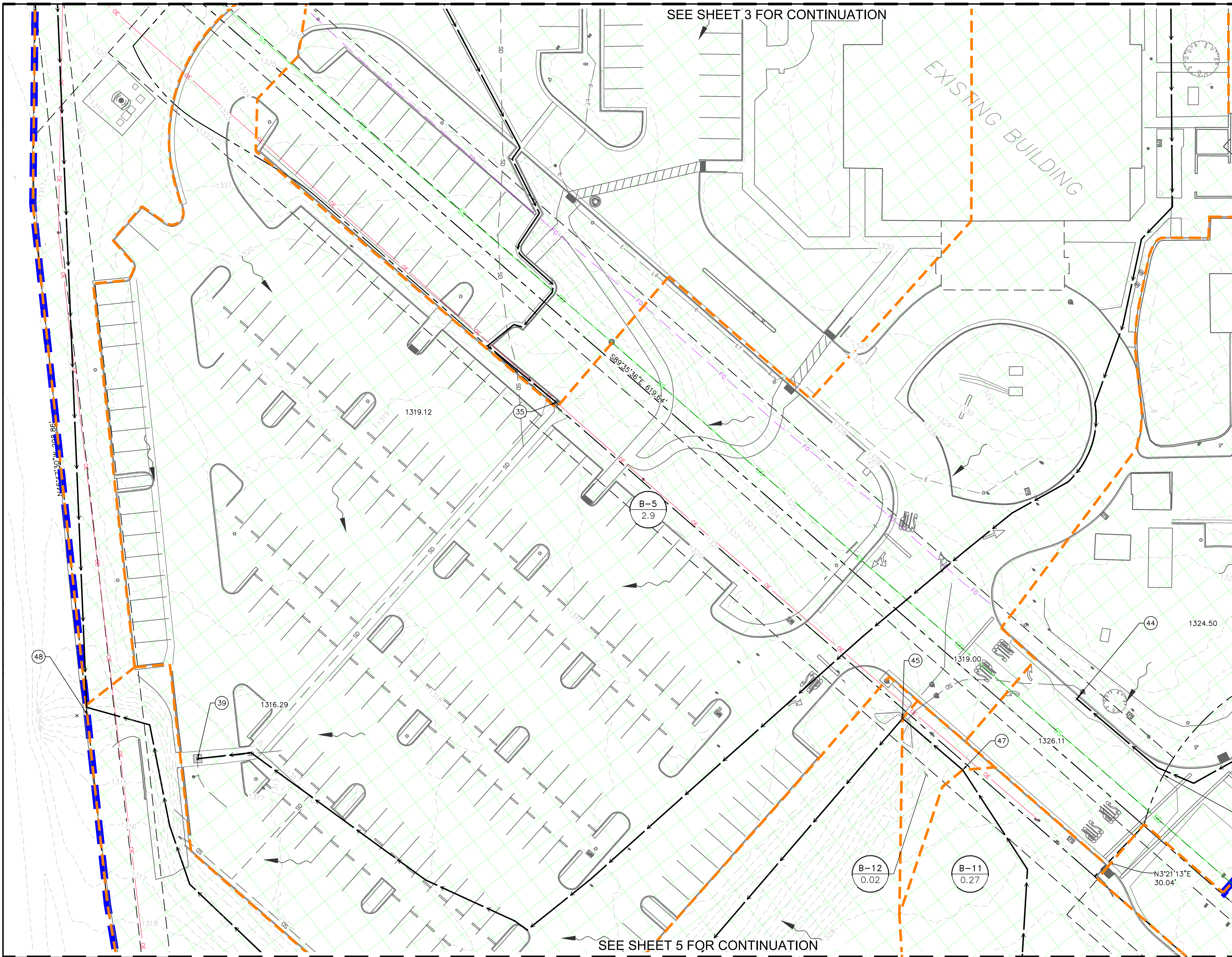
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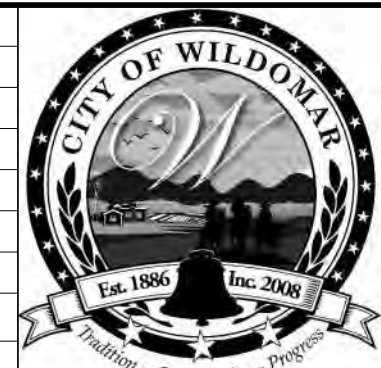
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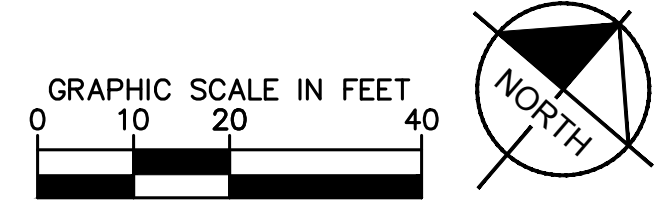
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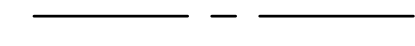







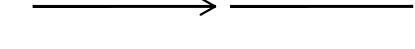


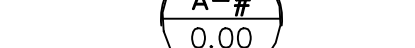



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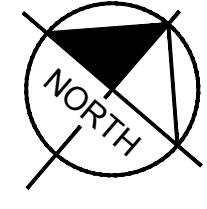
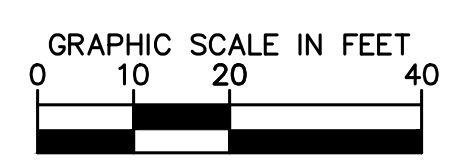
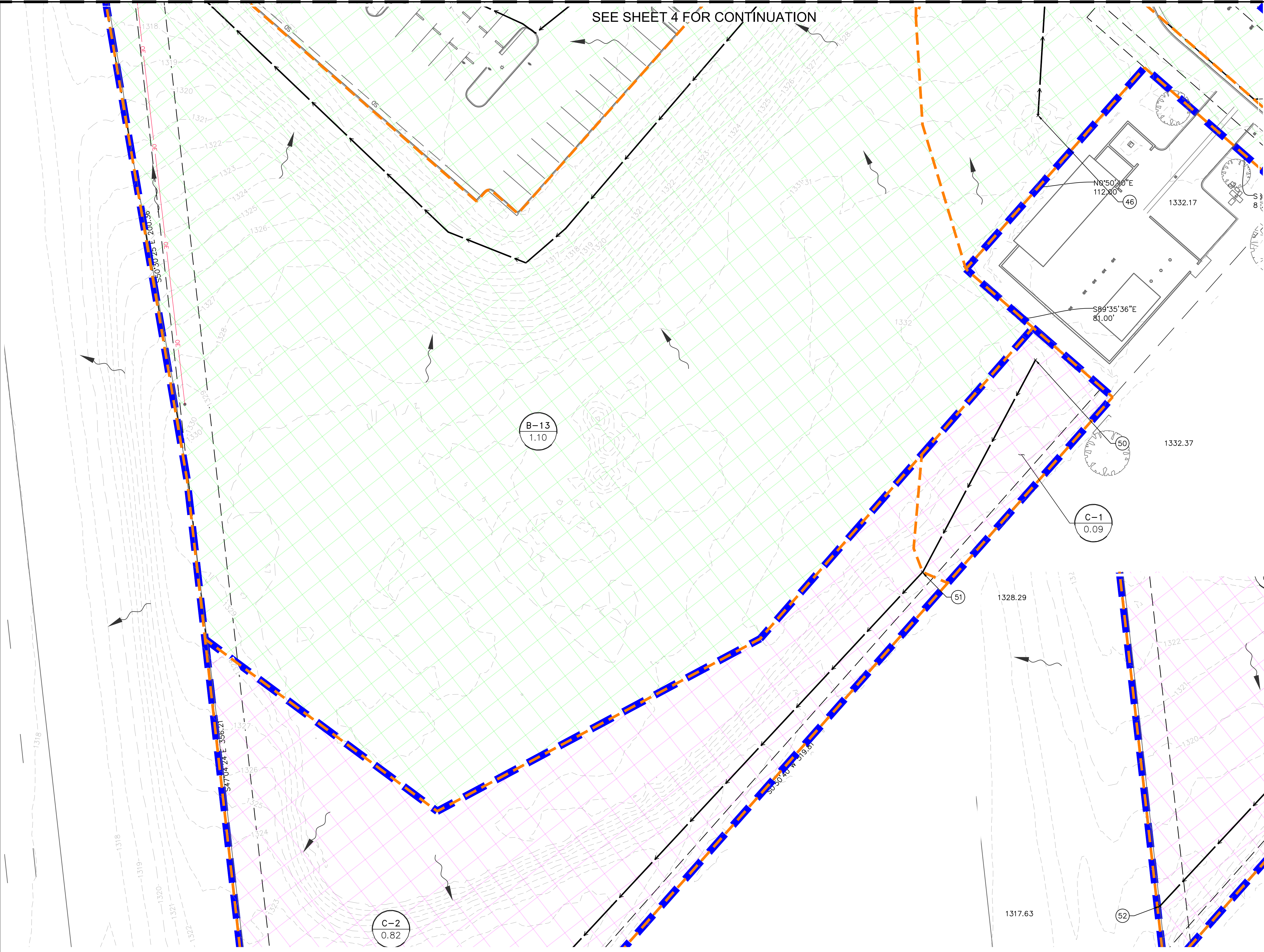
LEGEND

-  CENTER LINE
-  PROPERTY LINE
-  RIGHT-OF-WAY LINE / LEASE LINE
-  EASEMENT LINE
-  PROJECT LIMITS
-  SD EXISTING STORM DRAIN LINE
-  DRAINAGE AREA A
-  DRAINAGE AREA B
-  DRAINAGE AREA C
-  LONGEST FLOW PATH
-  DENOTES DRAINAGE AREA BOUNDARY
-  DENOTES RATIONAL METHOD AREA BOUNDARY
-  DRAINAGE AREA NAME
AREA (AC)
-  EXISTING SURFACE FLOW DIRECTION
-  NODE NUMBER

RATIONAL METHOD HYDROLOGY SUMMARY				
DRAINAGE AREA	AREA (AC)	TOTAL 2-YR FLOW RATE (CFS)	TOTAL 10-YEAR FLOW RATE (CFS)	TOTAL 100-YEAR FLOW RATE (CFS)
A	10.14	8.53	17.27	29.72
B	12.24	8.57	17.63	30.87
C	0.92	0.25	0.94	1.77
TOTAL	23.30	17.35	35.84	62.36

SOILS INFORMATION

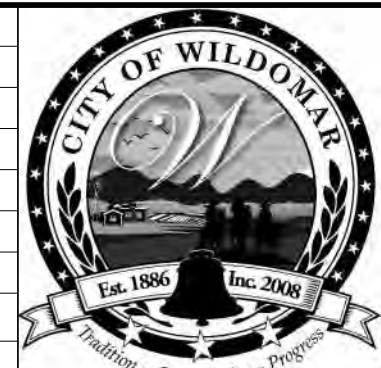
SOURCE: "UPDATE REPORT GEOTECHNICAL INVESTIGATION" DATED DECEMBER 12, 2019 BY NOVA SERVICES, INC.
 INFILTRATION RATE: 0.01 IN/HR
 SOIL TYPE: DENSE SANDS AND STIFF SILTS TO VERY DENSE SANDS AND VERY STIFF SILTS/CLAYS.



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MARK	BY	DATE	REVISIONS	APPR.	DATE
ENGINEER				CITY	



CITY OF WILDOMAR
 ACCEPTED BY:
 Daniel A. York, Director of Public Works/
 City Engineer, PE 43212
 ACCEPTANCE AS TO CONFORMANCE WITH APPLICABLE CITY STANDARDS AND PRACTICES



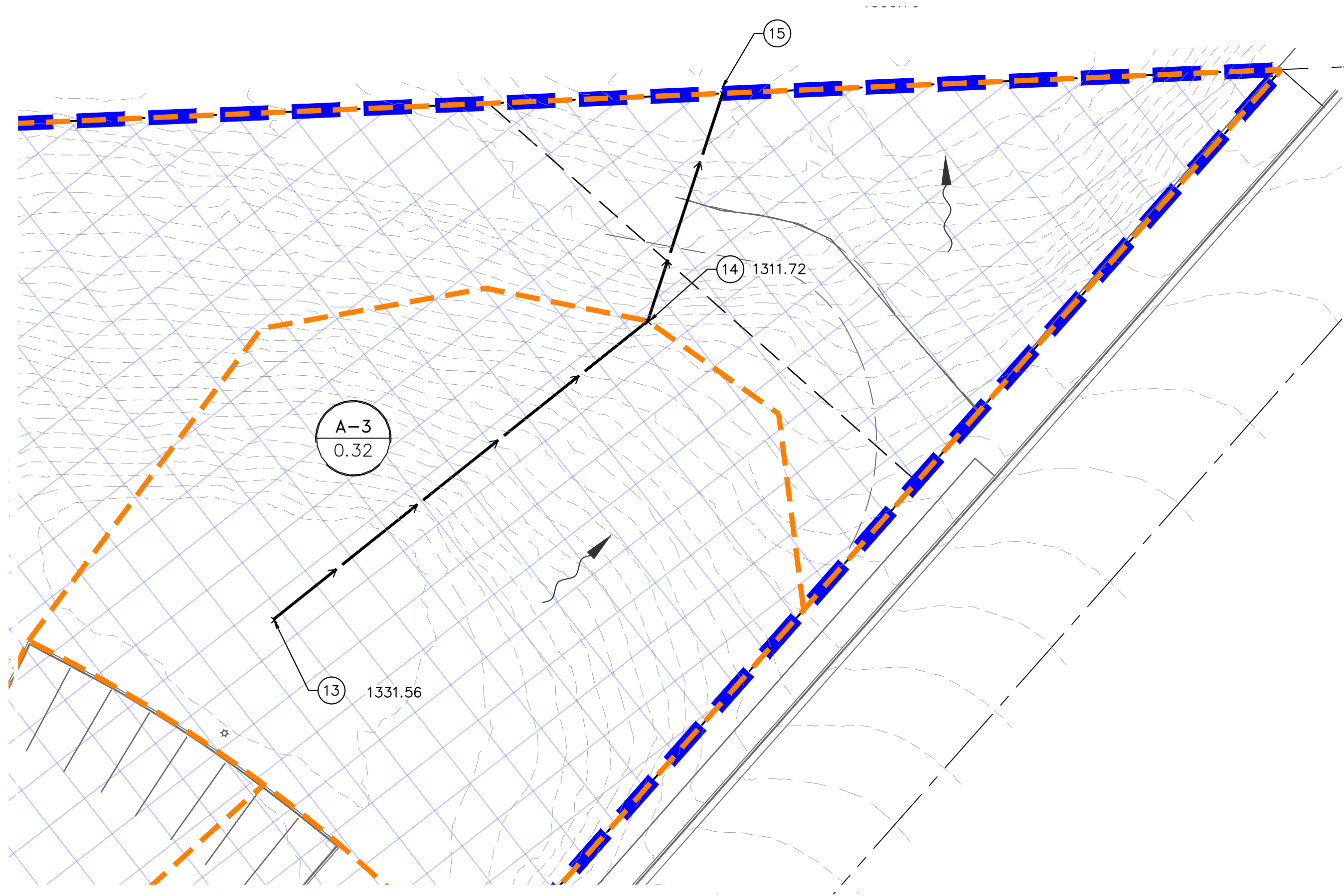
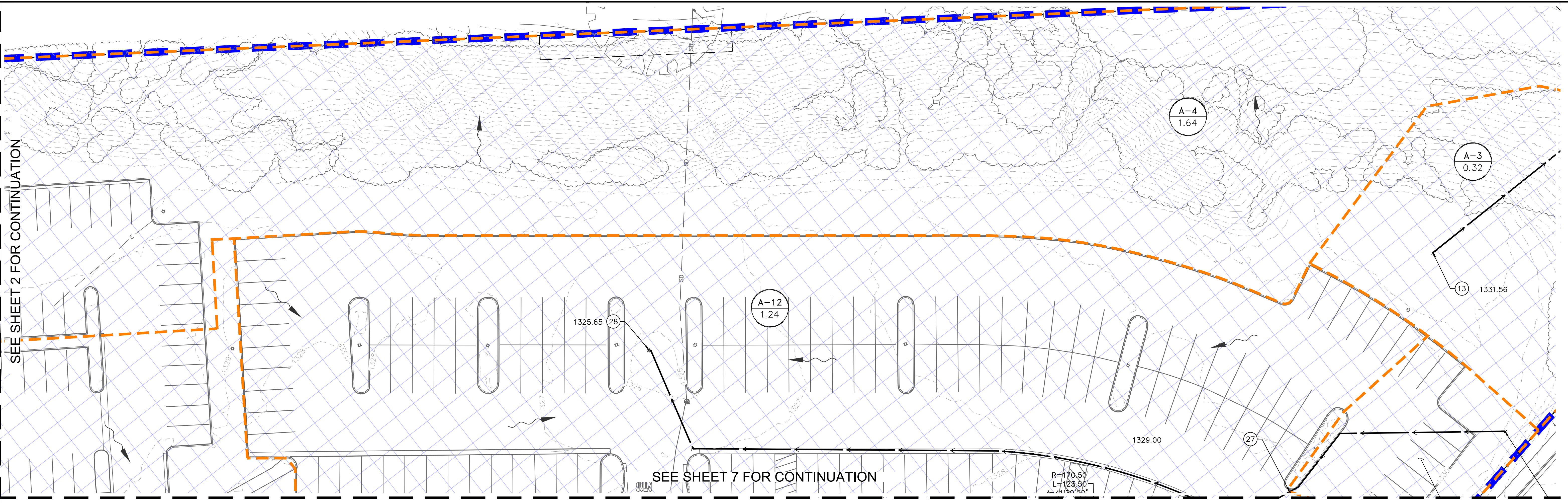
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 1100 Town and Country Road, Suite 700
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 714.939.1030 F 714.938.9488
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 PREPARED BY:
 NIKKI KERRY
 R.C.E. No. 58449 EXP. 12/31/22

BENCHMARK:
 Elevation = 1317.14
 Datum = NAD 83
 BENCHMARK #999
 THIS SURVEY WAS PERFORMED ON 04/23/19 BY JOEL PAULSON L.S. 6637
SCALE:
 H: As Noted V: As Noted

PP/PA20-0062 Project 20-062
CITY OF WILDOMAR
 INLAND VALLEY MEDICAL CENTER
 EXISTING CONDITIONS
 DRAINAGE MAP

SHEET No. 5
 OF 16 SHTS

Drawing name: C:\Users\lupito.astorga\AppData\Local\Temp\AcPublish_19528\Unsaved Drawing1.dwg Sheet: 6 Jul 14, 2021 10:28pm by: Lupito.Astorga

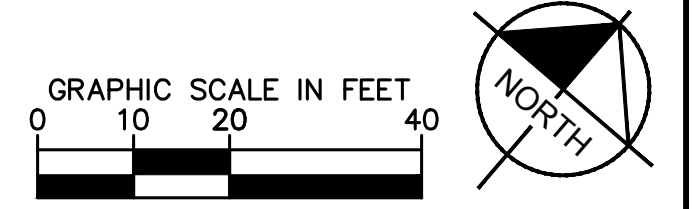


LEGEND

- CENTER LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE / LEASE LINE
- EASEMENT LINE
- PROJECT LIMITS
- EXISTING STORM DRAIN LINE
- DRAINAGE AREA A
- DRAINAGE AREA B
- DRAINAGE AREA C
- LONGEST FLOW PATH
- DENOTES DRAINAGE AREA BOUNDARY
- DENOTES RATIONAL METHOD AREA BOUNDARY
- DRAINAGE AREA NAME
AREA (AC)
- EXISTING SURFACE FLOW DIRECTION
- NODE NUMBER

RATIONAL METHOD HYDROLOGY SUMMARY				
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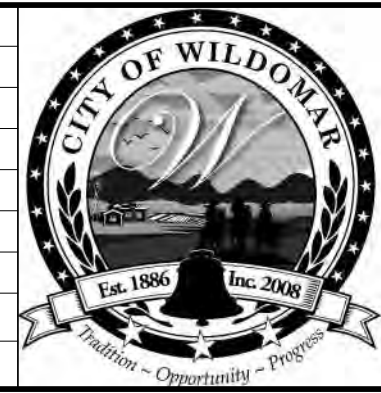
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 SOURCE: "UPDATE REPORT GEOTECHNICAL INVESTIGATION" DATED DECEMBER 12, 2019 BY NOVA SERVICES, INC.
 INFILTRATION RATE: 0.01 IN/HR
 SOIL TYPE: DENSE SANDS AND STIFF SILTS TO VERY DENSE SANDS AND VERY STIFF SILTS/CLAYS.



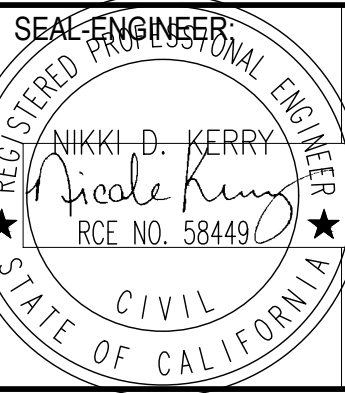
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MARK	BY	DATE	REVISIONS	APPR.	DATE
ENGINEER					CITY



CITY OF WILDOMAR
 ACCEPTED BY:
 Daniel A. York, Director of Public Works/
 City Engineer, PE 43212
 Date: _____
 ACCEPTANCE AS TO CONFORMANCE WITH APPLICABLE CITY STANDARDS AND PRACTICES

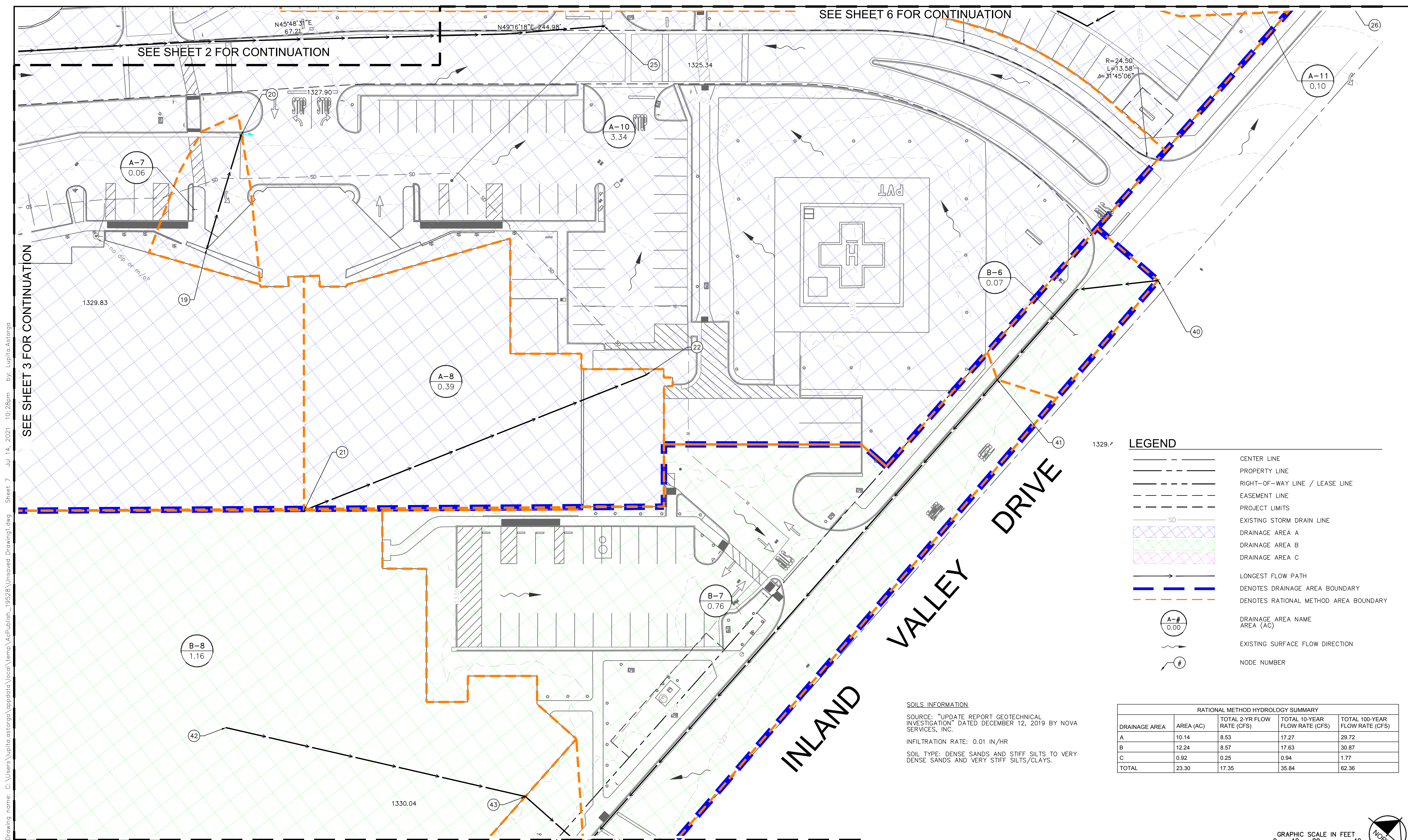


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 NIKKI KERRY
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BENCHMARK:
 Elevation = 1317.14
 Datum = NAD 83
 BENCHMARK #999
 THIS SURVEY WAS PERFORMED ON 04/23/19 BY JOEL PAULSON L.S. 6637
 SCALE:
 H: As Noted V: As Noted

PP/PA20-0062 Project 20-062
CITY OF WILDOMAR
 INLAND VALLEY MEDICAL CENTER
 EXISTING CONDITIONS
 DRAINAGE MAP

SHEET No. 6 OF 16 SHTS



SEE SHEET 6 FOR CONTINUATION

SEE SHEET 2 FOR CONTINUATION

SEE SHEET 3 FOR CONTINUATION

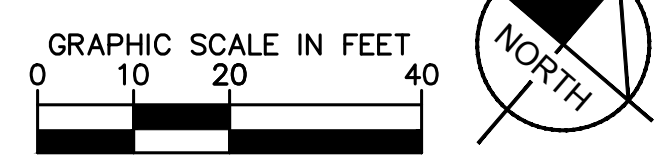
SEE SHEET 8 FOR CONTINUATION

LEGEND

- CENTER LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE / LEASE LINE
- EASEMENT LINE
- PROJECT LIMITS
- EXISTING STORM DRAIN LINE
- DRAINAGE AREA A
- DRAINAGE AREA B
- DRAINAGE AREA C
- LONGEST FLOW PATH
- DENOTES DRAINAGE AREA BOUNDARY
- DENOTES RATIONAL METHOD AREA BOUNDARY
- DRAINAGE AREA NAME
AREA (AC)
- EXISTING SURFACE FLOW DIRECTION
- NODE NUMBER

SOILS INFORMATION
 SOURCE: "UPDATE REPORT GEOTECHNICAL INVESTIGATION" DATED DECEMBER 12, 2019 BY NOVA SERVICES, INC.
 INFILTRATION RATE: 0.01 IN/HR
 SOIL TYPE: DENSE SANDS AND STIFF SILTS TO VERY DENSE SANDS AND VERY STIFF SILTS/CLAYS.

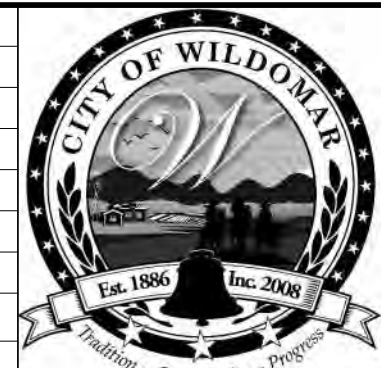
RATIONAL METHOD HYDROLOGY SUMMARY				
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CITY OF WILDOMAR
 ACCEPTED BY:
 Daniel A. York, Director of Public Works/
 City Engineer, PE 43212
 Date: 12/31/22
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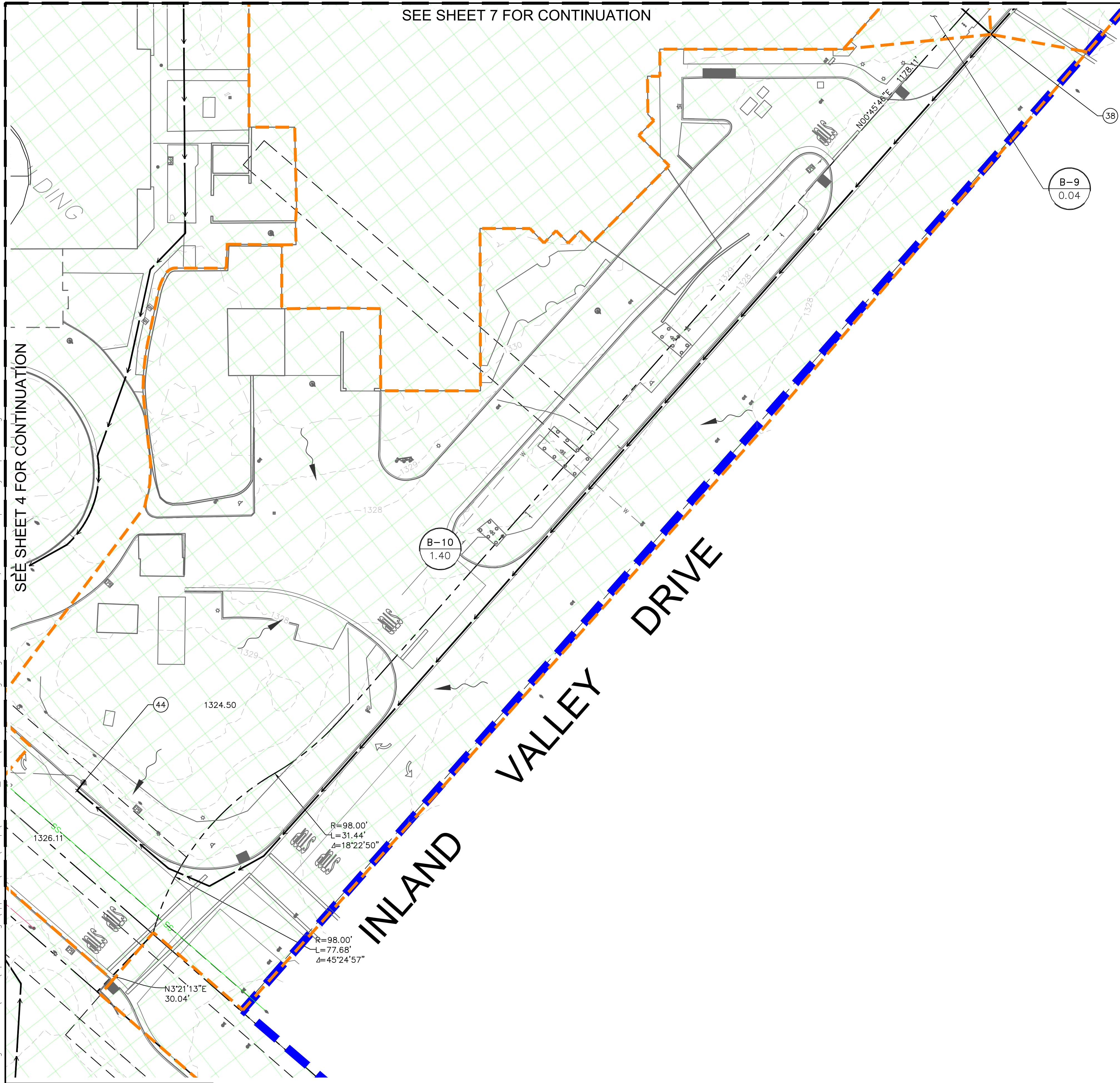
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 Datum = NAD 83
 BENCHMARK #999
 THIS SURVEY WAS PERFORMED ON 04/23/19 BY JOEL PAULSON L.S. 6637
 SCALE:
 H: As Noted V: As Noted

PP/PA20-0062 Project 20-062
CITY OF WILDOMAR
 INLAND VALLEY MEDICAL CENTER
 EXISTING CONDITIONS
 DRAINAGE MAP

SHEET No. 7
 OF 16 SHEETS

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Drawing name: C:\Users\lupita.astorga\AppData\Local\Temp\AcPublish_19528\Unsaved Drawing1.dwg Sheet: 8 Jul 14, 2021 10:28pm by: Lupita.Astorga



LEGEND

- CENTER LINE
- PROPERTY LINE
- - - RIGHT-OF-WAY LINE / LEASE LINE
- - - EASEMENT LINE
- - - PROJECT LIMITS
- SD --- EXISTING STORM DRAIN LINE
- ▨ DRAINAGE AREA A
- ▨ DRAINAGE AREA B
- ▨ DRAINAGE AREA C
- LONGEST FLOW PATH
- DENOTES DRAINAGE AREA BOUNDARY
- DENOTES RATIONAL METHOD AREA BOUNDARY
- ⊙ A-#
0.00 DRAINAGE AREA NAME
AREA (AC)
- EXISTING SURFACE FLOW DIRECTION
- ⊙ # NODE NUMBER

RATIONAL METHOD HYDROLOGY SUMMARY

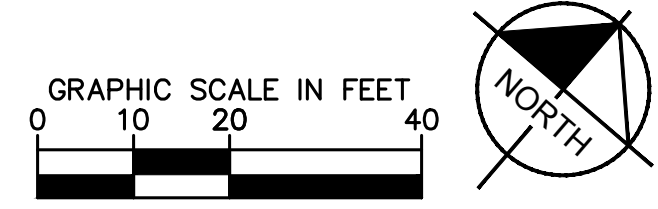
DRAINAGE AREA	AREA (AC)	TOTAL 2-YR FLOW RATE (CFS)	TOTAL 10-YEAR FLOW RATE (CFS)	TOTAL 100-YEAR FLOW RATE (CFS)
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SOILS INFORMATION

SOURCE: "UPDATE REPORT GEOTECHNICAL INVESTIGATION" DATED DECEMBER 12, 2019 BY NOVA SERVICES, INC.

INFILTRATION RATE: 0.01 IN/HR

SOIL TYPE: DENSE SANDS AND STIFF SILTS TO VERY DENSE SANDS AND VERY STIFF SILTS/CLAYS.



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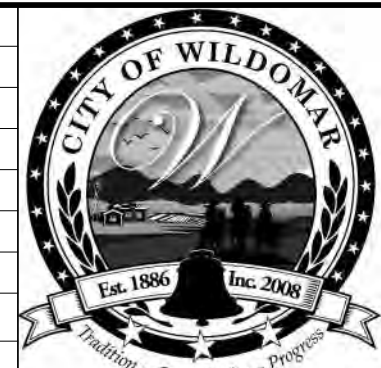
TOLL FREE 1-800-227-2600

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ENGINEER					CITY



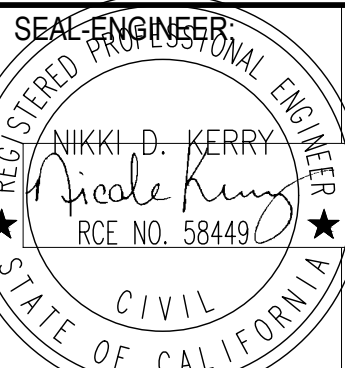
CITY OF WILDOMAR

ACCEPTED BY:

Date:

Daniel A. York, Director of Public Works/
City Engineer, PE 43212

ACCEPTANCE AS TO CONFORMANCE WITH APPLICABLE CITY STANDARDS AND PRACTICES



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PREPARED BY:

NIKKI KERRY
R.C.E. No. 58449 EXP. 12/31/22

BENCHMARK:
Elevation = 1317.14
Datum = NAD 83
BENCHMARK #999

THIS SURVEY WAS PERFORMED ON 04/23/19 BY JOEL PAULSON L.S. 6637

SCALE:
H: As Noted V: As Noted

PP/PA20-0062 Project 20-062

CITY OF WILDOMAR

INLAND VALLEY MEDICAL CENTER

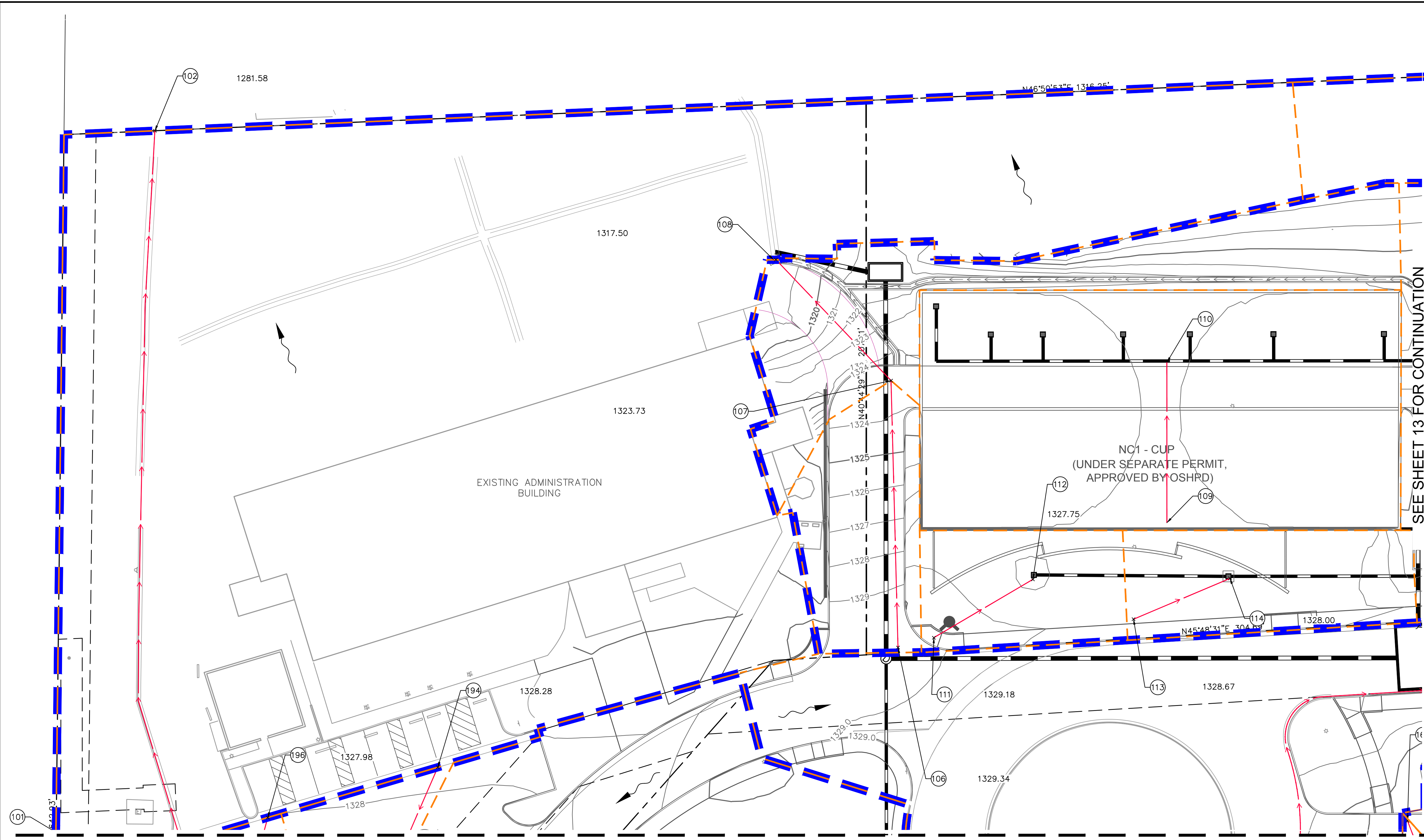
EXISTING CONDITIONS

DRAINAGE MAP

SHEET No. 8

OF 16 SHTS

Drawing name: \\dtp01\CA_LDT\LDT_LDEV\099094008 - UHS\1\CAD\Exhibits\2020.03.26 - Hydrology Exhibits\Proposed Hydrology_v2.dwg Sheet 8 Jul 14, 2021 10:28pm by: Lupton, Astorga



- LEGEND**
- CENTER LINE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE / LEASE LINE
 - EASEMENT LINE
 - PROJECT LIMITS
 - SD --- EXISTING STORM DRAIN LINE
 - SD --- PROPOSED STORM DRAIN LINE
 - LONGEST FLOW PATH
 - DENOTES SUB-DRAINAGE AREA BOUNDARY (REFER TO SHEET 5)
 - DENOTES RATIONAL METHOD AREA BOUNDARY
 - EXISTING SURFACE FLOW DIRECTION
 - B-# --- DETENTION SYSTEM ID
 - # --- NODE NUMBER

NOTES

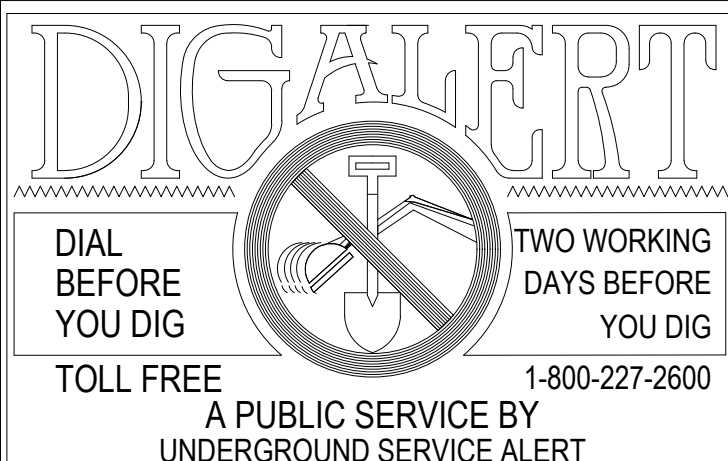
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RATIONAL METHOD CALCULATIONS WERE USED TO DETERMINE EXISTING VERSUS PROPOSED CONDITIONS ANALYSIS. REFER TO SHEET 14 FOR FLOW RATE SUMMARY.

REFER TO PROJECT'S FINAL HYDROLOGY AND HYDRAULICS REPORT FOR FULL CALCULATIONS.

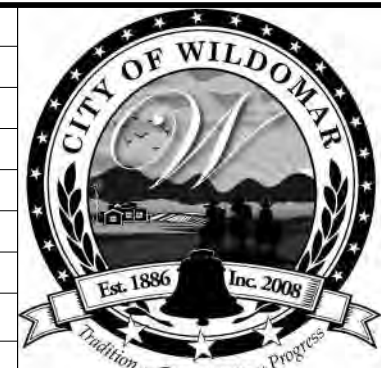
SEE SHEET 10 FOR CONTINUATION

SEE SHEET 13 FOR CONTINUATION



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	ENGINEER				CITY



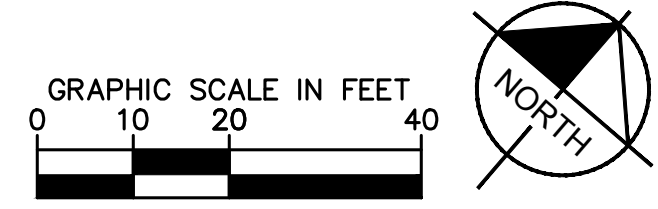
CITY OF WILDOMAR
 ACCEPTED BY:
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 City Engineer, PE 43212
 Date: _____
 ACCEPTANCE AS TO CONFORMANCE
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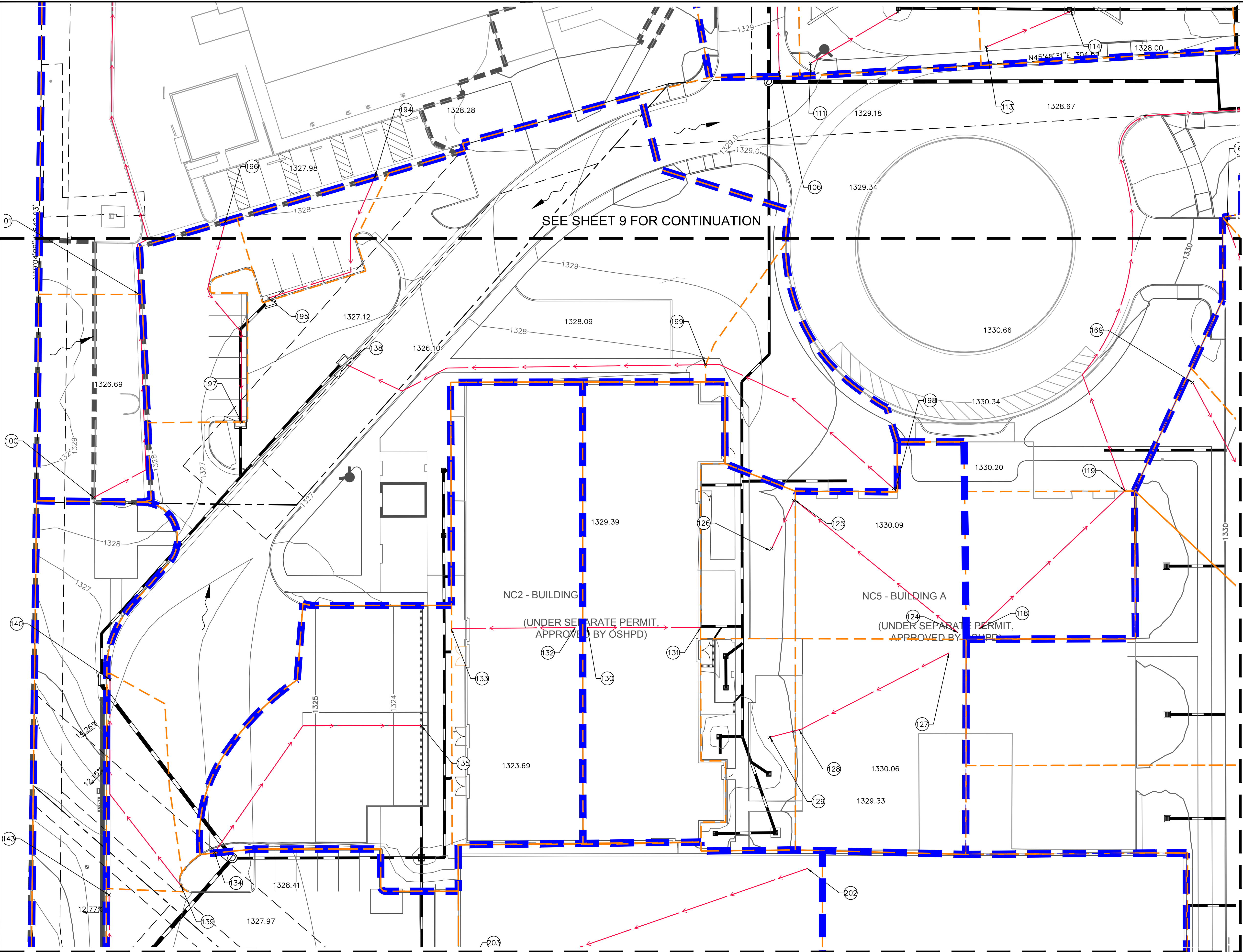
BENCHMARK:
 Elevation = 1317.14
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 BENCHMARK #999
 THIS SURVEY WAS PERFORMED
 ON 04/23/19 BY JOEL PAULSON
 L.S. 6637
 SCALE:
 H: As Noted V: As Noted

PP/PA20-0062 Project 20-062
CITY OF WILDOMAR
 INLAND VALLEY MEDICAL CENTER
 PROPOSED CONDITIONS RATIONAL METHOD
 DRAINAGE MAP



SHEET No.
 9
 OF 16 SHTS

Drawing name: \\vtp01\CA_LDT\LD\T_LDEV\099094008 - UHS\1\CAD\Exhibits\2020\03\26 - Hydrology Exhibits\Proposed Hydrology_v2.dwg Sheet 9 Jul 14, 2021 10:28pm by: Lupita Astorga



- LEGEND**
- CENTER LINE
 - PROPERTY LINE
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 - EXISTING STORM DRAIN LINE
 - PROPOSED STORM DRAIN LINE
 - LONGEST FLOW PATH
 - DENOTES SUB-DRAINAGE AREA BOUNDARY (REFER TO SHEET 5)
 - DENOTES RATIONAL METHOD AREA BOUNDARY
 - EXISTING SURFACE FLOW DIRECTION
 - DETENTION SYSTEM ID
 - # symbol"/> NODE NUMBER

NOTES

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REFER TO PROJECT'S FINAL HYDROLOGY AND HYDRAULICS REPORT FOR FULL CALCULATIONS.

SEE SHEET 14 FOR CONTINUATION

SEE SHEET 11 FOR CONTINUATION



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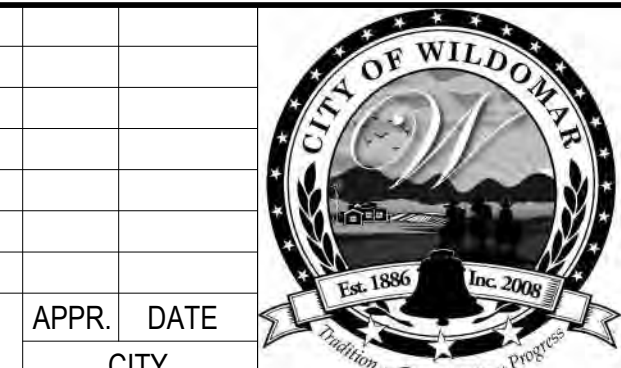
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MARK	BY	DATE
ENGINEER		

REVISIONS	APPR.	DATE
	CITY	



CITY OF WILDOMAR
 ACCEPTED BY:
 Daniel A. York, Director of Public Works/
 City Engineer, PE 43212

Date: _____

ACCEPTANCE AS TO CONFORMANCE WITH APPLICABLE CITY STANDARDS AND PRACTICES

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PREPARED BY:
 NIKKI KERRY
 R.C.E. No. 58449 EXP. 12/31/22

BENCHMARK:
 Elevation = 1317.14
 Datum = NAD 83
 BENCHMARK #999

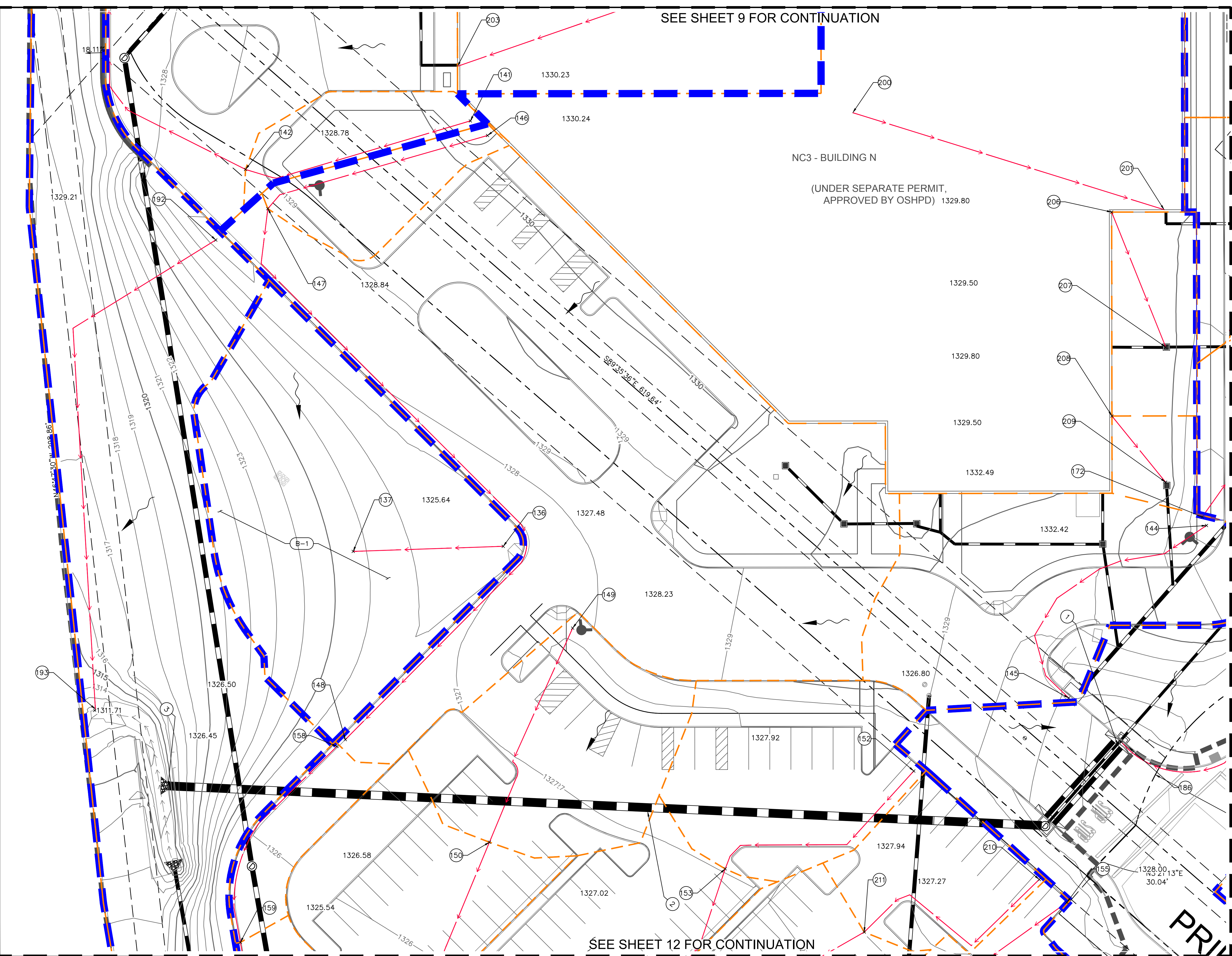
THIS SURVEY WAS PERFORMED ON 04/23/19 BY JOEL PAULSON L.S. 6637

SCALE:
 H: As Noted V: As Noted

PP/PA20-0062 Project 20-062 SHEET No. 10 OF 16 SHTS

CITY OF WILDOMAR
 INLAND VALLEY MEDICAL CENTER
 PROPOSED CONDITIONS RATIONAL METHOD DRAINAGE MAP

Drawing name: \\vtp01\CA_LDT\LDT_LDEV\099094008 - UHS\1\CAD\Exhibits\2020.03.26 - Hydrology\Exhibits\Proposed Hydrology_v2.dwg Sheet 10 Jul 14, 2021 10:28pm by: Lupita Astorga



LEGEND

- CENTER LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE / LEASE LINE
- EASEMENT LINE
- PROJECT LIMITS
- SD --- EXISTING STORM DRAIN LINE
- SD --- PROPOSED STORM DRAIN LINE
- LONGEST FLOW PATH
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- EXISTING SURFACE FLOW DIRECTION
- (B-#) DETENTION SYSTEM ID
- (#) NODE NUMBER

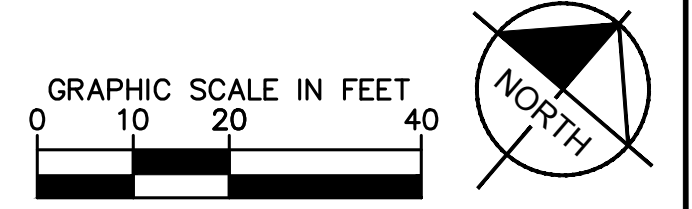
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SEE SHEET 15 FOR CONTINUATION



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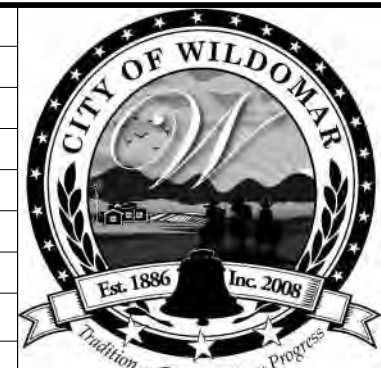
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	ENGINEER					



CITY OF WILDOMAR
ACCEPTED BY:

Date: Daniel A. York, Director of Public Works/
City Engineer, PE 43212

ACCEPTANCE AS TO CONFORMANCE WITH APPLICABLE CITY STANDARDS AND PRACTICES

Kimley»Horn

1100 Town and Country Road, Suite 700
Orange, CA 92668
714.939.1030 F 714.938.9488
www.kimley-horn.com

PREPARED BY: NIKKI KERRY
R.C.E. No. 58449 EXP. 12/31/22

BENCHMARK: Elevation = 1317.14
Datum = NAD 83
BENCHMARK #999

THIS SURVEY WAS PERFORMED ON 04/23/19 BY JOEL PAULSON L.S. 6637

SCALE: H: As Noted V: As Noted

PP/PA20-0062 Project 20-062 SHEET No. 11

CITY OF WILDOMAR
INLAND VALLEY MEDICAL CENTER
PROPOSED CONDITIONS RATIONAL METHOD DRAINAGE MAP

OF 16 SHTS

ISSUED FOR BID SET 5/21/2021
ISSUED FOR GMP ADDENDA 7/13/2021

Drawing name: \\vetp01\CA_LDT\LDT\LDI\Hydrology\Proposed Hydrology_v2.dwg Sheet 11 Jul 14, 2021 10:28pm by: Lupita Astorga

SEE SHEET 11 FOR CONTINUATION

PRIE

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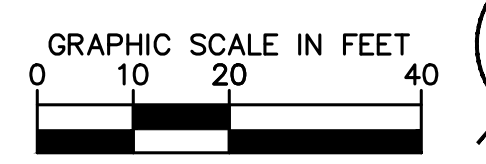
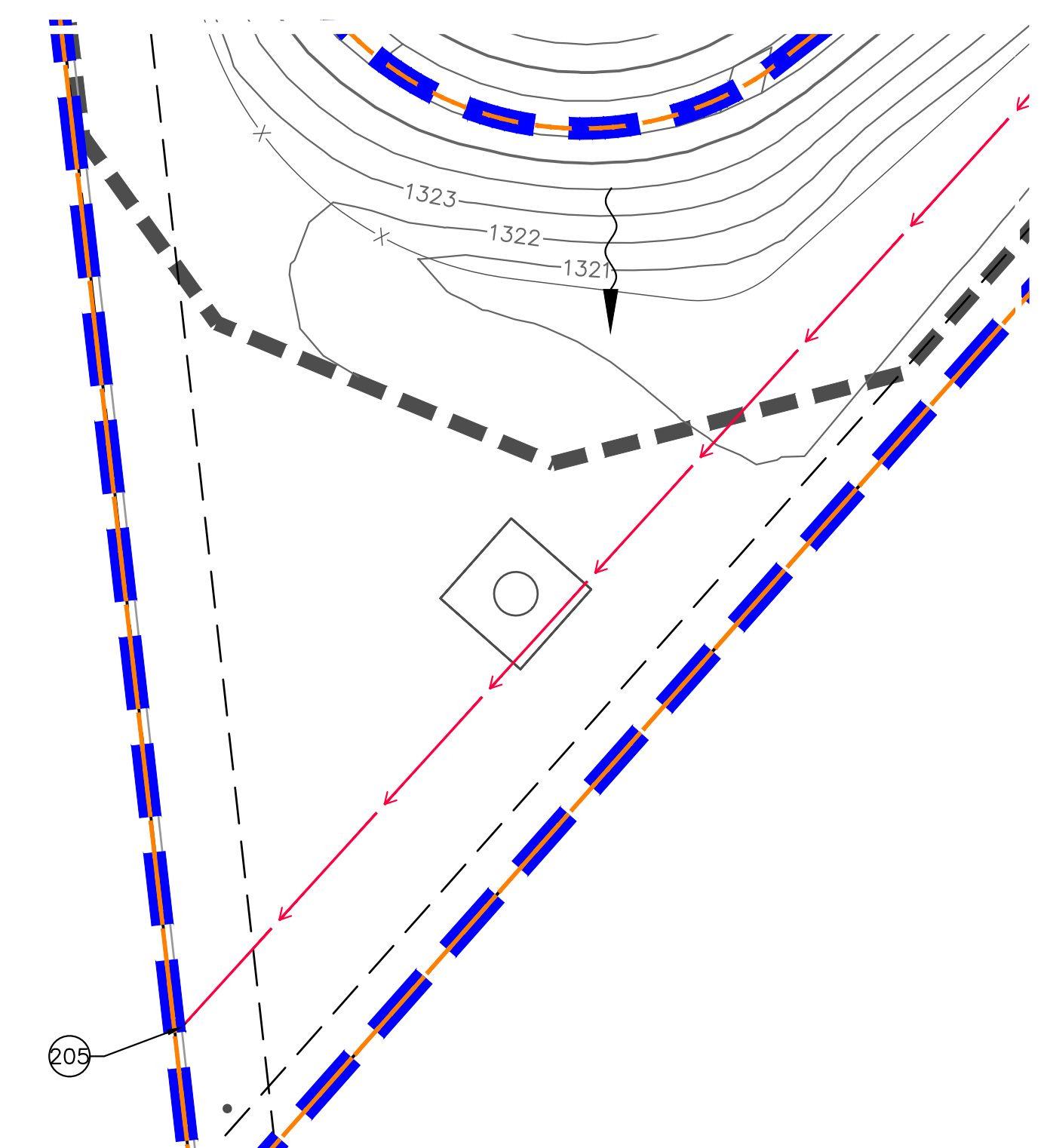
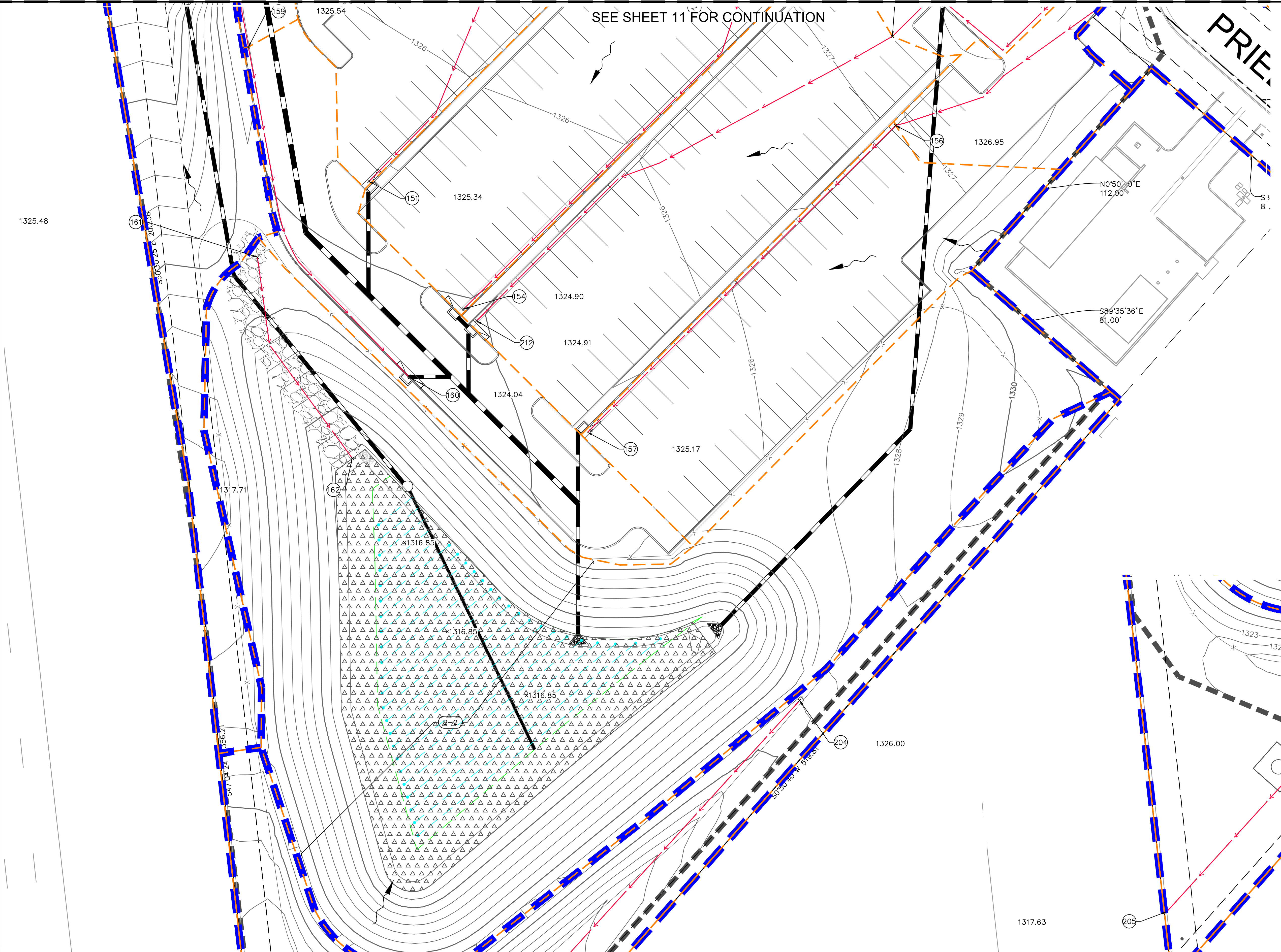
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- PROPERTY LINE
- RIGHT-OF-WAY LINE / LEASE LINE
- EASEMENT LINE
- PROJECT LIMITS
- EXISTING STORM DRAIN LINE
- PROPOSED STORM DRAIN LINE
- LONGEST FLOW PATH
- DENOTES SUB-DRAINAGE AREA BOUNDARY (REFER TO SHEET 5)
- DENOTES RATIONAL METHOD AREA BOUNDARY
- EXISTING SURFACE FLOW DIRECTION
- DETENTION SYSTEM ID
- NODE NUMBER

NOTES

RATIONAL METHOD CALCULATIONS WERE COMPLETED USING THE ADVANCE ENGINEERING SOFTWARE (AES) HYDROSOFT PACKAGE.

RATIONAL METHOD CALCULATIONS WERE USED TO DETERMINE EXISTING VERSUS PROPOSED CONDITIONS ANALYSIS. REFER TO SHEET 14 FOR FLOW RATE SUMMARY.

REFER TO PROJECT'S FINAL HYDROLOGY AND HYDRAULICS REPORT FOR FULL CALCULATIONS.



DIGALERT

DIAL BEFORE YOU DIG

TWO WORKING DAYS BEFORE YOU DIG

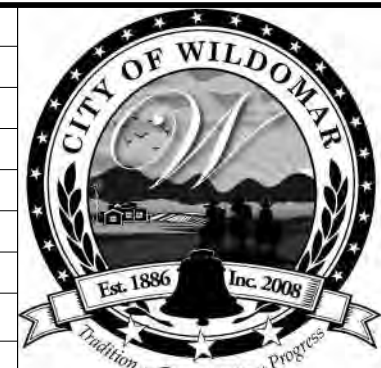
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NOTE:
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	ENGINEER			CITY	



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PP/PA20-0062 Project 20-062 SHEET No. 12

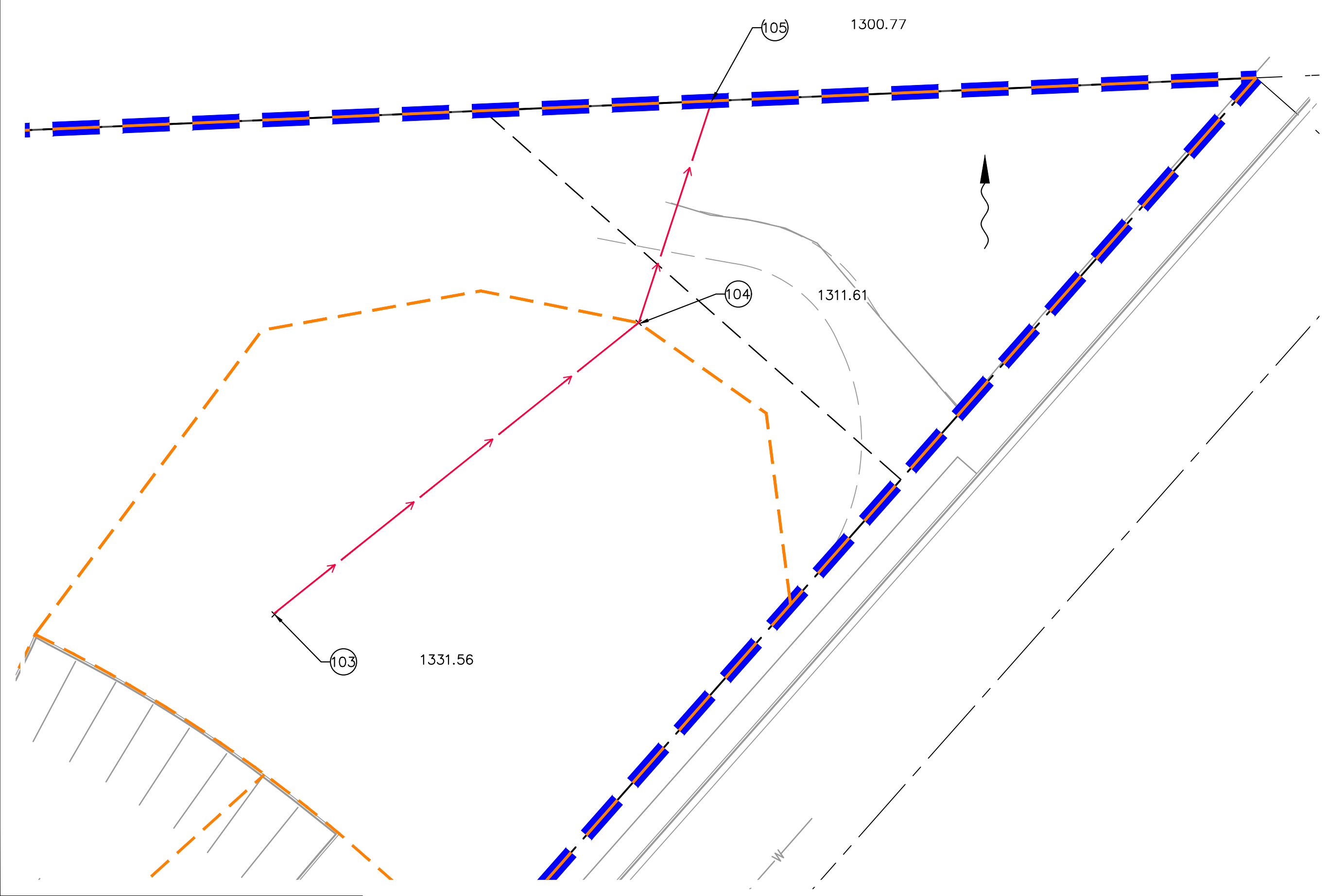
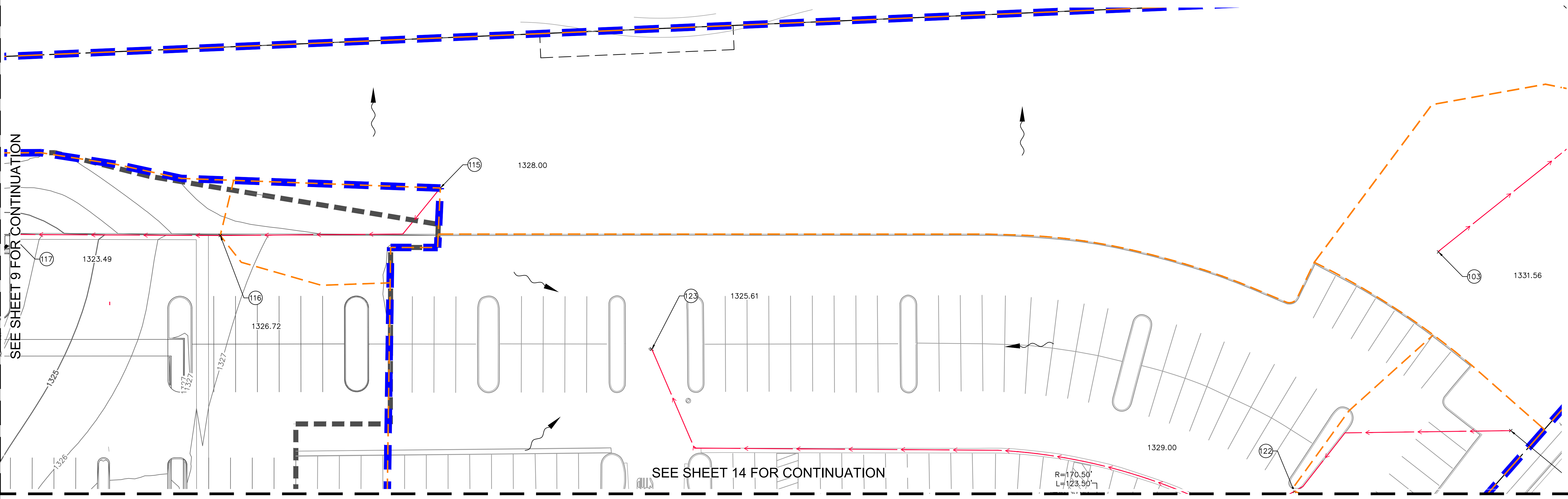
CITY OF WILDOMAR
INLAND VALLEY MEDICAL CENTER
PROPOSED CONDITIONS RATIONAL METHOD DRAINAGE MAP

OF 15 SHTS

Drawing name: \\netp01\CA_LDT\LDT_LDEV\099094008 - UHS\IV\CAD\Exhibits\2020\03\26 - Hydrology\Exhibits\Proposed Hydrology_v2.dwg Sheet 13 (2) Jul 14, 2021 10:28pm by: Lupita Astorga

SEE SHEET 9 FOR CONTINUATION

SEE SHEET 14 FOR CONTINUATION



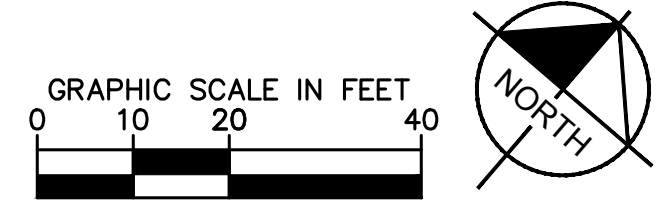
- LEGEND**
- CENTER LINE
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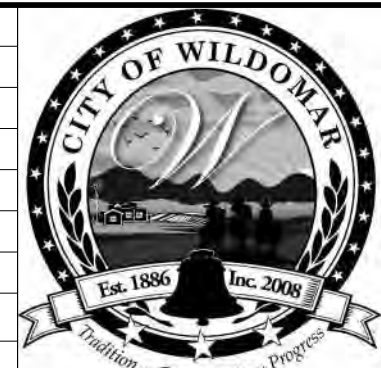
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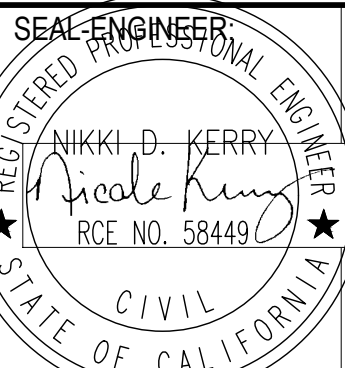
MARK	BY	DATE	REVISIONS	APPR.	DATE
ENGINEER					CITY



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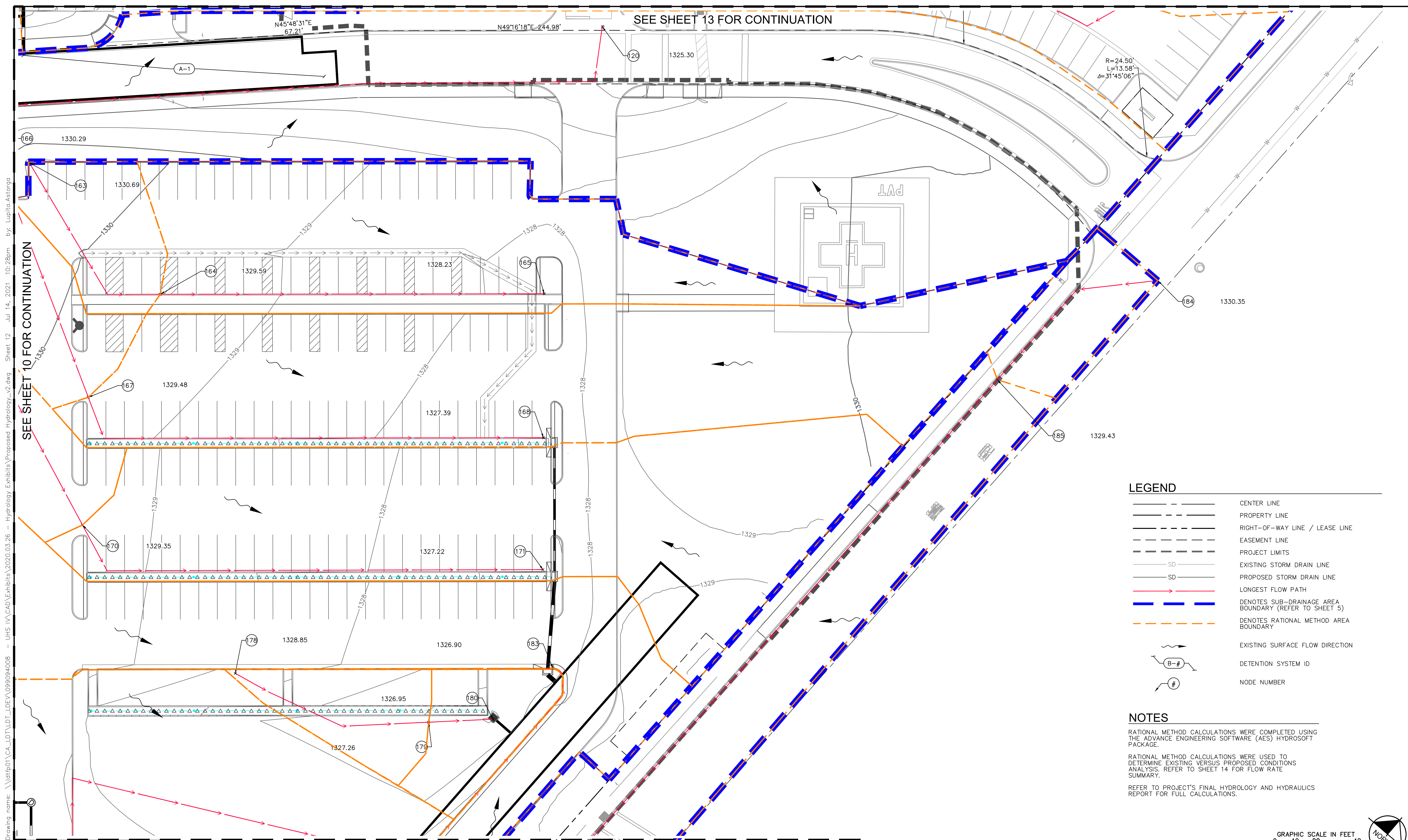
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SCALE:
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PP/PA20-0062 Project 20-062

CITY OF WILDOMAR
INLAND VALLEY MEDICAL CENTER
PROPOSED CONDITIONS RATIONAL METHOD DRAINAGE MAP

SHEET No. 13 OF 16 SHTS



Drawing name: \\netp01\CA_LDT\LDI_DEV\099094008 - UHS IV\CAD\Exhibits\2020\03\26 - Hydrology\Exhibits\Proposed Hydrology_v2.dwg Sheet 12 Jul 14, 2021 10:28pm by: Lupita Astorga

SEE SHEET 13 FOR CONTINUATION

SEE SHEET 10 FOR CONTINUATION

SEE SHEET 15 FOR CONTINUATION

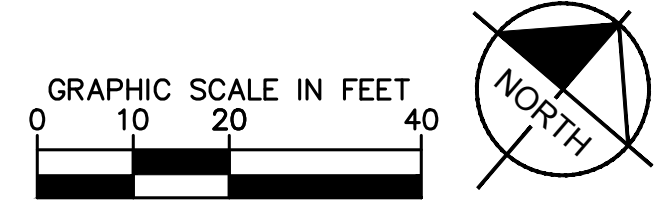
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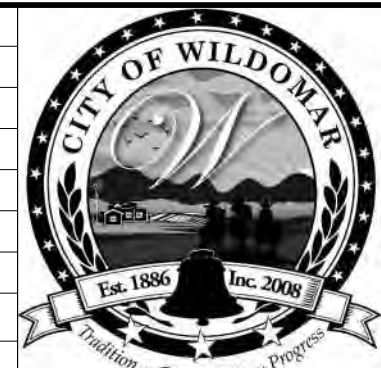
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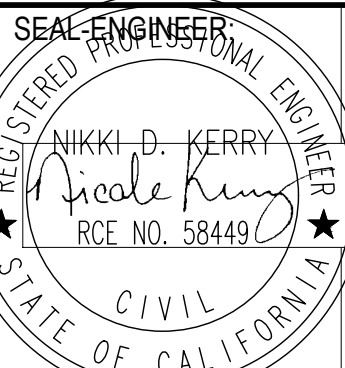
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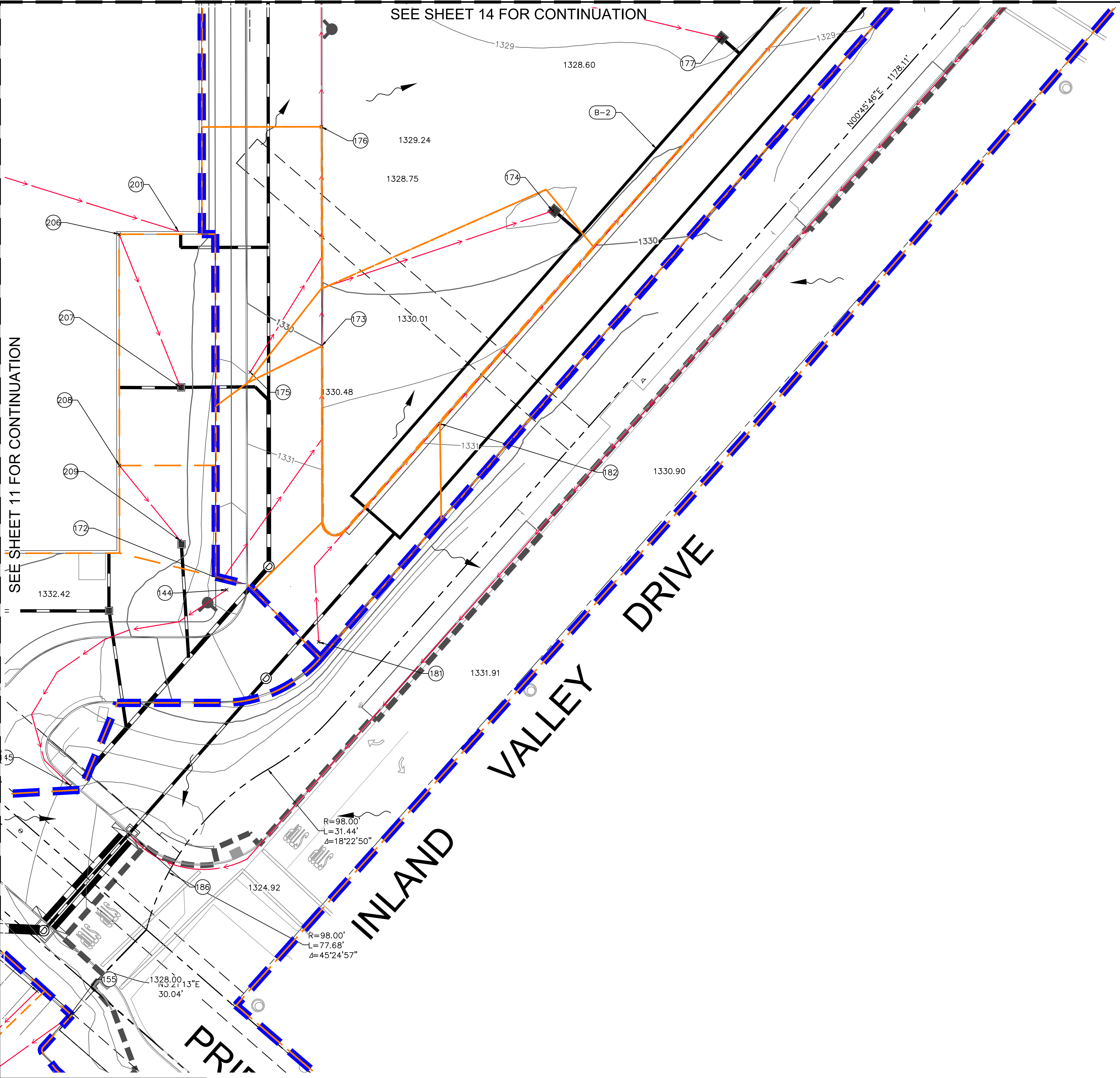
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PP/PA20-0062 Project 20-062

CITY OF WILDOMAR
INLAND VALLEY MEDICAL CENTER
PROPOSED CONDITIONS RATIONAL METHOD DRAINAGE MAP

SHEET No. 14 OF 15 SHTS

Drawing name: \\vetp01\CA_LDT\LDI\LDEV\099094008 - UHS IV\CAD\Exhibits\2020\03\26 - Hydrology Exhibits\Proposed Hydrology_v2.dwg Sheet 13 Jul 14, 2021 10:28pm by: Lupita Astorga



LEGEND

	CENTER LINE
	PROPERTY LINE
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	EXISTING SURFACE FLOW DIRECTION
	DETENTION SYSTEM ID
	NODE NUMBER

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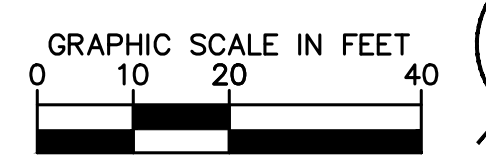
REFER TO PROJECT'S FINAL HYDROLOGY AND HYDRAULICS REPORT FOR FULL CALCULATIONS.

SEE SHEET 11 FOR CONTINUATION

SEE SHEET 14 FOR CONTINUATION

PRI

INLAND VALLEY DRIVE



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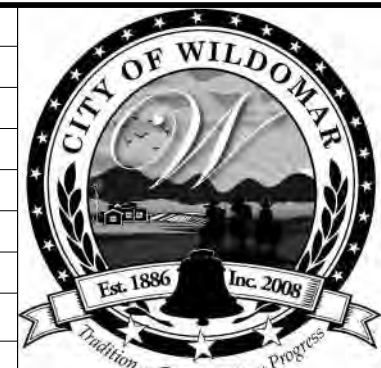
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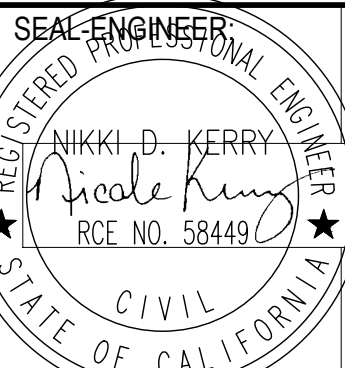
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SCALE:
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CITY OF WILDOMAR
 INLAND VALLEY MEDICAL CENTER
 PROPOSED CONDITIONS RATIONAL METHOD DRAINAGE MAP

SHEET No. 15 OF 16 SHTS

Drawing name: \\netp01\CA_LDT\LDI\LDI\Hydrology\Proposed Hydrology_v2.dwg Sheet 14 Jul 14, 2021 10:28pm by: Lupita Astorga



LEGEND

	CENTER LINE
	PROPERTY LINE
	RIGHT-OF-WAY LINE / LEASE LINE
	EASEMENT LINE
	PROJECT LIMITS
	EXISTING STORM DRAIN LINE
	PROPOSED STORM DRAIN LINE
	DRAINAGE AREA A
	DRAINAGE AREA B
	DRAINAGE AREA C
	DENOTES SUB-DRAINAGE AREA BOUNDARY
	SUBAREA NAME AREA (AC)
	DETENTION SYSTEM ID.

RATIONAL METHOD NOTES

RATIONAL METHOD CALCULATIONS WERE COMPLETED USING THE ADVANCE ENGINEERING SOFTWARE (AES) HYDROSOFT PACKAGE.

RATIONAL METHOD CALCULATIONS WERE USED TO DETERMINE EXISTING VERSUS PROPOSED CONDITIONS ANALYSIS. CALCULATED PEAK FLOW RATES WERE UTILIZED TO SIZE STORM DRAIN PIPES AND CATCH BASINS.

REFER TO PROJECT'S FINAL HYDROLOGY AND HYDRAULICS REPORT FOR FULL CALCULATIONS.

DRAINAGE AREA	AREA (AC)		TOTAL 2-YR FLOW RATE (CFS)		TOTAL 10-YEAR FLOW RATE (CFS)		TOTAL 100-YEAR FLOW RATE (CFS)	
	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
A	10.14	8.86	8.53	8.53	17.27	17.12	29.72	24.97
B	12.24	13.93	8.57	13.12	17.63	25.17	30.87	42.69
C	0.92	0.51	0.25	0.40	0.94	0.78	1.77	1.3
TOTAL	23.29	23.29	17.35	22.05	35.84	43.07	62.36	68.96

- ### BMP NOTES
- (A-1)** OLD CASTLE STORM CAPTURE UNDERGROUND DETENTION SYSTEM. REFER TO CIVIL PLANS FOR DETAILS.
 - (B-1)** DETENTION/BIOFILTRATION POND. REFER TO CIVIL PLANS FOR DETAILS.
 - (B-2)** DETENTION/BIOFILTRATION POND. REFER TO CIVIL PLANS FOR DETAILS.
 - (B-3)** OLD CASTLE CAPTURE UNDERGROUND SYSTEM. REFER TO CIVIL PLANS FOR DETAILS.

DETENTION NOTES

HYDROGRAPH CALCULATIONS WERE COMPLETED USING THE ADVANCE ENGINEERING SOFTWARE (AES) HYDROSOFT PACKAGE. ROUTING CALCULATIONS WERE COMPLETED USING BENTLEY'S PONDPACK V8I SOFTWARE.

UNDERGROUND DETENTION SYSTEMS HAVE BEEN PROVIDED FOR PORTIONS OF DRAINAGE AREA A AND DRAINAGE AREA B. ALL DETENTION SYSTEMS HAVE BEEN SIZED TO MEET HYDROMODIFICATION REQUIREMENTS PER THE PROJECT SPECIFIC WATER QUALITY MANAGEMENT PLAN.

ADDITIONALLY, THE DETENTION SYSTEMS IN SUBAREAS B-1 AND B-2 HAVE BEEN SIZED TO REDUCE THE TOTAL PEAK FLOWS FROM DRAINAGE AREA B TO THAT OF EXISTING CONDITIONS. UNIT HYDROGRAPH AND ROUTING CALCULATIONS FOR THESE DETENTION SYSTEMS ARE INCLUDED IN THE PROJECT'S FINAL HYDROLOGY AND HYDRAULICS REPORT.

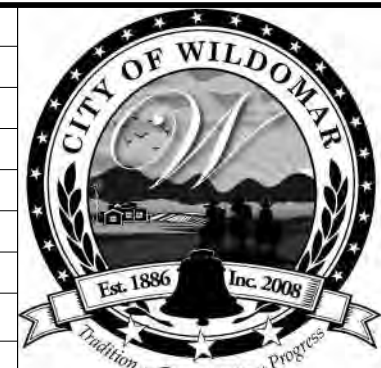
DETENTION SUMMARY				
CONDITION	SUB-DRAINAGE AREA	AREA (AC)	100-YEAR, 24-HOUR DETAINED PEAK FLOW (CFS)	100-YEAR WATER SURFACE ELEVATION (FT)
PROPOSED	B-1, B-2	7.79	0.76	1322.31
	B-3	3.89	2.14	1324.81
	B-4	1.30	1.02	—
	B-5	0.95	0.77	—
	B (TOTAL)	13.93	4.69	—



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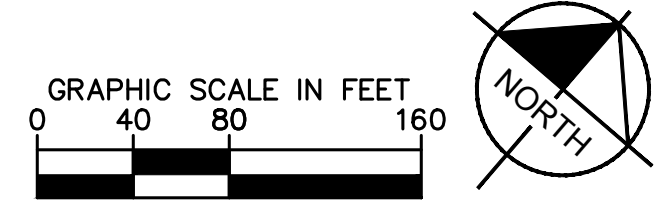
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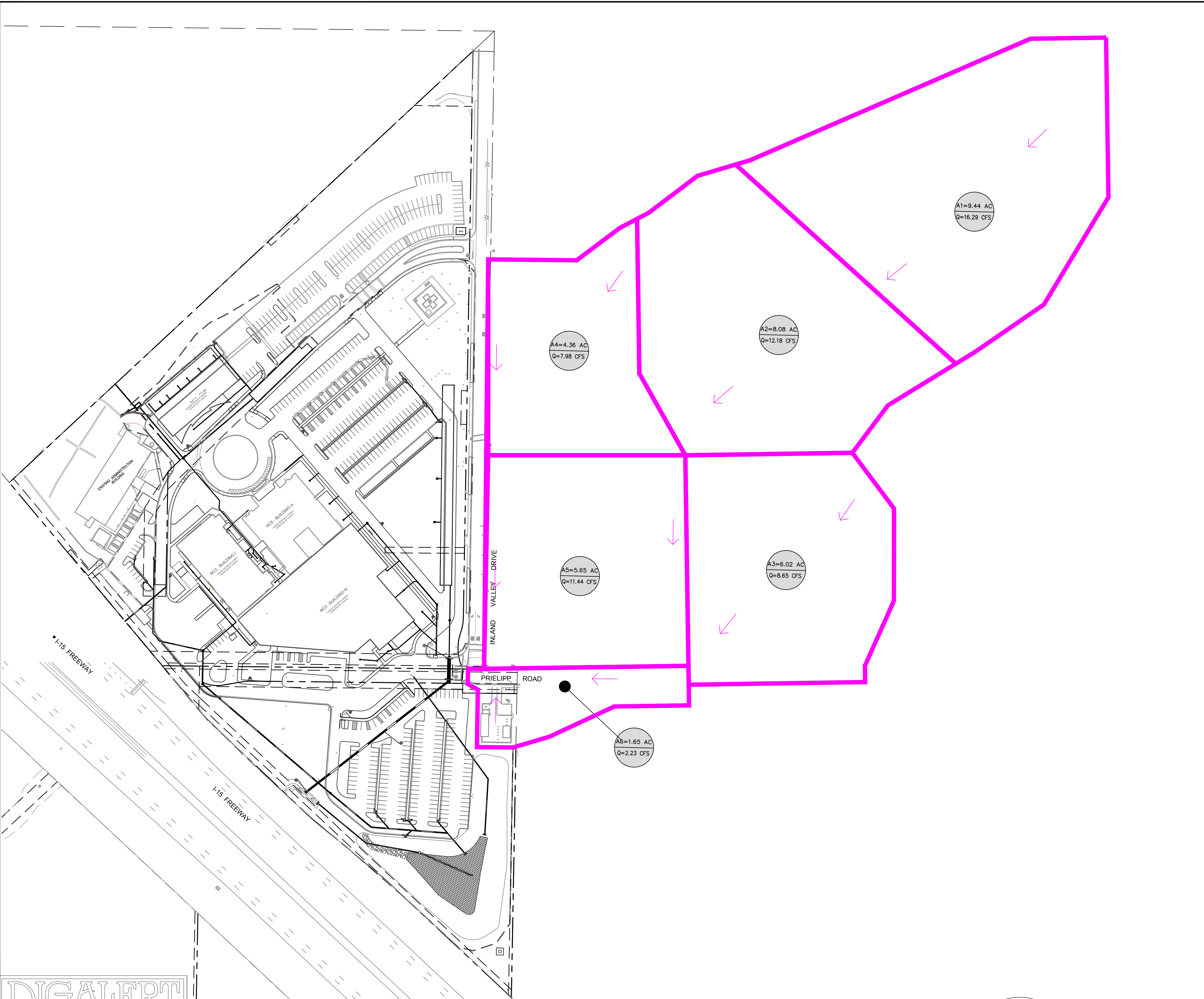
SCALE:
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CITY OF WILDOMAR
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PROPOSED CONDITIONS
OVERALL DRAINAGE EXHIBIT



Drawing name: \\netp01\CA_LDT\DT_LDEV\099094008 - UHS IV\CAD\Exhibits\2020.03.26 - Hydrology Exhibits\Proposed Hydrology_v2.dwg Sheet 14 (2) Jul 14, 2021 10:28pm By: Lupita Astorga



LEGEND

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- - - - - PROJECT LIMITS
- SD --- EXISTING STORM DRAIN LINE
- SD --- PROPOSED STORM DRAIN LINE
- OFFSITE SUB-DRAINAGE AREA BOUNDARY

OFFSITE SUBAREA NAME (AC)
 SUBAREA PEAK FLOW RATE (CFS)

- RATIONAL METHOD NOTES**
- ① EXISTING CATCH BASIN ON PRIELIPP ROAD AND INLAND VALLEY DRIVE COLLECTING OFFSITE DRAINAGE.
 - ② PROPOSED 42-INCH BYPASS PIPE TO CONVEY OFFSITE DRAINAGE DRAINAGE.
 - ③ OUTFALL TO EXISTING CONCRETE DITCH WITH ENERGY DISSIPATION DEVICE.
- HYDROLOGY INFORMATION SOURCE: WATER QUALITY MANAGEMENT PLANT DEVELOPMENT NO. PUP 00556 R3 PREPARED BY KIMLEY-HORN AND ASSOCIATES, INC. DATED JULY 31, 2006.

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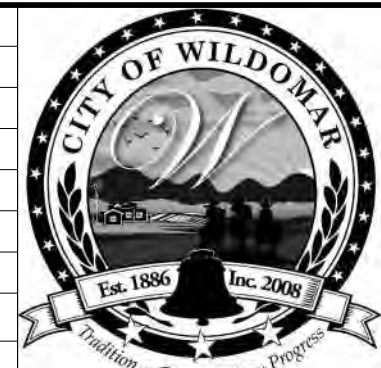
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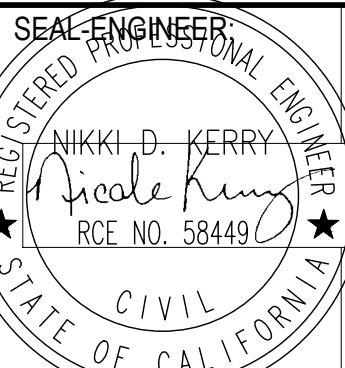
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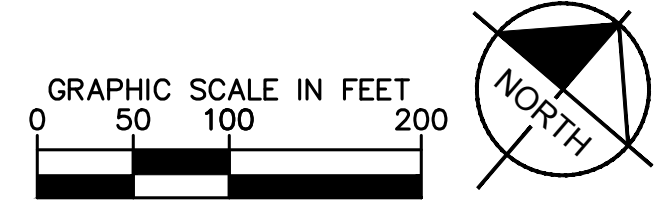
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CITY OF WILDOMAR
 INLAND VALLEY MEDICAL CENTER
 OFFSITE DRAINAGE AREA EXHIBIT



SHEET No. 1

OF 1 SHTS

APPENDIX B: RATIONAL METHOD CALCULATIONS – EXISTING CONDITIONS



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

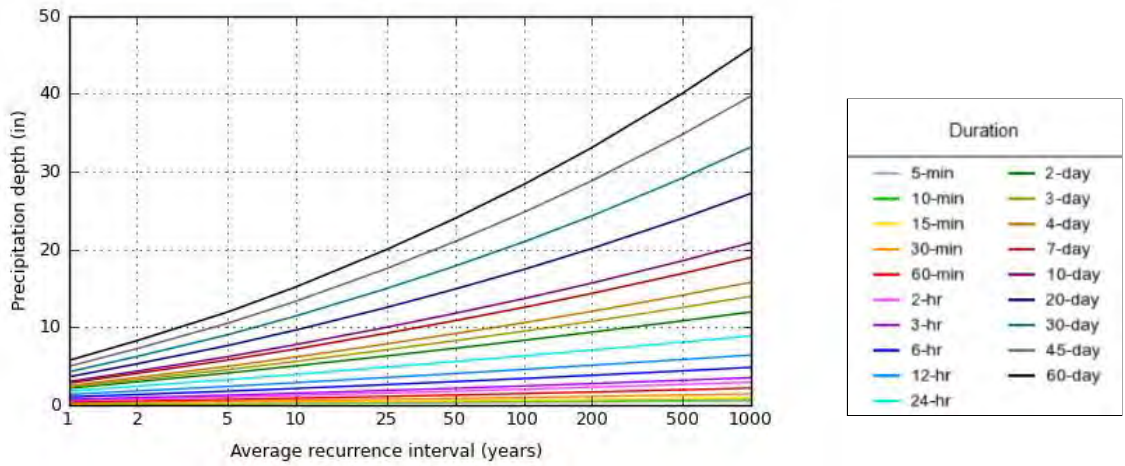
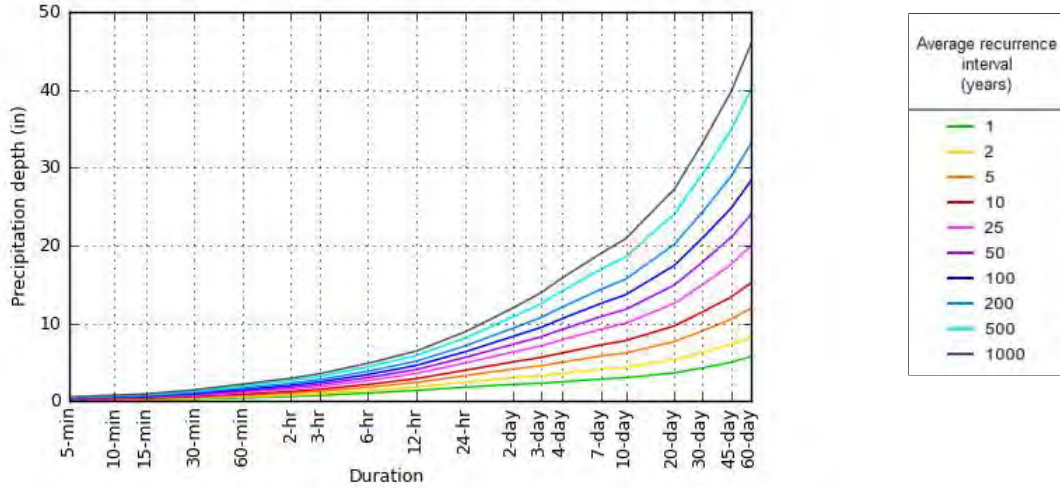
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.097 (0.081-0.117)	0.131 (0.109-0.157)	0.176 (0.147-0.213)	0.215 (0.178-0.262)	0.270 (0.216-0.341)	0.313 (0.245-0.405)	0.359 (0.274-0.476)	0.408 (0.302-0.557)	0.476 (0.337-0.679)	0.531 (0.362-0.785)
10-min	0.139 (0.117-0.167)	0.187 (0.157-0.226)	0.253 (0.211-0.306)	0.308 (0.255-0.376)	0.386 (0.309-0.488)	0.449 (0.351-0.580)	0.515 (0.392-0.683)	0.585 (0.432-0.798)	0.682 (0.483-0.974)	0.760 (0.519-1.13)
15-min	0.168 (0.141-0.203)	0.226 (0.190-0.273)	0.306 (0.255-0.370)	0.373 (0.309-0.454)	0.467 (0.374-0.591)	0.543 (0.425-0.702)	0.623 (0.474-0.826)	0.707 (0.523-0.966)	0.825 (0.584-1.18)	0.920 (0.628-1.36)
30-min	0.264 (0.222-0.318)	0.355 (0.298-0.428)	0.480 (0.401-0.580)	0.585 (0.485-0.714)	0.734 (0.587-0.928)	0.853 (0.667-1.10)	0.978 (0.745-1.30)	1.11 (0.821-1.52)	1.30 (0.917-1.85)	1.44 (0.986-2.14)
60-min	0.400 (0.336-0.482)	0.538 (0.451-0.649)	0.727 (0.607-0.879)	0.886 (0.734-1.08)	1.11 (0.889-1.40)	1.29 (1.01-1.67)	1.48 (1.13-1.96)	1.68 (1.24-2.30)	1.96 (1.39-2.80)	2.19 (1.49-3.24)
2-hr	0.591 (0.496-0.711)	0.779 (0.653-0.939)	1.03 (0.863-1.25)	1.25 (1.03-1.52)	1.55 (1.24-1.95)	1.78 (1.40-2.31)	2.03 (1.55-2.69)	2.29 (1.69-3.13)	2.65 (1.88-3.79)	2.94 (2.01-4.35)
3-hr	0.732 (0.615-0.882)	0.960 (0.804-1.16)	1.27 (1.06-1.53)	1.52 (1.26-1.86)	1.88 (1.50-2.38)	2.16 (1.69-2.79)	2.46 (1.87-3.26)	2.76 (2.04-3.78)	3.19 (2.26-4.55)	3.52 (2.40-5.22)
6-hr	1.04 (0.872-1.25)	1.36 (1.14-1.64)	1.79 (1.49-2.16)	2.14 (1.77-2.61)	2.63 (2.10-3.33)	3.02 (2.36-3.90)	3.41 (2.60-4.53)	3.83 (2.83-5.23)	4.40 (3.11-6.28)	4.84 (3.31-7.17)
12-hr	1.37 (1.15-1.65)	1.81 (1.52-2.19)	2.40 (2.01-2.90)	2.88 (2.39-3.52)	3.55 (2.84-4.48)	4.06 (3.17-5.24)	4.58 (3.49-6.08)	5.12 (3.79-7.00)	5.86 (4.14-8.36)	6.43 (4.39-9.52)
24-hr	1.79 (1.58-2.07)	2.43 (2.14-2.81)	3.27 (2.88-3.79)	3.95 (3.45-4.61)	4.88 (4.13-5.88)	5.60 (4.64-6.88)	6.32 (5.12-7.96)	7.07 (5.58-9.15)	8.09 (6.13-10.9)	8.88 (6.51-12.4)
2-day	2.15 (1.90-2.48)	2.99 (2.64-3.46)	4.12 (3.63-4.77)	5.04 (4.41-5.89)	6.31 (5.34-7.61)	7.30 (6.06-8.98)	8.32 (6.74-10.5)	9.37 (7.39-12.1)	10.8 (8.20-14.6)	12.0 (8.77-16.7)
3-day	2.30 (2.03-2.65)	3.26 (2.88-3.77)	4.55 (4.00-5.27)	5.62 (4.91-6.56)	7.10 (6.01-8.56)	8.27 (6.86-10.2)	9.49 (7.69-11.9)	10.8 (8.49-13.9)	12.5 (9.51-16.9)	14.0 (10.2-19.4)
4-day	2.47 (2.19-2.85)	3.54 (3.12-4.09)	4.98 (4.38-5.77)	6.18 (5.40-7.22)	7.86 (6.65-9.47)	9.19 (7.62-11.3)	10.6 (8.57-13.3)	12.0 (9.50-15.6)	14.1 (10.7-19.0)	15.8 (11.6-22.0)
7-day	2.83 (2.50-3.26)	4.08 (3.60-4.71)	5.78 (5.09-6.70)	7.21 (6.30-8.43)	9.24 (7.81-11.1)	10.8 (9.00-13.3)	12.5 (10.2-15.8)	14.3 (11.3-18.6)	16.9 (12.8-22.8)	19.0 (13.9-26.4)
10-day	3.01 (2.66-3.48)	4.36 (3.85-5.04)	6.21 (5.47-7.20)	7.78 (6.79-9.08)	10.0 (8.46-12.1)	11.8 (9.77-14.5)	13.7 (11.1-17.2)	15.7 (12.4-20.3)	18.5 (14.1-25.0)	20.9 (15.3-29.0)
20-day	3.62 (3.20-4.18)	5.30 (4.68-6.13)	7.64 (6.73-8.86)	9.65 (8.43-11.3)	12.5 (10.6-15.1)	14.9 (12.4-18.3)	17.4 (14.1-21.9)	20.1 (15.9-26.0)	24.0 (18.2-32.3)	27.2 (19.9-37.8)
30-day	4.26 (3.77-4.92)	6.24 (5.51-7.21)	9.03 (7.95-10.5)	11.5 (10.0-13.4)	15.0 (12.7-18.1)	17.9 (14.8-22.0)	21.0 (17.0-26.4)	24.3 (19.2-31.5)	29.2 (22.1-39.3)	33.2 (24.3-46.2)
45-day	4.97 (4.39-5.74)	7.25 (6.40-8.39)	10.5 (9.25-12.2)	13.3 (11.7-15.6)	17.5 (14.8-21.1)	21.0 (17.4-25.8)	24.7 (20.0-31.2)	28.8 (22.7-37.3)	34.8 (26.4-46.8)	39.7 (29.1-55.3)
60-day	5.72 (5.06-6.61)	8.28 (7.31-9.57)	11.9 (10.5-13.8)	15.2 (13.3-17.7)	20.0 (16.9-24.1)	24.0 (19.9-29.5)	28.3 (22.9-35.7)	33.1 (26.1-42.8)	40.1 (30.4-53.9)	45.9 (33.6-63.8)

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: 33.5915°, Longitude: -117.2383°



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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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[National Weather Service](#)
[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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NOAA Atlas 14, Volume 6, Version 2
 Location name: Wildomar, California, USA*
 Latitude: 33.5915°, Longitude: -117.2383°
 Elevation: 1311.1 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 & aerials](#)

PF tabular

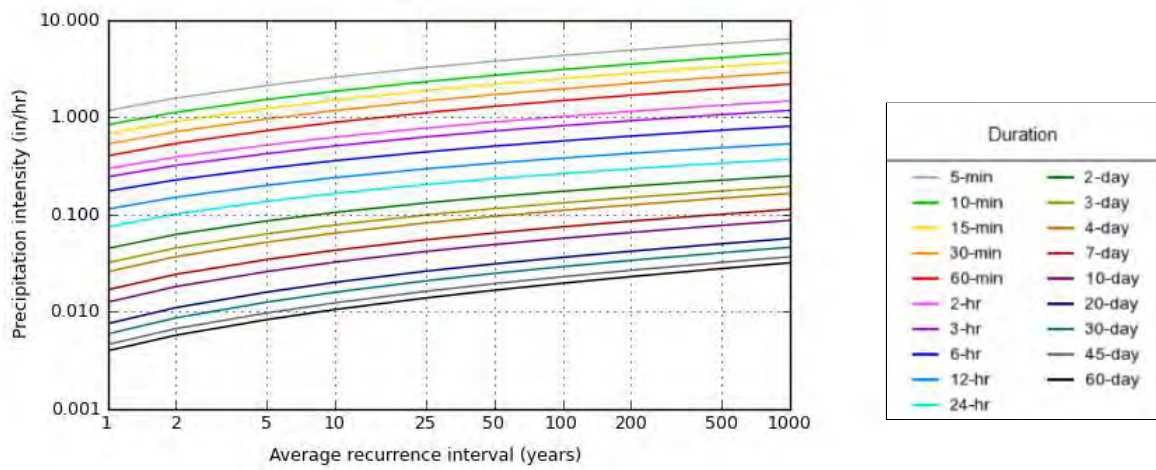
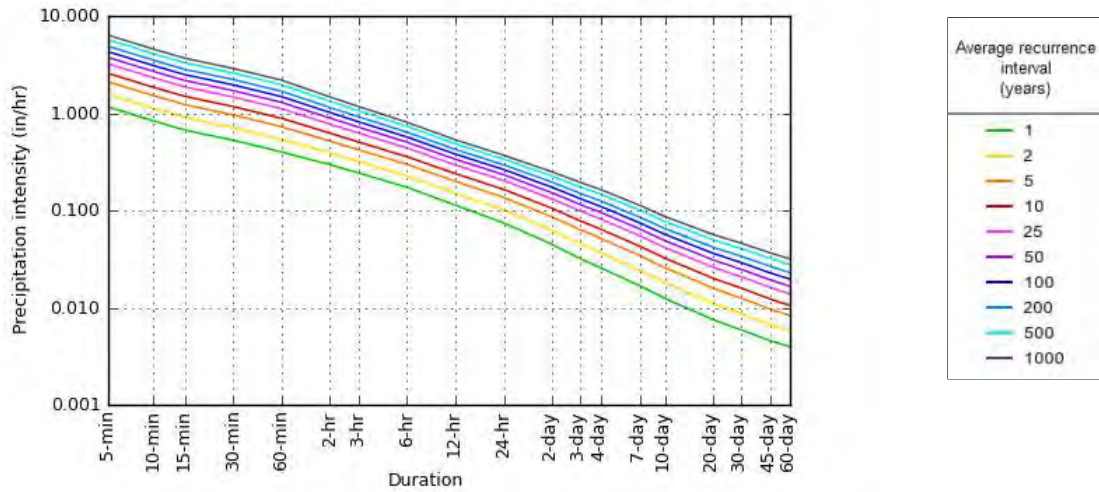
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.16 (0.972-1.40)	1.57 (1.31-1.88)	2.11 (1.76-2.56)	2.58 (2.14-3.14)	3.24 (2.59-4.09)	3.76 (2.94-4.86)	4.31 (3.29-5.71)	4.90 (3.62-6.68)	5.71 (4.04-8.15)	6.37 (4.34-9.42)
10-min	0.834 (0.702-1.00)	1.12 (0.942-1.36)	1.52 (1.27-1.84)	1.85 (1.53-2.26)	2.32 (1.85-2.93)	2.69 (2.11-3.48)	3.09 (2.35-4.10)	3.51 (2.59-4.79)	4.09 (2.90-5.84)	4.56 (3.11-6.76)
15-min	0.672 (0.564-0.812)	0.904 (0.760-1.09)	1.22 (1.02-1.48)	1.49 (1.24-1.82)	1.87 (1.50-2.36)	2.17 (1.70-2.81)	2.49 (1.90-3.30)	2.83 (2.09-3.86)	3.30 (2.34-4.71)	3.68 (2.51-5.44)
30-min	0.528 (0.444-0.636)	0.710 (0.596-0.856)	0.960 (0.802-1.16)	1.17 (0.970-1.43)	1.47 (1.17-1.86)	1.71 (1.33-2.20)	1.96 (1.49-2.59)	2.22 (1.64-3.03)	2.59 (1.83-3.70)	2.89 (1.97-4.28)
60-min	0.400 (0.336-0.482)	0.538 (0.451-0.649)	0.727 (0.607-0.879)	0.886 (0.734-1.08)	1.11 (0.889-1.40)	1.29 (1.01-1.67)	1.48 (1.13-1.96)	1.68 (1.24-2.30)	1.96 (1.39-2.80)	2.19 (1.49-3.24)
2-hr	0.296 (0.248-0.356)	0.390 (0.326-0.470)	0.516 (0.432-0.624)	0.624 (0.516-0.760)	0.773 (0.618-0.977)	0.892 (0.698-1.15)	1.02 (0.774-1.35)	1.15 (0.847-1.57)	1.33 (0.938-1.89)	1.47 (1.00-2.17)
3-hr	0.244 (0.205-0.294)	0.320 (0.268-0.385)	0.422 (0.352-0.509)	0.507 (0.420-0.618)	0.626 (0.500-0.791)	0.720 (0.563-0.930)	0.818 (0.623-1.08)	0.920 (0.681-1.26)	1.06 (0.752-1.52)	1.17 (0.801-1.74)
6-hr	0.174 (0.146-0.209)	0.227 (0.190-0.273)	0.298 (0.249-0.360)	0.357 (0.296-0.436)	0.440 (0.351-0.555)	0.504 (0.394-0.651)	0.570 (0.434-0.756)	0.639 (0.473-0.873)	0.734 (0.520-1.05)	0.809 (0.552-1.20)
12-hr	0.114 (0.095-0.137)	0.150 (0.126-0.181)	0.199 (0.167-0.241)	0.239 (0.198-0.292)	0.294 (0.235-0.372)	0.337 (0.263-0.435)	0.380 (0.290-0.504)	0.425 (0.314-0.581)	0.486 (0.344-0.694)	0.534 (0.364-0.790)
24-hr	0.075 (0.066-0.086)	0.101 (0.089-0.117)	0.136 (0.120-0.158)	0.165 (0.144-0.192)	0.203 (0.172-0.245)	0.233 (0.193-0.287)	0.263 (0.213-0.332)	0.295 (0.232-0.381)	0.337 (0.255-0.454)	0.370 (0.271-0.515)
2-day	0.045 (0.040-0.052)	0.062 (0.055-0.072)	0.086 (0.076-0.099)	0.105 (0.092-0.123)	0.131 (0.111-0.159)	0.152 (0.126-0.187)	0.173 (0.140-0.218)	0.195 (0.154-0.253)	0.225 (0.171-0.304)	0.249 (0.183-0.347)
3-day	0.032 (0.028-0.037)	0.045 (0.040-0.052)	0.063 (0.056-0.073)	0.078 (0.068-0.091)	0.099 (0.083-0.119)	0.115 (0.095-0.141)	0.132 (0.107-0.166)	0.150 (0.118-0.193)	0.174 (0.132-0.235)	0.194 (0.142-0.270)
4-day	0.026 (0.023-0.030)	0.037 (0.033-0.043)	0.052 (0.046-0.060)	0.064 (0.056-0.075)	0.082 (0.069-0.099)	0.096 (0.079-0.118)	0.110 (0.089-0.139)	0.126 (0.099-0.162)	0.147 (0.111-0.198)	0.164 (0.120-0.229)
7-day	0.017 (0.015-0.019)	0.024 (0.021-0.028)	0.034 (0.030-0.040)	0.043 (0.038-0.050)	0.055 (0.047-0.066)	0.065 (0.054-0.079)	0.075 (0.060-0.094)	0.085 (0.067-0.110)	0.101 (0.076-0.135)	0.113 (0.083-0.157)
10-day	0.013 (0.011-0.014)	0.018 (0.016-0.021)	0.026 (0.023-0.030)	0.032 (0.028-0.038)	0.042 (0.035-0.050)	0.049 (0.041-0.060)	0.057 (0.046-0.072)	0.065 (0.052-0.085)	0.077 (0.059-0.104)	0.087 (0.064-0.121)
20-day	0.008 (0.007-0.009)	0.011 (0.010-0.013)	0.016 (0.014-0.018)	0.020 (0.018-0.023)	0.026 (0.022-0.032)	0.031 (0.026-0.038)	0.036 (0.029-0.046)	0.042 (0.033-0.054)	0.050 (0.038-0.067)	0.057 (0.042-0.079)
30-day	0.006 (0.005-0.007)	0.009 (0.008-0.010)	0.013 (0.011-0.015)	0.016 (0.014-0.019)	0.021 (0.018-0.025)	0.025 (0.021-0.030)	0.029 (0.024-0.037)	0.034 (0.027-0.044)	0.040 (0.031-0.055)	0.046 (0.034-0.064)
45-day	0.005 (0.004-0.005)	0.007 (0.006-0.008)	0.010 (0.009-0.011)	0.012 (0.011-0.014)	0.016 (0.014-0.020)	0.019 (0.016-0.024)	0.023 (0.019-0.029)	0.027 (0.021-0.035)	0.032 (0.024-0.043)	0.037 (0.027-0.051)
60-day	0.004 (0.004-0.005)	0.006 (0.005-0.007)	0.008 (0.007-0.010)	0.011 (0.009-0.012)	0.014 (0.012-0.017)	0.017 (0.014-0.020)	0.020 (0.016-0.025)	0.023 (0.018-0.030)	0.028 (0.021-0.037)	0.032 (0.023-0.044)

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 intensity-duration-frequency (IDF) curves
 Latitude: 33.5915°, Longitude: -117.2383°



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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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Date 9/10/20

Job No. 990948008



UHS Inland Valley Existing Conditions

Subarea	U/S Node	D/S Node	U/S Elev.	D/S Elev.	Length (ft)	10-Year (cfs)	100-Year (cfs)		
A	10	11	1329.93	1328.59	100	5.01	8.45		
	11	12	1328.59	1281.58	434				
	13	14	1331.56	1311.72	100	2.72	4.96		
	14	15	1311.72	1300.79	50				
	16	17				0.55	0.93		
	17	18	1330.08	1329.36	46				
	19	20	1329.83	1327.9	57	0.13	0.22		
	21	22				0.86	1.42		
	23	24	1330.2	1329.15	100	5.67	9.77		
	24	25	1329.15	1325.34	445				
	26	27	1329.98	1329	100	2.33	3.97		
	27	28	1329	1325.65	301				
<i>Subtotal</i>						<i>17.27</i>	<i>29.72</i>		
B	30	31				1.05	1.75		
	32	33				3.45	5.99		
	33	35	1330.11	1319.12	739				
	36	37				4.75	8.08		
	37	39	1330.16	1316.29	717				
	40	41	1330.35	1330.28	100	8.38	15.05		
	41	38	1330.28	1327.92	303				
	38	38							
	42	43							
	43	38	1330.04	1327.92	38				
	38	38							
	38	44	1327.92	1324.5	500				
	45	45							
	46	47	1332.17	1326.11	100				
	47	45	1326.11	1319	34				
	45	45							
	45	48	1319	1311	528				
	48	48							
34	49	1329	1323.6	100					
49	48	1323.6	1311	396					
48	48								
<i>Subtotal</i>								<i>17.63</i>	<i>30.87</i>
C	50	51	1328.83	1326.01	100	0.94	1.77		
	51	52	1326.01	1317.63	317				
<i>Subtotal</i>						<i>0.94</i>	<i>1.77</i>		

RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1982-2011 Advanced Engineering Software (aes)
(Rational Tabling Version 18.0)
Release Date: 07/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****

- * UHS Inland Valley Existing Conditions *
* 10-year, Rational Method *
* Kimley-Horn, LAC *

FILE NAME: IV_E.DAT
TIME/DATE OF STUDY: 05:29 09/10/2020

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

USER SPECIFIED STORM EVENT(YEAR) = 10.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 12.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
10-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) = 1.850
10-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) = 0.886
100-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) = 3.090
100-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) = 1.480
SLOPE OF 10-YEAR INTENSITY-DURATION CURVE = 0.4108943
SLOPE OF 100-YEAR INTENSITY-DURATION CURVE = 0.4108413

COMPUTED RAINFALL INTENSITY DATA:
STORM EVENT = 10.00 1-HOUR INTENSITY(INCH/HOUR) = 0.895
SLOPE OF INTENSITY DURATION CURVE = 0.4109

RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES

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

Table with 10 columns: NO., (FT), (FT), SIDE / SIDE/ WAY, (FT), (FT), (FT), (FT), (n). Row 1: 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.*

FLOW PROCESS FROM NODE 10.00 TO NODE 11.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====
ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL

TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1329.93
 DOWNSTREAM ELEVATION(FEET) = 1328.59
 ELEVATION DIFFERENCE(FEET) = 1.34
 TC = 0.303*[(100.00**3)/(1.34)]**.2 = 4.531
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 USER-SPECIFIED RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.29
 TOTAL AREA(ACRES) = 0.13 TOTAL RUNOFF(CFS) = 0.29

FLOW PROCESS FROM NODE 11.00 TO NODE 12.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1328.59 DOWNSTREAM(FEET) = 1281.58
 CHANNEL LENGTH THRU SUBAREA(FEET) = 434.00 CHANNEL SLOPE = 0.1083
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.148
 USER-SPECIFIED RUNOFF COEFFICIENT = .8804
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.46
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 3.41
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 2.12
 Tc(MIN.) = 7.12
 SUBAREA AREA(ACRES) = 1.25 SUBAREA RUNOFF(CFS) = 2.36
 TOTAL AREA(ACRES) = 1.4 PEAK FLOW RATE(CFS) = 2.65

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.08 FLOW VELOCITY(FEET/SEC.) = 4.07
 LONGEST FLOWPATH FROM NODE 10.00 TO NODE 12.00 = 534.00 FEET.

FLOW PROCESS FROM NODE 12.00 TO NODE 12.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.148
 USER-SPECIFIED RUNOFF COEFFICIENT = .8804
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 1.25 SUBAREA RUNOFF(CFS) = 2.36
 TOTAL AREA(ACRES) = 2.6 TOTAL RUNOFF(CFS) = 5.01
 TC(MIN.) = 7.12

FLOW PROCESS FROM NODE 13.00 TO NODE 14.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1331.56
 DOWNSTREAM ELEVATION(FEET) = 1311.72
 ELEVATION DIFFERENCE(FEET) = 19.84
 TC = 0.937*[(100.00**3)/(19.84)]**.2 = 8.174
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.030

USER-SPECIFIED RUNOFF COEFFICIENT = .6949
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.45
 TOTAL AREA(ACRES) = 0.32 TOTAL RUNOFF(CFS) = 0.45

FLOW PROCESS FROM NODE 14.00 TO NODE 15.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1311.72 DOWNSTREAM(FEET) = 1300.79
 CHANNEL LENGTH THRU SUBAREA(FEET) = 50.00 CHANNEL SLOPE = 0.2186
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.995
 USER-SPECIFIED RUNOFF COEFFICIENT = .6922
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.02
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 2.37
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 0.35
 Tc(MIN.) = 8.52
 SUBAREA AREA(ACRES) = 0.82 SUBAREA RUNOFF(CFS) = 1.13
 TOTAL AREA(ACRES) = 1.1 PEAK FLOW RATE(CFS) = 1.58

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.08 FLOW VELOCITY(FEET/SEC.) = 2.55
 LONGEST FLOWPATH FROM NODE 13.00 TO NODE 15.00 = 150.00 FEET.

FLOW PROCESS FROM NODE 15.00 TO NODE 15.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.995
 USER-SPECIFIED RUNOFF COEFFICIENT = .6922
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.82 SUBAREA RUNOFF(CFS) = 1.13
 TOTAL AREA(ACRES) = 2.0 TOTAL RUNOFF(CFS) = 2.72
 TC(MIN.) = 8.52

FLOW PROCESS FROM NODE 16.00 TO NODE 17.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 USER-SPECIFIED RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.26
 TOTAL AREA(ACRES) = 0.12 TOTAL RUNOFF(CFS) = 0.26

FLOW PROCESS FROM NODE 17.00 TO NODE 18.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.08 DOWNSTREAM(FEET) = 1329.36
 CHANNEL LENGTH THRU SUBAREA(FEET) = 46.00 CHANNEL SLOPE = 0.0157

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CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.351
USER-SPECIFIED RUNOFF COEFFICIENT = .8817
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.34
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.07
AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 0.72
Tc(MIN.) = 5.72
SUBAREA AREA(ACRES) = 0.07 SUBAREA RUNOFF(CFS) = 0.15
TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.41

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.06 FLOW VELOCITY(FEET/SEC.) = 1.22
LONGEST FLOWPATH FROM NODE 16.00 TO NODE 18.00 = 96.00 FEET.

FLOW PROCESS FROM NODE 18.00 TO NODE 18.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.351
USER-SPECIFIED RUNOFF COEFFICIENT = .8817
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.07 SUBAREA RUNOFF(CFS) = 0.15
TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 0.55
TC(MIN.) = 5.72

FLOW PROCESS FROM NODE 19.00 TO NODE 20.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 57.00
UPSTREAM ELEVATION(FEET) = 1329.83
DOWNSTREAM ELEVATION(FEET) = 1327.90
ELEVATION DIFFERENCE(FEET) = 1.93
TC = 0.303*[(57.00**3)/(1.93)]**.2 = 3.006
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
USER-SPECIFIED RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.13
TOTAL AREA(ACRES) = 0.06 TOTAL RUNOFF(CFS) = 0.13

FLOW PROCESS FROM NODE 21.00 TO NODE 22.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
USER SPECIFIED Tc(MIN.) = 5.000
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
USER-SPECIFIED RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.86
TOTAL AREA(ACRES) = 0.39 TOTAL RUNOFF(CFS) = 0.86

FLOW PROCESS FROM NODE 23.00 TO NODE 24.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1330.20
DOWNSTREAM ELEVATION(FEET) = 1329.15
ELEVATION DIFFERENCE(FEET) = 1.05
TC = 0.303*[(100.00**3)/(1.05)]**.2 = 4.757
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
USER-SPECIFIED RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.31
TOTAL AREA(ACRES) = 0.14 TOTAL RUNOFF(CFS) = 0.31

FLOW PROCESS FROM NODE 24.00 TO NODE 25.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1329.15 DOWNSTREAM(FEET) = 1325.34
CHANNEL LENGTH THRU SUBAREA(FEET) = 445.00 CHANNEL SLOPE = 0.0086
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.830
USER-SPECIFIED RUNOFF COEFFICIENT = .8778
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.66
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.34
AVERAGE FLOW DEPTH(FEET) = 0.11 TRAVEL TIME(MIN.) = 5.52
Tc(MIN.) = 10.52
SUBAREA AREA(ACRES) = 1.67 SUBAREA RUNOFF(CFS) = 2.68
TOTAL AREA(ACRES) = 1.8 PEAK FLOW RATE(CFS) = 2.99

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.14 FLOW VELOCITY(FEET/SEC.) = 1.54
LONGEST FLOWPATH FROM NODE 23.00 TO NODE 25.00 = 545.00 FEET.

FLOW PROCESS FROM NODE 25.00 TO NODE 25.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.830
USER-SPECIFIED RUNOFF COEFFICIENT = .8778
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 1.67 SUBAREA RUNOFF(CFS) = 2.68
TOTAL AREA(ACRES) = 3.5 TOTAL RUNOFF(CFS) = 5.67
TC(MIN.) = 10.52

FLOW PROCESS FROM NODE 26.00 TO NODE 27.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2

INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1329.98
 DOWNSTREAM ELEVATION(FEET) = 1329.00
 ELEVATION DIFFERENCE(FEET) = 0.98
 $TC = 0.303 * [(100.00 ** 3) / (0.98)] ** .2 = 4.823$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 USER-SPECIFIED RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.22
 TOTAL AREA(ACRES) = 0.10 TOTAL RUNOFF(CFS) = 0.22

FLOW PROCESS FROM NODE 27.00 TO NODE 28.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1329.00 DOWNSTREAM(FEET) = 1325.65
 CHANNEL LENGTH THRU SUBAREA(FEET) = 301.00 CHANNEL SLOPE = 0.0111
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.937
 USER-SPECIFIED RUNOFF COEFFICIENT = .8787
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.75
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.20
 AVERAGE FLOW DEPTH(FEET) = 0.08 TRAVEL TIME(MIN.) = 4.17
 Tc(MIN.) = 9.17
 SUBAREA AREA(ACRES) = 0.62 SUBAREA RUNOFF(CFS) = 1.06
 TOTAL AREA(ACRES) = 0.7 PEAK FLOW RATE(CFS) = 1.27

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 1.39
 LONGEST FLOWPATH FROM NODE 26.00 TO NODE 28.00 = 401.00 FEET.

FLOW PROCESS FROM NODE 28.00 TO NODE 28.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.937
 USER-SPECIFIED RUNOFF COEFFICIENT = .8787
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.62 SUBAREA RUNOFF(CFS) = 1.06
 TOTAL AREA(ACRES) = 1.3 TOTAL RUNOFF(CFS) = 2.33
 TC(MIN.) = 9.17

FLOW PROCESS FROM NODE 30.00 TO NODE 31.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 USER-SPECIFIED RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 1.05
 TOTAL AREA(ACRES) = 0.48 TOTAL RUNOFF(CFS) = 1.05

FLOW PROCESS FROM NODE 32.00 TO NODE 33.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL USER SPECIFIED Tc(MIN.) = 5.000 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484 USER-SPECIFIED RUNOFF COEFFICIENT = .8825 SOIL CLASSIFICATION IS "C" SUBAREA RUNOFF(CFS) = 0.26 TOTAL AREA(ACRES) = 0.12 TOTAL RUNOFF(CFS) = 0.26

FLOW PROCESS FROM NODE 33.00 TO NODE 35.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<< >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1330.11 DOWNSTREAM(FEET) = 1319.12 CHANNEL LENGTH THRU SUBAREA(FEET) = 739.00 CHANNEL SLOPE = 0.0149 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.651 USER-SPECIFIED RUNOFF COEFFICIENT = .8760 SOIL CLASSIFICATION IS "C" TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.08 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.45 AVERAGE FLOW DEPTH(FEET) = 0.09 TRAVEL TIME(MIN.) = 8.51 Tc(MIN.) = 13.51 SUBAREA AREA(ACRES) = 1.10 SUBAREA RUNOFF(CFS) = 1.59 TOTAL AREA(ACRES) = 1.2 PEAK FLOW RATE(CFS) = 1.85

END OF SUBAREA CHANNEL FLOW HYDRAULICS: DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 1.73 LONGEST FLOWPATH FROM NODE 32.00 TO NODE 35.00 = 30839.00 FEET.

FLOW PROCESS FROM NODE 35.00 TO NODE 35.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.651 USER-SPECIFIED RUNOFF COEFFICIENT = .8760 SOIL CLASSIFICATION IS "C" SUBAREA AREA(ACRES) = 1.10 SUBAREA RUNOFF(CFS) = 1.59 TOTAL AREA(ACRES) = 2.3 TOTAL RUNOFF(CFS) = 3.45 TC(MIN.) = 13.51

FLOW PROCESS FROM NODE 36.00 TO NODE 37.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL USER SPECIFIED Tc(MIN.) = 5.000 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484 USER-SPECIFIED RUNOFF COEFFICIENT = .8825 SOIL CLASSIFICATION IS "C" SUBAREA RUNOFF(CFS) = 0.29 TOTAL AREA(ACRES) = 0.13 TOTAL RUNOFF(CFS) = 0.29

FLOW PROCESS FROM NODE 37.00 TO NODE 39.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.16 DOWNSTREAM(FEET) = 1316.29
 CHANNEL LENGTH THRU SUBAREA(FEET) = 717.00 CHANNEL SLOPE = 0.0193
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.756
 USER-SPECIFIED RUNOFF COEFFICIENT = .8771
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.40
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.80
 AVERAGE FLOW DEPTH(FEET) = 0.09 TRAVEL TIME(MIN.) = 6.63
 Tc(MIN.) = 11.63
 SUBAREA AREA(ACRES) = 1.45 SUBAREA RUNOFF(CFS) = 2.23
 TOTAL AREA(ACRES) = 1.6 PEAK FLOW RATE(CFS) = 2.52

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.11 FLOW VELOCITY(FEET/SEC.) = 2.04
 LONGEST FLOWPATH FROM NODE 36.00 TO NODE 39.00 = 1456.00 FEET.

FLOW PROCESS FROM NODE 39.00 TO NODE 39.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.756
 USER-SPECIFIED RUNOFF COEFFICIENT = .8771
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 1.45 SUBAREA RUNOFF(CFS) = 2.23
 TOTAL AREA(ACRES) = 3.0 TOTAL RUNOFF(CFS) = 4.75
 TC(MIN.) = 11.63

FLOW PROCESS FROM NODE 40.00 TO NODE 41.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.35
 DOWNSTREAM ELEVATION(FEET) = 1330.28
 ELEVATION DIFFERENCE(FEET) = 0.07
 $TC = 0.303 * [(100.00**3)/(0.07)]**.2 = 8.178$
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.030
 USER-SPECIFIED RUNOFF COEFFICIENT = .8795
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.12
 TOTAL AREA(ACRES) = 0.07 TOTAL RUNOFF(CFS) = 0.12

FLOW PROCESS FROM NODE 41.00 TO NODE 38.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.28 DOWNSTREAM(FEET) = 1327.92
 CHANNEL LENGTH THRU SUBAREA(FEET) = 303.00 CHANNEL SLOPE = 0.0078

CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.646
USER-SPECIFIED RUNOFF COEFFICIENT = .8760
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.40
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.93
AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 5.44
Tc(MIN.) = 13.61
SUBAREA AREA(ACRES) = 0.38 SUBAREA RUNOFF(CFS) = 0.55
TOTAL AREA(ACRES) = 0.4 PEAK FLOW RATE(CFS) = 0.67

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.08 FLOW VELOCITY(FEET/SEC.) = 1.03
LONGEST FLOWPATH FROM NODE 40.00 TO NODE 38.00 = 403.00 FEET.

FLOW PROCESS FROM NODE 38.00 TO NODE 38.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.646
USER-SPECIFIED RUNOFF COEFFICIENT = .8760
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.38 SUBAREA RUNOFF(CFS) = 0.55
TOTAL AREA(ACRES) = 0.8 TOTAL RUNOFF(CFS) = 1.22
TC(MIN.) = 13.61

FLOW PROCESS FROM NODE 38.00 TO NODE 38.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<

TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
TIME OF CONCENTRATION(MIN.) = 13.61
RAINFALL INTENSITY(INCH/HR) = 1.65
TOTAL STREAM AREA(ACRES) = 0.83
PEAK FLOW RATE(CFS) AT CONFLUENCE = 1.22

FLOW PROCESS FROM NODE 42.00 TO NODE 43.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
USER SPECIFIED Tc(MIN.) = 5.000
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
USER-SPECIFIED RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 2.54
TOTAL AREA(ACRES) = 1.16 TOTAL RUNOFF(CFS) = 2.54

FLOW PROCESS FROM NODE 43.00 TO NODE 38.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1330.04 DOWNSTREAM(FEET) = 1327.92
CHANNEL LENGTH THRU SUBAREA(FEET) = 38.00 CHANNEL SLOPE = 0.0558
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000

MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.441
 USER-SPECIFIED RUNOFF COEFFICIENT = .8823
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.56
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 2.91
 AVERAGE FLOW DEPTH(FEET) = 0.09 TRAVEL TIME(MIN.) = 0.22
 Tc(MIN.) = 5.22
 SUBAREA AREA(ACRES) = 0.02 SUBAREA RUNOFF(CFS) = 0.04
 TOTAL AREA(ACRES) = 1.2 PEAK FLOW RATE(CFS) = 2.59

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.09 FLOW VELOCITY(FEET/SEC.) = 2.93
 LONGEST FLOWPATH FROM NODE 42.00 TO NODE 38.00 = 341.00 FEET.

FLOW PROCESS FROM NODE 38.00 TO NODE 38.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.441
 USER-SPECIFIED RUNOFF COEFFICIENT = .8823
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.02 SUBAREA RUNOFF(CFS) = 0.04
 TOTAL AREA(ACRES) = 1.2 TOTAL RUNOFF(CFS) = 2.63
 TC(MIN.) = 5.22

FLOW PROCESS FROM NODE 38.00 TO NODE 38.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<

=====

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
 TIME OF CONCENTRATION(MIN.) = 5.22
 RAINFALL INTENSITY(INCH/HR) = 2.44
 TOTAL STREAM AREA(ACRES) = 1.20
 PEAK FLOW RATE(CFS) AT CONFLUENCE = 2.63

** CONFLUENCE DATA **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)	AREA (ACRE)
1	1.22	13.61	1.646	0.83
2	2.63	5.22	2.441	1.20

*****WARNING*****

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

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

** PEAK FLOW RATE TABLE **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)
1	3.10	5.22	2.441
2	2.99	13.61	1.646

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) = 3.10 Tc(MIN.) = 5.22

TOTAL AREA(ACRES) = 2.0
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 38.00 = 403.00 FEET.

FLOW PROCESS FROM NODE 38.00 TO NODE 44.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1327.92 DOWNSTREAM(FEET) = 1324.50
 CHANNEL LENGTH THRU SUBAREA(FEET) = 500.00 CHANNEL SLOPE = 0.0068
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.812
 USER-SPECIFIED RUNOFF COEFFICIENT = .8776
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 3.68
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.50
 AVERAGE FLOW DEPTH(FEET) = 0.16 TRAVEL TIME(MIN.) = 5.56
 Tc(MIN.) = 10.77
 SUBAREA AREA(ACRES) = 0.73 SUBAREA RUNOFF(CFS) = 1.16
 TOTAL AREA(ACRES) = 2.8 PEAK FLOW RATE(CFS) = 4.26

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.16 FLOW VELOCITY(FEET/SEC.) = 1.58
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 44.00 = 903.00 FEET.

FLOW PROCESS FROM NODE 44.00 TO NODE 44.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.812
 USER-SPECIFIED RUNOFF COEFFICIENT = .8776
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.73 SUBAREA RUNOFF(CFS) = 1.16
 TOTAL AREA(ACRES) = 3.5 TOTAL RUNOFF(CFS) = 5.42
 TC(MIN.) = 10.77

FLOW PROCESS FROM NODE 44.00 TO NODE 45.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1320.79 DOWNSTREAM(FEET) = 1319.00
 FLOW LENGTH(FEET) = 81.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 15.0 INCH PIPE IS 8.2 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) = 7.91
 ESTIMATED PIPE DIAMETER(INCH) = 15.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 5.42
 PIPE TRAVEL TIME(MIN.) = 0.17 Tc(MIN.) = 10.94
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 45.00 = 984.00 FEET.

FLOW PROCESS FROM NODE 45.00 TO NODE 45.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<

=====

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 TIME OF CONCENTRATION(MIN.) = 10.94
 RAINFALL INTENSITY(INCH/HR) = 1.80

TOTAL STREAM AREA(ACRES) = 3.49
 PEAK FLOW RATE(CFS) AT CONFLUENCE = 5.42

FLOW PROCESS FROM NODE 46.00 TO NODE 47.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
 TC = $K * [(LENGTH ** 3) / (ELEVATION CHANGE)] ** .2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1332.17
 DOWNSTREAM ELEVATION(FEET) = 1326.11
 ELEVATION DIFFERENCE(FEET) = 6.06
 TC = $0.937 * [(100.00 ** 3) / (6.06)] ** .2 = 10.362$
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.841
 USER-SPECIFIED RUNOFF COEFFICIENT = .6791
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.34
 TOTAL AREA(ACRES) = 0.27 TOTAL RUNOFF(CFS) = 0.34

FLOW PROCESS FROM NODE 47.00 TO NODE 45.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.11 DOWNSTREAM(FEET) = 1319.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 34.00 CHANNEL SLOPE = 0.2091
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.820
 USER-SPECIFIED RUNOFF COEFFICIENT = .6771
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.34
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.89
 AVERAGE FLOW DEPTH(FEET) = 0.04 TRAVEL TIME(MIN.) = 0.30
 Tc(MIN.) = 10.66
 SUBAREA AREA(ACRES) = 0.01 SUBAREA RUNOFF(CFS) = 0.01
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.35

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.04 FLOW VELOCITY(FEET/SEC.) = 1.92
 LONGEST FLOWPATH FROM NODE 46.00 TO NODE 45.00 = 134.00 FEET.

FLOW PROCESS FROM NODE 45.00 TO NODE 45.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.820
 USER-SPECIFIED RUNOFF COEFFICIENT = .6771
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.01 SUBAREA RUNOFF(CFS) = 0.01
 TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 0.36
 TC(MIN.) = 10.66

FLOW PROCESS FROM NODE 45.00 TO NODE 45.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<

```

=====
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
TIME OF CONCENTRATION(MIN.) = 10.66
RAINFALL INTENSITY(INCH/HR) = 1.82
TOTAL STREAM AREA(ACRES) = 0.29
PEAK FLOW RATE(CFS) AT CONFLUENCE = 0.36
    
```

** CONFLUENCE DATA **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)	AREA (ACRE)
1	5.42	10.94	1.800	3.49
2	0.36	10.66	1.820	0.29

```

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

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

** PEAK FLOW RATE TABLE **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)
1	5.64	10.66	1.820
2	5.78	10.94	1.800

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

```

PEAK FLOW RATE(CFS) = 5.78 Tc(MIN.) = 10.94
TOTAL AREA(ACRES) = 3.8
LONGEST FLOWPATH FROM NODE 40.00 TO NODE 45.00 = 984.00 FEET.
    
```

```

*****
FLOW PROCESS FROM NODE 45.00 TO NODE 48.00 IS CODE = 51
    
```

```

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
    
```

```

=====
ELEVATION DATA: UPSTREAM(FEET) = 1319.00 DOWNSTREAM(FEET) = 1311.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 528.00 CHANNEL SLOPE = 0.0152
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 3.000
MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 3.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.639
USER-SPECIFIED RUNOFF COEFFICIENT = .6591
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 6.35
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 3.13
AVERAGE FLOW DEPTH(FEET) = 0.55 TRAVEL TIME(MIN.) = 2.81
Tc(MIN.) = 13.76
SUBAREA AREA(ACRES) = 1.05 SUBAREA RUNOFF(CFS) = 1.13
TOTAL AREA(ACRES) = 4.8 PEAK FLOW RATE(CFS) = 6.91
    
```

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.58 FLOW VELOCITY(FEET/SEC.) = 3.21
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 48.00 = 1512.00 FEET.

```

*****
FLOW PROCESS FROM NODE 48.00 TO NODE 48.00 IS CODE = 81
    
```

```

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
    
```


10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.639
USER-SPECIFIED RUNOFF COEFFICIENT = .6591
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 1.05 SUBAREA RUNOFF(CFS) = 1.13
TOTAL AREA(ACRES) = 5.9 TOTAL RUNOFF(CFS) = 8.05
TC(MIN.) = 13.76

FLOW PROCESS FROM NODE 48.00 TO NODE 48.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<

=====
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
TIME OF CONCENTRATION(MIN.) = 13.76
RAINFALL INTENSITY(INCH/HR) = 1.64
TOTAL STREAM AREA(ACRES) = 5.88
PEAK FLOW RATE(CFS) AT CONFLUENCE = 8.05

FLOW PROCESS FROM NODE 34.00 TO NODE 49.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====
ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1329.00
DOWNSTREAM ELEVATION(FEET) = 1323.60
ELEVATION DIFFERENCE(FEET) = 5.40
TC = 0.937*[(100.00**3)/(5.40)]**.2 = 10.603
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.824
USER-SPECIFIED RUNOFF COEFFICIENT = .6775
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.10
TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.10

FLOW PROCESS FROM NODE 49.00 TO NODE 48.00 IS CODE = 51

=====
** WARNING: Computed Flowrate is less than 0.1 cfs,
Routing Algorithm is UNAVAILABLE.

FLOW PROCESS FROM NODE 48.00 TO NODE 48.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.824
USER-SPECIFIED RUNOFF COEFFICIENT = .6775
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.22 SUBAREA RUNOFF(CFS) = 0.27
TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 0.37
TC(MIN.) = 10.60

FLOW PROCESS FROM NODE 48.00 TO NODE 48.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<

=====
TOTAL NUMBER OF STREAMS = 2

CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:

TIME OF CONCENTRATION(MIN.) = 10.60
 RAINFALL INTENSITY(INCH/HR) = 1.82
 TOTAL STREAM AREA(ACRES) = 0.30
 PEAK FLOW RATE(CFS) AT CONFLUENCE = 0.37

** CONFLUENCE DATA **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)	AREA (ACRE)
1	8.05	13.76	1.639	5.88
2	0.37	10.60	1.824	0.30

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

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

** PEAK FLOW RATE TABLE **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)
1	6.57	10.60	1.824
2	8.38	13.76	1.639

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 8.38 Tc(MIN.) = 13.76
 TOTAL AREA(ACRES) = 6.2
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 48.00 = 1512.00 FEET.

 FLOW PROCESS FROM NODE 50.00 TO NODE 51.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1328.83
 DOWNSTREAM ELEVATION(FEET) = 1326.01
 ELEVATION DIFFERENCE(FEET) = 2.82
 $TC = 0.937 * [(100.00**3)/(2.82)]**.2 = 12.075$
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.729
 USER-SPECIFIED RUNOFF COEFFICIENT = .6684
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.10
 TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.10

 FLOW PROCESS FROM NODE 51.00 TO NODE 52.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.01 DOWNSTREAM(FEET) = 1317.63
 CHANNEL LENGTH THRU SUBAREA(FEET) = 317.00 CHANNEL SLOPE = 0.0264
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 5.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.572
 USER-SPECIFIED RUNOFF COEFFICIENT = .6517

SOIL CLASSIFICATION IS "C"

TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.31
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.68
 AVERAGE FLOW DEPTH(FEET) = 0.19 TRAVEL TIME(MIN.) = 3.15
 Tc(MIN.) = 15.23
 SUBAREA AREA(ACRES) = 0.41 SUBAREA RUNOFF(CFS) = 0.42
 TOTAL AREA(ACRES) = 0.5 PEAK FLOW RATE(CFS) = 0.52

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.23 FLOW VELOCITY(FEET/SEC.) = 1.92
 LONGEST FLOWPATH FROM NODE 50.00 TO NODE 52.00 = 417.00 FEET.

FLOW PROCESS FROM NODE 52.00 TO NODE 52.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.572
 USER-SPECIFIED RUNOFF COEFFICIENT = .6517
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.41 SUBAREA RUNOFF(CFS) = 0.42
 TOTAL AREA(ACRES) = 0.9 TOTAL RUNOFF(CFS) = 0.94
 TC(MIN.) = 15.23

END OF STUDY SUMMARY:

TOTAL AREA(ACRES) = 0.9 TC(MIN.) = 15.23
 PEAK FLOW RATE(CFS) = 0.94

=====

END OF RATIONAL METHOD ANALYSIS



RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
 RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
 (RCFC&WCD) 1978 HYDROLOGY MANUAL
 (c) Copyright 1982-2011 Advanced Engineering Software (aes)
 (Rational Tabling Version 18.0)
 Release Date: 07/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****

* UHS Inland Valley Existing Conditions *
 * 100-Year Storm Event *
 * Kimley-Horn, LAC *

FILE NAME: IV_E.DAT
 TIME/DATE OF STUDY: 05:28 09/10/2020

 USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

USER SPECIFIED STORM EVENT(YEAR) = 100.00
 SPECIFIED MINIMUM PIPE SIZE(INCH) = 12.00
 SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
 10-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) = 1.850
 10-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) = 0.886
 100-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) = 3.090
 100-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) = 1.480
 SLOPE OF 10-YEAR INTENSITY-DURATION CURVE = 0.4108943
 SLOPE OF 100-YEAR INTENSITY-DURATION CURVE = 0.4108413

COMPUTED RAINFALL INTENSITY DATA:
 STORM EVENT = 100.00 1-HOUR INTENSITY(INCH/HOUR) = 1.480
 SLOPE OF INTENSITY DURATION CURVE = 0.4108

RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
 NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
 AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES

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

NO.	HALF-WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL IN- / OUT- / SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER WIDTH (FT)	GEOMETRIES LIP (FT)	MANNING HIKE (FT)	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.*

 FLOW PROCESS FROM NODE 10.00 TO NODE 11.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL

TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1329.93
 DOWNSTREAM ELEVATION(FEET) = 1328.59
 ELEVATION DIFFERENCE(FEET) = 1.34
 TC = 0.303*[(100.00**3)/(1.34)]**.2 = 4.531
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 USER-SPECIFIED RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.47
 TOTAL AREA(ACRES) = 0.13 TOTAL RUNOFF(CFS) = 0.47

FLOW PROCESS FROM NODE 11.00 TO NODE 12.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1328.59 DOWNSTREAM(FEET) = 1281.58
 CHANNEL LENGTH THRU SUBAREA(FEET) = 434.00 CHANNEL SLOPE = 0.1083
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.597
 USER-SPECIFIED RUNOFF COEFFICIENT = .8872
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.46
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 3.79
 AVERAGE FLOW DEPTH(FEET) = 0.08 TRAVEL TIME(MIN.) = 1.91
 Tc(MIN.) = 6.91
 SUBAREA AREA(ACRES) = 1.25 SUBAREA RUNOFF(CFS) = 3.99
 TOTAL AREA(ACRES) = 1.4 PEAK FLOW RATE(CFS) = 4.46

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 4.33
 LONGEST FLOWPATH FROM NODE 10.00 TO NODE 12.00 = 534.00 FEET.

FLOW PROCESS FROM NODE 12.00 TO NODE 12.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.597
 USER-SPECIFIED RUNOFF COEFFICIENT = .8872
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 1.25 SUBAREA RUNOFF(CFS) = 3.99
 TOTAL AREA(ACRES) = 2.6 TOTAL RUNOFF(CFS) = 8.45
 TC(MIN.) = 6.91

FLOW PROCESS FROM NODE 13.00 TO NODE 14.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1331.56
 DOWNSTREAM ELEVATION(FEET) = 1311.72
 ELEVATION DIFFERENCE(FEET) = 19.84
 TC = 0.937*[(100.00**3)/(19.84)]**.2 = 8.174
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.357

USER-SPECIFIED RUNOFF COEFFICIENT = .7637
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.82
 TOTAL AREA(ACRES) = 0.32 TOTAL RUNOFF(CFS) = 0.82

FLOW PROCESS FROM NODE 14.00 TO NODE 15.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1311.72 DOWNSTREAM(FEET) = 1300.79
 CHANNEL LENGTH THRU SUBAREA(FEET) = 50.00 CHANNEL SLOPE = 0.2186
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.309
 USER-SPECIFIED RUNOFF COEFFICIENT = .7620
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.85
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 2.85
 AVERAGE FLOW DEPTH(FEET) = 0.08 TRAVEL TIME(MIN.) = 0.29
 Tc(MIN.) = 8.47
 SUBAREA AREA(ACRES) = 0.82 SUBAREA RUNOFF(CFS) = 2.07
 TOTAL AREA(ACRES) = 1.1 PEAK FLOW RATE(CFS) = 2.89

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 3.14
 LONGEST FLOWPATH FROM NODE 13.00 TO NODE 15.00 = 150.00 FEET.

FLOW PROCESS FROM NODE 15.00 TO NODE 15.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.309
 USER-SPECIFIED RUNOFF COEFFICIENT = .7620
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.82 SUBAREA RUNOFF(CFS) = 2.07
 TOTAL AREA(ACRES) = 2.0 TOTAL RUNOFF(CFS) = 4.96
 TC(MIN.) = 8.47

FLOW PROCESS FROM NODE 16.00 TO NODE 17.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 USER-SPECIFIED RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.44
 TOTAL AREA(ACRES) = 0.12 TOTAL RUNOFF(CFS) = 0.44

FLOW PROCESS FROM NODE 17.00 TO NODE 18.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.08 DOWNSTREAM(FEET) = 1329.36
 CHANNEL LENGTH THRU SUBAREA(FEET) = 46.00 CHANNEL SLOPE = 0.0157

CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.925
 USER-SPECIFIED RUNOFF COEFFICIENT = .8881
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.56
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.31
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 0.59
 Tc(MIN.) = 5.59
 SUBAREA AREA(ACRES) = 0.07 SUBAREA RUNOFF(CFS) = 0.24
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.68

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 1.35
 LONGEST FLOWPATH FROM NODE 16.00 TO NODE 18.00 = 96.00 FEET.

 FLOW PROCESS FROM NODE 18.00 TO NODE 18.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.925
 USER-SPECIFIED RUNOFF COEFFICIENT = .8881
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.07 SUBAREA RUNOFF(CFS) = 0.24
 TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 0.93
 TC(MIN.) = 5.59

 FLOW PROCESS FROM NODE 19.00 TO NODE 20.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 57.00
 UPSTREAM ELEVATION(FEET) = 1329.83
 DOWNSTREAM ELEVATION(FEET) = 1327.90
 ELEVATION DIFFERENCE(FEET) = 1.93
 TC = 0.303*[(57.00**3)/(1.93)]**.2 = 3.006
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 USER-SPECIFIED RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.22
 TOTAL AREA(ACRES) = 0.06 TOTAL RUNOFF(CFS) = 0.22

 FLOW PROCESS FROM NODE 21.00 TO NODE 22.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 USER-SPECIFIED RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 1.42
 TOTAL AREA(ACRES) = 0.39 TOTAL RUNOFF(CFS) = 1.42

FLOW PROCESS FROM NODE 23.00 TO NODE 24.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1330.20
DOWNSTREAM ELEVATION(FEET) = 1329.15
ELEVATION DIFFERENCE(FEET) = 1.05
TC = 0.303*[(100.00**3)/(1.05)]**.2 = 4.757
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
USER-SPECIFIED RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.51
TOTAL AREA(ACRES) = 0.14 TOTAL RUNOFF(CFS) = 0.51

FLOW PROCESS FROM NODE 24.00 TO NODE 25.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1329.15 DOWNSTREAM(FEET) = 1325.34
CHANNEL LENGTH THRU SUBAREA(FEET) = 445.00 CHANNEL SLOPE = 0.0086
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.131
USER-SPECIFIED RUNOFF COEFFICIENT = .8855
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.83
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.58
AVERAGE FLOW DEPTH(FEET) = 0.13 TRAVEL TIME(MIN.) = 4.69
Tc(MIN.) = 9.69
SUBAREA AREA(ACRES) = 1.67 SUBAREA RUNOFF(CFS) = 4.63
TOTAL AREA(ACRES) = 1.8 PEAK FLOW RATE(CFS) = 5.14

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.17 FLOW VELOCITY(FEET/SEC.) = 1.78
LONGEST FLOWPATH FROM NODE 23.00 TO NODE 25.00 = 545.00 FEET.

FLOW PROCESS FROM NODE 25.00 TO NODE 25.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.131
USER-SPECIFIED RUNOFF COEFFICIENT = .8855
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 1.67 SUBAREA RUNOFF(CFS) = 4.63
TOTAL AREA(ACRES) = 3.5 TOTAL RUNOFF(CFS) = 9.77
TC(MIN.) = 9.69

FLOW PROCESS FROM NODE 26.00 TO NODE 27.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2

INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1329.98
 DOWNSTREAM ELEVATION(FEET) = 1329.00
 ELEVATION DIFFERENCE(FEET) = 0.98
 $TC = 0.303 * [(100.00 ** 3) / (0.98)] ** .2 = 4.823$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 USER-SPECIFIED RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.37
 TOTAL AREA(ACRES) = 0.10 TOTAL RUNOFF(CFS) = 0.37

FLOW PROCESS FROM NODE 27.00 TO NODE 28.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1329.00 DOWNSTREAM(FEET) = 1325.65
 CHANNEL LENGTH THRU SUBAREA(FEET) = 301.00 CHANNEL SLOPE = 0.0111
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.285
 USER-SPECIFIED RUNOFF COEFFICIENT = .8861
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.27
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.39
 AVERAGE FLOW DEPTH(FEET) = 0.10 TRAVEL TIME(MIN.) = 3.62
 Tc(MIN.) = 8.62
 SUBAREA AREA(ACRES) = 0.62 SUBAREA RUNOFF(CFS) = 1.80
 TOTAL AREA(ACRES) = 0.7 PEAK FLOW RATE(CFS) = 2.17

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.12 FLOW VELOCITY(FEET/SEC.) = 1.59
 LONGEST FLOWPATH FROM NODE 26.00 TO NODE 28.00 = 401.00 FEET.

FLOW PROCESS FROM NODE 28.00 TO NODE 28.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.285
 USER-SPECIFIED RUNOFF COEFFICIENT = .8861
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.62 SUBAREA RUNOFF(CFS) = 1.80
 TOTAL AREA(ACRES) = 1.3 TOTAL RUNOFF(CFS) = 3.97
 TC(MIN.) = 8.62

FLOW PROCESS FROM NODE 30.00 TO NODE 31.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 USER-SPECIFIED RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 1.75
 TOTAL AREA(ACRES) = 0.48 TOTAL RUNOFF(CFS) = 1.75

FLOW PROCESS FROM NODE 32.00 TO NODE 33.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL USER SPECIFIED Tc(MIN.) = 5.000 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108 USER-SPECIFIED RUNOFF COEFFICIENT = .8885 SOIL CLASSIFICATION IS "C" SUBAREA RUNOFF(CFS) = 0.44 TOTAL AREA(ACRES) = 0.12 TOTAL RUNOFF(CFS) = 0.44

FLOW PROCESS FROM NODE 33.00 TO NODE 35.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<< >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1330.11 DOWNSTREAM(FEET) = 1319.12 CHANNEL LENGTH THRU SUBAREA(FEET) = 739.00 CHANNEL SLOPE = 0.0149 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.851 USER-SPECIFIED RUNOFF COEFFICIENT = .8844 SOIL CLASSIFICATION IS "C" TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.84 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.72 AVERAGE FLOW DEPTH(FEET) = 0.10 TRAVEL TIME(MIN.) = 7.16 Tc(MIN.) = 12.16 SUBAREA AREA(ACRES) = 1.10 SUBAREA RUNOFF(CFS) = 2.77 TOTAL AREA(ACRES) = 1.2 PEAK FLOW RATE(CFS) = 3.21

END OF SUBAREA CHANNEL FLOW HYDRAULICS: DEPTH(FEET) = 0.13 FLOW VELOCITY(FEET/SEC.) = 2.02 LONGEST FLOWPATH FROM NODE 32.00 TO NODE 35.00 = 30839.00 FEET.

FLOW PROCESS FROM NODE 35.00 TO NODE 35.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.851 USER-SPECIFIED RUNOFF COEFFICIENT = .8844 SOIL CLASSIFICATION IS "C" SUBAREA AREA(ACRES) = 1.10 SUBAREA RUNOFF(CFS) = 2.77 TOTAL AREA(ACRES) = 2.3 TOTAL RUNOFF(CFS) = 5.99 TC(MIN.) = 12.16

FLOW PROCESS FROM NODE 36.00 TO NODE 37.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL USER SPECIFIED Tc(MIN.) = 5.000 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108 USER-SPECIFIED RUNOFF COEFFICIENT = .8885 SOIL CLASSIFICATION IS "C" SUBAREA RUNOFF(CFS) = 0.47 TOTAL AREA(ACRES) = 0.13 TOTAL RUNOFF(CFS) = 0.47

FLOW PROCESS FROM NODE 37.00 TO NODE 39.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.16 DOWNSTREAM(FEET) = 1316.29
 CHANNEL LENGTH THRU SUBAREA(FEET) = 717.00 CHANNEL SLOPE = 0.0193
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.964
 USER-SPECIFIED RUNOFF COEFFICIENT = .8849
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.43
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.97
 AVERAGE FLOW DEPTH(FEET) = 0.11 TRAVEL TIME(MIN.) = 6.07
 Tc(MIN.) = 11.07
 SUBAREA AREA(ACRES) = 1.45 SUBAREA RUNOFF(CFS) = 3.80
 TOTAL AREA(ACRES) = 1.6 PEAK FLOW RATE(CFS) = 4.28

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.13 FLOW VELOCITY(FEET/SEC.) = 2.39
 LONGEST FLOWPATH FROM NODE 36.00 TO NODE 39.00 = 1456.00 FEET.

FLOW PROCESS FROM NODE 39.00 TO NODE 39.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.964
 USER-SPECIFIED RUNOFF COEFFICIENT = .8849
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 1.45 SUBAREA RUNOFF(CFS) = 3.80
 TOTAL AREA(ACRES) = 3.0 TOTAL RUNOFF(CFS) = 8.08
 TC(MIN.) = 11.07

FLOW PROCESS FROM NODE 40.00 TO NODE 41.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.35
 DOWNSTREAM ELEVATION(FEET) = 1330.28
 ELEVATION DIFFERENCE(FEET) = 0.07
 $TC = 0.303 * [(100.00**3)/(0.07)]**.2 = 8.178$
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.356
 USER-SPECIFIED RUNOFF COEFFICIENT = .8864
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.21
 TOTAL AREA(ACRES) = 0.07 TOTAL RUNOFF(CFS) = 0.21

FLOW PROCESS FROM NODE 41.00 TO NODE 38.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.28 DOWNSTREAM(FEET) = 1327.92
 CHANNEL LENGTH THRU SUBAREA(FEET) = 303.00 CHANNEL SLOPE = 0.0078

CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.769
 USER-SPECIFIED RUNOFF COEFFICIENT = .8840
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.67
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.04
 AVERAGE FLOW DEPTH(FEET) = 0.08 TRAVEL TIME(MIN.) = 4.88
 Tc(MIN.) = 13.06
 SUBAREA AREA(ACRES) = 0.38 SUBAREA RUNOFF(CFS) = 0.93
 TOTAL AREA(ACRES) = 0.4 PEAK FLOW RATE(CFS) = 1.14

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 1.24
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 38.00 = 403.00 FEET.

FLOW PROCESS FROM NODE 38.00 TO NODE 38.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.769
 USER-SPECIFIED RUNOFF COEFFICIENT = .8840
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.38 SUBAREA RUNOFF(CFS) = 0.93
 TOTAL AREA(ACRES) = 0.8 TOTAL RUNOFF(CFS) = 2.07
 TC(MIN.) = 13.06

FLOW PROCESS FROM NODE 38.00 TO NODE 38.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<

=====

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 TIME OF CONCENTRATION(MIN.) = 13.06
 RAINFALL INTENSITY(INCH/HR) = 2.77
 TOTAL STREAM AREA(ACRES) = 0.83
 PEAK FLOW RATE(CFS) AT CONFLUENCE = 2.07

FLOW PROCESS FROM NODE 42.00 TO NODE 43.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 USER-SPECIFIED RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 4.23
 TOTAL AREA(ACRES) = 1.16 TOTAL RUNOFF(CFS) = 4.23

FLOW PROCESS FROM NODE 43.00 TO NODE 38.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.04 DOWNSTREAM(FEET) = 1327.92
 CHANNEL LENGTH THRU SUBAREA(FEET) = 38.00 CHANNEL SLOPE = 0.0558
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000

MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.048
 USER-SPECIFIED RUNOFF COEFFICIENT = .8884
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 4.27
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 3.46
 AVERAGE FLOW DEPTH(FEET) = 0.11 TRAVEL TIME(MIN.) = 0.18
 Tc(MIN.) = 5.18
 SUBAREA AREA(ACRES) = 0.02 SUBAREA RUNOFF(CFS) = 0.07
 TOTAL AREA(ACRES) = 1.2 PEAK FLOW RATE(CFS) = 4.31

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.11 FLOW VELOCITY(FEET/SEC.) = 3.49
 LONGEST FLOWPATH FROM NODE 42.00 TO NODE 38.00 = 341.00 FEET.

FLOW PROCESS FROM NODE 38.00 TO NODE 38.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.048
 USER-SPECIFIED RUNOFF COEFFICIENT = .8884
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.02 SUBAREA RUNOFF(CFS) = 0.07
 TOTAL AREA(ACRES) = 1.2 TOTAL RUNOFF(CFS) = 4.38
 TC(MIN.) = 5.18

FLOW PROCESS FROM NODE 38.00 TO NODE 38.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<
 >>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<

=====

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
 TIME OF CONCENTRATION(MIN.) = 5.18
 RAINFALL INTENSITY(INCH/HR) = 4.05
 TOTAL STREAM AREA(ACRES) = 1.20
 PEAK FLOW RATE(CFS) AT CONFLUENCE = 4.38

** CONFLUENCE DATA **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)	AREA (ACRE)
1	2.07	13.06	2.769	0.83
2	4.38	5.18	4.048	1.20

*****WARNING*****

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

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

** PEAK FLOW RATE TABLE **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)
1	5.20	5.18	4.048
2	5.06	13.06	2.769

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) = 5.20 Tc(MIN.) = 5.18

TOTAL AREA(ACRES) = 2.0
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 38.00 = 403.00 FEET.

FLOW PROCESS FROM NODE 38.00 TO NODE 44.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1327.92 DOWNSTREAM(FEET) = 1324.50
 CHANNEL LENGTH THRU SUBAREA(FEET) = 500.00 CHANNEL SLOPE = 0.0068
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.069
 USER-SPECIFIED RUNOFF COEFFICIENT = .8853
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 6.20
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.67
 AVERAGE FLOW DEPTH(FEET) = 0.19 TRAVEL TIME(MIN.) = 4.99
 Tc(MIN.) = 10.17
 SUBAREA AREA(ACRES) = 0.73 SUBAREA RUNOFF(CFS) = 1.98
 TOTAL AREA(ACRES) = 2.8 PEAK FLOW RATE(CFS) = 7.18

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.20 FLOW VELOCITY(FEET/SEC.) = 1.79
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 44.00 = 903.00 FEET.

FLOW PROCESS FROM NODE 44.00 TO NODE 44.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.069
 USER-SPECIFIED RUNOFF COEFFICIENT = .8853
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.73 SUBAREA RUNOFF(CFS) = 1.98
 TOTAL AREA(ACRES) = 3.5 TOTAL RUNOFF(CFS) = 9.17
 TC(MIN.) = 10.17

FLOW PROCESS FROM NODE 44.00 TO NODE 45.00 IS CODE = 31

>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1320.79 DOWNSTREAM(FEET) = 1319.00
 FLOW LENGTH(FEET) = 81.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 15.0 INCH PIPE IS 12.0 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) = 8.69
 ESTIMATED PIPE DIAMETER(INCH) = 15.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 9.17
 PIPE TRAVEL TIME(MIN.) = 0.16 Tc(MIN.) = 10.32
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 45.00 = 984.00 FEET.

FLOW PROCESS FROM NODE 45.00 TO NODE 45.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<

=====

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 TIME OF CONCENTRATION(MIN.) = 10.32
 RAINFALL INTENSITY(INCH/HR) = 3.05

TOTAL STREAM AREA(ACRES) = 3.49
 PEAK FLOW RATE(CFS) AT CONFLUENCE = 9.17

FLOW PROCESS FROM NODE 46.00 TO NODE 47.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
 TC = $K * [(LENGTH^{**3}) / (ELEVATION CHANGE)]^{**0.2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1332.17
 DOWNSTREAM ELEVATION(FEET) = 1326.11
 ELEVATION DIFFERENCE(FEET) = 6.06
 TC = $0.937 * [(100.00^{**3}) / (6.06)]^{**0.2} = 10.362$
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.045
 USER-SPECIFIED RUNOFF COEFFICIENT = .7521
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.62
 TOTAL AREA(ACRES) = 0.27 TOTAL RUNOFF(CFS) = 0.62

FLOW PROCESS FROM NODE 47.00 TO NODE 45.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.11 DOWNSTREAM(FEET) = 1319.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 34.00 CHANNEL SLOPE = 0.2091
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.012
 USER-SPECIFIED RUNOFF COEFFICIENT = .7507
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.63
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 2.01
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 0.28
 Tc(MIN.) = 10.64
 SUBAREA AREA(ACRES) = 0.01 SUBAREA RUNOFF(CFS) = 0.02
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.64

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.06 FLOW VELOCITY(FEET/SEC.) = 2.04
 LONGEST FLOWPATH FROM NODE 46.00 TO NODE 45.00 = 134.00 FEET.

FLOW PROCESS FROM NODE 45.00 TO NODE 45.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.012
 USER-SPECIFIED RUNOFF COEFFICIENT = .7507
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.01 SUBAREA RUNOFF(CFS) = 0.02
 TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 0.66
 TC(MIN.) = 10.64

FLOW PROCESS FROM NODE 45.00 TO NODE 45.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<

```
=====
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
TIME OF CONCENTRATION(MIN.) = 10.64
RAINFALL INTENSITY(INCH/HR) = 3.01
TOTAL STREAM AREA(ACRES) = 0.29
PEAK FLOW RATE(CFS) AT CONFLUENCE = 0.66
```

** CONFLUENCE DATA **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)	AREA (ACRE)
1	9.17	10.32	3.050	3.49
2	0.66	10.64	3.012	0.29

*****WARNING*****

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

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

** PEAK FLOW RATE TABLE **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)
1	9.81	10.32	3.050
2	9.72	10.64	3.012

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE(CFS) = 9.81 Tc(MIN.) = 10.32
 TOTAL AREA(ACRES) = 3.8
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 45.00 = 984.00 FEET.

FLOW PROCESS FROM NODE 45.00 TO NODE 48.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

```
=====
ELEVATION DATA: UPSTREAM(FEET) = 1319.00 DOWNSTREAM(FEET) = 1311.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 528.00 CHANNEL SLOPE = 0.0152
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 3.000
MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 3.00
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.796
USER-SPECIFIED RUNOFF COEFFICIENT = .7412
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 10.90
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 3.62
AVERAGE FLOW DEPTH(FEET) = 0.72 TRAVEL TIME(MIN.) = 2.43
Tc(MIN.) = 12.75
SUBAREA AREA(ACRES) = 1.05 SUBAREA RUNOFF(CFS) = 2.18
TOTAL AREA(ACRES) = 4.8 PEAK FLOW RATE(CFS) = 11.99
```

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.76 FLOW VELOCITY(FEET/SEC.) = 3.70
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 48.00 = 1512.00 FEET.

FLOW PROCESS FROM NODE 48.00 TO NODE 48.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.796
 USER-SPECIFIED RUNOFF COEFFICIENT = .7412
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 1.05 SUBAREA RUNOFF(CFS) = 2.18
 TOTAL AREA(ACRES) = 5.9 TOTAL RUNOFF(CFS) = 14.16
 TC(MIN.) = 12.75

FLOW PROCESS FROM NODE 48.00 TO NODE 48.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<

=====

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 TIME OF CONCENTRATION(MIN.) = 12.75
 RAINFALL INTENSITY(INCH/HR) = 2.80
 TOTAL STREAM AREA(ACRES) = 5.88
 PEAK FLOW RATE(CFS) AT CONFLUENCE = 14.16

FLOW PROCESS FROM NODE 34.00 TO NODE 49.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1329.00
 DOWNSTREAM ELEVATION(FEET) = 1323.60
 ELEVATION DIFFERENCE(FEET) = 5.40
 $TC = 0.937 * [(100.00**3)/(5.40)]**.2 = 10.603$
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.017
 USER-SPECIFIED RUNOFF COEFFICIENT = .7509
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.18
 TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.18

FLOW PROCESS FROM NODE 49.00 TO NODE 48.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1323.60 DOWNSTREAM(FEET) = 1311.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 396.00 CHANNEL SLOPE = 0.0318
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 10.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.634
 USER-SPECIFIED RUNOFF COEFFICIENT = .7332
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.39
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.59
 AVERAGE FLOW DEPTH(FEET) = 0.16 TRAVEL TIME(MIN.) = 4.15
 Tc(MIN.) = 14.75
 SUBAREA AREA(ACRES) = 0.22 SUBAREA RUNOFF(CFS) = 0.42
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.61

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.19 FLOW VELOCITY(FEET/SEC.) = 1.75
 LONGEST FLOWPATH FROM NODE 34.00 TO NODE 48.00 = 496.00 FEET.

FLOW PROCESS FROM NODE 48.00 TO NODE 48.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.634
 USER-SPECIFIED RUNOFF COEFFICIENT = .7332
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.22 SUBAREA RUNOFF(CFS) = 0.42
 TOTAL AREA(ACRES) = 0.5 TOTAL RUNOFF(CFS) = 1.03
 TC(MIN.) = 14.75

 FLOW PROCESS FROM NODE 48.00 TO NODE 48.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
 TIME OF CONCENTRATION(MIN.) = 14.75
 RAINFALL INTENSITY(INCH/HR) = 2.63
 TOTAL STREAM AREA(ACRES) = 0.52
 PEAK FLOW RATE(CFS) AT CONFLUENCE = 1.03

** CONFLUENCE DATA **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)	AREA (ACRE)
1	14.16	12.75	2.796	5.88
2	1.03	14.75	2.634	0.52

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

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

** PEAK FLOW RATE TABLE **

STREAM NUMBER	RUNOFF (CFS)	Tc (MIN.)	INTENSITY (INCH/HOUR)
1	15.05	12.75	2.796
2	14.37	14.75	2.634

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) = 15.05 Tc(MIN.) = 12.75
 TOTAL AREA(ACRES) = 6.4
 LONGEST FLOWPATH FROM NODE 40.00 TO NODE 48.00 = 1512.00 FEET.

 FLOW PROCESS FROM NODE 50.00 TO NODE 51.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1328.83
 DOWNSTREAM ELEVATION(FEET) = 1326.01
 ELEVATION DIFFERENCE(FEET) = 2.82
 $TC = 0.937 * [(100.00**3)/(2.82)]**.2 = 12.075$

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.860
USER-SPECIFIED RUNOFF COEFFICIENT = .7441
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.19
TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.19

FLOW PROCESS FROM NODE 51.00 TO NODE 52.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.01 DOWNSTREAM(FEET) = 1317.63
CHANNEL LENGTH THRU SUBAREA(FEET) = 317.00 CHANNEL SLOPE = 0.0264
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 5.000
MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 1.00
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.629
USER-SPECIFIED RUNOFF COEFFICIENT = .7330
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.59
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.93
AVERAGE FLOW DEPTH(FEET) = 0.25 TRAVEL TIME(MIN.) = 2.74
Tc(MIN.) = 14.81
SUBAREA AREA(ACRES) = 0.41 SUBAREA RUNOFF(CFS) = 0.79
TOTAL AREA(ACRES) = 0.5 PEAK FLOW RATE(CFS) = 0.98

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.29 FLOW VELOCITY(FEET/SEC.) = 2.26
LONGEST FLOWPATH FROM NODE 50.00 TO NODE 52.00 = 417.00 FEET.

FLOW PROCESS FROM NODE 52.00 TO NODE 52.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.629
USER-SPECIFIED RUNOFF COEFFICIENT = .7330
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.41 SUBAREA RUNOFF(CFS) = 0.79
TOTAL AREA(ACRES) = 0.9 TOTAL RUNOFF(CFS) = 1.77
TC(MIN.) = 14.81

=====

END OF STUDY SUMMARY:
TOTAL AREA(ACRES) = 0.9 TC(MIN.) = 14.81
PEAK FLOW RATE(CFS) = 1.77

=====

END OF RATIONAL METHOD ANALYSIS



APPENDIX C: RATIONAL METHOD CALCULATIONS – PROPOSED
CONDITIONS

RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1982-2011 Advanced Engineering Software (aes)
(Rational Tabling Version 18.0)
Release Date: 07/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****

- * UHS Inland Valley Proposed Conditions *
* 10-year,Rational Method *
* Kimley-Horn, LAC *

FILE NAME: IV_P.DAT
TIME/DATE OF STUDY: 02:03 12/16/2020

USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

USER SPECIFIED STORM EVENT(YEAR) = 10.00
SPECIFIED MINIMUM PIPE SIZE(INCH) = 8.00
SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
10-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) = 1.850
10-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) = 0.886
100-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) = 3.090
100-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) = 1.480
SLOPE OF 10-YEAR INTENSITY-DURATION CURVE = 0.4108943
SLOPE OF 100-YEAR INTENSITY-DURATION CURVE = 0.4108413

COMPUTED RAINFALL INTENSITY DATA:
STORM EVENT = 10.00 1-HOUR INTENSITY(INCH/HOUR) = 0.895
SLOPE OF INTENSITY DURATION CURVE = 0.4109

RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES

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

Table with 10 columns: NO., (FT), (FT), SIDE / SIDE/, WAY, (FT), (FT), (FT), (FT), (n). Row 1: 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.*

FLOW PROCESS FROM NODE 100.00 TO NODE 101.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
=====

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL

TC = $K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1328.94
 DOWNSTREAM ELEVATION(FEET) = 1327.66
 ELEVATION DIFFERENCE(FEET) = 1.28
 $TC = 0.303 * [(100.00**3)/(1.28)]**.2 = 4.572$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.20
 TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.20

FLOW PROCESS FROM NODE 101.00 TO NODE 102.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1327.66 DOWNSTREAM(FEET) = 1281.58
 CHANNEL LENGTH THRU SUBAREA(FEET) = 293.00 CHANNEL SLOPE = 0.1573
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.243
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8810
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.08
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 3.45
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 1.41
 Tc(MIN.) = 6.41
 SUBAREA AREA(ACRES) = 0.89 SUBAREA RUNOFF(CFS) = 1.76
 TOTAL AREA(ACRES) = 1.0 PEAK FLOW RATE(CFS) = 1.96

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 3.86
 LONGEST FLOWPATH FROM NODE 100.00 TO NODE 102.00 = 393.00 FEET.

FLOW PROCESS FROM NODE 102.00 TO NODE 102.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.243
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8810
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.89 SUBAREA RUNOFF(CFS) = 1.76
 TOTAL AREA(ACRES) = 1.9 TOTAL RUNOFF(CFS) = 3.71
 TC(MIN.) = 6.41

FLOW PROCESS FROM NODE 103.00 TO NODE 104.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1331.56
 DOWNSTREAM ELEVATION(FEET) = 1311.61
 ELEVATION DIFFERENCE(FEET) = 19.95
 $TC = 0.303 * [(100.00**3)/(19.95)]**.2 = 2.640$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.68
TOTAL AREA(ACRES) = 0.31 TOTAL RUNOFF(CFS) = 0.68

FLOW PROCESS FROM NODE 104.00 TO NODE 105.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1311.61 DOWNSTREAM(FEET) = 1300.77
CHANNEL LENGTH THRU SUBAREA(FEET) = 50.00 CHANNEL SLOPE = 0.2168
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.445
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8823
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.41
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 4.22
AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 0.20
Tc(MIN.) = 5.20
SUBAREA AREA(ACRES) = 0.68 SUBAREA RUNOFF(CFS) = 1.47
TOTAL AREA(ACRES) = 1.0 PEAK FLOW RATE(CFS) = 2.15

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 5.01
LONGEST FLOWPATH FROM NODE 103.00 TO NODE 105.00 = 150.00 FEET.

FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.445
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8823
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.68 SUBAREA RUNOFF(CFS) = 1.47
TOTAL AREA(ACRES) = 1.7 TOTAL RUNOFF(CFS) = 3.61
TC(MIN.) = 5.20

FLOW PROCESS FROM NODE 106.00 TO NODE 107.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1329.32
DOWNSTREAM ELEVATION(FEET) = 1323.75
ELEVATION DIFFERENCE(FEET) = 5.57
TC = 0.303*[(100.00**3)/(5.57)]**.2 = 3.407
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.20
TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.20

FLOW PROCESS FROM NODE 107.00 TO NODE 108.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1323.75 DOWNSTREAM(FEET) = 1317.89
CHANNEL LENGTH THRU SUBAREA(FEET) = 62.00 CHANNEL SLOPE = 0.0945
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.400
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8820
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.29
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 2.37
AVERAGE FLOW DEPTH(FEET) = 0.04 TRAVEL TIME(MIN.) = 0.44
Tc(MIN.) = 5.44
SUBAREA AREA(ACRES) = 0.09 SUBAREA RUNOFF(CFS) = 0.19
TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.39

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.04 FLOW VELOCITY(FEET/SEC.) = 2.33
LONGEST FLOWPATH FROM NODE 106.00 TO NODE 108.00 = 162.00 FEET.

FLOW PROCESS FROM NODE 108.00 TO NODE 108.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.400
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8820
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.09 SUBAREA RUNOFF(CFS) = 0.19
TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 0.58
TC(MIN.) = 5.44

FLOW PROCESS FROM NODE 109.00 TO NODE 110.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
USER SPECIFIED Tc(MIN.) = 5.000
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.81
TOTAL AREA(ACRES) = 0.37 TOTAL RUNOFF(CFS) = 0.81

FLOW PROCESS FROM NODE 111.00 TO NODE 112.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 50.00
UPSTREAM ELEVATION(FEET) = 1329.55
DOWNSTREAM ELEVATION(FEET) = 1327.75
ELEVATION DIFFERENCE(FEET) = 1.80
TC = 0.303*[(50.00**3)/(1.80)]**.2 = 2.818
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.18
TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.18

FLOW PROCESS FROM NODE 113.00 TO NODE 114.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 50.00
UPSTREAM ELEVATION(FEET) = 1328.67
DOWNSTREAM ELEVATION(FEET) = 1328.00
ELEVATION DIFFERENCE(FEET) = 0.67
TC = 0.303*[(50.00**3)/(0.67)]**.2 = 3.434
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.20
TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.20

FLOW PROCESS FROM NODE 115.00 TO NODE 116.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1328.00
DOWNSTREAM ELEVATION(FEET) = 1326.72
ELEVATION DIFFERENCE(FEET) = 1.28
TC = 0.303*[(100.00**3)/(1.28)]**.2 = 4.572
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.15
TOTAL AREA(ACRES) = 0.07 TOTAL RUNOFF(CFS) = 0.15

FLOW PROCESS FROM NODE 116.00 TO NODE 117.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.72 DOWNSTREAM(FEET) = 1323.49
CHANNEL LENGTH THRU SUBAREA(FEET) = 87.00 CHANNEL SLOPE = 0.0371
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.322
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8815
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.41
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.62
AVERAGE FLOW DEPTH(FEET) = 0.05 TRAVEL TIME(MIN.) = 0.89
Tc(MIN.) = 5.89

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SUBAREA AREA(ACRES) = 0.25 SUBAREA RUNOFF(CFS) = 0.51
TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.67

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.06 FLOW VELOCITY(FEET/SEC.) = 1.99
LONGEST FLOWPATH FROM NODE 115.00 TO NODE 117.00 = 187.00 FEET.

FLOW PROCESS FROM NODE 117.00 TO NODE 117.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.322
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8815
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.25 SUBAREA RUNOFF(CFS) = 0.51
TOTAL AREA(ACRES) = 0.6 TOTAL RUNOFF(CFS) = 1.18
TC(MIN.) = 5.89

FLOW PROCESS FROM NODE 118.00 TO NODE 119.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
USER SPECIFIED Tc(MIN.) = 5.000
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.22
TOTAL AREA(ACRES) = 0.10 TOTAL RUNOFF(CFS) = 0.22

FLOW PROCESS FROM NODE 119.00 TO NODE 120.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.20 DOWNSTREAM(FEET) = 1325.30
CHANNEL LENGTH THRU SUBAREA(FEET) = 517.00 CHANNEL SLOPE = 0.0095
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.734
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8769
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.96
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.23
AVERAGE FLOW DEPTH(FEET) = 0.09 TRAVEL TIME(MIN.) = 6.99
Tc(MIN.) = 11.99
SUBAREA AREA(ACRES) = 0.95 SUBAREA RUNOFF(CFS) = 1.44
TOTAL AREA(ACRES) = 1.0 PEAK FLOW RATE(CFS) = 1.66

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.11 FLOW VELOCITY(FEET/SEC.) = 1.40
LONGEST FLOWPATH FROM NODE 118.00 TO NODE 120.00 = 604.00 FEET.

FLOW PROCESS FROM NODE 120.00 TO NODE 120.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.734

COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8769
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.95 SUBAREA RUNOFF(CFS) = 1.44
TOTAL AREA(ACRES) = 2.0 TOTAL RUNOFF(CFS) = 3.11
TC(MIN.) = 11.99

FLOW PROCESS FROM NODE 121.00 TO NODE 122.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = $K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1330.00
DOWNSTREAM ELEVATION(FEET) = 1329.00
ELEVATION DIFFERENCE(FEET) = 1.00
TC = $0.303 * [(100.00**3)/(1.00)]**.2 = 4.804$
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.22
TOTAL AREA(ACRES) = 0.10 TOTAL RUNOFF(CFS) = 0.22

FLOW PROCESS FROM NODE 122.00 TO NODE 123.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

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ELEVATION DATA: UPSTREAM(FEET) = 1329.00 DOWNSTREAM(FEET) = 1325.61
CHANNEL LENGTH THRU SUBAREA(FEET) = 200.00 CHANNEL SLOPE = 0.0170
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.113
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8801
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.74
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.38
AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 2.41
Tc(MIN.) = 7.41
SUBAREA AREA(ACRES) = 0.55 SUBAREA RUNOFF(CFS) = 1.02
TOTAL AREA(ACRES) = 0.7 PEAK FLOW RATE(CFS) = 1.24

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.09 FLOW VELOCITY(FEET/SEC.) = 1.60
LONGEST FLOWPATH FROM NODE 121.00 TO NODE 123.00 = 300.00 FEET.

FLOW PROCESS FROM NODE 123.00 TO NODE 123.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.113
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8801
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.55 SUBAREA RUNOFF(CFS) = 1.02
TOTAL AREA(ACRES) = 1.2 TOTAL RUNOFF(CFS) = 2.27
TC(MIN.) = 7.41

FLOW PROCESS FROM NODE 124.00 TO NODE 125.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL USER SPECIFIED Tc(MIN.) = 5.000 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825 SOIL CLASSIFICATION IS "C" SUBAREA RUNOFF(CFS) = 0.26 TOTAL AREA(ACRES) = 0.12 TOTAL RUNOFF(CFS) = 0.26

***** FLOW PROCESS FROM NODE 125.00 TO NODE 126.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<< >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1330.33 DOWNSTREAM(FEET) = 1329.74 CHANNEL LENGTH THRU SUBAREA(FEET) = 23.00 CHANNEL SLOPE = 0.0257 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.425 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8822 SOIL CLASSIFICATION IS "C" TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.30 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.26 AVERAGE FLOW DEPTH(FEET) = 0.05 TRAVEL TIME(MIN.) = 0.30 Tc(MIN.) = 5.30 SUBAREA AREA(ACRES) = 0.03 SUBAREA RUNOFF(CFS) = 0.06 TOTAL AREA(ACRES) = 0.1 PEAK FLOW RATE(CFS) = 0.33

END OF SUBAREA CHANNEL FLOW HYDRAULICS: DEPTH(FEET) = 0.05 FLOW VELOCITY(FEET/SEC.) = 1.40 LONGEST FLOWPATH FROM NODE 124.00 TO NODE 126.00 = 223.00 FEET.

***** FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.425 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8822 SOIL CLASSIFICATION IS "C" SUBAREA AREA(ACRES) = 0.03 SUBAREA RUNOFF(CFS) = 0.06 TOTAL AREA(ACRES) = 0.2 TOTAL RUNOFF(CFS) = 0.39 TC(MIN.) = 5.30

***** FLOW PROCESS FROM NODE 127.00 TO NODE 128.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL USER SPECIFIED Tc(MIN.) = 5.000 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825 SOIL CLASSIFICATION IS "C" SUBAREA RUNOFF(CFS) = 0.33 TOTAL AREA(ACRES) = 0.15 TOTAL RUNOFF(CFS) = 0.33

FLOW PROCESS FROM NODE 128.00 TO NODE 129.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.32 DOWNSTREAM(FEET) = 1329.54
 CHANNEL LENGTH THRU SUBAREA(FEET) = 15.00 CHANNEL SLOPE = 0.0520
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.454
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8823
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.38
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.64
 AVERAGE FLOW DEPTH(FEET) = 0.05 TRAVEL TIME(MIN.) = 0.15
 Tc(MIN.) = 5.15
 SUBAREA AREA(ACRES) = 0.05 SUBAREA RUNOFF(CFS) = 0.11
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.44

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.05 FLOW VELOCITY(FEET/SEC.) = 1.87
 LONGEST FLOWPATH FROM NODE 127.00 TO NODE 129.00 = 38.00 FEET.

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.454
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8823
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.05 SUBAREA RUNOFF(CFS) = 0.11
 TOTAL AREA(ACRES) = 0.2 TOTAL RUNOFF(CFS) = 0.55
 TC(MIN.) = 5.15

FLOW PROCESS FROM NODE 130.00 TO NODE 131.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.53
 TOTAL AREA(ACRES) = 0.24 TOTAL RUNOFF(CFS) = 0.53

FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.55
 TOTAL AREA(ACRES) = 0.25 TOTAL RUNOFF(CFS) = 0.55

FLOW PROCESS FROM NODE 134.00 TO NODE 135.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 117.00
UPSTREAM ELEVATION(FEET) = 1327.91
DOWNSTREAM ELEVATION(FEET) = 1323.18
ELEVATION DIFFERENCE(FEET) = 4.73
TC = 0.303*[(117.00**3)/(4.73)]**.2 = 3.868
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.48
TOTAL AREA(ACRES) = 0.22 TOTAL RUNOFF(CFS) = 0.48

FLOW PROCESS FROM NODE 136.00 TO NODE 137.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 65.00
UPSTREAM ELEVATION(FEET) = 1327.48
DOWNSTREAM ELEVATION(FEET) = 1317.01
ELEVATION DIFFERENCE(FEET) = 10.47
TC = 0.303*[(65.00**3)/(10.47)]**.2 = 2.319
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.77
TOTAL AREA(ACRES) = 0.35 TOTAL RUNOFF(CFS) = 0.77

FLOW PROCESS FROM NODE 194.00 TO NODE 195.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 80.00
UPSTREAM ELEVATION(FEET) = 1328.28
DOWNSTREAM ELEVATION(FEET) = 1327.12
ELEVATION DIFFERENCE(FEET) = 1.16
TC = 0.303*[(80.00**3)/(1.16)]**.2 = 4.079
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.11
TOTAL AREA(ACRES) = 0.05 TOTAL RUNOFF(CFS) = 0.11

FLOW PROCESS FROM NODE 196.00 TO NODE 197.00 IS CODE = 21

 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 =====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 TC = $K * [(LENGTH^{**3}) / (ELEVATION\ CHANGE)]^{**0.2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 92.00
 UPSTREAM ELEVATION(FEET) = 1327.98
 DOWNSTREAM ELEVATION(FEET) = 1326.69
 ELEVATION DIFFERENCE(FEET) = 1.29
 TC = $0.303 * [(92.00^{**3}) / (1.29)]^{**0.2} = 4.342$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.18
 TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.18

 FLOW PROCESS FROM NODE 198.00 TO NODE 199.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 =====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 TC = $K * [(LENGTH^{**3}) / (ELEVATION\ CHANGE)]^{**0.2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.34
 DOWNSTREAM ELEVATION(FEET) = 1328.21
 ELEVATION DIFFERENCE(FEET) = 2.13
 TC = $0.303 * [(100.00^{**3}) / (2.13)]^{**0.2} = 4.130$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.24
 TOTAL AREA(ACRES) = 0.11 TOTAL RUNOFF(CFS) = 0.24

 FLOW PROCESS FROM NODE 199.00 TO NODE 138.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 =====

ELEVATION DATA: UPSTREAM(FEET) = 1328.21 DOWNSTREAM(FEET) = 1326.10
 CHANNEL LENGTH THRU SUBAREA(FEET) = 157.00 CHANNEL SLOPE = 0.0134
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.142
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8803
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.61
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.21
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 2.17
 Tc(MIN.) = 7.17
 SUBAREA AREA(ACRES) = 0.39 SUBAREA RUNOFF(CFS) = 0.74
 TOTAL AREA(ACRES) = 0.5 PEAK FLOW RATE(CFS) = 0.98

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.09 FLOW VELOCITY(FEET/SEC.) = 1.31
 LONGEST FLOWPATH FROM NODE 198.00 TO NODE 138.00 = 257.00 FEET.

FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.142
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8803
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.39 SUBAREA RUNOFF(CFS) = 0.74
TOTAL AREA(ACRES) = 0.9 TOTAL RUNOFF(CFS) = 1.71
TC(MIN.) = 7.17

FLOW PROCESS FROM NODE 139.00 TO NODE 140.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1327.97
DOWNSTREAM ELEVATION(FEET) = 1326.92
ELEVATION DIFFERENCE(FEET) = 1.05
TC = 0.303*[(100.00**3)/(1.05)]**.2 = 4.757
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.13
TOTAL AREA(ACRES) = 0.06 TOTAL RUNOFF(CFS) = 0.13

FLOW PROCESS FROM NODE 141.00 TO NODE 142.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1330.22
DOWNSTREAM ELEVATION(FEET) = 1328.78
ELEVATION DIFFERENCE(FEET) = 1.44
TC = 0.303*[(100.00**3)/(1.44)]**.2 = 4.466
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.13
TOTAL AREA(ACRES) = 0.06 TOTAL RUNOFF(CFS) = 0.13

FLOW PROCESS FROM NODE 142.00 TO NODE 143.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1328.78 DOWNSTREAM(FEET) = 1327.40
CHANNEL LENGTH THRU SUBAREA(FEET) = 117.00 CHANNEL SLOPE = 0.0118
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.180
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8806

SOIL CLASSIFICATION IS "C"

TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.26
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.04
AVERAGE FLOW DEPTH(FEET) = 0.05 TRAVEL TIME(MIN.) = 1.87
Tc(MIN.) = 6.87
SUBAREA AREA(ACRES) = 0.14 SUBAREA RUNOFF(CFS) = 0.27
TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.40

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.06 FLOW VELOCITY(FEET/SEC.) = 0.99
LONGEST FLOWPATH FROM NODE 141.00 TO NODE 143.00 = 217.00 FEET.

FLOW PROCESS FROM NODE 143.00 TO NODE 143.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.180
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8806
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.14 SUBAREA RUNOFF(CFS) = 0.27
TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 0.67
TC(MIN.) = 6.87

FLOW PROCESS FROM NODE 144.00 TO NODE 145.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 122.00
UPSTREAM ELEVATION(FEET) = 1332.49
DOWNSTREAM ELEVATION(FEET) = 1326.80
ELEVATION DIFFERENCE(FEET) = 5.69
TC = 0.303*[(122.00**3)/(5.69)]**.2 = 3.823
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.59
TOTAL AREA(ACRES) = 0.27 TOTAL RUNOFF(CFS) = 0.59

FLOW PROCESS FROM NODE 146.00 TO NODE 147.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1330.23
DOWNSTREAM ELEVATION(FEET) = 1328.84
ELEVATION DIFFERENCE(FEET) = 1.39
TC = 0.303*[(100.00**3)/(1.39)]**.2 = 4.498
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.13
TOTAL AREA(ACRES) = 0.06 TOTAL RUNOFF(CFS) = 0.13

FLOW PROCESS FROM NODE 147.00 TO NODE 148.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1328.84 DOWNSTREAM(FEET) = 1326.50
 CHANNEL LENGTH THRU SUBAREA(FEET) = 304.00 CHANNEL SLOPE = 0.0077
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.820
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8777
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.45
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.89
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 5.67
 Tc(MIN.) = 10.67
 SUBAREA AREA(ACRES) = 0.40 SUBAREA RUNOFF(CFS) = 0.64
 TOTAL AREA(ACRES) = 0.5 PEAK FLOW RATE(CFS) = 0.77

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.09 FLOW VELOCITY(FEET/SEC.) = 1.03
 LONGEST FLOWPATH FROM NODE 146.00 TO NODE 148.00 = 404.00 FEET.

FLOW PROCESS FROM NODE 148.00 TO NODE 148.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.820
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8777
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.40 SUBAREA RUNOFF(CFS) = 0.64
 TOTAL AREA(ACRES) = 0.9 TOTAL RUNOFF(CFS) = 1.41
 TC(MIN.) = 10.67

FLOW PROCESS FROM NODE 149.00 TO NODE 150.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1328.36
 DOWNSTREAM ELEVATION(FEET) = 1326.55
 ELEVATION DIFFERENCE(FEET) = 1.81
 $TC = 0.303 * [(100.00**3)/(1.81)]**.2 = 4.266$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.39
 TOTAL AREA(ACRES) = 0.18 TOTAL RUNOFF(CFS) = 0.39

FLOW PROCESS FROM NODE 150.00 TO NODE 151.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.55 DOWNSTREAM(FEET) = 1325.32
 CHANNEL LENGTH THRU SUBAREA(FEET) = 115.00 CHANNEL SLOPE = 0.0107
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.202
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8808
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.48
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.12
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 1.70
 Tc(MIN.) = 6.70
 SUBAREA AREA(ACRES) = 0.09 SUBAREA RUNOFF(CFS) = 0.17
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.57

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 1.12
 LONGEST FLOWPATH FROM NODE 149.00 TO NODE 151.00 = 215.00 FEET.

FLOW PROCESS FROM NODE 151.00 TO NODE 151.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.202
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8808
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.09 SUBAREA RUNOFF(CFS) = 0.17
 TOTAL AREA(ACRES) = 0.4 TOTAL RUNOFF(CFS) = 0.74
 TC(MIN.) = 6.70

FLOW PROCESS FROM NODE 152.00 TO NODE 153.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3) / (ELEVATION CHANGE)]** .2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1327.92
 DOWNSTREAM ELEVATION(FEET) = 1327.01
 ELEVATION DIFFERENCE(FEET) = 0.91
 $TC = 0.303 * [(100.00**3) / (0.91)]** .2 = 4.895$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.37
 TOTAL AREA(ACRES) = 0.17 TOTAL RUNOFF(CFS) = 0.37

FLOW PROCESS FROM NODE 153.00 TO NODE 154.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1327.01 DOWNSTREAM(FEET) = 1324.86
 CHANNEL LENGTH THRU SUBAREA(FEET) = 186.00 CHANNEL SLOPE = 0.0116
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.081
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8799
 SOIL CLASSIFICATION IS "C"

TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.49
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.15
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 2.70
 Tc(MIN.) = 7.70
 SUBAREA AREA(ACRES) = 0.13 SUBAREA RUNOFF(CFS) = 0.24
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.61

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 1.14
 LONGEST FLOWPATH FROM NODE 152.00 TO NODE 154.00 = 286.00 FEET.

FLOW PROCESS FROM NODE 154.00 TO NODE 154.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.081
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8799
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.13 SUBAREA RUNOFF(CFS) = 0.24
 TOTAL AREA(ACRES) = 0.4 TOTAL RUNOFF(CFS) = 0.85
 TC(MIN.) = 7.70

FLOW PROCESS FROM NODE 155.00 TO NODE 156.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 TC = $K * [(LENGTH^{**3}) / (ELEVATION CHANGE)]^{** .2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1328.00
 DOWNSTREAM ELEVATION(FEET) = 1326.96
 ELEVATION DIFFERENCE(FEET) = 1.04
 TC = $0.303 * [(100.00^{**3}) / (1.04)]^{** .2} = 4.766$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.20
 TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.20

FLOW PROCESS FROM NODE 156.00 TO NODE 157.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.96 DOWNSTREAM(FEET) = 1325.29
 CHANNEL LENGTH THRU SUBAREA(FEET) = 180.00 CHANNEL SLOPE = 0.0093
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.034
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8795
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.32
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.96
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 3.14
 Tc(MIN.) = 8.14
 SUBAREA AREA(ACRES) = 0.14 SUBAREA RUNOFF(CFS) = 0.25
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.45

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 1.04
 LONGEST FLOWPATH FROM NODE 155.00 TO NODE 157.00 = 280.00 FEET.

FLOW PROCESS FROM NODE 157.00 TO NODE 157.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.034
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8795
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.14 SUBAREA RUNOFF(CFS) = 0.25
 TOTAL AREA(ACRES) = 0.4 TOTAL RUNOFF(CFS) = 0.70
 TC(MIN.) = 8.14

FLOW PROCESS FROM NODE 158.00 TO NODE 159.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1326.43
 DOWNSTREAM ELEVATION(FEET) = 1325.70
 ELEVATION DIFFERENCE(FEET) = 0.73
 $TC = 0.303 * [(100.00**3)/(0.73)]**.2 = 5.116$
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.461
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8824
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.11
 TOTAL AREA(ACRES) = 0.05 TOTAL RUNOFF(CFS) = 0.11

FLOW PROCESS FROM NODE 159.00 TO NODE 160.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1325.70 DOWNSTREAM(FEET) = 1324.51
 CHANNEL LENGTH THRU SUBAREA(FEET) = 157.00 CHANNEL SLOPE = 0.0076
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.011
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8793
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.20
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.81
 AVERAGE FLOW DEPTH(FEET) = 0.05 TRAVEL TIME(MIN.) = 3.24
 Tc(MIN.) = 8.36
 SUBAREA AREA(ACRES) = 0.11 SUBAREA RUNOFF(CFS) = 0.19
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.30

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.06 FLOW VELOCITY(FEET/SEC.) = 0.90
 LONGEST FLOWPATH FROM NODE 158.00 TO NODE 160.00 = 257.00 FEET.

FLOW PROCESS FROM NODE 160.00 TO NODE 160.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

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=====
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.011
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8793
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.11 SUBAREA RUNOFF(CFS) = 0.19
TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 0.50
TC(MIN.) = 8.36
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FLOW PROCESS FROM NODE 161.00 TO NODE 162.00 IS CODE = 21
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1325.48
DOWNSTREAM ELEVATION(FEET) = 1318.00
ELEVATION DIFFERENCE(FEET) = 7.48
TC = 0.937*[(100.00**3)/(7.48)]**.2 = 9.934
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.874
UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .6820
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 1.48
TOTAL AREA(ACRES) = 1.16 TOTAL RUNOFF(CFS) = 1.48
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*****
FLOW PROCESS FROM NODE 200.00 TO NODE 201.00 IS CODE = 22
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
USER SPECIFIED Tc(MIN.) = 5.000
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 2.35
TOTAL AREA(ACRES) = 1.07 TOTAL RUNOFF(CFS) = 2.35
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```
*****
FLOW PROCESS FROM NODE 202.00 TO NODE 203.00 IS CODE = 22
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
=====
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```
ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
USER SPECIFIED Tc(MIN.) = 5.000
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.48
TOTAL AREA(ACRES) = 0.22 TOTAL RUNOFF(CFS) = 0.48
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*****
FLOW PROCESS FROM NODE 206.00 TO NODE 207.00 IS CODE = 21
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
```

INITIAL SUBAREA FLOW-LENGTH(FEET) = 63.00
 UPSTREAM ELEVATION(FEET) = 1329.80
 DOWNSTREAM ELEVATION(FEET) = 1329.00
 ELEVATION DIFFERENCE(FEET) = 0.80
 $TC = 0.303 * [(63.00^3) / (0.80)]^{.2} = 3.807$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.15
 TOTAL AREA(ACRES) = 0.07 TOTAL RUNOFF(CFS) = 0.15

FLOW PROCESS FROM NODE 208.00 TO NODE 209.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH^3) / (ELEVATION CHANGE)]^{.2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 34.00
 UPSTREAM ELEVATION(FEET) = 1329.80
 DOWNSTREAM ELEVATION(FEET) = 1329.64
 ELEVATION DIFFERENCE(FEET) = 0.16
 $TC = 0.303 * [(34.00^3) / (0.16)]^{.2} = 3.628$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.07
 TOTAL AREA(ACRES) = 0.03 TOTAL RUNOFF(CFS) = 0.07

FLOW PROCESS FROM NODE 210.00 TO NODE 211.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH^3) / (ELEVATION CHANGE)]^{.2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1327.94
 DOWNSTREAM ELEVATION(FEET) = 1327.27
 ELEVATION DIFFERENCE(FEET) = 0.67
 $TC = 0.303 * [(100.00^3) / (0.67)]^{.2} = 5.205$
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.444
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8823
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.22
 TOTAL AREA(ACRES) = 0.10 TOTAL RUNOFF(CFS) = 0.22

FLOW PROCESS FROM NODE 211.00 TO NODE 212.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1327.27 DOWNSTREAM(FEET) = 1324.89
 CHANNEL LENGTH THRU SUBAREA(FEET) = 211.00 CHANNEL SLOPE = 0.0113
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.002
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8793

SOIL CLASSIFICATION IS "C"

TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.36
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.08
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 3.25
 Tc(MIN.) = 8.45
 SUBAREA AREA(ACRES) = 0.17 SUBAREA RUNOFF(CFS) = 0.30
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.51

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 1.20
 LONGEST FLOWPATH FROM NODE 210.00 TO NODE 212.00 = 311.00 FEET.

FLOW PROCESS FROM NODE 212.00 TO NODE 212.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.002
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8793
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.17 SUBAREA RUNOFF(CFS) = 0.30
 TOTAL AREA(ACRES) = 0.4 TOTAL RUNOFF(CFS) = 0.81
 TC(MIN.) = 8.45

FLOW PROCESS FROM NODE 163.00 TO NODE 164.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH^{**3}) / (ELEVATION CHANGE)]^{**0.2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.69
 DOWNSTREAM ELEVATION(FEET) = 1329.41
 ELEVATION DIFFERENCE(FEET) = 1.28
 $TC = 0.303 * [(100.00^{**3}) / (1.28)]^{**0.2} = 4.572$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.20
 TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.20

FLOW PROCESS FROM NODE 164.00 TO NODE 165.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1329.41 DOWNSTREAM(FEET) = 1327.48
 CHANNEL LENGTH THRU SUBAREA(FEET) = 184.00 CHANNEL SLOPE = 0.0105
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.019
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8794
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.38
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.93
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 3.28
 Tc(MIN.) = 8.28
 SUBAREA AREA(ACRES) = 0.20 SUBAREA RUNOFF(CFS) = 0.36
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.55

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 1.09
 LONGEST FLOWPATH FROM NODE 163.00 TO NODE 165.00 = 284.00 FEET.

FLOW PROCESS FROM NODE 165.00 TO NODE 165.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.019
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8794
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.20 SUBAREA RUNOFF(CFS) = 0.36
 TOTAL AREA(ACRES) = 0.5 TOTAL RUNOFF(CFS) = 0.91
 TC(MIN.) = 8.28

FLOW PROCESS FROM NODE 166.00 TO NODE 167.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.29
 DOWNSTREAM ELEVATION(FEET) = 1329.36
 ELEVATION DIFFERENCE(FEET) = 0.93
 $TC = 0.303 * [(100.00**3)/(0.93)]**.2 = 4.874$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.18
 TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.18

FLOW PROCESS FROM NODE 167.00 TO NODE 168.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1329.36 DOWNSTREAM(FEET) = 1327.20
 CHANNEL LENGTH THRU SUBAREA(FEET) = 234.00 CHANNEL SLOPE = 0.0092
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.979
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8791
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.45
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.06
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 3.69
 Tc(MIN.) = 8.69
 SUBAREA AREA(ACRES) = 0.32 SUBAREA RUNOFF(CFS) = 0.56
 TOTAL AREA(ACRES) = 0.4 PEAK FLOW RATE(CFS) = 0.73

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.08 FLOW VELOCITY(FEET/SEC.) = 1.13
 LONGEST FLOWPATH FROM NODE 166.00 TO NODE 168.00 = 334.00 FEET.

FLOW PROCESS FROM NODE 168.00 TO NODE 168.00 IS CODE = 81

 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 =====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.979
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8791
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.32 SUBAREA RUNOFF(CFS) = 0.56
 TOTAL AREA(ACRES) = 0.7 TOTAL RUNOFF(CFS) = 1.29
 TC(MIN.) = 8.69

 FLOW PROCESS FROM NODE 169.00 TO NODE 170.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 =====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.40
 DOWNSTREAM ELEVATION(FEET) = 1329.14
 ELEVATION DIFFERENCE(FEET) = 1.26
 $TC = 0.303 * [(100.00**3)/(1.26)]**.2 = 4.587$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.22
 TOTAL AREA(ACRES) = 0.10 TOTAL RUNOFF(CFS) = 0.22

 FLOW PROCESS FROM NODE 170.00 TO NODE 171.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
 =====

ELEVATION DATA: UPSTREAM(FEET) = 1329.14 DOWNSTREAM(FEET) = 1327.26
 CHANNEL LENGTH THRU SUBAREA(FEET) = 236.00 CHANNEL SLOPE = 0.0080
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.944
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8788
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.49
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.96
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 4.08
 Tc(MIN.) = 9.08
 SUBAREA AREA(ACRES) = 0.31 SUBAREA RUNOFF(CFS) = 0.53
 TOTAL AREA(ACRES) = 0.4 PEAK FLOW RATE(CFS) = 0.75

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.09 FLOW VELOCITY(FEET/SEC.) = 1.00
 LONGEST FLOWPATH FROM NODE 169.00 TO NODE 171.00 = 336.00 FEET.

 FLOW PROCESS FROM NODE 171.00 TO NODE 171.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
 =====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.944
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8788
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.31 SUBAREA RUNOFF(CFS) = 0.53

TOTAL AREA(ACRES) = 0.7 TOTAL RUNOFF(CFS) = 1.28
TC(MIN.) = 9.08

FLOW PROCESS FROM NODE 172.00 TO NODE 173.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = $K * [(LENGTH^{**3}) / (ELEVATION\ CHANGE)]^{**0.2}$
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1332.49
DOWNSTREAM ELEVATION(FEET) = 1330.00
ELEVATION DIFFERENCE(FEET) = 2.49
TC = $0.303 * [(100.00^{**3}) / (2.49)]^{**0.2} = 4.003$
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.15
TOTAL AREA(ACRES) = 0.07 TOTAL RUNOFF(CFS) = 0.15

FLOW PROCESS FROM NODE 173.00 TO NODE 174.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

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ELEVATION DATA: UPSTREAM(FEET) = 1330.00 DOWNSTREAM(FEET) = 1329.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 113.00 CHANNEL SLOPE = 0.0088
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.152
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8804
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.23
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.90
AVERAGE FLOW DEPTH(FEET) = 0.05 TRAVEL TIME(MIN.) = 2.09
Tc(MIN.) = 7.09
SUBAREA AREA(ACRES) = 0.08 SUBAREA RUNOFF(CFS) = 0.15
TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.31

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.06 FLOW VELOCITY(FEET/SEC.) = 0.91
LONGEST FLOWPATH FROM NODE 172.00 TO NODE 174.00 = 213.00 FEET.

FLOW PROCESS FROM NODE 174.00 TO NODE 174.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.152
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8804
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.08 SUBAREA RUNOFF(CFS) = 0.15
TOTAL AREA(ACRES) = 0.2 TOTAL RUNOFF(CFS) = 0.46
TC(MIN.) = 7.09

FLOW PROCESS FROM NODE 175.00 TO NODE 176.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1331.90
DOWNSTREAM ELEVATION(FEET) = 1327.55
ELEVATION DIFFERENCE(FEET) = 4.35
TC = 0.303*[( 100.00**3)/( 4.35)]**.2 = 3.580
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.18
TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.18

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FLOW PROCESS FROM NODE 176.00 TO NODE 177.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
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ELEVATION DATA: UPSTREAM(FEET) = 1329.24 DOWNSTREAM(FEET) = 1328.60
CHANNEL LENGTH THRU SUBAREA(FEET) = 224.00 CHANNEL SLOPE = 0.0029
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 0.50
10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.795
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8775
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.46
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.62
AVERAGE FLOW DEPTH(FEET) = 0.09 TRAVEL TIME(MIN.) = 6.03
Tc(MIN.) = 11.03
SUBAREA AREA(ACRES) = 0.36 SUBAREA RUNOFF(CFS) = 0.57
TOTAL AREA(ACRES) = 0.4 PEAK FLOW RATE(CFS) = 0.74

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END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 0.72
LONGEST FLOWPATH FROM NODE 175.00 TO NODE 177.00 = 324.00 FEET.

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FLOW PROCESS FROM NODE 177.00 TO NODE 177.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
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10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.795
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8775
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.36 SUBAREA RUNOFF(CFS) = 0.57
TOTAL AREA(ACRES) = 0.8 TOTAL RUNOFF(CFS) = 1.31
TC(MIN.) = 11.03

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FLOW PROCESS FROM NODE 178.00 TO NODE 179.00 IS CODE = 21
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1329.17
DOWNSTREAM ELEVATION(FEET) = 1328.61

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ELEVATION DIFFERENCE(FEET) = 0.56
 TC = 0.303*[(100.00**3)/(0.56)]**.2 = 5.394
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.408
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8821
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.17
 TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.17

FLOW PROCESS FROM NODE 179.00 TO NODE 180.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

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ELEVATION DATA: UPSTREAM(FEET) = 1328.61 DOWNSTREAM(FEET) = 1327.91
 CHANNEL LENGTH THRU SUBAREA(FEET) = 31.00 CHANNEL SLOPE = 0.0226
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 0.50
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.330
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8816
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.21
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.16
 AVERAGE FLOW DEPTH(FEET) = 0.04 TRAVEL TIME(MIN.) = 0.45
 Tc(MIN.) = 5.84
 SUBAREA AREA(ACRES) = 0.04 SUBAREA RUNOFF(CFS) = 0.08
 TOTAL AREA(ACRES) = 0.1 PEAK FLOW RATE(CFS) = 0.25

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.05 FLOW VELOCITY(FEET/SEC.) = 1.08
 LONGEST FLOWPATH FROM NODE 178.00 TO NODE 180.00 = 131.00 FEET.

FLOW PROCESS FROM NODE 180.00 TO NODE 180.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.330
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8816
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.04 SUBAREA RUNOFF(CFS) = 0.08
 TOTAL AREA(ACRES) = 0.2 TOTAL RUNOFF(CFS) = 0.33
 TC(MIN.) = 5.84

FLOW PROCESS FROM NODE 181.00 TO NODE 182.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

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ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1331.91
 DOWNSTREAM ELEVATION(FEET) = 1330.85
 ELEVATION DIFFERENCE(FEET) = 1.06
 TC = 0.303*[(100.00**3)/(1.06)]**.2 = 4.748
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.11
 TOTAL AREA(ACRES) = 0.05 TOTAL RUNOFF(CFS) = 0.11

FLOW PROCESS FROM NODE 182.00 TO NODE 183.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

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ELEVATION DATA: UPSTREAM(FEET) = 1330.85 DOWNSTREAM(FEET) = 1327.44
 CHANNEL LENGTH THRU SUBAREA(FEET) = 313.00 CHANNEL SLOPE = 0.0109
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.860
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8781
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.41
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.02
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 5.11
 Tc(MIN.) = 10.11
 SUBAREA AREA(ACRES) = 0.36 SUBAREA RUNOFF(CFS) = 0.59
 TOTAL AREA(ACRES) = 0.4 PEAK FLOW RATE(CFS) = 0.70

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.08 FLOW VELOCITY(FEET/SEC.) = 1.12
 LONGEST FLOWPATH FROM NODE 181.00 TO NODE 183.00 = 413.00 FEET.

FLOW PROCESS FROM NODE 183.00 TO NODE 183.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

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10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.860
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8781
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.36 SUBAREA RUNOFF(CFS) = 0.59
 TOTAL AREA(ACRES) = 0.8 TOTAL RUNOFF(CFS) = 1.29
 TC(MIN.) = 10.11

FLOW PROCESS FROM NODE 184.00 TO NODE 185.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1327.20
 DOWNSTREAM ELEVATION(FEET) = 1326.43
 ELEVATION DIFFERENCE(FEET) = 0.77
 $TC = 0.303 * [(100.00**3)/(0.77)]**.2 = 5.062$
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.472
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8824
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.15
 TOTAL AREA(ACRES) = 0.07 TOTAL RUNOFF(CFS) = 0.15

FLOW PROCESS FROM NODE 185.00 TO NODE 186.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.43 DOWNSTREAM(FEET) = 1326.05

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CHANNEL LENGTH THRU SUBAREA(FEET) = 77.00 CHANNEL SLOPE = 0.0049
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.172
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8805
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.23
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.69
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 1.87
 Tc(MIN.) = 6.93
 SUBAREA AREA(ACRES) = 0.08 SUBAREA RUNOFF(CFS) = 0.15
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.31

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 0.71
 LONGEST FLOWPATH FROM NODE 184.00 TO NODE 186.00 = 177.00 FEET.

 FLOW PROCESS FROM NODE 186.00 TO NODE 186.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.172
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8805
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.08 SUBAREA RUNOFF(CFS) = 0.15
 TOTAL AREA(ACRES) = 0.2 TOTAL RUNOFF(CFS) = 0.46
 TC(MIN.) = 6.93

 FLOW PROCESS FROM NODE 187.00 TO NODE 188.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 42.00
 UPSTREAM ELEVATION(FEET) = 1330.08
 DOWNSTREAM ELEVATION(FEET) = 1324.00
 ELEVATION DIFFERENCE(FEET) = 6.08
 $TC = 0.937 * [(42.00**3)/(6.08)]**.2 = 6.153$
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.281
 UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7128
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 1.56
 TOTAL AREA(ACRES) = 0.96 TOTAL RUNOFF(CFS) = 1.56

 FLOW PROCESS FROM NODE 189.00 TO NODE 190.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.35
 DOWNSTREAM ELEVATION(FEET) = 1329.43
 ELEVATION DIFFERENCE(FEET) = 0.92
 $TC = 0.303 * [(100.00**3)/(0.92)]**.2 = 4.885$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484

COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.18
 TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.18

FLOW PROCESS FROM NODE 190.00 TO NODE 191.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1329.43 DOWNSTREAM(FEET) = 1324.91
 CHANNEL LENGTH THRU SUBAREA(FEET) = 768.00 CHANNEL SLOPE = 0.0059
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.432
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8735
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.56
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.91
 AVERAGE FLOW DEPTH(FEET) = 0.08 TRAVEL TIME(MIN.) = 14.10
 Tc(MIN.) = 19.10
 SUBAREA AREA(ACRES) = 0.61 SUBAREA RUNOFF(CFS) = 0.76
 TOTAL AREA(ACRES) = 0.7 PEAK FLOW RATE(CFS) = 0.94

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 1.02
 LONGEST FLOWPATH FROM NODE 189.00 TO NODE 191.00 = 868.00 FEET.

FLOW PROCESS FROM NODE 191.00 TO NODE 191.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.432
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8735
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.61 SUBAREA RUNOFF(CFS) = 0.76
 TOTAL AREA(ACRES) = 1.3 TOTAL RUNOFF(CFS) = 1.70
 TC(MIN.) = 19.10

FLOW PROCESS FROM NODE 192.00 TO NODE 193.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 234.00
 UPSTREAM ELEVATION(FEET) = 1329.21
 DOWNSTREAM ELEVATION(FEET) = 1311.71
 ELEVATION DIFFERENCE(FEET) = 17.50
 $TC = 0.303 * [(234.00**3)/(17.50)]**.2 = 4.513$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.484
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 2.08
 TOTAL AREA(ACRES) = 0.95 TOTAL RUNOFF(CFS) = 2.08

FLOW PROCESS FROM NODE 204.00 TO NODE 205.00 IS CODE = 21

 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 =====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 920.00
 UPSTREAM ELEVATION(FEET) = 1326.00
 DOWNSTREAM ELEVATION(FEET) = 1317.63
 ELEVATION DIFFERENCE(FEET) = 8.37
 TC = 0.303*[(920.00**3)/(8.37)]**.2 = 11.894
 10 YEAR RAINFALL INTENSITY(INCH/HOUR) = 1.740
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8770
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.78
 TOTAL AREA(ACRES) = 0.51 TOTAL RUNOFF(CFS) = 0.78
 =====

END OF STUDY SUMMARY:
 TOTAL AREA(ACRES) = 0.5 TC(MIN.) = 11.89
 PEAK FLOW RATE(CFS) = 0.78
 =====

END OF RATIONAL METHOD ANALYSIS
 =====

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RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
 RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
 (RCFC&WCD) 1978 HYDROLOGY MANUAL
 (c) Copyright 1982-2011 Advanced Engineering Software (aes)
 (Rational Tabling Version 18.0)
 Release Date: 07/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****

* UHS Inland Valley Proposed Conditions *
 * 100-year, Rational Method *
 * Kimley-Horn, LAC *

FILE NAME: IV_P.DAT
 TIME/DATE OF STUDY: 02:04 12/16/2020

 USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:

USER SPECIFIED STORM EVENT(YEAR) = 100.00
 SPECIFIED MINIMUM PIPE SIZE(INCH) = 8.00
 SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
 10-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) = 1.850
 10-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) = 0.886
 100-YEAR STORM 10-MINUTE INTENSITY(INCH/HOUR) = 3.090
 100-YEAR STORM 60-MINUTE INTENSITY(INCH/HOUR) = 1.480
 SLOPE OF 10-YEAR INTENSITY-DURATION CURVE = 0.4108943
 SLOPE OF 100-YEAR INTENSITY-DURATION CURVE = 0.4108413

COMPUTED RAINFALL INTENSITY DATA:
 STORM EVENT = 100.00 1-HOUR INTENSITY(INCH/HOUR) = 1.480
 SLOPE OF INTENSITY DURATION CURVE = 0.4108

RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
 NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
 AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES

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

NO.	HALF-WIDTH (FT)	CROWN TO CROSSFALL (FT)	STREET-CROSSFALL IN- / OUT- / SIDE / SIDE / WAY	CURB HEIGHT (FT)	GUTTER WIDTH (FT)	GEOMETRIES LIP (FT)	MANNING HIKE (FT)	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.*

 FLOW PROCESS FROM NODE 100.00 TO NODE 101.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL

TC = $K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1328.94
 DOWNSTREAM ELEVATION(FEET) = 1327.66
 ELEVATION DIFFERENCE(FEET) = 1.28
 $TC = 0.303 * [(100.00**3)/(1.28)]**.2 = 4.572$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.33
 TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.33

FLOW PROCESS FROM NODE 101.00 TO NODE 102.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1327.66 DOWNSTREAM(FEET) = 1281.58
 CHANNEL LENGTH THRU SUBAREA(FEET) = 293.00 CHANNEL SLOPE = 0.1573
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.771
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8877
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.81
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 4.22
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 1.16
 Tc(MIN.) = 6.16
 SUBAREA AREA(ACRES) = 0.89 SUBAREA RUNOFF(CFS) = 2.98
 TOTAL AREA(ACRES) = 1.0 PEAK FLOW RATE(CFS) = 3.31

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.09 FLOW VELOCITY(FEET/SEC.) = 4.44
 LONGEST FLOWPATH FROM NODE 100.00 TO NODE 102.00 = 393.00 FEET.

FLOW PROCESS FROM NODE 102.00 TO NODE 102.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.771
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8877
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.89 SUBAREA RUNOFF(CFS) = 2.98
 TOTAL AREA(ACRES) = 1.9 TOTAL RUNOFF(CFS) = 6.29
 TC(MIN.) = 6.16

FLOW PROCESS FROM NODE 103.00 TO NODE 104.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1331.56
 DOWNSTREAM ELEVATION(FEET) = 1311.61
 ELEVATION DIFFERENCE(FEET) = 19.95
 $TC = 0.303 * [(100.00**3)/(19.95)]**.2 = 2.640$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 1.13
 TOTAL AREA(ACRES) = 0.31 TOTAL RUNOFF(CFS) = 1.13

 FLOW PROCESS FROM NODE 104.00 TO NODE 105.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1311.61 DOWNSTREAM(FEET) = 1300.77
 CHANNEL LENGTH THRU SUBAREA(FEET) = 50.00 CHANNEL SLOPE = 0.2168
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.049
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8884
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 2.35
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 4.65
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 0.18
 Tc(MIN.) = 5.18
 SUBAREA AREA(ACRES) = 0.68 SUBAREA RUNOFF(CFS) = 2.45
 TOTAL AREA(ACRES) = 1.0 PEAK FLOW RATE(CFS) = 3.58

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.08 FLOW VELOCITY(FEET/SEC.) = 5.50
 LONGEST FLOWPATH FROM NODE 103.00 TO NODE 105.00 = 150.00 FEET.

 FLOW PROCESS FROM NODE 105.00 TO NODE 105.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.049
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8884
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.68 SUBAREA RUNOFF(CFS) = 2.45
 TOTAL AREA(ACRES) = 1.7 TOTAL RUNOFF(CFS) = 6.02
 TC(MIN.) = 5.18

 FLOW PROCESS FROM NODE 106.00 TO NODE 107.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1329.32
 DOWNSTREAM ELEVATION(FEET) = 1323.75
 ELEVATION DIFFERENCE(FEET) = 5.57
 $TC = 0.303 * [(100.00**3)/(5.57)]**.2 = 3.407$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.33
 TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.33

FLOW PROCESS FROM NODE 107.00 TO NODE 108.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1323.75 DOWNSTREAM(FEET) = 1317.89
CHANNEL LENGTH THRU SUBAREA(FEET) = 62.00 CHANNEL SLOPE = 0.0945
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.984
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8882
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.49
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 2.68
AVERAGE FLOW DEPTH(FEET) = 0.04 TRAVEL TIME(MIN.) = 0.39
Tc(MIN.) = 5.39
SUBAREA AREA(ACRES) = 0.09 SUBAREA RUNOFF(CFS) = 0.32
TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.65

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.05 FLOW VELOCITY(FEET/SEC.) = 2.56
LONGEST FLOWPATH FROM NODE 106.00 TO NODE 108.00 = 162.00 FEET.

FLOW PROCESS FROM NODE 108.00 TO NODE 108.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.984
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8882
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.09 SUBAREA RUNOFF(CFS) = 0.32
TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 0.97
TC(MIN.) = 5.39

FLOW PROCESS FROM NODE 109.00 TO NODE 110.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
USER SPECIFIED Tc(MIN.) = 5.000
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 1.35
TOTAL AREA(ACRES) = 0.37 TOTAL RUNOFF(CFS) = 1.35

FLOW PROCESS FROM NODE 111.00 TO NODE 112.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 50.00
UPSTREAM ELEVATION(FEET) = 1329.55
DOWNSTREAM ELEVATION(FEET) = 1327.75
ELEVATION DIFFERENCE(FEET) = 1.80
TC = 0.303*[(50.00**3)/(1.80)]**.2 = 2.818
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.29
 TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.29

 FLOW PROCESS FROM NODE 113.00 TO NODE 114.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 50.00
 UPSTREAM ELEVATION(FEET) = 1328.67
 DOWNSTREAM ELEVATION(FEET) = 1328.00
 ELEVATION DIFFERENCE(FEET) = 0.67
 $TC = 0.303 * [(50.00**3)/(0.67)]**.2 = 3.434$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.33
 TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.33

 FLOW PROCESS FROM NODE 115.00 TO NODE 116.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1328.00
 DOWNSTREAM ELEVATION(FEET) = 1326.72
 ELEVATION DIFFERENCE(FEET) = 1.28
 $TC = 0.303 * [(100.00**3)/(1.28)]**.2 = 4.572$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.26
 TOTAL AREA(ACRES) = 0.07 TOTAL RUNOFF(CFS) = 0.26

 FLOW PROCESS FROM NODE 116.00 TO NODE 117.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.72 DOWNSTREAM(FEET) = 1323.49
 CHANNEL LENGTH THRU SUBAREA(FEET) = 87.00 CHANNEL SLOPE = 0.0371
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.890
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8880
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.68
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 2.04
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 0.71
 Tc(MIN.) = 5.71

SUBAREA AREA(ACRES) = 0.25 SUBAREA RUNOFF(CFS) = 0.86
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 1.12

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 2.10
 LONGEST FLOWPATH FROM NODE 115.00 TO NODE 117.00 = 187.00 FEET.

FLOW PROCESS FROM NODE 117.00 TO NODE 117.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.890
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8880
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.25 SUBAREA RUNOFF(CFS) = 0.86
 TOTAL AREA(ACRES) = 0.6 TOTAL RUNOFF(CFS) = 1.98
 TC(MIN.) = 5.71

FLOW PROCESS FROM NODE 118.00 TO NODE 119.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.37
 TOTAL AREA(ACRES) = 0.10 TOTAL RUNOFF(CFS) = 0.37

FLOW PROCESS FROM NODE 119.00 TO NODE 120.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.20 DOWNSTREAM(FEET) = 1325.30
 CHANNEL LENGTH THRU SUBAREA(FEET) = 517.00 CHANNEL SLOPE = 0.0095
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.937
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8848
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.62
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.36
 AVERAGE FLOW DEPTH(FEET) = 0.11 TRAVEL TIME(MIN.) = 6.32
 Tc(MIN.) = 11.32
 SUBAREA AREA(ACRES) = 0.95 SUBAREA RUNOFF(CFS) = 2.47
 TOTAL AREA(ACRES) = 1.0 PEAK FLOW RATE(CFS) = 2.83

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.13 FLOW VELOCITY(FEET/SEC.) = 1.58
 LONGEST FLOWPATH FROM NODE 118.00 TO NODE 120.00 = 604.00 FEET.

FLOW PROCESS FROM NODE 120.00 TO NODE 120.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.937

COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8848
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.95 SUBAREA RUNOFF(CFS) = 2.47
 TOTAL AREA(ACRES) = 2.0 TOTAL RUNOFF(CFS) = 5.30
 TC(MIN.) = 11.32

 FLOW PROCESS FROM NODE 121.00 TO NODE 122.00 IS CODE = 21

 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 TC = $K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.00
 DOWNSTREAM ELEVATION(FEET) = 1329.00
 ELEVATION DIFFERENCE(FEET) = 1.00
 TC = $0.303 * [(100.00**3)/(1.00)]**.2 = 4.804$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.37
 TOTAL AREA(ACRES) = 0.10 TOTAL RUNOFF(CFS) = 0.37

 FLOW PROCESS FROM NODE 122.00 TO NODE 123.00 IS CODE = 51

 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1329.00 DOWNSTREAM(FEET) = 1325.61
 CHANNEL LENGTH THRU SUBAREA(FEET) = 200.00 CHANNEL SLOPE = 0.0170
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.559
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8870
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.24
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.60
 AVERAGE FLOW DEPTH(FEET) = 0.09 TRAVEL TIME(MIN.) = 2.09
 Tc(MIN.) = 7.09
 SUBAREA AREA(ACRES) = 0.55 SUBAREA RUNOFF(CFS) = 1.74
 TOTAL AREA(ACRES) = 0.7 PEAK FLOW RATE(CFS) = 2.10

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.11 FLOW VELOCITY(FEET/SEC.) = 1.76
 LONGEST FLOWPATH FROM NODE 121.00 TO NODE 123.00 = 300.00 FEET.

 FLOW PROCESS FROM NODE 123.00 TO NODE 123.00 IS CODE = 81

 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.559
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8870
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.55 SUBAREA RUNOFF(CFS) = 1.74
 TOTAL AREA(ACRES) = 1.2 TOTAL RUNOFF(CFS) = 3.84
 TC(MIN.) = 7.09

FLOW PROCESS FROM NODE 124.00 TO NODE 125.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL USER SPECIFIED Tc(MIN.) = 5.000 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885 SOIL CLASSIFICATION IS "C" SUBAREA RUNOFF(CFS) = 0.44 TOTAL AREA(ACRES) = 0.12 TOTAL RUNOFF(CFS) = 0.44

***** FLOW PROCESS FROM NODE 125.00 TO NODE 126.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<< >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1330.33 DOWNSTREAM(FEET) = 1329.74 CHANNEL LENGTH THRU SUBAREA(FEET) = 23.00 CHANNEL SLOPE = 0.0257 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.023 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8883 SOIL CLASSIFICATION IS "C" TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.49 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.47 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 0.26 Tc(MIN.) = 5.26 SUBAREA AREA(ACRES) = 0.03 SUBAREA RUNOFF(CFS) = 0.11 TOTAL AREA(ACRES) = 0.1 PEAK FLOW RATE(CFS) = 0.55

END OF SUBAREA CHANNEL FLOW HYDRAULICS: DEPTH(FEET) = 0.06 FLOW VELOCITY(FEET/SEC.) = 1.63 LONGEST FLOWPATH FROM NODE 124.00 TO NODE 126.00 = 223.00 FEET.

***** FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.023 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8883 SOIL CLASSIFICATION IS "C" SUBAREA AREA(ACRES) = 0.03 SUBAREA RUNOFF(CFS) = 0.11 TOTAL AREA(ACRES) = 0.2 TOTAL RUNOFF(CFS) = 0.65 TC(MIN.) = 5.26

***** FLOW PROCESS FROM NODE 127.00 TO NODE 128.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM DEVELOPMENT IS COMMERCIAL USER SPECIFIED Tc(MIN.) = 5.000 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885 SOIL CLASSIFICATION IS "C" SUBAREA RUNOFF(CFS) = 0.55 TOTAL AREA(ACRES) = 0.15 TOTAL RUNOFF(CFS) = 0.55

FLOW PROCESS FROM NODE 128.00 TO NODE 129.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.32 DOWNSTREAM(FEET) = 1329.54
 CHANNEL LENGTH THRU SUBAREA(FEET) = 15.00 CHANNEL SLOPE = 0.0520
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.067
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8884
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.64
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 2.04
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 0.12
 Tc(MIN.) = 5.12
 SUBAREA AREA(ACRES) = 0.05 SUBAREA RUNOFF(CFS) = 0.18
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.73

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.06 FLOW VELOCITY(FEET/SEC.) = 2.17
 LONGEST FLOWPATH FROM NODE 127.00 TO NODE 129.00 = 38.00 FEET.

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.067
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8884
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.05 SUBAREA RUNOFF(CFS) = 0.18
 TOTAL AREA(ACRES) = 0.2 TOTAL RUNOFF(CFS) = 0.91
 TC(MIN.) = 5.12

FLOW PROCESS FROM NODE 130.00 TO NODE 131.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.88
 TOTAL AREA(ACRES) = 0.24 TOTAL RUNOFF(CFS) = 0.88

FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 22

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 USER SPECIFIED Tc(MIN.) = 5.000
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.91
 TOTAL AREA(ACRES) = 0.25 TOTAL RUNOFF(CFS) = 0.91

FLOW PROCESS FROM NODE 134.00 TO NODE 135.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

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=====
ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 117.00
UPSTREAM ELEVATION(FEET) = 1327.91
DOWNSTREAM ELEVATION(FEET) = 1323.18
ELEVATION DIFFERENCE(FEET) = 4.73
TC = 0.303*[( 117.00**3)/( 4.73)]**.2 = 3.868
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.80
TOTAL AREA(ACRES) = 0.22 TOTAL RUNOFF(CFS) = 0.80
    
```

FLOW PROCESS FROM NODE 136.00 TO NODE 137.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

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=====
ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 65.00
UPSTREAM ELEVATION(FEET) = 1327.48
DOWNSTREAM ELEVATION(FEET) = 1317.01
ELEVATION DIFFERENCE(FEET) = 10.47
TC = 0.303*[( 65.00**3)/( 10.47)]**.2 = 2.319
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 1.28
TOTAL AREA(ACRES) = 0.35 TOTAL RUNOFF(CFS) = 1.28
    
```

FLOW PROCESS FROM NODE 194.00 TO NODE 195.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

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=====
ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 80.00
UPSTREAM ELEVATION(FEET) = 1328.28
DOWNSTREAM ELEVATION(FEET) = 1327.12
ELEVATION DIFFERENCE(FEET) = 1.16
TC = 0.303*[( 80.00**3)/( 1.16)]**.2 = 4.079
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.18
TOTAL AREA(ACRES) = 0.05 TOTAL RUNOFF(CFS) = 0.18
    
```

FLOW PROCESS FROM NODE 196.00 TO NODE 197.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

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=====
ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 92.00
UPSTREAM ELEVATION(FEET) = 1327.98
DOWNSTREAM ELEVATION(FEET) = 1326.69
ELEVATION DIFFERENCE(FEET) = 1.29
TC = 0.303*[( 92.00**3)/( 1.29)]**.2 = 4.342
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.29
TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.29

```

FLOW PROCESS FROM NODE 198.00 TO NODE 199.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

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=====
ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1330.34
DOWNSTREAM ELEVATION(FEET) = 1328.21
ELEVATION DIFFERENCE(FEET) = 2.13
TC = 0.303*[( 100.00**3)/( 2.13)]**.2 = 4.130
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.40
TOTAL AREA(ACRES) = 0.11 TOTAL RUNOFF(CFS) = 0.40

```

FLOW PROCESS FROM NODE 199.00 TO NODE 138.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

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=====
ELEVATION DATA: UPSTREAM(FEET) = 1328.21 DOWNSTREAM(FEET) = 1326.10
CHANNEL LENGTH THRU SUBAREA(FEET) = 157.00 CHANNEL SLOPE = 0.0134
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.599
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8872
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 1.03
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.38
AVERAGE FLOW DEPTH(FEET) = 0.09 TRAVEL TIME(MIN.) = 1.90
Tc(MIN.) = 6.90
SUBAREA AREA(ACRES) = 0.39 SUBAREA RUNOFF(CFS) = 1.25
TOTAL AREA(ACRES) = 0.5 PEAK FLOW RATE(CFS) = 1.65

```

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 1.60
LONGEST FLOWPATH FROM NODE 198.00 TO NODE 138.00 = 257.00 FEET.

FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.599
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8872
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.39 SUBAREA RUNOFF(CFS) = 1.25
TOTAL AREA(ACRES) = 0.9 TOTAL RUNOFF(CFS) = 2.89
TC(MIN.) = 6.90

FLOW PROCESS FROM NODE 139.00 TO NODE 140.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1327.97
DOWNSTREAM ELEVATION(FEET) = 1326.92
ELEVATION DIFFERENCE(FEET) = 1.05
TC = 0.303*[(100.00**3)/(1.05)]**.2 = 4.757
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.22
TOTAL AREA(ACRES) = 0.06 TOTAL RUNOFF(CFS) = 0.22

FLOW PROCESS FROM NODE 141.00 TO NODE 142.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1330.22
DOWNSTREAM ELEVATION(FEET) = 1328.78
ELEVATION DIFFERENCE(FEET) = 1.44
TC = 0.303*[(100.00**3)/(1.44)]**.2 = 4.466
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.22
TOTAL AREA(ACRES) = 0.06 TOTAL RUNOFF(CFS) = 0.22

FLOW PROCESS FROM NODE 142.00 TO NODE 143.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1328.78 DOWNSTREAM(FEET) = 1327.40
CHANNEL LENGTH THRU SUBAREA(FEET) = 117.00 CHANNEL SLOPE = 0.0118
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.626
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8872

SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.44
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.10
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 1.77
 Tc(MIN.) = 6.77
 SUBAREA AREA(ACRES) = 0.14 SUBAREA RUNOFF(CFS) = 0.45
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.67

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 1.25
 LONGEST FLOWPATH FROM NODE 141.00 TO NODE 143.00 = 217.00 FEET.

 FLOW PROCESS FROM NODE 143.00 TO NODE 143.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.626
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8872
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.14 SUBAREA RUNOFF(CFS) = 0.45
 TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 1.12
 TC(MIN.) = 6.77

 FLOW PROCESS FROM NODE 144.00 TO NODE 145.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 122.00
 UPSTREAM ELEVATION(FEET) = 1332.49
 DOWNSTREAM ELEVATION(FEET) = 1326.80
 ELEVATION DIFFERENCE(FEET) = 5.69
 $TC = 0.303 * [(122.00**3)/(5.69)]**.2 = 3.823$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.99
 TOTAL AREA(ACRES) = 0.27 TOTAL RUNOFF(CFS) = 0.99

 FLOW PROCESS FROM NODE 146.00 TO NODE 147.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.23
 DOWNSTREAM ELEVATION(FEET) = 1328.84
 ELEVATION DIFFERENCE(FEET) = 1.39
 $TC = 0.303 * [(100.00**3)/(1.39)]**.2 = 4.498$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.22
 TOTAL AREA(ACRES) = 0.06 TOTAL RUNOFF(CFS) = 0.22

FLOW PROCESS FROM NODE 147.00 TO NODE 148.00 IS CODE = 51

 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1328.84 DOWNSTREAM(FEET) = 1326.50
 CHANNEL LENGTH THRU SUBAREA(FEET) = 304.00 CHANNEL SLOPE = 0.0077
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.104
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8854
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.77
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.04
 AVERAGE FLOW DEPTH(FEET) = 0.09 TRAVEL TIME(MIN.) = 4.89
 Tc(MIN.) = 9.89
 SUBAREA AREA(ACRES) = 0.40 SUBAREA RUNOFF(CFS) = 1.10
 TOTAL AREA(ACRES) = 0.5 PEAK FLOW RATE(CFS) = 1.32

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 1.23
 LONGEST FLOWPATH FROM NODE 146.00 TO NODE 148.00 = 404.00 FEET.

FLOW PROCESS FROM NODE 148.00 TO NODE 148.00 IS CODE = 81

 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.104
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8854
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.40 SUBAREA RUNOFF(CFS) = 1.10
 TOTAL AREA(ACRES) = 0.9 TOTAL RUNOFF(CFS) = 2.42
 TC(MIN.) = 9.89

FLOW PROCESS FROM NODE 149.00 TO NODE 150.00 IS CODE = 21

 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1328.36
 DOWNSTREAM ELEVATION(FEET) = 1326.55
 ELEVATION DIFFERENCE(FEET) = 1.81
 $TC = 0.303 * [(100.00**3)/(1.81)]**.2 = 4.266$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.66
 TOTAL AREA(ACRES) = 0.18 TOTAL RUNOFF(CFS) = 0.66

FLOW PROCESS FROM NODE 150.00 TO NODE 151.00 IS CODE = 51

 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 1326.55 DOWNSTREAM(FEET) = 1325.32
 CHANNEL LENGTH THRU SUBAREA(FEET) = 115.00 CHANNEL SLOPE = 0.0107
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.677
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8874
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.80
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.24
 AVERAGE FLOW DEPTH(FEET) = 0.08 TRAVEL TIME(MIN.) = 1.55
 Tc(MIN.) = 6.55
 SUBAREA AREA(ACRES) = 0.09 SUBAREA RUNOFF(CFS) = 0.29
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.95

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.09 FLOW VELOCITY(FEET/SEC.) = 1.27
 LONGEST FLOWPATH FROM NODE 149.00 TO NODE 151.00 = 215.00 FEET.

FLOW PROCESS FROM NODE 151.00 TO NODE 151.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.677
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8874
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.09 SUBAREA RUNOFF(CFS) = 0.29
 TOTAL AREA(ACRES) = 0.4 TOTAL RUNOFF(CFS) = 1.24
 TC(MIN.) = 6.55

FLOW PROCESS FROM NODE 152.00 TO NODE 153.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1327.92
 DOWNSTREAM ELEVATION(FEET) = 1327.01
 ELEVATION DIFFERENCE(FEET) = 0.91
 $TC = 0.303 * [(100.00**3)/(0.91)]**.2 = 4.895$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.62
 TOTAL AREA(ACRES) = 0.17 TOTAL RUNOFF(CFS) = 0.62

FLOW PROCESS FROM NODE 153.00 TO NODE 154.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1327.01 DOWNSTREAM(FEET) = 1324.86
 CHANNEL LENGTH THRU SUBAREA(FEET) = 186.00 CHANNEL SLOPE = 0.0116
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.487
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8868
 SOIL CLASSIFICATION IS "C"

TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.82
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.26
 AVERAGE FLOW DEPTH(FEET) = 0.08 TRAVEL TIME(MIN.) = 2.45
 Tc(MIN.) = 7.45
 SUBAREA AREA(ACRES) = 0.13 SUBAREA RUNOFF(CFS) = 0.40
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 1.02

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.09 FLOW VELOCITY(FEET/SEC.) = 1.31
 LONGEST FLOWPATH FROM NODE 152.00 TO NODE 154.00 = 286.00 FEET.

FLOW PROCESS FROM NODE 154.00 TO NODE 154.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.487
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8868
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.13 SUBAREA RUNOFF(CFS) = 0.40
 TOTAL AREA(ACRES) = 0.4 TOTAL RUNOFF(CFS) = 1.42
 TC(MIN.) = 7.45

FLOW PROCESS FROM NODE 155.00 TO NODE 156.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH^{**3}) / (ELEVATION CHANGE)]^{** .2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1328.00
 DOWNSTREAM ELEVATION(FEET) = 1326.96
 ELEVATION DIFFERENCE(FEET) = 1.04
 $TC = 0.303 * [(100.00^{**3}) / (1.04)]^{** .2} = 4.766$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.33
 TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.33

FLOW PROCESS FROM NODE 156.00 TO NODE 157.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.96 DOWNSTREAM(FEET) = 1325.29
 CHANNEL LENGTH THRU SUBAREA(FEET) = 180.00 CHANNEL SLOPE = 0.0093
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.421
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8866
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.54
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.07
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 2.81
 Tc(MIN.) = 7.81
 SUBAREA AREA(ACRES) = 0.14 SUBAREA RUNOFF(CFS) = 0.42
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.75

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.08 FLOW VELOCITY(FEET/SEC.) = 1.16
 LONGEST FLOWPATH FROM NODE 155.00 TO NODE 157.00 = 280.00 FEET.

FLOW PROCESS FROM NODE 157.00 TO NODE 157.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.421
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8866
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.14 SUBAREA RUNOFF(CFS) = 0.42
 TOTAL AREA(ACRES) = 0.4 TOTAL RUNOFF(CFS) = 1.18
 TC(MIN.) = 7.81

FLOW PROCESS FROM NODE 158.00 TO NODE 159.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1326.43
 DOWNSTREAM ELEVATION(FEET) = 1325.70
 ELEVATION DIFFERENCE(FEET) = 0.73
 $TC = 0.303 * [(100.00**3)/(0.73)]**.2 = 5.116$
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.070
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.18
 TOTAL AREA(ACRES) = 0.05 TOTAL RUNOFF(CFS) = 0.18

FLOW PROCESS FROM NODE 159.00 TO NODE 160.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1325.70 DOWNSTREAM(FEET) = 1324.51
 CHANNEL LENGTH THRU SUBAREA(FEET) = 157.00 CHANNEL SLOPE = 0.0076
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.356
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8864
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.35
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.85
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 3.06
 Tc(MIN.) = 8.18
 SUBAREA AREA(ACRES) = 0.11 SUBAREA RUNOFF(CFS) = 0.33
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.51

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 0.95
 LONGEST FLOWPATH FROM NODE 158.00 TO NODE 160.00 = 257.00 FEET.

FLOW PROCESS FROM NODE 160.00 TO NODE 160.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

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=====
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.356
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8864
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.11 SUBAREA RUNOFF(CFS) = 0.33
TOTAL AREA(ACRES) = 0.3 TOTAL RUNOFF(CFS) = 0.84
TC(MIN.) = 8.18
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FLOW PROCESS FROM NODE 161.00 TO NODE 162.00 IS CODE = 21
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1325.48
DOWNSTREAM ELEVATION(FEET) = 1318.00
ELEVATION DIFFERENCE(FEET) = 7.48
TC = 0.937*[( 100.00**3)/( 7.48)]**.2 = 9.934
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.098
UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7542
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 2.71
TOTAL AREA(ACRES) = 1.16 TOTAL RUNOFF(CFS) = 2.71
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FLOW PROCESS FROM NODE 200.00 TO NODE 201.00 IS CODE = 22
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
USER SPECIFIED Tc(MIN.) = 5.000
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 3.91
TOTAL AREA(ACRES) = 1.07 TOTAL RUNOFF(CFS) = 3.91
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*****
FLOW PROCESS FROM NODE 202.00 TO NODE 203.00 IS CODE = 22
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
USER SPECIFIED Tc(MIN.) = 5.000
100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.80
TOTAL AREA(ACRES) = 0.22 TOTAL RUNOFF(CFS) = 0.80
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*****
FLOW PROCESS FROM NODE 206.00 TO NODE 207.00 IS CODE = 21
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
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ASSUMED INITIAL SUBAREA UNIFORM
DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
```

INITIAL SUBAREA FLOW-LENGTH(FEET) = 63.00
 UPSTREAM ELEVATION(FEET) = 1329.80
 DOWNSTREAM ELEVATION(FEET) = 1329.00
 ELEVATION DIFFERENCE(FEET) = 0.80
 $TC = 0.303 * [(63.00^3) / (0.80)]^{0.2} = 3.807$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.26
 TOTAL AREA(ACRES) = 0.07 TOTAL RUNOFF(CFS) = 0.26

FLOW PROCESS FROM NODE 208.00 TO NODE 209.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH^3) / (ELEVATION CHANGE)]^{0.2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 34.00
 UPSTREAM ELEVATION(FEET) = 1329.80
 DOWNSTREAM ELEVATION(FEET) = 1329.64
 ELEVATION DIFFERENCE(FEET) = 0.16
 $TC = 0.303 * [(34.00^3) / (0.16)]^{0.2} = 3.628$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.11
 TOTAL AREA(ACRES) = 0.03 TOTAL RUNOFF(CFS) = 0.11

FLOW PROCESS FROM NODE 210.00 TO NODE 211.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH^3) / (ELEVATION CHANGE)]^{0.2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1327.94
 DOWNSTREAM ELEVATION(FEET) = 1327.27
 ELEVATION DIFFERENCE(FEET) = 0.67
 $TC = 0.303 * [(100.00^3) / (0.67)]^{0.2} = 5.205$
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.041
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8884
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.36
 TOTAL AREA(ACRES) = 0.10 TOTAL RUNOFF(CFS) = 0.36

FLOW PROCESS FROM NODE 211.00 TO NODE 212.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1327.27 DOWNSTREAM(FEET) = 1324.89
 CHANNEL LENGTH THRU SUBAREA(FEET) = 211.00 CHANNEL SLOPE = 0.0113
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.342
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8863

SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.61
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.15
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 3.06
 Tc(MIN.) = 8.26
 SUBAREA AREA(ACRES) = 0.17 SUBAREA RUNOFF(CFS) = 0.50
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.86

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.08 FLOW VELOCITY(FEET/SEC.) = 1.33
 LONGEST FLOWPATH FROM NODE 210.00 TO NODE 212.00 = 311.00 FEET.

 FLOW PROCESS FROM NODE 212.00 TO NODE 212.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.342
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8863
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.17 SUBAREA RUNOFF(CFS) = 0.50
 TOTAL AREA(ACRES) = 0.4 TOTAL RUNOFF(CFS) = 1.37
 TC(MIN.) = 8.26

 FLOW PROCESS FROM NODE 163.00 TO NODE 164.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH^{**3}) / (ELEVATION CHANGE)]^{**0.2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.69
 DOWNSTREAM ELEVATION(FEET) = 1329.41
 ELEVATION DIFFERENCE(FEET) = 1.28
 $TC = 0.303 * [(100.00^{**3}) / (1.28)]^{**0.2} = 4.572$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.33
 TOTAL AREA(ACRES) = 0.09 TOTAL RUNOFF(CFS) = 0.33

 FLOW PROCESS FROM NODE 164.00 TO NODE 165.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1329.41 DOWNSTREAM(FEET) = 1327.48
 CHANNEL LENGTH THRU SUBAREA(FEET) = 184.00 CHANNEL SLOPE = 0.0105
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.461
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8867
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.63
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.19
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 2.59
 Tc(MIN.) = 7.59
 SUBAREA AREA(ACRES) = 0.20 SUBAREA RUNOFF(CFS) = 0.61
 TOTAL AREA(ACRES) = 0.3 PEAK FLOW RATE(CFS) = 0.94

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.09 FLOW VELOCITY(FEET/SEC.) = 1.26
 LONGEST FLOWPATH FROM NODE 163.00 TO NODE 165.00 = 284.00 FEET.

FLOW PROCESS FROM NODE 165.00 TO NODE 165.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.461
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8867
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.20 SUBAREA RUNOFF(CFS) = 0.61
 TOTAL AREA(ACRES) = 0.5 TOTAL RUNOFF(CFS) = 1.56
 TC(MIN.) = 7.59

FLOW PROCESS FROM NODE 166.00 TO NODE 167.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.29
 DOWNSTREAM ELEVATION(FEET) = 1329.36
 ELEVATION DIFFERENCE(FEET) = 0.93
 $TC = 0.303 * [(100.00**3)/(0.93)]**.2 = 4.874$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.29
 TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.29

FLOW PROCESS FROM NODE 167.00 TO NODE 168.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1329.36 DOWNSTREAM(FEET) = 1327.20
 CHANNEL LENGTH THRU SUBAREA(FEET) = 234.00 CHANNEL SLOPE = 0.0092
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.333
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8863
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.76
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.18
 AVERAGE FLOW DEPTH(FEET) = 0.08 TRAVEL TIME(MIN.) = 3.32
 Tc(MIN.) = 8.32
 SUBAREA AREA(ACRES) = 0.32 SUBAREA RUNOFF(CFS) = 0.95
 TOTAL AREA(ACRES) = 0.4 PEAK FLOW RATE(CFS) = 1.24

END OF SUBAREA CHANNEL FLOW HYDRAULICS:

DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 1.35
 LONGEST FLOWPATH FROM NODE 166.00 TO NODE 168.00 = 334.00 FEET.

FLOW PROCESS FROM NODE 168.00 TO NODE 168.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.333
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8863
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.32 SUBAREA RUNOFF(CFS) = 0.95
 TOTAL AREA(ACRES) = 0.7 TOTAL RUNOFF(CFS) = 2.18
 TC(MIN.) = 8.32

FLOW PROCESS FROM NODE 169.00 TO NODE 170.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.40
 DOWNSTREAM ELEVATION(FEET) = 1329.14
 ELEVATION DIFFERENCE(FEET) = 1.26
 $TC = 0.303 * [(100.00**3)/(1.26)]**.2 = 4.587$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.37
 TOTAL AREA(ACRES) = 0.10 TOTAL RUNOFF(CFS) = 0.37

FLOW PROCESS FROM NODE 170.00 TO NODE 171.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1329.14 DOWNSTREAM(FEET) = 1327.26
 CHANNEL LENGTH THRU SUBAREA(FEET) = 236.00 CHANNEL SLOPE = 0.0080
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.294
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8862
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.82
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.10
 AVERAGE FLOW DEPTH(FEET) = 0.09 TRAVEL TIME(MIN.) = 3.56
 Tc(MIN.) = 8.56
 SUBAREA AREA(ACRES) = 0.31 SUBAREA RUNOFF(CFS) = 0.90
 TOTAL AREA(ACRES) = 0.4 PEAK FLOW RATE(CFS) = 1.27

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.10 FLOW VELOCITY(FEET/SEC.) = 1.23
 LONGEST FLOWPATH FROM NODE 169.00 TO NODE 171.00 = 336.00 FEET.

FLOW PROCESS FROM NODE 171.00 TO NODE 171.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.294
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8862
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.31 SUBAREA RUNOFF(CFS) = 0.90

TOTAL AREA(ACRES) = 0.7 TOTAL RUNOFF(CFS) = 2.17
 TC(MIN.) = 8.56

FLOW PROCESS FROM NODE 172.00 TO NODE 173.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL

TC = $K * [(LENGTH^{**3}) / (ELEVATION\ CHANGE)]^{**0.2}$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1332.49
 DOWNSTREAM ELEVATION(FEET) = 1330.00
 ELEVATION DIFFERENCE(FEET) = 2.49
 $TC = 0.303 * [(100.00^{**3}) / (2.49)]^{**0.2} = 4.003$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.26
 TOTAL AREA(ACRES) = 0.07 TOTAL RUNOFF(CFS) = 0.26

FLOW PROCESS FROM NODE 173.00 TO NODE 174.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.00 DOWNSTREAM(FEET) = 1329.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 113.00 CHANNEL SLOPE = 0.0088
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.580
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8871
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.38
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.95
 AVERAGE FLOW DEPTH(FEET) = 0.06 TRAVEL TIME(MIN.) = 1.99
 Tc(MIN.) = 6.99
 SUBAREA AREA(ACRES) = 0.08 SUBAREA RUNOFF(CFS) = 0.25
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.51

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.07 FLOW VELOCITY(FEET/SEC.) = 1.01
 LONGEST FLOWPATH FROM NODE 172.00 TO NODE 174.00 = 213.00 FEET.

FLOW PROCESS FROM NODE 174.00 TO NODE 174.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.580
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8871
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.08 SUBAREA RUNOFF(CFS) = 0.25
 TOTAL AREA(ACRES) = 0.2 TOTAL RUNOFF(CFS) = 0.76
 TC(MIN.) = 6.99

FLOW PROCESS FROM NODE 175.00 TO NODE 176.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<


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      ASSUMED INITIAL SUBAREA UNIFORM
      DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1331.90
DOWNSTREAM ELEVATION(FEET) = 1327.55
ELEVATION DIFFERENCE(FEET) = 4.35
TC = 0.303*[( 100.00**3)/( 4.35)]**.2 = 3.580
COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
SOIL CLASSIFICATION IS "C"
SUBAREA RUNOFF(CFS) = 0.29
TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.29

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FLOW PROCESS FROM NODE 176.00 TO NODE 177.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
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ELEVATION DATA: UPSTREAM(FEET) = 1329.24 DOWNSTREAM(FEET) = 1328.60
CHANNEL LENGTH THRU SUBAREA(FEET) = 224.00 CHANNEL SLOPE = 0.0029
CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 0.50
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.081
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8854
SOIL CLASSIFICATION IS "C"
TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.79
TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.74
AVERAGE FLOW DEPTH(FEET) = 0.10 TRAVEL TIME(MIN.) = 5.07
Tc(MIN.) = 10.07
SUBAREA AREA(ACRES) = 0.36 SUBAREA RUNOFF(CFS) = 0.98
TOTAL AREA(ACRES) = 0.4 PEAK FLOW RATE(CFS) = 1.27

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END OF SUBAREA CHANNEL FLOW HYDRAULICS:
DEPTH(FEET) = 0.12 FLOW VELOCITY(FEET/SEC.) = 0.82
LONGEST FLOWPATH FROM NODE 175.00 TO NODE 177.00 = 324.00 FEET.

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*****
FLOW PROCESS FROM NODE 177.00 TO NODE 177.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
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 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.081
COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8854
SOIL CLASSIFICATION IS "C"
SUBAREA AREA(ACRES) = 0.36 SUBAREA RUNOFF(CFS) = 0.98
TOTAL AREA(ACRES) = 0.8 TOTAL RUNOFF(CFS) = 2.26
TC(MIN.) = 10.07

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*****
FLOW PROCESS FROM NODE 178.00 TO NODE 179.00 IS CODE = 21
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>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
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      ASSUMED INITIAL SUBAREA UNIFORM
      DEVELOPMENT IS COMMERCIAL
TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
UPSTREAM ELEVATION(FEET) = 1329.17
DOWNSTREAM ELEVATION(FEET) = 1328.61

```

ELEVATION DIFFERENCE(FEET) = 0.56
 TC = 0.303*[(100.00**3)/(0.56)]**.2 = 5.394
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.982
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8882
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.28
 TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.28

FLOW PROCESS FROM NODE 179.00 TO NODE 180.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1328.61 DOWNSTREAM(FEET) = 1327.91
 CHANNEL LENGTH THRU SUBAREA(FEET) = 31.00 CHANNEL SLOPE = 0.0226
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 0.50
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.874
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8879
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.35
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.39
 AVERAGE FLOW DEPTH(FEET) = 0.05 TRAVEL TIME(MIN.) = 0.37
 Tc(MIN.) = 5.77
 SUBAREA AREA(ACRES) = 0.04 SUBAREA RUNOFF(CFS) = 0.14
 TOTAL AREA(ACRES) = 0.1 PEAK FLOW RATE(CFS) = 0.42

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.06 FLOW VELOCITY(FEET/SEC.) = 1.34
 LONGEST FLOWPATH FROM NODE 178.00 TO NODE 180.00 = 131.00 FEET.

FLOW PROCESS FROM NODE 180.00 TO NODE 180.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.874
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8879
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.04 SUBAREA RUNOFF(CFS) = 0.14
 TOTAL AREA(ACRES) = 0.2 TOTAL RUNOFF(CFS) = 0.56
 TC(MIN.) = 5.77

FLOW PROCESS FROM NODE 181.00 TO NODE 182.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1331.91
 DOWNSTREAM ELEVATION(FEET) = 1330.85
 ELEVATION DIFFERENCE(FEET) = 1.06
 TC = 0.303*[(100.00**3)/(1.06)]**.2 = 4.748
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.18
 TOTAL AREA(ACRES) = 0.05 TOTAL RUNOFF(CFS) = 0.18

FLOW PROCESS FROM NODE 182.00 TO NODE 183.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1330.85 DOWNSTREAM(FEET) = 1327.44
 CHANNEL LENGTH THRU SUBAREA(FEET) = 313.00 CHANNEL SLOPE = 0.0109
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.136
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8856
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.70
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.12
 AVERAGE FLOW DEPTH(FEET) = 0.08 TRAVEL TIME(MIN.) = 4.65
 Tc(MIN.) = 9.65
 SUBAREA AREA(ACRES) = 0.36 SUBAREA RUNOFF(CFS) = 1.00
 TOTAL AREA(ACRES) = 0.4 PEAK FLOW RATE(CFS) = 1.18

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.09 FLOW VELOCITY(FEET/SEC.) = 1.34
 LONGEST FLOWPATH FROM NODE 181.00 TO NODE 183.00 = 413.00 FEET.

FLOW PROCESS FROM NODE 183.00 TO NODE 183.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.136
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8856
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.36 SUBAREA RUNOFF(CFS) = 1.00
 TOTAL AREA(ACRES) = 0.8 TOTAL RUNOFF(CFS) = 2.18
 TC(MIN.) = 9.65

FLOW PROCESS FROM NODE 184.00 TO NODE 185.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1327.20
 DOWNSTREAM ELEVATION(FEET) = 1326.43
 ELEVATION DIFFERENCE(FEET) = 0.77
 $TC = 0.303 * [(100.00**3)/(0.77)]**.2 = 5.062$
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.087
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.25
 TOTAL AREA(ACRES) = 0.07 TOTAL RUNOFF(CFS) = 0.25

FLOW PROCESS FROM NODE 185.00 TO NODE 186.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1326.43 DOWNSTREAM(FEET) = 1326.05

CHANNEL LENGTH THRU SUBAREA(FEET) = 77.00 CHANNEL SLOPE = 0.0049
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.629
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8873
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.38
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 0.76
 AVERAGE FLOW DEPTH(FEET) = 0.07 TRAVEL TIME(MIN.) = 1.70
 Tc(MIN.) = 6.76
 SUBAREA AREA(ACRES) = 0.08 SUBAREA RUNOFF(CFS) = 0.26
 TOTAL AREA(ACRES) = 0.2 PEAK FLOW RATE(CFS) = 0.51

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.08 FLOW VELOCITY(FEET/SEC.) = 0.83
 LONGEST FLOWPATH FROM NODE 184.00 TO NODE 186.00 = 177.00 FEET.

 FLOW PROCESS FROM NODE 186.00 TO NODE 186.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.629
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8873
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.08 SUBAREA RUNOFF(CFS) = 0.26
 TOTAL AREA(ACRES) = 0.2 TOTAL RUNOFF(CFS) = 0.77
 TC(MIN.) = 6.76

 FLOW PROCESS FROM NODE 187.00 TO NODE 188.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS: UNDEVELOPED WITH GOOD COVER
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 42.00
 UPSTREAM ELEVATION(FEET) = 1330.08
 DOWNSTREAM ELEVATION(FEET) = 1324.00
 ELEVATION DIFFERENCE(FEET) = 6.08
 $TC = 0.937 * [(42.00**3)/(6.08)]**.2 = 6.153$
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 3.772
 UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7767
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 2.81
 TOTAL AREA(ACRES) = 0.96 TOTAL RUNOFF(CFS) = 2.81

 FLOW PROCESS FROM NODE 189.00 TO NODE 190.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 100.00
 UPSTREAM ELEVATION(FEET) = 1330.35
 DOWNSTREAM ELEVATION(FEET) = 1329.43
 ELEVATION DIFFERENCE(FEET) = 0.92
 $TC = 0.303 * [(100.00**3)/(0.92)]**.2 = 4.885$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108

COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 0.29
 TOTAL AREA(ACRES) = 0.08 TOTAL RUNOFF(CFS) = 0.29

FLOW PROCESS FROM NODE 190.00 TO NODE 191.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

=====

ELEVATION DATA: UPSTREAM(FEET) = 1329.43 DOWNSTREAM(FEET) = 1324.91
 CHANNEL LENGTH THRU SUBAREA(FEET) = 768.00 CHANNEL SLOPE = 0.0059
 CHANNEL BASE(FEET) = 0.00 "Z" FACTOR = 99.000
 MANNING'S FACTOR = 0.015 MAXIMUM DEPTH(FEET) = 1.00
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.480
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) = 0.97
 TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) = 1.06
 AVERAGE FLOW DEPTH(FEET) = 0.10 TRAVEL TIME(MIN.) = 12.07
 Tc(MIN.) = 17.07
 SUBAREA AREA(ACRES) = 0.61 SUBAREA RUNOFF(CFS) = 1.34
 TOTAL AREA(ACRES) = 0.7 PEAK FLOW RATE(CFS) = 1.63

END OF SUBAREA CHANNEL FLOW HYDRAULICS:
 DEPTH(FEET) = 0.12 FLOW VELOCITY(FEET/SEC.) = 1.16
 LONGEST FLOWPATH FROM NODE 189.00 TO NODE 191.00 = 868.00 FEET.

FLOW PROCESS FROM NODE 191.00 TO NODE 191.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

=====

100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.480
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8825
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) = 0.61 SUBAREA RUNOFF(CFS) = 1.34
 TOTAL AREA(ACRES) = 1.3 TOTAL RUNOFF(CFS) = 2.96
 TC(MIN.) = 17.07

FLOW PROCESS FROM NODE 192.00 TO NODE 193.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<

=====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 $TC = K * [(LENGTH**3)/(ELEVATION CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 234.00
 UPSTREAM ELEVATION(FEET) = 1329.21
 DOWNSTREAM ELEVATION(FEET) = 1311.71
 ELEVATION DIFFERENCE(FEET) = 17.50
 $TC = 0.303 * [(234.00**3)/(17.50)]**.2 = 4.513$
 COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 4.108
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 3.47
 TOTAL AREA(ACRES) = 0.95 TOTAL RUNOFF(CFS) = 3.47

FLOW PROCESS FROM NODE 204.00 TO NODE 205.00 IS CODE = 21

 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 =====

ASSUMED INITIAL SUBAREA UNIFORM
 DEVELOPMENT IS COMMERCIAL
 TC = $K * [(LENGTH**3)/(ELEVATION\ CHANGE)]**.2$
 INITIAL SUBAREA FLOW-LENGTH(FEET) = 920.00
 UPSTREAM ELEVATION(FEET) = 1326.00
 DOWNSTREAM ELEVATION(FEET) = 1317.63
 ELEVATION DIFFERENCE(FEET) = 8.37
 TC = $0.303 * [(920.00**3)/(8.37)]**.2 = 11.894$
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) = 2.878
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8845
 SOIL CLASSIFICATION IS "C"
 SUBAREA RUNOFF(CFS) = 1.30
 TOTAL AREA(ACRES) = 0.51 TOTAL RUNOFF(CFS) = 1.30
 =====

END OF STUDY SUMMARY:
 TOTAL AREA(ACRES) = 0.5 TC(MIN.) = 11.89
 PEAK FLOW RATE(CFS) = 1.30
 =====

END OF RATIONAL METHOD ANALYSIS
 =====

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APPENDIX D: UNIT HYDROGRAPH CALCULATIONS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* Inland Valley Existing Conditions *
* Area B, unit Hydrograph *
* 10-year, 1-hour *

FILE NAME: E_B.DAT
TIME/DATE OF STUDY: 06:22 09/10/2020

FLOW PROCESS FROM NODE 30.00 TO NODE 48.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 12.240 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.150 HOURS
 CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
 THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
 MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.170
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 0.89 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
RCFC&WCD DEPTH-AREA ADJUSTMENT FACTOR(PLATE E-5.8) = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 55.556

===== UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	7.039	10.420
2	37.811	45.551
3	65.637	41.190
4	77.088	16.951
5	83.494	9.483
6	87.755	6.308
7	90.831	4.553
8	93.134	3.409
9	94.948	2.684
10	96.378	2.118
11	97.463	1.606
12	98.200	1.092
13	98.599	0.590
14	98.998	0.590
15	99.385	0.573
16	99.754	0.546
17	99.938	0.273
18	100.000	0.091

TOTAL STORM RAINFALL(INCHES) = 0.89
TOTAL SOIL-LOSS(INCHES) = 0.17
TOTAL EFFECTIVE RAINFALL(INCHES) = 0.72

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.1734
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.7340

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1 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	5.0	10.0	15.0	20.0
0.083	0.0022	0.32	Q	.	.	.	.
0.167	0.0142	1.74	V Q	.	.	.	.
0.250	0.0357	3.13	.V Q	.	.	.	.
0.333	0.0626	3.90	. V Q	.	.	.	.
0.417	0.0939	4.55	. V Q.	.	.	.	.
0.500	0.1295	5.17	. V Q	.	.	.	.
0.583	0.1702	5.91	. V.Q	.	.	.	.
0.667	0.2176	6.88	. .V Q	.	.	.	.
0.750	0.2736	8.13	. . V Q	.	.	.	.
0.833	0.3501	11.11	. . V. Q	.	.	.	.
0.917	0.4563	15.41	. . V Q	.	.	.	.
1.000	0.5501	13.62	. . Q V.	.	.	.	.
1.083	0.6117	8.95	. . Q .	.	.	V	.
1.167	0.6498	5.53	. .Q	.	.	.	V
1.250	0.6728	3.34	. Q	.	.	.	V
1.333	0.6889	2.33	. Q	.	.	.	V
1.417	0.7008	1.72	. Q	.	.	.	V
1.500	0.7098	1.31	. Q	.	.	.	V
1.583	0.7167	1.00	.Q	.	.	.	V.
1.667	0.7218	0.74	.Q	.	.	.	V.
1.750	0.7254	0.53	.Q	.	.	.	V.

E_B101.RES

1.833	0.7280	0.36	Q	.	.	.	V.
1.917	0.7299	0.29	Q	.	.	.	V.
2.000	0.7315	0.23	Q	.	.	.	V.
2.083	0.7328	0.18	Q	.	.	.	V.
2.167	0.7336	0.11	Q	.	.	.	V.
2.250	0.7339	0.05	Q	.	.	.	V.
2.333	0.7340	0.01	Q	.	.	.	V.
2.417	0.7340	0.00	Q	.	.	.	V

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	145.0
10%	80.0
20%	65.0
30%	45.0
40%	30.0
50%	25.0
60%	15.0
70%	15.0
80%	10.0
90%	5.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* Inland Valley Existing Conditions *
* Area B, unit Hydrograph *
* 10-year, 24-hour *

FILE NAME: E_B.DAT
TIME/DATE OF STUDY: 06:23 09/10/2020

FLOW PROCESS FROM NODE 30.00 TO NODE 48.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 12.240 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.150 HOURS
 CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
 THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
 MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.170
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.080
USER-ENTERED RAINFALL = 3.95 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
RCFC&WCD DEPTH-AREA ADJUSTMENT FACTOR(PLATE E-5.8) = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 166.667

=====

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
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1	36.829	18.172
2	82.779	22.673
3	92.971	5.029
4	97.347	2.159
5	98.994	0.812
6	99.522	0.261
7	99.809	0.141
8	99.952	0.071
9	100.000	0.024

TOTAL STORM RAINFALL(INCHES) = 3.95
 TOTAL SOIL-LOSS(INCHES) = 1.72
 TOTAL EFFECTIVE RAINFALL(INCHES) = 2.23

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1.7556
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 2.2722

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2 4 - 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 FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0005	0.07	Q	.	.	.	.
0.167	0.0010	0.07	Q	.	.	.	.
0.250	0.0015	0.07	Q	.	.	.	.
0.333	0.0028	0.20	Q	.	.	.	.
0.417	0.0042	0.20	Q	.	.	.	.
0.500	0.0056	0.20	Q	.	.	.	.
0.583	0.0074	0.26	VQ	.	.	.	.
0.667	0.0092	0.26	VQ	.	.	.	.
0.750	0.0110	0.26	VQ	.	.	.	.
0.833	0.0131	0.32	VQ	.	.	.	.
0.917	0.0153	0.32	VQ	.	.	.	.
1.000	0.0175	0.32	VQ	.	.	.	.
1.083	0.0198	0.33	VQ	.	.	.	.
1.167	0.0221	0.33	VQ	.	.	.	.
1.250	0.0244	0.33	VQ	.	.	.	.
1.333	0.0264	0.30	VQ	.	.	.	.
1.417	0.0285	0.30	VQ	.	.	.	.
1.500	0.0306	0.30	VQ	.	.	.	.
1.583	0.0326	0.30	VQ	.	.	.	.
1.667	0.0347	0.30	VQ	.	.	.	.
1.750	0.0367	0.30	VQ	.	.	.	.
1.833	0.0390	0.33	VQ	.	.	.	.
1.917	0.0412	0.33	VQ	.	.	.	.
2.000	0.0435	0.33	VQ	.	.	.	.
2.083	0.0461	0.37	VQ	.	.	.	.
2.167	0.0486	0.37	VQ	.	.	.	.
2.250	0.0512	0.37	VQ	.	.	.	.
2.333	0.0539	0.38	VQ	.	.	.	.
2.417	0.0565	0.38	VQ	.	.	.	.
2.500	0.0591	0.38	Q	.	.	.	.

2.583	0.0620	0.42	.Q	.	.	.	.
2.667	0.0650	0.42	.Q	.	.	.	.
2.750	0.0679	0.42	.Q	.	.	.	.
2.833	0.0711	0.47	.Q	.	.	.	.
2.917	0.0743	0.47	.Q	.	.	.	.
3.000	0.0776	0.47	.Q	.	.	.	.
3.083	0.0809	0.48	.Q	.	.	.	.
3.167	0.0842	0.48	.Q	.	.	.	.
3.250	0.0875	0.48	.Q	.	.	.	.
3.333	0.0908	0.48	.Q	.	.	.	.
3.417	0.0942	0.48	.Q	.	.	.	.
3.500	0.0975	0.48	.Q	.	.	.	.
3.583	0.1009	0.49	.Q	.	.	.	.
3.667	0.1042	0.49	.Q	.	.	.	.
3.750	0.1076	0.49	.Q	.	.	.	.
3.833	0.1112	0.52	.VQ	.	.	.	.
3.917	0.1148	0.52	. Q	.	.	.	.
4.000	0.1184	0.52	. Q	.	.	.	.
4.083	0.1223	0.57	. Q	.	.	.	.
4.167	0.1262	0.57	. Q	.	.	.	.
4.250	0.1301	0.57	. Q	.	.	.	.
4.333	0.1343	0.61	. Q	.	.	.	.
4.417	0.1385	0.61	. Q	.	.	.	.
4.500	0.1428	0.61	. Q	.	.	.	.
4.583	0.1473	0.66	. Q	.	.	.	.
4.667	0.1519	0.66	. Q	.	.	.	.
4.750	0.1565	0.66	. Q	.	.	.	.
4.833	0.1613	0.71	. Q	.	.	.	.
4.917	0.1662	0.71	. Q	.	.	.	.
5.000	0.1711	0.71	. QV	.	.	.	.
5.083	0.1759	0.69	. QV	.	.	.	.
5.167	0.1806	0.69	. QV	.	.	.	.
5.250	0.1853	0.69	. QV	.	.	.	.
5.333	0.1898	0.65	. QV	.	.	.	.
5.417	0.1942	0.65	. QV	.	.	.	.
5.500	0.1987	0.65	. QV	.	.	.	.
5.583	0.2036	0.71	. QV	.	.	.	.
5.667	0.2085	0.71	. QV	.	.	.	.
5.750	0.2134	0.71	. QV	.	.	.	.
5.833	0.2186	0.76	. Q	.	.	.	.
5.917	0.2239	0.76	. Q	.	.	.	.
6.000	0.2291	0.76	. QV	.	.	.	.
6.083	0.2347	0.81	. QV	.	.	.	.
6.167	0.2402	0.81	. QV	.	.	.	.
6.250	0.2458	0.81	. QV	.	.	.	.
6.333	0.2517	0.86	. QV	.	.	.	.
6.417	0.2576	0.86	. QV	.	.	.	.
6.500	0.2635	0.86	. QV	.	.	.	.
6.583	0.2697	0.90	. QV	.	.	.	.
6.667	0.2760	0.90	. QV	.	.	.	.
6.750	0.2822	0.90	. QV	.	.	.	.
6.833	0.2888	0.95	. Q V	.	.	.	.
6.917	0.2953	0.95	. Q V	.	.	.	.
7.000	0.3019	0.95	. Q V	.	.	.	.
7.083	0.3086	0.97	. Q V	.	.	.	.
7.167	0.3152	0.97	. Q V	.	.	.	.
7.250	0.3219	0.97	. Q V	.	.	.	.
7.333	0.3288	1.01	. QV	.	.	.	.
7.417	0.3358	1.01	. QV	.	.	.	.
7.500	0.3427	1.01	. Q V	.	.	.	.
7.583	0.3502	1.09	. Q V	.	.	.	.
7.667	0.3577	1.09	. Q V	.	.	.	.
7.750	0.3652	1.09	. Q V	.	.	.	.

7.833	0.3734	1.18	.	Q V	.	.	.	.
7.917	0.3815	1.18	.	Q V	.	.	.	.
8.000	0.3896	1.18	.	Q V	.	.	.	.
8.083	0.3987	1.31	.	Q V	.	.	.	.
8.167	0.4077	1.31	.	Q V	.	.	.	.
8.250	0.4167	1.31	.	Q V	.	.	.	.
8.333	0.4265	1.42	.	Q V	.	.	.	.
8.417	0.4363	1.42	.	Q V	.	.	.	.
8.500	0.4460	1.42	.	Q V	.	.	.	.
8.583	0.4562	1.48	.	Q V	.	.	.	.
8.667	0.4664	1.48	.	Q V	.	.	.	.
8.750	0.4766	1.48	.	Q V	.	.	.	.
8.833	0.4874	1.57	.	Q V	.	.	.	.
8.917	0.4982	1.57	.	Q V	.	.	.	.
9.000	0.5091	1.57	.	Q V	.	.	.	.
9.083	0.5208	1.70	.	Q V	.	.	.	.
9.167	0.5325	1.70	.	Q V	.	.	.	.
9.250	0.5442	1.70	.	Q V	.	.	.	.
9.333	0.5569	1.84	.	Q V	.	.	.	.
9.417	0.5696	1.84	.	Q V	.	.	.	.
9.500	0.5823	1.84	.	Q V	.	.	.	.
9.583	0.5958	1.95	.	Q V	.	.	.	.
9.667	0.6092	1.95	.	Q V	.	.	.	.
9.750	0.6226	1.95	.	Q V	.	.	.	.
9.833	0.6368	2.05	.	Q .V	.	.	.	.
9.917	0.6509	2.05	.	Q .V	.	.	.	.
10.000	0.6650	2.05	.	Q .V	.	.	.	.
10.083	0.6779	1.86	.	Q .V	.	.	.	.
10.167	0.6907	1.86	.	Q . V	.	.	.	.
10.250	0.7035	1.86	.	Q . V	.	.	.	.
10.333	0.7143	1.57	.	Q . V	.	.	.	.
10.417	0.7251	1.57	.	Q . V	.	.	.	.
10.500	0.7359	1.57	.	Q . V	.	.	.	.
10.583	0.7475	1.68	.	Q . V	.	.	.	.
10.667	0.7591	1.68	.	Q . V	.	.	.	.
10.750	0.7707	1.68	.	Q . V	.	.	.	.
10.833	0.7837	1.88	.	Q . V	.	.	.	.
10.917	0.7966	1.88	.	Q . V	.	.	.	.
11.000	0.8096	1.88	.	Q . V	.	.	.	.
11.083	0.8226	1.89	.	Q . V	.	.	.	.
11.167	0.8356	1.89	.	Q . V	.	.	.	.
11.250	0.8485	1.89	.	Q . V	.	.	.	.
11.333	0.8613	1.86	.	Q . V	.	.	.	.
11.417	0.8741	1.86	.	Q . V	.	.	.	.
11.500	0.8869	1.86	.	Q . V	.	.	.	.
11.583	0.8992	1.78	.	Q . V	.	.	.	.
11.667	0.9115	1.78	.	Q . V	.	.	.	.
11.750	0.9238	1.78	.	Q . V	.	.	.	.
11.833	0.9357	1.73	.	Q . V	.	.	.	.
11.917	0.9476	1.73	.	Q . V	.	.	.	.
12.000	0.9595	1.73	.	Q . V	.	.	.	.
12.083	0.9745	2.19	.	Q . V	.	.	.	.
12.167	0.9896	2.19	.	Q . V	.	.	.	.
12.250	1.0046	2.19	.	Q . V	.	.	.	.
12.333	1.0240	2.81	.	.Q V	.	.	.	.
12.417	1.0433	2.81	.	.Q V	.	.	.	.
12.500	1.0627	2.81	.	.Q V	.	.	.	.
12.583	1.0847	3.19	.	. Q V	.	.	.	.
12.667	1.1067	3.19	.	. Q V	.	.	.	.
12.750	1.1287	3.19	.	. Q V
12.833	1.1531	3.54	.	. Q V
12.917	1.1775	3.54	.	. Q V
13.000	1.2019	3.54	.	. Q V

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13.083	1.2300	4.09	.	.	Q	.V	.	.
13.167	1.2582	4.09	.	.	Q	.V	.	.
13.250	1.2863	4.09	.	.	Q	.V	.	.
13.333	1.3181	4.61	.	.	Q	.V	.	.
13.417	1.3498	4.61	.	.	Q	.V	.	.
13.500	1.3816	4.61	.	.	Q	.V	.	.
13.583	1.4090	3.97	.	.	Q	.V	.	.
13.667	1.4363	3.97	.	.	Q	.V	.	.
13.750	1.4636	3.97	.	.	Q	.V	.	.
13.833	1.4847	3.06	.	.Q	.	.V	.	.
13.917	1.5058	3.06	.	.Q	.	.V	.	.
14.000	1.5270	3.06	.	.Q	.	.V	.	.
14.083	1.5489	3.18	.	.Q	.	.V	.	.
14.167	1.5708	3.18	.	.Q	.	.V	.	.
14.250	1.5927	3.18	.	.Q	.	.V	.	.
14.333	1.6161	3.41	.	.Q	.	.V	.	.
14.417	1.6396	3.41	.	.Q	.	.V	.	.
14.500	1.6631	3.41	.	.Q	.	.V	.	.
14.583	1.6864	3.39	.	.Q	.	.V	.	.
14.667	1.7098	3.39	.	.Q	.	.V	.	.
14.750	1.7332	3.39	.	.Q	.	.V	.	.
14.833	1.7563	3.35	.	.Q	.	.V	.	.
14.917	1.7794	3.35	.	.Q	.	.V	.	.
15.000	1.8025	3.35	.	.Q	.	.V	.	.
15.083	1.8246	3.22	.	.Q	.	.V	.	.
15.167	1.8468	3.22	.	.Q	.	.V	.	.
15.250	1.8690	3.22	.	.Q	.	.V	.	.
15.333	1.8900	3.06	.	.Q	.	.V	.	.
15.417	1.9111	3.06	.	.Q	.	.V	.	.
15.500	1.9322	3.06	.	.Q	.	.V	.	.
15.583	1.9507	2.68	.	.Q	.	.V	.	.
15.667	1.9692	2.68	.	.Q	.	.V	.	.
15.750	1.9876	2.68	.	.Q	.	.V	.	.
15.833	2.0036	2.32	.	.Q	.	.V	.	.
15.917	2.0196	2.32	.	.Q	.	.V	.	.
16.000	2.0355	2.32	.	.Q	.	.V	.	.
16.083	2.0464	1.58	.	.Q	.	.V	.	.
16.167	2.0573	1.58	.	.Q	.	.V	.	.
16.250	2.0682	1.58	.	.Q	.	.V	.	.
16.333	2.0732	0.72	.Q	.	.	.V	.	.
16.417	2.0781	0.72	.Q	.	.	.V	.	.
16.500	2.0831	0.72	.Q	.	.	.V	.	.
16.583	2.0865	0.49	.Q	.	.	.V	.	.
16.667	2.0898	0.49	.Q	.	.	.V	.	.
16.750	2.0932	0.49	.Q	.	.	.V	.	.
16.833	2.0957	0.36	.Q	.	.	.V	.	.
16.917	2.0982	0.36	.Q	.	.	.V	.	.
17.000	2.1006	0.36	.Q	.	.	.V	.	.
17.083	2.1033	0.39	.Q	.	.	.V	.	.
17.167	2.1060	0.39	.Q	.	.	.V	.	.
17.250	2.1087	0.39	.Q	.	.	.V	.	.
17.333	2.1119	0.47	.Q	.	.	.V	.	.
17.417	2.1151	0.47	.Q	.	.	.V	.	.
17.500	2.1183	0.47	.Q	.	.	.V	.	.
17.583	2.1216	0.48	.Q	.	.	.V	.	.
17.667	2.1249	0.48	.Q	.	.	.V	.	.
17.750	2.1282	0.48	.Q	.	.	.V	.	.
17.833	2.1313	0.45	.Q	.	.	.V	.	.
17.917	2.1344	0.45	.Q	.	.	.V	.	.
18.000	2.1374	0.45	.Q	.	.	.V	.	.
18.083	2.1402	0.40	.Q	.	.	.V	.	.
18.167	2.1430	0.40	.Q	.	.	.V	.	.
18.250	2.1458	0.40	.Q	.	.	.V	.	.

18.333	2.1485	0.40	.Q	.	.	.	V	.
18.417	2.1512	0.40	.Q	.	.	.	V	.
18.500	2.1540	0.40	.Q	.	.	.	V	.
18.583	2.1564	0.36	.Q	.	.	.	V	.
18.667	2.1589	0.36	.Q	.	.	.	V	.
18.750	2.1613	0.36	.Q	.	.	.	V	.
18.833	2.1632	0.27	.Q	.	.	.	V	.
18.917	2.1651	0.27	.Q	.	.	.	V	.
19.000	2.1670	0.27	.Q	.	.	.	V	.
19.083	2.1688	0.25	.Q	.	.	.	V	.
19.167	2.1705	0.25	.Q	.	.	.	V	.
19.250	2.1723	0.25	.Q	.	.	.	V	.
19.333	2.1745	0.32	.Q	.	.	.	V	.
19.417	2.1767	0.32	.Q	.	.	.	V	.
19.500	2.1789	0.32	.Q	.	.	.	V	.
19.583	2.1812	0.33	.Q	.	.	.	V	.
19.667	2.1835	0.33	.Q	.	.	.	V	.
19.750	2.1858	0.33	.Q	.	.	.	V	.
19.833	2.1876	0.27	.Q	.	.	.	V	.
19.917	2.1894	0.27	.Q	.	.	.	V	.
20.000	2.1913	0.27	.Q	.	.	.	V	.
20.083	2.1930	0.25	.Q	.	.	.	V	.
20.167	2.1947	0.25	.Q	.	.	.	V	.
20.250	2.1965	0.25	.Q	.	.	.	V	.
20.333	2.1984	0.28	.Q	.	.	.	V	.
20.417	2.2004	0.28	.Q	.	.	.	V	.
20.500	2.2023	0.28	.Q	.	.	.	V	.
20.583	2.2043	0.29	.Q	.	.	.	V	.
20.667	2.2063	0.29	.Q	.	.	.	V	.
20.750	2.2083	0.29	.Q	.	.	.	V	.
20.833	2.2101	0.26	.Q	.	.	.	V	.
20.917	2.2118	0.26	.Q	.	.	.	V	.
21.000	2.2136	0.26	.Q	.	.	.	V	.
21.083	2.2153	0.25	Q	.	.	.	V	.
21.167	2.2170	0.25	Q	.	.	.	V	.
21.250	2.2187	0.25	Q	.	.	.	V	.
21.333	2.2204	0.25	Q	.	.	.	V	.
21.417	2.2221	0.25	Q	.	.	.	V	.
21.500	2.2238	0.25	Q	.	.	.	V	.
21.583	2.2254	0.24	Q	.	.	.	V	.
21.667	2.2271	0.24	Q	.	.	.	V	.
21.750	2.2288	0.24	Q	.	.	.	V	.
21.833	2.2305	0.24	Q	.	.	.	V	.
21.917	2.2322	0.24	Q	.	.	.	V	.
22.000	2.2338	0.24	Q	.	.	.	V	.
22.083	2.2355	0.24	Q	.	.	.	V	.
22.167	2.2372	0.24	Q	.	.	.	V	.
22.250	2.2389	0.24	Q	.	.	.	V	.
22.333	2.2405	0.24	Q	.	.	.	V	.
22.417	2.2422	0.24	Q	.	.	.	V	.
22.500	2.2439	0.24	Q	.	.	.	V	.
22.583	2.2453	0.21	Q	.	.	.	V	.
22.667	2.2468	0.21	Q	.	.	.	V	.
22.750	2.2482	0.21	Q	.	.	.	V	.
22.833	2.2496	0.20	Q	.	.	.	V	.
22.917	2.2509	0.20	Q	.	.	.	V	.
23.000	2.2523	0.20	Q	.	.	.	V	.
23.083	2.2537	0.20	Q	.	.	.	V	.
23.166	2.2550	0.20	Q	.	.	.	V	.
23.250	2.2564	0.20	Q	.	.	.	V	.
23.333	2.2577	0.20	Q	.	.	.	V	.
23.416	2.2591	0.20	Q	.	.	.	V	.
23.500	2.2604	0.20	Q	.	.	.	V	.

23.583	2.2618	0.20	Q	.	.	.	V.
23.666	2.2631	0.20	Q	.	.	.	V.
23.750	2.2645	0.20	Q	.	.	.	V.
23.833	2.2658	0.20	Q	.	.	.	V.
23.916	2.2671	0.20	Q	.	.	.	V.
24.000	2.2685	0.20	Q	.	.	.	V.
24.083	2.2693	0.12	Q	.	.	.	V.
24.166	2.2702	0.12	Q	.	.	.	V.
24.250	2.2710	0.12	Q	.	.	.	V.
24.333	2.2713	0.03	Q	.	.	.	V.
24.416	2.2715	0.03	Q	.	.	.	V.
24.500	2.2717	0.03	Q	.	.	.	V.
24.583	2.2718	0.01	Q	.	.	.	V.
24.666	2.2719	0.01	Q	.	.	.	V.
24.750	2.2720	0.01	Q	.	.	.	V.
24.833	2.2720	0.01	Q	.	.	.	V.
24.916	2.2721	0.01	Q	.	.	.	V.
25.000	2.2721	0.01	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1500.0
10%	870.0
20%	570.0
30%	480.0
40%	330.0
50%	225.0
60%	195.0
70%	105.0
80%	45.0
90%	15.0

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* Inland Valley Existing Conditions *
* Area B, unit Hydrograph *
* 100-year, 1-hour *

FILE NAME: E_B.DAT
TIME/DATE OF STUDY: 06:22 09/10/2020

FLOW PROCESS FROM NODE 30.00 TO NODE 48.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 12.240 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.150 HOURS
 CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
 THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
 MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.170
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 1.49 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
RCFC&WCD DEPTH-AREA ADJUSTMENT FACTOR(PLATE E-5.8) = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 55.556

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	7.039	10.420
2	37.811	45.551
3	65.637	41.190
4	77.088	16.951
5	83.494	9.483
6	87.755	6.308
7	90.831	4.553
8	93.134	3.409
9	94.948	2.684
10	96.378	2.118
11	97.463	1.606
12	98.200	1.092
13	98.599	0.590
14	98.998	0.590
15	99.385	0.573
16	99.754	0.546
17	99.938	0.273
18	100.000	0.091

TOTAL STORM RAINFALL(INCHES) = 1.49
 TOTAL SOIL-LOSS(INCHES) = 0.17
 TOTAL EFFECTIVE RAINFALL(INCHES) = 1.32

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.1734
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1.3457

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1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	7.5	15.0	22.5	30.0
0.083	0.0044	0.64	Q	.	.	.	.
0.167	0.0281	3.45	V Q	.	.	.	.
0.250	0.0706	6.17	. V	Q .	.	.	.
0.333	0.1230	7.61	. V	Q	.	.	.
0.417	0.1836	8.80	. V	.Q	.	.	.
0.500	0.2517	9.89	. V	. Q	.	.	.
0.583	0.3288	11.19	. V	Q	.	.	.
0.667	0.4171	12.83	. V	Q	.	.	.
0.750	0.5202	14.96	. V	Q.	.	.	.
0.833	0.6577	19.97	. V	V.	Q	.	.
0.917	0.8448	27.18	. V	.	V	.	Q
1.000	1.0114	24.19	. V	.	.	V Q	.
1.083	1.1236	16.28	. V	.	.Q	.	V
1.167	1.1933	10.13	. V	Q	.	.	V
1.250	1.2351	6.07	. V	Q	.	.	V
1.333	1.2642	4.22	. V	Q	.	.	V
1.417	1.2857	3.12	. V	Q	.	.	V
1.500	1.3020	2.37	. V	Q	.	.	V
1.583	1.3144	1.80	. V	Q	.	.	V
1.667	1.3236	1.34	. V	Q	.	.	V
1.750	1.3302	0.96	. V	Q	.	.	V

1.833	1.3348	0.66	Q	.	.	.	V.
1.917	1.3384	0.52	Q	.	.	.	V.
2.000	1.3412	0.42	Q	.	.	.	V.
2.083	1.3435	0.33	Q	.	.	.	V.
2.167	1.3448	0.20	Q	.	.	.	V.
2.250	1.3455	0.09	Q	.	.	.	V.
2.333	1.3457	0.03	Q	.	.	.	V.
2.417	1.3457	0.01	Q	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	145.0
10%	80.0
20%	65.0
30%	50.0
40%	35.0
50%	25.0
60%	15.0
70%	15.0
80%	10.0
90%	5.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* Inland Valley Existing Conditions *
* Area B, unit Hydrograph *
* 100-year, 24-hour *

FILE NAME: E_B.DAT
TIME/DATE OF STUDY: 06:25 09/10/2020

FLOW PROCESS FROM NODE 30.00 TO NODE 48.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 12.240 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.150 HOURS
 CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
 THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
 MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.170
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.080
USER-ENTERED RAINFALL = 6.32 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
RCFC&WCD DEPTH-AREA ADJUSTMENT FACTOR(PLATE E-5.8) = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 166.667

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	36.829	18.172
2	82.779	22.673
3	92.971	5.029
4	97.347	2.159
5	98.994	0.812
6	99.522	0.261
7	99.809	0.141
8	99.952	0.071
9	100.000	0.024

TOTAL STORM RAINFALL(INCHES) = 6.32
TOTAL SOIL-LOSS(INCHES) = 2.22
TOTAL EFFECTIVE RAINFALL(INCHES) = 4.10

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 2.2681
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 4.1760

↑
=====

2 4 - 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 FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0008	0.11	Q	.	.	.	.
0.167	0.0016	0.11	Q	.	.	.	.
0.250	0.0024	0.11	Q	.	.	.	.
0.333	0.0045	0.32	VQ	.	.	.	.
0.417	0.0067	0.32	VQ	.	.	.	.
0.500	0.0089	0.32	VQ	.	.	.	.
0.583	0.0118	0.42	VQ	.	.	.	.
0.667	0.0147	0.42	VQ	.	.	.	.
0.750	0.0175	0.42	VQ	.	.	.	.
0.833	0.0210	0.51	V Q	.	.	.	.
0.917	0.0245	0.51	V Q	.	.	.	.
1.000	0.0280	0.51	V Q	.	.	.	.
1.083	0.0317	0.53	V Q	.	.	.	.
1.167	0.0353	0.53	V Q	.	.	.	.
1.250	0.0390	0.53	V Q	.	.	.	.
1.333	0.0423	0.48	VQ	.	.	.	.
1.417	0.0456	0.48	VQ	.	.	.	.
1.500	0.0489	0.48	VQ	.	.	.	.
1.583	0.0522	0.47	VQ	.	.	.	.
1.667	0.0554	0.47	VQ	.	.	.	.
1.750	0.0587	0.47	VQ	.	.	.	.
1.833	0.0623	0.53	V Q	.	.	.	.
1.917	0.0660	0.53	V Q	.	.	.	.
2.000	0.0696	0.53	V Q	.	.	.	.
2.083	0.0737	0.60	V Q	.	.	.	.
2.167	0.0778	0.60	V Q	.	.	.	.
2.250	0.0819	0.60	V Q	.	.	.	.
2.333	0.0862	0.61	V Q	.	.	.	.
2.417	0.0904	0.61	V Q	.	.	.	.
2.500	0.0946	0.61	V Q	.	.	.	.

2.583	0.0993	0.68	V Q	.	.	.	.
2.667	0.1039	0.68	V Q	.	.	.	.
2.750	0.1086	0.68	VQ	.	.	.	.
2.833	0.1138	0.75	.V Q	.	.	.	.
2.917	0.1190	0.75	.V Q	.	.	.	.
3.000	0.1241	0.75	.V Q	.	.	.	.
3.083	0.1294	0.77	.V Q	.	.	.	.
3.167	0.1347	0.77	.V Q	.	.	.	.
3.250	0.1400	0.77	.V Q	.	.	.	.
3.333	0.1453	0.78	.V Q	.	.	.	.
3.417	0.1507	0.78	.V Q	.	.	.	.
3.500	0.1560	0.78	.V Q	.	.	.	.
3.583	0.1614	0.78	.V Q	.	.	.	.
3.667	0.1667	0.78	.V Q	.	.	.	.
3.750	0.1721	0.78	.V Q	.	.	.	.
3.833	0.1778	0.84	.V Q	.	.	.	.
3.917	0.1836	0.84	.V Q	.	.	.	.
4.000	0.1894	0.84	.V Q	.	.	.	.
4.083	0.1956	0.91	.V Q	.	.	.	.
4.167	0.2019	0.91	.V Q	.	.	.	.
4.250	0.2081	0.91	.V Q	.	.	.	.
4.333	0.2149	0.98	. VQ	.	.	.	.
4.417	0.2217	0.98	. VQ	.	.	.	.
4.500	0.2284	0.98	. VQ	.	.	.	.
4.583	0.2357	1.06	. V Q	.	.	.	.
4.667	0.2430	1.06	. V Q	.	.	.	.
4.750	0.2503	1.06	. V Q	.	.	.	.
4.833	0.2582	1.14	. V Q	.	.	.	.
4.917	0.2660	1.14	. V Q	.	.	.	.
5.000	0.2738	1.14	. V Q	.	.	.	.
5.083	0.2814	1.10	. V Q	.	.	.	.
5.167	0.2890	1.10	. V Q	.	.	.	.
5.250	0.2965	1.10	. V Q	.	.	.	.
5.333	0.3037	1.03	. V Q	.	.	.	.
5.417	0.3108	1.03	. V Q	.	.	.	.
5.500	0.3179	1.03	. VQ	.	.	.	.
5.583	0.3258	1.14	. VQ	.	.	.	.
5.667	0.3336	1.14	. VQ	.	.	.	.
5.750	0.3414	1.14	. VQ	.	.	.	.
5.833	0.3498	1.22	. VQ	.	.	.	.
5.917	0.3582	1.22	. VQ	.	.	.	.
6.000	0.3666	1.22	. VQ	.	.	.	.
6.083	0.3755	1.29	. V Q	.	.	.	.
6.167	0.3844	1.29	. V Q	.	.	.	.
6.250	0.3933	1.29	. V Q	.	.	.	.
6.333	0.4027	1.37	. V Q	.	.	.	.
6.417	0.4122	1.37	. V Q	.	.	.	.
6.500	0.4216	1.37	. VQ	.	.	.	.
6.583	0.4316	1.45	. VQ	.	.	.	.
6.667	0.4415	1.45	. VQ	.	.	.	.
6.750	0.4515	1.45	. VQ	.	.	.	.
6.833	0.4620	1.53	. V Q	.	.	.	.
6.917	0.4726	1.53	. V Q	.	.	.	.
7.000	0.4831	1.53	. V Q	.	.	.	.
7.083	0.4937	1.55	. V Q	.	.	.	.
7.167	0.5044	1.55	. V Q	.	.	.	.
7.250	0.5150	1.55	. V Q	.	.	.	.
7.333	0.5261	1.61	. VQ	.	.	.	.
7.417	0.5372	1.61	. VQ	.	.	.	.
7.500	0.5483	1.61	. VQ	.	.	.	.
7.583	0.5603	1.74	. VQ	.	.	.	.
7.667	0.5723	1.74	. VQ	.	.	.	.
7.750	0.5843	1.74	. VQ	.	.	.	.

7.833	0.5974	1.89	.	V Q	.	.	.	.
7.917	0.6104	1.89	.	V Q	.	.	.	.
8.000	0.6234	1.89	.	V Q	.	.	.	.
8.083	0.6379	2.10	.	V Q	.	.	.	.
8.167	0.6523	2.10	.	V Q	.	.	.	.
8.250	0.6668	2.10	.	V Q	.	.	.	.
8.333	0.6824	2.27	.	V Q	.	.	.	.
8.417	0.6980	2.27	.	V Q	.	.	.	.
8.500	0.7136	2.27	.	V Q	.	.	.	.
8.583	0.7302	2.40	.	V Q	.	.	.	.
8.667	0.7467	2.40	.	V Q	.	.	.	.
8.750	0.7632	2.40	.	V Q	.	.	.	.
8.833	0.7815	2.66	.	V Q	.	.	.	.
8.917	0.7998	2.66	.	V Q	.	.	.	.
9.000	0.8181	2.66	.	V Q	.	.	.	.
9.083	0.8394	3.09	.	V . Q	.	.	.	.
9.167	0.8607	3.09	.	V . Q	.	.	.	.
9.250	0.8820	3.09	.	V . Q	.	.	.	.
9.333	0.9066	3.57	.	V . Q	.	.	.	.
9.417	0.9311	3.57	.	V . Q	.	.	.	.
9.500	0.9557	3.57	.	V . Q	.	.	.	.
9.583	0.9829	3.94	.	V . Q	.	.	.	.
9.667	1.0101	3.94	.	V . Q	.	.	.	.
9.750	1.0372	3.94	.	V . Q	.	.	.	.
9.833	1.0669	4.30	.	V Q	.	.	.	.
9.917	1.0965	4.30	.	V Q	.	.	.	.
10.000	1.1261	4.30	.	V Q	.	.	.	.
10.083	1.1518	3.73	.	.V Q	.	.	.	.
10.167	1.1776	3.73	.	.V Q	.	.	.	.
10.250	1.2033	3.73	.	.V Q	.	.	.	.
10.333	1.2227	2.82	.	.Q	.	.	.	.
10.417	1.2421	2.82	.	.Q	.	.	.	.
10.500	1.2615	2.82	.	.QV	.	.	.	.
10.583	1.2838	3.23	.	. Q	.	.	.	.
10.667	1.3060	3.23	.	. Q	.	.	.	.
10.750	1.3282	3.23	.	. Q	.	.	.	.
10.833	1.3550	3.89	.	. V Q	.	.	.	.
10.917	1.3818	3.89	.	. V Q	.	.	.	.
11.000	1.4086	3.89	.	. V Q	.	.	.	.
11.083	1.4358	3.94	.	. V Q	.	.	.	.
11.167	1.4629	3.94	.	. VQ	.	.	.	.
11.250	1.4900	3.94	.	. VQ	.	.	.	.
11.333	1.5167	3.88	.	. VQ	.	.	.	.
11.417	1.5435	3.88	.	. VQ	.	.	.	.
11.500	1.5702	3.88	.	. Q	.	.	.	.
11.583	1.5955	3.67	.	. QV	.	.	.	.
11.667	1.6208	3.67	.	. QV	.	.	.	.
11.750	1.6461	3.67	.	. QV	.	.	.	.
11.833	1.6704	3.53	.	. Q V	.	.	.	.
11.917	1.6947	3.53	.	. Q V	.	.	.	.
12.000	1.7190	3.53	.	. Q V	.	.	.	.
12.083	1.7495	4.44	.	. VQ	.	.	.	.
12.167	1.7801	4.44	.	. Q	.	.	.	.
12.250	1.8107	4.44	.	. Q	.	.	.	.
12.333	1.8492	5.59	.	. V . Q	.	.	.	.
12.417	1.8877	5.59	.	. V . Q	.	.	.	.
12.500	1.9263	5.59	.	. V . Q	.	.	.	.
12.583	1.9691	6.22	.	. V . Q	.	.	.	.
12.667	2.0120	6.22	.	. V . Q	.	.	.	.
12.750	2.0548	6.22	.	. V . Q	.	.	.	.
12.833	2.1016	6.78	.	. V Q	.	.	.	.
12.917	2.1483	6.78	.	. V Q	.	.	.	.
13.000	2.1950	6.78	.	. V Q	.	.	.	.

E_B10024.RES

13.083	2.2476	7.64	.	.	.V	Q	.
13.167	2.3003	7.64	.	.	.V	Q	.
13.250	2.3529	7.64	.	.	.V	Q	.
13.333	2.4112	8.47	.	.	.V	.Q	.
13.417	2.4696	8.47	.	.	.V	.Q	.
13.500	2.5279	8.47	.	.	.V	.Q	.
13.583	2.5790	7.42	.	.	.V	Q.	.
13.667	2.6301	7.42	.	.	.V	Q.	.
13.750	2.6812	7.42	.	.	.V	Q.	.
13.833	2.7223	5.96	.	.	.Q	V	.
13.917	2.7633	5.96	.	.	.Q	V	.
14.000	2.8043	5.96	.	.	.Q	V	.
14.083	2.8465	6.13	.	.	.Q	V	.
14.167	2.8887	6.13	.	.	.Q	V	.
14.250	2.9309	6.13	.	.	.Q	V	.
14.333	2.9755	6.47	.	.	.Q	V	.
14.417	3.0200	6.47	.	.	.Q	V	.
14.500	3.0646	6.47	.	.	.Q	V.	.
14.583	3.1089	6.43	.	.	.Q	V.	.
14.667	3.1532	6.43	.	.	.Q	V	.
14.750	3.1975	6.43	.	.	.Q	V	.
14.833	3.2413	6.35	.	.	.Q	.V	.
14.917	3.2850	6.35	.	.	.Q	.V	.
15.000	3.3288	6.35	.	.	.Q	.V	.
15.083	3.3709	6.12	.	.	.Q	.V	.
15.167	3.4131	6.12	.	.	.Q	.V	.
15.250	3.4552	6.12	.	.	.Q	.V	.
15.333	3.4955	5.85	.	.	.Q	.V	.
15.417	3.5358	5.85	.	.	.Q	.V	.
15.500	3.5761	5.85	.	.	.Q	.V	.
15.583	3.6121	5.23	.	.	.Q	.V	.
15.667	3.6482	5.23	.	.	.Q	.V	.
15.750	3.6842	5.23	.	.	.Q	.V	.
15.833	3.7161	4.63	.	.	.Q	.V	.
15.917	3.7480	4.63	.	.	.Q	.V	.
16.000	3.7799	4.63	.	.	.Q	.V	.
16.083	3.8013	3.11	.	.Q	.	.V	.
16.167	3.8228	3.11	.	.Q	.	.V	.
16.250	3.8442	3.11	.	.Q	.	.V	.
16.333	3.8532	1.31	.	.Q	.	.V	.
16.417	3.8622	1.31	.	.Q	.	.V	.
16.500	3.8713	1.31	.	.Q	.	.V	.
16.583	3.8771	0.85	.	.Q	.	.V	.
16.667	3.8829	0.85	.	.Q	.	.V	.
16.750	3.8887	0.85	.	.Q	.	.V	.
16.833	3.8929	0.60	.	.Q	.	.V	.
16.917	3.8970	0.60	.	.Q	.	.V	.
17.000	3.9012	0.60	.	.Q	.	.V	.
17.083	3.9055	0.63	.	.Q	.	.V	.
17.167	3.9099	0.63	.	.Q	.	.V	.
17.250	3.9143	0.63	.	.Q	.	.V	.
17.333	3.9194	0.75	.	.Q	.	.V	.
17.417	3.9246	0.75	.	.Q	.	.V	.
17.500	3.9297	0.75	.	.Q	.	.V	.
17.583	3.9350	0.77	.	.Q	.	.V	.
17.667	3.9403	0.77	.	.Q	.	.V	.
17.750	3.9456	0.77	.	.Q	.	.V	.
17.833	3.9505	0.72	.	.Q	.	.V	.
17.917	3.9554	0.72	.	.Q	.	.V	.
18.000	3.9604	0.72	.	.Q	.	.V	.
18.083	3.9648	0.65	.	.Q	.	.V	.
18.167	3.9693	0.65	.	.Q	.	.V	.
18.250	3.9737	0.65	.	.Q	.	.V	.

18.333	3.9781	0.63	. Q	.	.	.	V .
18.417	3.9825	0.63	. Q	.	.	.	V .
18.500	3.9868	0.63	. Q	.	.	.	V .
18.583	3.9907	0.57	. Q	.	.	.	V .
18.667	3.9947	0.57	. Q	.	.	.	V .
18.750	3.9986	0.57	. Q	.	.	.	V .
18.833	4.0016	0.44	.Q	.	.	.	V .
18.917	4.0046	0.44	.Q	.	.	.	V .
19.000	4.0077	0.44	.Q	.	.	.	V .
19.083	4.0105	0.41	.Q	.	.	.	V .
19.167	4.0133	0.41	.Q	.	.	.	V .
19.250	4.0161	0.41	.Q	.	.	.	V .
19.333	4.0196	0.51	. Q	.	.	.	V .
19.417	4.0232	0.51	. Q	.	.	.	V .
19.500	4.0267	0.51	. Q	.	.	.	V .
19.583	4.0304	0.53	. Q	.	.	.	V .
19.667	4.0341	0.53	. Q	.	.	.	V .
19.750	4.0377	0.53	. Q	.	.	.	V .
19.833	4.0407	0.42	.Q	.	.	.	V .
19.917	4.0436	0.42	.Q	.	.	.	V .
20.000	4.0465	0.42	.Q	.	.	.	V .
20.083	4.0493	0.40	.Q	.	.	.	V .
20.167	4.0520	0.40	.Q	.	.	.	V .
20.250	4.0548	0.40	.Q	.	.	.	V .
20.333	4.0579	0.45	.Q	.	.	.	V .
20.417	4.0611	0.45	.Q	.	.	.	V .
20.500	4.0642	0.45	.Q	.	.	.	V .
20.583	4.0674	0.46	.Q	.	.	.	V .
20.667	4.0706	0.46	.Q	.	.	.	V .
20.750	4.0737	0.46	.Q	.	.	.	V .
20.833	4.0765	0.41	.Q	.	.	.	V .
20.917	4.0794	0.41	.Q	.	.	.	V .
21.000	4.0822	0.41	.Q	.	.	.	V .
21.083	4.0849	0.40	.Q	.	.	.	V .
21.167	4.0876	0.40	.Q	.	.	.	V .
21.250	4.0903	0.40	.Q	.	.	.	V .
21.333	4.0931	0.39	.Q	.	.	.	V .
21.417	4.0958	0.39	.Q	.	.	.	V .
21.500	4.0985	0.39	.Q	.	.	.	V .
21.583	4.1012	0.39	.Q	.	.	.	V .
21.667	4.1038	0.39	.Q	.	.	.	V .
21.750	4.1065	0.39	.Q	.	.	.	V .
21.833	4.1092	0.39	.Q	.	.	.	V .
21.917	4.1119	0.39	.Q	.	.	.	V .
22.000	4.1146	0.39	.Q	.	.	.	V .
22.083	4.1173	0.39	.Q	.	.	.	V .
22.167	4.1200	0.39	.Q	.	.	.	V .
22.250	4.1226	0.39	.Q	.	.	.	V .
22.333	4.1253	0.39	.Q	.	.	.	V .
22.417	4.1280	0.39	.Q	.	.	.	V .
22.500	4.1307	0.39	.Q	.	.	.	V .
22.583	4.1330	0.33	.Q	.	.	.	V .
22.667	4.1353	0.33	.Q	.	.	.	V .
22.750	4.1376	0.33	.Q	.	.	.	V .
22.833	4.1398	0.32	.Q	.	.	.	V .
22.917	4.1420	0.32	.Q	.	.	.	V .
23.000	4.1442	0.32	.Q	.	.	.	V .
23.083	4.1463	0.31	.Q	.	.	.	V .
23.166	4.1485	0.31	.Q	.	.	.	V .
23.250	4.1507	0.31	.Q	.	.	.	V .
23.333	4.1528	0.31	.Q	.	.	.	V .
23.416	4.1550	0.31	.Q	.	.	.	V .
23.500	4.1571	0.31	.Q	.	.	.	V .

23.583	4.1593	0.31	.Q	.	.	.	V.
23.666	4.1614	0.31	.Q	.	.	.	V.
23.750	4.1636	0.31	.Q	.	.	.	V.
23.833	4.1657	0.31	.Q	.	.	.	V.
23.916	4.1679	0.31	.Q	.	.	.	V.
24.000	4.1700	0.31	.Q	.	.	.	V.
24.083	4.1714	0.20	Q	.	.	.	V.
24.166	4.1728	0.20	Q	.	.	.	V.
24.250	4.1741	0.20	Q	.	.	.	V.
24.333	4.1745	0.05	Q	.	.	.	V.
24.416	4.1749	0.05	Q	.	.	.	V.
24.500	4.1752	0.05	Q	.	.	.	V.
24.583	4.1754	0.02	Q	.	.	.	V.
24.666	4.1755	0.02	Q	.	.	.	V.
24.750	4.1757	0.02	Q	.	.	.	V.
24.833	4.1757	0.01	Q	.	.	.	V.
24.916	4.1758	0.01	Q	.	.	.	V.
25.000	4.1758	0.01	Q	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1500.0
10%	750.0
20%	525.0
30%	450.0
40%	375.0
50%	255.0
60%	210.0
70%	165.0
80%	60.0
90%	30.0

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions Unit Hydrograph *
* 10-year, 1-hour *

FILE NAME: B3.DAT
TIME/DATE OF STUDY: 22:51 12/10/2020

FLOW PROCESS FROM NODE 181.00 TO NODE 183.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 3.890 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.100
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 0.89 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 83.333

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	13.994	6.583
2	59.664	21.485
3	78.792	8.999
4	86.766	3.751
5	91.428	2.193
6	94.514	1.452
7	96.650	1.005
8	98.044	0.656
9	98.699	0.308
10	99.289	0.278
11	99.716	0.201
12	99.929	0.100
13	100.000	0.033



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0447	0.0083	0.0363
2	0.0468	0.0083	0.0385
3	0.0493	0.0083	0.0410
4	0.0536	0.0083	0.0453
5	0.0561	0.0083	0.0477
6	0.0626	0.0083	0.0543
7	0.0717	0.0083	0.0634
8	0.0778	0.0083	0.0694
9	0.1101	0.0083	0.1018
10	0.1977	0.0083	0.1894
11	0.0670	0.0083	0.0587
12	0.0486	0.0083	0.0403

TOTAL STORM RAINFALL(INCHES) = 0.89
 TOTAL SOIL-LOSS(INCHES) = 0.10
 TOTAL EFFECTIVE RAINFALL(INCHES) = 0.79

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0324
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.2547



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0016	0.24	Q	.	.	.	.
0.167	0.0088	1.03	.V Q	.	.	.	.
0.250	0.0186	1.42	. V Q	.	.	.	.
0.333	0.0300	1.66	. V Q	.	.	.	.
0.417	0.0429	1.88	. VQ	.	.	.	.
0.500	0.0573	2.08	. Q	.	.	.	.
0.583	0.0736	2.37	. Q.V	.	.	.	.
0.667	0.0922	2.71	. Q V	.	.	.	.

B3_101.RES					
0.750	0.1141	3.18	.	. Q	V . .
0.833	0.1457	4.58	.	.	Q . V .
0.917	0.1867	5.96	.	.	. Q V. .
1.000	0.2141	3.98	.	Q	. V .
1.083	0.2318	2.57	.	Q	. V .
1.167	0.2408	1.30	.	Q	. V .
1.250	0.2459	0.75	.	Q	. V .
1.333	0.2493	0.49	.	Q	. V .
1.417	0.2515	0.31	.	Q	. V .
1.500	0.2527	0.19	.	Q	. V .
1.583	0.2536	0.13	.	Q	. V .
1.667	0.2542	0.08	.	Q	. V .
1.750	0.2545	0.05	.	Q	. V .
1.833	0.2546	0.02	.	Q	. V .
1.917	0.2547	0.01	.	Q	. V .

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	115.0
10%	70.0
20%	60.0
30%	45.0
40%	30.0
50%	20.0
60%	15.0
70%	10.0
80%	5.0
90%	5.0

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions Unit Hydrograph *
* 10-yea, 24-hour *

FILE NAME: B3.DAT
TIME/DATE OF STUDY: 22:50 12/10/2020

FLOW PROCESS FROM NODE 181.00 TO NODE 183.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 3.890 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.100
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.050
USER-ENTERED RAINFALL = 3.95 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 250.000

===== UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	50.817	7.969
2	90.903	6.286
3	97.798	1.081
4	99.444	0.258
5	99.778	0.052
6	99.944	0.026
7	100.000	0.009



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
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1	0.0079	0.0040	0.0040
2	0.0119	0.0059	0.0059
3	0.0119	0.0059	0.0059
4	0.0158	0.0079	0.0079
5	0.0119	0.0059	0.0059
6	0.0119	0.0059	0.0059
7	0.0119	0.0059	0.0059
8	0.0158	0.0079	0.0079
9	0.0158	0.0079	0.0079
10	0.0158	0.0079	0.0079
11	0.0198	0.0099	0.0099
12	0.0198	0.0099	0.0099
13	0.0198	0.0099	0.0099
14	0.0198	0.0099	0.0099
15	0.0198	0.0099	0.0099
16	0.0237	0.0119	0.0119
17	0.0237	0.0119	0.0119
18	0.0277	0.0138	0.0138
19	0.0277	0.0138	0.0138
20	0.0316	0.0158	0.0158
21	0.0237	0.0119	0.0119
22	0.0277	0.0138	0.0138
23	0.0316	0.0158	0.0158
24	0.0316	0.0158	0.0158
25	0.0356	0.0178	0.0178
26	0.0356	0.0178	0.0178
27	0.0395	0.0198	0.0198
28	0.0395	0.0198	0.0198
29	0.0395	0.0198	0.0198
30	0.0435	0.0217	0.0217
31	0.0474	0.0237	0.0237
32	0.0514	0.0257	0.0257
33	0.0593	0.0293	0.0299
34	0.0593	0.0289	0.0303
35	0.0632	0.0285	0.0347
36	0.0672	0.0281	0.0391
37	0.0751	0.0277	0.0474
38	0.0790	0.0273	0.0517
39	0.0830	0.0269	0.0560
40	0.0869	0.0265	0.0604
41	0.0593	0.0261	0.0331
42	0.0593	0.0258	0.0335
43	0.0790	0.0254	0.0536
44	0.0790	0.0250	0.0540
45	0.0751	0.0247	0.0504
46	0.0751	0.0243	0.0508
47	0.0672	0.0239	0.0432

48	0.0711	0.0236	0.0475
49	0.0988	0.0232	0.0755
50	0.1027	0.0229	0.0798
51	0.1106	0.0225	0.0881
52	0.1146	0.0222	0.0924
53	0.1343	0.0219	0.1124
54	0.1343	0.0215	0.1128
55	0.0909	0.0212	0.0697
56	0.0909	0.0209	0.0700
57	0.1067	0.0206	0.0861
58	0.1027	0.0202	0.0825
59	0.1027	0.0199	0.0828
60	0.0988	0.0196	0.0791
61	0.0948	0.0193	0.0755
62	0.0909	0.0190	0.0718
63	0.0751	0.0187	0.0563
64	0.0751	0.0185	0.0566
65	0.0158	0.0079	0.0079
66	0.0158	0.0079	0.0079
67	0.0119	0.0059	0.0059
68	0.0119	0.0059	0.0059
69	0.0198	0.0099	0.0099
70	0.0198	0.0099	0.0099
71	0.0198	0.0099	0.0099
72	0.0158	0.0079	0.0079
73	0.0158	0.0079	0.0079
74	0.0158	0.0079	0.0079
75	0.0119	0.0059	0.0059
76	0.0079	0.0040	0.0040
77	0.0119	0.0059	0.0059
78	0.0158	0.0079	0.0079
79	0.0119	0.0059	0.0059
80	0.0079	0.0040	0.0040
81	0.0119	0.0059	0.0059
82	0.0119	0.0059	0.0059
83	0.0119	0.0059	0.0059
84	0.0079	0.0040	0.0040
85	0.0119	0.0059	0.0059
86	0.0079	0.0040	0.0040
87	0.0119	0.0059	0.0059
88	0.0079	0.0040	0.0040
89	0.0119	0.0059	0.0059
90	0.0079	0.0040	0.0040
91	0.0079	0.0040	0.0040
92	0.0079	0.0040	0.0040
93	0.0079	0.0040	0.0040
94	0.0079	0.0040	0.0040
95	0.0079	0.0040	0.0040
96	0.0079	0.0040	0.0040

TOTAL STORM RAINFALL(INCHES) = 3.95
 TOTAL SOIL-LOSS(INCHES) = 1.35
 TOTAL EFFECTIVE RAINFALL(INCHES) = 2.60

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.4372
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.8428

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 2 4 - 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 FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0002	0.03	Q	.	.	.	.
0.167	0.0004	0.03	Q	.	.	.	.
0.250	0.0007	0.03	Q	.	.	.	.
0.333	0.0011	0.07	Q	.	.	.	.
0.417	0.0016	0.07	Q	.	.	.	.
0.500	0.0021	0.07	Q	.	.	.	.
0.583	0.0027	0.09	Q	.	.	.	.
0.667	0.0034	0.09	Q	.	.	.	.
0.750	0.0040	0.09	Q	.	.	.	.
0.833	0.0047	0.11	Q	.	.	.	.
0.917	0.0055	0.11	Q	.	.	.	.
1.000	0.0062	0.11	Q	.	.	.	.
1.083	0.0069	0.11	Q	.	.	.	.
1.167	0.0076	0.11	Q	.	.	.	.
1.250	0.0084	0.11	Q	.	.	.	.
1.333	0.0090	0.09	Q	.	.	.	.
1.417	0.0097	0.09	Q	.	.	.	.
1.500	0.0103	0.09	Q	.	.	.	.
1.583	0.0110	0.09	Q	.	.	.	.
1.667	0.0116	0.09	Q	.	.	.	.
1.750	0.0123	0.09	Q	.	.	.	.
1.833	0.0130	0.11	Q	.	.	.	.
1.917	0.0138	0.11	Q	.	.	.	.
2.000	0.0145	0.11	Q	.	.	.	.
2.083	0.0153	0.12	Q	.	.	.	.
2.167	0.0162	0.12	Q	.	.	.	.
2.250	0.0170	0.12	Q	.	.	.	.
2.333	0.0179	0.12	Q	.	.	.	.
2.417	0.0187	0.12	Q	.	.	.	.
2.500	0.0196	0.12	Q	.	.	.	.
2.583	0.0205	0.14	Q	.	.	.	.
2.667	0.0215	0.14	QV	.	.	.	.
2.750	0.0224	0.14	QV	.	.	.	.
2.833	0.0235	0.15	QV	.	.	.	.
2.917	0.0245	0.15	QV	.	.	.	.
3.000	0.0256	0.15	QV	.	.	.	.
3.083	0.0266	0.15	QV	.	.	.	.
3.167	0.0277	0.15	QV	.	.	.	.
3.250	0.0288	0.15	QV	.	.	.	.
3.333	0.0298	0.15	QV	.	.	.	.
3.417	0.0309	0.15	QV	.	.	.	.
3.500	0.0320	0.15	QV	.	.	.	.
3.583	0.0330	0.15	QV	.	.	.	.
3.667	0.0341	0.15	QV	.	.	.	.
3.750	0.0352	0.15	QV	.	.	.	.
3.833	0.0363	0.17	QV	.	.	.	.
3.917	0.0375	0.17	QV	.	.	.	.
4.000	0.0387	0.17	QV	.	.	.	.
4.083	0.0399	0.18	QV	.	.	.	.
4.167	0.0412	0.18	QV	.	.	.	.
4.250	0.0425	0.18	Q V	.	.	.	.
4.333	0.0438	0.20	Q V	.	.	.	.
4.417	0.0452	0.20	Q V	.	.	.	.
4.500	0.0466	0.20	Q V	.	.	.	.
4.583	0.0481	0.21	Q V	.	.	.	.
4.667	0.0496	0.21	Q V	.	.	.	.

4.750	0.0510	0.21	Q V	.	.	.	.
4.833	0.0526	0.23	Q V	.	.	.	.
4.917	0.0542	0.23	Q V	.	.	.	.
5.000	0.0558	0.23	Q V	.	.	.	.
5.083	0.0573	0.21	Q V	.	.	.	.
5.167	0.0588	0.21	Q V	.	.	.	.
5.250	0.0602	0.21	Q V	.	.	.	.
5.333	0.0616	0.21	Q V	.	.	.	.
5.417	0.0631	0.21	Q V	.	.	.	.
5.500	0.0645	0.21	Q V	.	.	.	.
5.583	0.0661	0.23	Q V	.	.	.	.
5.667	0.0677	0.23	Q V	.	.	.	.
5.750	0.0693	0.23	Q V	.	.	.	.
5.833	0.0709	0.24	Q V	.	.	.	.
5.917	0.0726	0.24	Q V	.	.	.	.
6.000	0.0743	0.24	Q V	.	.	.	.
6.083	0.0761	0.26	.Q V	.	.	.	.
6.167	0.0779	0.26	.Q V	.	.	.	.
6.250	0.0797	0.26	.Q V	.	.	.	.
6.333	0.0816	0.28	.Q V	.	.	.	.
6.417	0.0835	0.28	.Q V	.	.	.	.
6.500	0.0854	0.28	.Q V	.	.	.	.
6.583	0.0875	0.29	.Q V	.	.	.	.
6.667	0.0895	0.29	.Q V	.	.	.	.
6.750	0.0915	0.29	.Q V	.	.	.	.
6.833	0.0936	0.31	.Q V	.	.	.	.
6.917	0.0957	0.31	.Q V	.	.	.	.
7.000	0.0978	0.31	.Q V	.	.	.	.
7.083	0.1000	0.31	.Q V	.	.	.	.
7.167	0.1021	0.31	.Q V	.	.	.	.
7.250	0.1042	0.31	.Q V	.	.	.	.
7.333	0.1065	0.33	.Q V	.	.	.	.
7.417	0.1087	0.33	.Q V	.	.	.	.
7.500	0.1109	0.33	.Q V	.	.	.	.
7.583	0.1134	0.35	.Q V	.	.	.	.
7.667	0.1158	0.35	.Q V	.	.	.	.
7.750	0.1182	0.35	.Q V	.	.	.	.
7.833	0.1209	0.38	.Q V	.	.	.	.
7.917	0.1235	0.38	.Q V	.	.	.	.
8.000	0.1262	0.38	.Q V	.	.	.	.
8.083	0.1292	0.43	.Q V	.	.	.	.
8.167	0.1321	0.43	.Q V	.	.	.	.
8.250	0.1351	0.43	.Q V	.	.	.	.
8.333	0.1383	0.47	.Q V	.	.	.	.
8.417	0.1415	0.47	.Q V	.	.	.	.
8.500	0.1447	0.47	.Q V	.	.	.	.
8.583	0.1482	0.51	. Q V	.	.	.	.
8.667	0.1517	0.51	. Q V	.	.	.	.
8.750	0.1552	0.51	. Q V	.	.	.	.
8.833	0.1592	0.57	. Q V	.	.	.	.
8.917	0.1631	0.57	. Q V	.	.	.	.
9.000	0.1671	0.57	. Q V	.	.	.	.
9.083	0.1717	0.67	. Q V	.	.	.	.
9.167	0.1763	0.67	. Q V	.	.	.	.
9.250	0.1809	0.67	. Q V	.	.	.	.
9.333	0.1862	0.76	. Q V	.	.	.	.
9.417	0.1914	0.76	. Q V	.	.	.	.
9.500	0.1967	0.76	. Q V	.	.	.	.
9.583	0.2025	0.84	. Q V	.	.	.	.
9.667	0.2082	0.84	. Q V	.	.	.	.
9.750	0.2140	0.84	. Q V	.	.	.	.
9.833	0.2202	0.90	. Q V	.	.	.	.
9.917	0.2264	0.90	. Q V	.	.	.	.

10.000	0.2327	0.90	. Q	V	.	.	.
10.083	0.2376	0.72	. Q	.V	.	.	.
10.167	0.2426	0.72	. Q	.V	.	.	.
10.250	0.2476	0.72	. Q	.V	.	.	.
10.333	0.2514	0.56	. Q	.V	.	.	.
10.417	0.2553	0.56	. Q	. V	.	.	.
10.500	0.2591	0.56	. Q	. V	.	.	.
10.583	0.2639	0.69	. Q	. V	.	.	.
10.667	0.2687	0.69	. Q	. V	.	.	.
10.750	0.2734	0.69	. Q	. V	.	.	.
10.833	0.2791	0.82	. Q	. V	.	.	.
10.917	0.2847	0.82	. Q	. V	.	.	.
11.000	0.2903	0.82	. Q	. V	.	.	.
11.083	0.2959	0.81	. Q	. V	.	.	.
11.167	0.3015	0.81	. Q	. V	.	.	.
11.250	0.3071	0.81	. Q	. V	.	.	.
11.333	0.3126	0.80	. Q	. V	.	.	.
11.417	0.3181	0.80	. Q	. V	.	.	.
11.500	0.3235	0.80	. Q	. V	.	.	.
11.583	0.3286	0.74	. Q	. V	.	.	.
11.667	0.3337	0.74	. Q	. V	.	.	.
11.750	0.3387	0.74	. Q	. V	.	.	.
11.833	0.3437	0.72	. Q	. V	.	.	.
11.917	0.3487	0.72	. Q	. V	.	.	.
12.000	0.3537	0.72	. Q	. V	.	.	.
12.083	0.3603	0.97	. Q	. V	.	.	.
12.167	0.3670	0.97	. Q	. V	.	.	.
12.250	0.3736	0.97	. Q	. V	.	.	.
12.333	0.3817	1.18	. Q	. V	.	.	.
12.417	0.3898	1.18	. Q	. V	.	.	.
12.500	0.3980	1.18	. Q	. V	.	.	.
12.583	0.4069	1.30	. Q	. V.	.	.	.
12.667	0.4159	1.30	. Q	. V.	.	.	.
12.750	0.4248	1.30	. Q	. V	.	.	.
12.833	0.4345	1.40	. Q	. V	.	.	.
12.917	0.4441	1.40	. Q	. V	.	.	.
13.000	0.4538	1.40	. Q	. V	.	.	.
13.083	0.4648	1.60	. Q	. V	.	.	.
13.167	0.4758	1.60	. Q	. V	.	.	.
13.250	0.4868	1.60	. Q	. V	.	.	.
13.333	0.4987	1.73	. Q	. V	.	.	.
13.417	0.5107	1.73	. Q	. V	.	.	.
13.500	0.5226	1.73	. Q	. V	.	.	.
13.583	0.5324	1.42	. Q	. V	.	.	.
13.667	0.5421	1.42	. Q	. V	.	.	.
13.750	0.5519	1.42	. Q	. V	.	.	.
13.833	0.5598	1.15	. Q	. V	.	.	.
13.917	0.5678	1.15	. Q	. V	.	.	.
14.000	0.5757	1.15	. Q	. V	.	.	.
14.083	0.5843	1.24	. Q	. V	.	.	.
14.167	0.5928	1.24	. Q	. V	.	.	.
14.250	0.6014	1.24	. Q	. V	.	.	.
14.333	0.6103	1.30	. Q	. V	.	.	.
14.417	0.6193	1.30	. Q	. V.	.	.	.
14.500	0.6282	1.30	. Q	. V.	.	.	.
14.583	0.6372	1.30	. Q	. V	.	.	.
14.667	0.6461	1.30	. Q	. V	.	.	.
14.750	0.6550	1.30	. Q	. V	.	.	.
14.833	0.6638	1.27	. Q	. V	.	.	.
14.917	0.6725	1.27	. Q	. V	.	.	.
15.000	0.6812	1.27	. Q	. V	.	.	.
15.083	0.6896	1.22	. Q	. V	.	.	.
15.167	0.6980	1.22	. Q	. V	.	.	.

15.250	0.7064	1.22	.	Q	.	.	.	V	.
15.333	0.7144	1.16	.	Q	.	.	.	V	.
15.417	0.7224	1.16	.	Q	.	.	.	V	.
15.500	0.7304	1.16	.	Q	.	.	.	V	.
15.583	0.7373	1.01	.	Q	.	.	.	V	.
15.667	0.7443	1.01	.	Q	.	.	.	V	.
15.750	0.7512	1.01	.	Q	.	.	.	V	.
15.833	0.7575	0.91	.	Q	.	.	.	V	.
15.917	0.7637	0.91	.	Q	.	.	.	V	.
16.000	0.7700	0.91	.	Q	.	.	.	V	.
16.083	0.7735	0.50	.	Q	.	.	.	V	.
16.167	0.7770	0.50	.	Q	.	.	.	V	.
16.250	0.7804	0.50	.	Q	.	.	.	V	.
16.333	0.7818	0.19	Q	.	.	.	.	V	.
16.417	0.7831	0.19	Q	.	.	.	.	V	.
16.500	0.7845	0.19	Q	.	.	.	.	V	.
16.583	0.7853	0.13	Q	.	.	.	.	V	.
16.667	0.7862	0.13	Q	.	.	.	.	V	.
16.750	0.7871	0.13	Q	.	.	.	.	V	.
16.833	0.7877	0.10	Q	.	.	.	.	V	.
16.917	0.7884	0.10	Q	.	.	.	.	V	.
17.000	0.7891	0.10	Q	.	.	.	.	V	.
17.083	0.7900	0.13	Q	.	.	.	.	V	.
17.167	0.7909	0.13	Q	.	.	.	.	V	.
17.250	0.7917	0.13	Q	.	.	.	.	V	.
17.333	0.7928	0.15	Q	.	.	.	.	V	.
17.417	0.7938	0.15	Q	.	.	.	.	V	.
17.500	0.7948	0.15	Q	.	.	.	.	V	.
17.583	0.7959	0.15	Q	.	.	.	.	V	.
17.667	0.7970	0.15	Q	.	.	.	.	V	.
17.750	0.7980	0.15	Q	.	.	.	.	V	.
17.833	0.7990	0.14	Q	.	.	.	.	V	.
17.917	0.7999	0.14	Q	.	.	.	.	V	.
18.000	0.8009	0.14	Q	.	.	.	.	V	.
18.083	0.8017	0.13	Q	.	.	.	.	V	.
18.167	0.8026	0.13	Q	.	.	.	.	V	.
18.250	0.8035	0.13	Q	.	.	.	.	V	.
18.333	0.8044	0.12	Q	.	.	.	.	V	.
18.417	0.8052	0.12	Q	.	.	.	.	V	.
18.500	0.8061	0.12	Q	.	.	.	.	V	.
18.583	0.8068	0.11	Q	.	.	.	.	V	.
18.667	0.8076	0.11	Q	.	.	.	.	V	.
18.750	0.8083	0.11	Q	.	.	.	.	V	.
18.833	0.8089	0.08	Q	.	.	.	.	V	.
18.917	0.8094	0.08	Q	.	.	.	.	V	.
19.000	0.8100	0.08	Q	.	.	.	.	V	.
19.083	0.8105	0.08	Q	.	.	.	.	V	.
19.167	0.8111	0.08	Q	.	.	.	.	V	.
19.250	0.8116	0.08	Q	.	.	.	.	V	.
19.333	0.8124	0.11	Q	.	.	.	.	V	.
19.417	0.8131	0.11	Q	.	.	.	.	V	.
19.500	0.8138	0.11	Q	.	.	.	.	V	.
19.583	0.8146	0.10	Q	.	.	.	.	V	.
19.667	0.8153	0.10	Q	.	.	.	.	V	.
19.750	0.8160	0.10	Q	.	.	.	.	V	.
19.833	0.8166	0.08	Q	.	.	.	.	V	.
19.917	0.8171	0.08	Q	.	.	.	.	V	.
20.000	0.8176	0.08	Q	.	.	.	.	V	.
20.083	0.8182	0.08	Q	.	.	.	.	V	.
20.167	0.8188	0.08	Q	.	.	.	.	V	.
20.250	0.8193	0.08	Q	.	.	.	.	V	.
20.333	0.8199	0.09	Q	.	.	.	.	V	.
20.417	0.8206	0.09	Q	.	.	.	.	V	.

20.500	0.8212	0.09	Q	.	.	.	V
20.583	0.8218	0.09	Q	.	.	.	V.
20.667	0.8225	0.09	Q	.	.	.	V.
20.750	0.8231	0.09	Q	.	.	.	V.
20.833	0.8236	0.08	Q	.	.	.	V.
20.917	0.8242	0.08	Q	.	.	.	V.
21.000	0.8247	0.08	Q	.	.	.	V.
21.083	0.8253	0.08	Q	.	.	.	V.
21.167	0.8258	0.08	Q	.	.	.	V.
21.250	0.8264	0.08	Q	.	.	.	V.
21.333	0.8269	0.08	Q	.	.	.	V.
21.417	0.8274	0.08	Q	.	.	.	V.
21.500	0.8279	0.08	Q	.	.	.	V.
21.583	0.8285	0.08	Q	.	.	.	V.
21.667	0.8290	0.08	Q	.	.	.	V.
21.750	0.8296	0.08	Q	.	.	.	V.
21.833	0.8301	0.07	Q	.	.	.	V.
21.917	0.8306	0.07	Q	.	.	.	V.
22.000	0.8311	0.07	Q	.	.	.	V.
22.083	0.8317	0.08	Q	.	.	.	V.
22.167	0.8322	0.08	Q	.	.	.	V.
22.250	0.8328	0.08	Q	.	.	.	V.
22.333	0.8333	0.07	Q	.	.	.	V.
22.417	0.8338	0.07	Q	.	.	.	V.
22.500	0.8343	0.07	Q	.	.	.	V.
22.583	0.8348	0.06	Q	.	.	.	V.
22.667	0.8352	0.06	Q	.	.	.	V.
22.750	0.8356	0.06	Q	.	.	.	V.
22.833	0.8361	0.06	Q	.	.	.	V.
22.917	0.8365	0.06	Q	.	.	.	V.
23.000	0.8369	0.06	Q	.	.	.	V.
23.083	0.8374	0.06	Q	.	.	.	V.
23.166	0.8378	0.06	Q	.	.	.	V.
23.250	0.8382	0.06	Q	.	.	.	V.
23.333	0.8386	0.06	Q	.	.	.	V.
23.416	0.8391	0.06	Q	.	.	.	V.
23.500	0.8395	0.06	Q	.	.	.	V.
23.583	0.8399	0.06	Q	.	.	.	V.
23.666	0.8403	0.06	Q	.	.	.	V.
23.750	0.8408	0.06	Q	.	.	.	V.
23.833	0.8412	0.06	Q	.	.	.	V.
23.916	0.8416	0.06	Q	.	.	.	V.
24.000	0.8421	0.06	Q	.	.	.	V.
24.083	0.8423	0.03	Q	.	.	.	V.
24.166	0.8425	0.03	Q	.	.	.	V.
24.250	0.8427	0.03	Q	.	.	.	V.
24.333	0.8427	0.01	Q	.	.	.	V.
24.416	0.8428	0.01	Q	.	.	.	V.
24.500	0.8428	0.01	Q	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1470.0
10%	750.0
20%	525.0
30%	435.0
40%	375.0
50%	255.0

	B3_1024.RES
60%	195.0
70%	150.0
80%	60.0
90%	30.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions Unit Hydrograph *
* 100-year, 1-hour *

FILE NAME: B3.DAT
TIME/DATE OF STUDY: 22:52 12/10/2020

FLOW PROCESS FROM NODE 181.00 TO NODE 183.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 3.890 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.100
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 1.48 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 83.333

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	13.994	6.583
2	59.664	21.485
3	78.792	8.999
4	86.766	3.751
5	91.428	2.193
6	94.514	1.452
7	96.650	1.005
8	98.044	0.656
9	98.699	0.308
10	99.289	0.278
11	99.716	0.201
12	99.929	0.100
13	100.000	0.033

UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0746	0.0083	0.0663
2	0.0782	0.0083	0.0698
3	0.0823	0.0083	0.0740
4	0.0895	0.0083	0.0812
5	0.0937	0.0083	0.0853
6	0.1046	0.0083	0.0963
7	0.1198	0.0083	0.1114
8	0.1299	0.0083	0.1216
9	0.1839	0.0083	0.1756
10	0.3303	0.0083	0.3219
11	0.1120	0.0083	0.1037
12	0.0812	0.0083	0.0728

TOTAL STORM RAINFALL(INCHES) = 1.48
 TOTAL SOIL-LOSS(INCHES) = 0.10
 TOTAL EFFECTIVE RAINFALL(INCHES) = 1.38

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0324
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.4471

1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	5.0	10.0	15.0	20.0
0.083	0.0030	0.44	Q	.	.	.	.
0.167	0.0160	1.88	.V Q	.	.	.	.
0.250	0.0338	2.58	. V Q	.	.	.	.
0.333	0.0545	3.00	. V Q	.	.	.	.
0.417	0.0777	3.38	. Q	.	.	.	.
0.500	0.1034	3.72	. Q V.	.	.	.	.
0.583	0.1323	4.20	. Q .V	.	.	.	.
0.667	0.1653	4.78	. Q. V	.	.	.	.

B3_1001.RES						
0.750	0.2037	5.58	.	.Q	V	.
0.833	0.2582	7.91	.	.	Q	V
0.917	0.3285	10.21	.	.	.	Q
1.000	0.3761	6.91	.	.	Q	.
1.083	0.4072	4.51	.	Q.	.	V
1.167	0.4229	2.28	.	Q	.	V
1.250	0.4319	1.31	.	Q	.	V
1.333	0.4378	0.85	.	Q	.	V
1.417	0.4415	0.54	.	Q	.	V
1.500	0.4438	0.33	Q	.	.	V
1.583	0.4453	0.22	Q	.	.	V
1.667	0.4462	0.14	Q	.	.	V
1.750	0.4468	0.08	Q	.	.	V
1.833	0.4470	0.04	Q	.	.	V
1.917	0.4471	0.01	Q	.	.	V
2.000	0.4471	0.00	Q	.	.	V

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	120.0
10%	70.0
20%	60.0
30%	45.0
40%	35.0
50%	20.0
60%	15.0
70%	10.0
80%	5.0
90%	5.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions Unit Hydrograph *
* 100-year, 24-hour *

FILE NAME: B3.DAT
TIME/DATE OF STUDY: 22:51 12/10/2020

FLOW PROCESS FROM NODE 181.00 TO NODE 183.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 3.890 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.100
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.050
USER-ENTERED RAINFALL = 6.32 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 250.000

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	50.817	7.969
2	90.903	6.286
3	97.798	1.081
4	99.444	0.258
5	99.778	0.052
6	99.944	0.026
7	100.000	0.009



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
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1	0.0126	0.0063	0.0063
2	0.0190	0.0095	0.0095
3	0.0190	0.0095	0.0095
4	0.0253	0.0126	0.0126
5	0.0190	0.0095	0.0095
6	0.0190	0.0095	0.0095
7	0.0190	0.0095	0.0095
8	0.0253	0.0126	0.0126
9	0.0253	0.0126	0.0126
10	0.0253	0.0126	0.0126
11	0.0316	0.0158	0.0158
12	0.0316	0.0158	0.0158
13	0.0316	0.0158	0.0158
14	0.0316	0.0158	0.0158
15	0.0316	0.0158	0.0158
16	0.0379	0.0190	0.0190
17	0.0379	0.0190	0.0190
18	0.0442	0.0221	0.0221
19	0.0442	0.0221	0.0221
20	0.0506	0.0253	0.0253
21	0.0379	0.0190	0.0190
22	0.0442	0.0221	0.0221
23	0.0506	0.0253	0.0253
24	0.0506	0.0253	0.0253
25	0.0569	0.0284	0.0284
26	0.0569	0.0284	0.0284
27	0.0632	0.0316	0.0316
28	0.0632	0.0314	0.0318
29	0.0632	0.0310	0.0322
30	0.0695	0.0306	0.0390
31	0.0758	0.0301	0.0457
32	0.0822	0.0297	0.0524
33	0.0948	0.0293	0.0655
34	0.0948	0.0289	0.0659
35	0.1011	0.0285	0.0726
36	0.1074	0.0281	0.0793
37	0.1201	0.0277	0.0924
38	0.1264	0.0273	0.0991
39	0.1327	0.0269	0.1058
40	0.1390	0.0265	0.1125
41	0.0948	0.0261	0.0687
42	0.0948	0.0258	0.0690
43	0.1264	0.0254	0.1010
44	0.1264	0.0250	0.1014
45	0.1201	0.0247	0.0954
46	0.1201	0.0243	0.0958
47	0.1074	0.0239	0.0835

48	0.1138	0.0236	0.0902
49	0.1580	0.0232	0.1348
50	0.1643	0.0229	0.1414
51	0.1770	0.0225	0.1544
52	0.1833	0.0222	0.1611
53	0.2149	0.0219	0.1930
54	0.2149	0.0215	0.1934
55	0.1454	0.0212	0.1242
56	0.1454	0.0209	0.1245
57	0.1706	0.0206	0.1501
58	0.1643	0.0202	0.1441
59	0.1643	0.0199	0.1444
60	0.1580	0.0196	0.1384
61	0.1517	0.0193	0.1324
62	0.1454	0.0190	0.1263
63	0.1201	0.0187	0.1013
64	0.1201	0.0185	0.1016
65	0.0253	0.0126	0.0126
66	0.0253	0.0126	0.0126
67	0.0190	0.0095	0.0095
68	0.0190	0.0095	0.0095
69	0.0316	0.0158	0.0158
70	0.0316	0.0158	0.0158
71	0.0316	0.0158	0.0158
72	0.0253	0.0126	0.0126
73	0.0253	0.0126	0.0126
74	0.0253	0.0126	0.0126
75	0.0190	0.0095	0.0095
76	0.0126	0.0063	0.0063
77	0.0190	0.0095	0.0095
78	0.0253	0.0126	0.0126
79	0.0190	0.0095	0.0095
80	0.0126	0.0063	0.0063
81	0.0190	0.0095	0.0095
82	0.0190	0.0095	0.0095
83	0.0190	0.0095	0.0095
84	0.0126	0.0063	0.0063
85	0.0190	0.0095	0.0095
86	0.0126	0.0063	0.0063
87	0.0190	0.0095	0.0095
88	0.0126	0.0063	0.0063
89	0.0190	0.0095	0.0095
90	0.0126	0.0063	0.0063
91	0.0126	0.0063	0.0063
92	0.0126	0.0063	0.0063
93	0.0126	0.0063	0.0063
94	0.0126	0.0063	0.0063
95	0.0126	0.0063	0.0063
96	0.0126	0.0063	0.0063

TOTAL STORM RAINFALL(INCHES) = 6.32
 TOTAL SOIL-LOSS(INCHES) = 1.68
 TOTAL EFFECTIVE RAINFALL(INCHES) = 4.64

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.5450
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1.5030

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 FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0003	0.05	Q	.	.	.	.
0.167	0.0007	0.05	Q	.	.	.	.
0.250	0.0010	0.05	Q	.	.	.	.
0.333	0.0018	0.12	Q	.	.	.	.
0.417	0.0026	0.12	Q	.	.	.	.
0.500	0.0034	0.12	Q	.	.	.	.
0.583	0.0044	0.14	Q	.	.	.	.
0.667	0.0054	0.14	Q	.	.	.	.
0.750	0.0064	0.14	Q	.	.	.	.
0.833	0.0075	0.17	Q	.	.	.	.
0.917	0.0087	0.17	Q	.	.	.	.
1.000	0.0099	0.17	Q	.	.	.	.
1.083	0.0111	0.17	Q	.	.	.	.
1.167	0.0122	0.17	Q	.	.	.	.
1.250	0.0134	0.17	Q	.	.	.	.
1.333	0.0144	0.15	Q	.	.	.	.
1.417	0.0155	0.15	Q	.	.	.	.
1.500	0.0165	0.15	Q	.	.	.	.
1.583	0.0176	0.15	Q	.	.	.	.
1.667	0.0186	0.15	Q	.	.	.	.
1.750	0.0196	0.15	Q	.	.	.	.
1.833	0.0208	0.17	Q	.	.	.	.
1.917	0.0220	0.17	Q	.	.	.	.
2.000	0.0232	0.17	Q	.	.	.	.
2.083	0.0245	0.19	Q	.	.	.	.
2.167	0.0259	0.19	Q	.	.	.	.
2.250	0.0272	0.19	Q	.	.	.	.
2.333	0.0286	0.20	Q	.	.	.	.
2.417	0.0299	0.20	Q	.	.	.	.
2.500	0.0313	0.20	Q	.	.	.	.
2.583	0.0328	0.22	Q	.	.	.	.
2.667	0.0344	0.22	Q	.	.	.	.
2.750	0.0359	0.22	Q	.	.	.	.
2.833	0.0376	0.24	Q	.	.	.	.
2.917	0.0392	0.24	QV	.	.	.	.
3.000	0.0409	0.24	QV	.	.	.	.
3.083	0.0426	0.25	QV	.	.	.	.
3.167	0.0443	0.25	QV	.	.	.	.
3.250	0.0460	0.25	QV	.	.	.	.
3.333	0.0477	0.25	QV	.	.	.	.
3.417	0.0494	0.25	QV	.	.	.	.
3.500	0.0511	0.25	QV	.	.	.	.
3.583	0.0528	0.25	QV	.	.	.	.
3.667	0.0545	0.25	QV	.	.	.	.
3.750	0.0562	0.25	QV	.	.	.	.
3.833	0.0581	0.27	.Q	.	.	.	.
3.917	0.0600	0.27	.Q	.	.	.	.
4.000	0.0619	0.27	.Q	.	.	.	.
4.083	0.0639	0.29	.Q	.	.	.	.
4.167	0.0659	0.29	.Q	.	.	.	.
4.250	0.0679	0.29	.Q	.	.	.	.
4.333	0.0701	0.32	.Q	.	.	.	.
4.417	0.0724	0.32	.Q	.	.	.	.
4.500	0.0746	0.32	.Q	.	.	.	.
4.583	0.0769	0.34	.QV	.	.	.	.
4.667	0.0793	0.34	.QV	.	.	.	.

4.750	0.0816	0.34	.QV	.	.	.	.
4.833	0.0842	0.37	.QV	.	.	.	.
4.917	0.0868	0.37	.QV	.	.	.	.
5.000	0.0893	0.37	.QV	.	.	.	.
5.083	0.0917	0.34	.QV	.	.	.	.
5.167	0.0940	0.34	.QV	.	.	.	.
5.250	0.0964	0.34	.QV	.	.	.	.
5.333	0.0986	0.33	.QV	.	.	.	.
5.417	0.1009	0.33	.QV	.	.	.	.
5.500	0.1032	0.33	.QV	.	.	.	.
5.583	0.1057	0.37	.QV	.	.	.	.
5.667	0.1083	0.37	.QV	.	.	.	.
5.750	0.1108	0.37	.QV	.	.	.	.
5.833	0.1135	0.39	.Q V	.	.	.	.
5.917	0.1162	0.39	.Q V	.	.	.	.
6.000	0.1189	0.39	.Q V	.	.	.	.
6.083	0.1218	0.42	.Q V	.	.	.	.
6.167	0.1247	0.42	.Q V	.	.	.	.
6.250	0.1276	0.42	.Q V	.	.	.	.
6.333	0.1306	0.44	.Q V	.	.	.	.
6.417	0.1337	0.44	.Q V	.	.	.	.
6.500	0.1367	0.44	.Q V	.	.	.	.
6.583	0.1399	0.47	.Q V	.	.	.	.
6.667	0.1432	0.47	.Q V	.	.	.	.
6.750	0.1464	0.47	.Q V	.	.	.	.
6.833	0.1498	0.49	.Q V	.	.	.	.
6.917	0.1532	0.49	.Q V	.	.	.	.
7.000	0.1566	0.49	.Q V	.	.	.	.
7.083	0.1600	0.50	. Q V	.	.	.	.
7.167	0.1635	0.50	. Q V	.	.	.	.
7.250	0.1669	0.50	. Q V	.	.	.	.
7.333	0.1708	0.56	. Q V	.	.	.	.
7.417	0.1746	0.56	. Q V	.	.	.	.
7.500	0.1784	0.56	. Q V	.	.	.	.
7.583	0.1830	0.65	. Q V	.	.	.	.
7.667	0.1875	0.65	. Q V	.	.	.	.
7.750	0.1920	0.65	. Q V	.	.	.	.
7.833	0.1972	0.76	. Q V	.	.	.	.
7.917	0.2024	0.76	. Q V	.	.	.	.
8.000	0.2076	0.76	. Q V	.	.	.	.
8.083	0.2139	0.91	. Q V	.	.	.	.
8.167	0.2202	0.91	. Q V	.	.	.	.
8.250	0.2265	0.91	. Q V	.	.	.	.
8.333	0.2335	1.01	. Q V	.	.	.	.
8.417	0.2404	1.01	. Q V	.	.	.	.
8.500	0.2474	1.01	. Q V	.	.	.	.
8.583	0.2548	1.08	. Q V	.	.	.	.
8.667	0.2622	1.08	. Q V	.	.	.	.
8.750	0.2697	1.08	. Q V	.	.	.	.
8.833	0.2778	1.18	. Q V	.	.	.	.
8.917	0.2860	1.18	. Q V	.	.	.	.
9.000	0.2941	1.18	. Q V	.	.	.	.
9.083	0.3033	1.34	. Q V	.	.	.	.
9.167	0.3125	1.34	. Q V	.	.	.	.
9.250	0.3217	1.34	. Q V	.	.	.	.
9.333	0.3319	1.48	. Q V	.	.	.	.
9.417	0.3421	1.48	. Q V	.	.	.	.
9.500	0.3523	1.48	. Q V	.	.	.	.
9.583	0.3633	1.59	. Q V	.	.	.	.
9.667	0.3742	1.59	. Q V	.	.	.	.
9.750	0.3852	1.59	. Q V	.	.	.	.
9.833	0.3969	1.70	. Q V	.	.	.	.
9.917	0.4086	1.70	. Q V	.	.	.	.

10.000	0.4203	1.70	.	Q	V	.	.	.
10.083	0.4300	1.40	.	Q	.V	.	.	.
10.167	0.4396	1.40	.	Q	.V	.	.	.
10.250	0.4493	1.40	.	Q	.V	.	.	.
10.333	0.4571	1.14	.	Q	.V	.	.	.
10.417	0.4649	1.14	.	Q	.V	.	.	.
10.500	0.4728	1.14	.	Q	.V	.	.	.
10.583	0.4821	1.35	.	Q	.V	.	.	.
10.667	0.4914	1.35	.	Q	.V	.	.	.
10.750	0.5007	1.35	.	Q	.V	.	.	.
10.833	0.5113	1.54	.	Q	.V	.	.	.
10.917	0.5220	1.54	.	Q	.V	.	.	.
11.000	0.5326	1.54	.	Q	.V	.	.	.
11.083	0.5432	1.53	.	Q	.V	.	.	.
11.167	0.5537	1.53	.	Q	.V	.	.	.
11.250	0.5643	1.53	.	Q	.V	.	.	.
11.333	0.5746	1.51	.	Q	.V	.	.	.
11.417	0.5850	1.51	.	Q	.V	.	.	.
11.500	0.5954	1.51	.	Q	.V	.	.	.
11.583	0.6051	1.40	.	Q	.V	.	.	.
11.667	0.6147	1.40	.	Q	.V	.	.	.
11.750	0.6244	1.40	.	Q	.V	.	.	.
11.833	0.6339	1.38	.	Q	.V	.	.	.
11.917	0.6434	1.38	.	Q	.V	.	.	.
12.000	0.6529	1.38	.	Q	.V	.	.	.
12.083	0.6651	1.76	.	Q	.V	.	.	.
12.167	0.6772	1.76	.	Q	.V	.	.	.
12.250	0.6894	1.76	.	Q	.V	.	.	.
12.333	0.7039	2.10	.	Q	.V	.	.	.
12.417	0.7183	2.10	.	Q	.V	.	.	.
12.500	0.7328	2.10	.	Q	.V	.	.	.
12.583	0.7486	2.30	.	Q.	.V	.	.	.
12.667	0.7644	2.30	.	Q.	.V	.	.	.
12.750	0.7803	2.30	.	Q.	.V	.	.	.
12.833	0.7971	2.45	.	Q.	.V	.	.	.
12.917	0.8140	2.45	.	Q.	.V	.	.	.
13.000	0.8309	2.45	.	Q.	.V	.	.	.
13.083	0.8499	2.76	.	.Q	.V	.	.	.
13.167	0.8690	2.76	.	.Q	.V	.	.	.
13.250	0.8880	2.76	.	.Q	.V	.	.	.
13.333	0.9085	2.98	.	.Q	.V	.	.	.
13.417	0.9290	2.98	.	.Q	.V	.	.	.
13.500	0.9496	2.98	.	.Q	.V	.	.	.
13.583	0.9666	2.47	.	Q.	.V	.	.	.
13.667	0.9836	2.47	.	Q.	.V	.	.	.
13.750	1.0006	2.47	.	Q.	.V	.	.	.
13.833	1.0146	2.05	.	Q	.V	.	.	.
13.917	1.0287	2.05	.	Q	.V	.	.	.
14.000	1.0428	2.05	.	Q	.V	.	.	.
14.083	1.0578	2.18	.	Q	.V	.	.	.
14.167	1.0728	2.18	.	Q	.V	.	.	.
14.250	1.0878	2.18	.	Q	.V	.	.	.
14.333	1.1035	2.27	.	Q.	.V	.	.	.
14.417	1.1192	2.27	.	Q.	.V	.	.	.
14.500	1.1348	2.27	.	Q.	.V	.	.	.
14.583	1.1504	2.26	.	Q.	.V	.	.	.
14.667	1.1660	2.26	.	Q.	.V	.	.	.
14.750	1.1816	2.26	.	Q.	.V	.	.	.
14.833	1.1969	2.22	.	Q	.V	.	.	.
14.917	1.2121	2.22	.	Q	.V	.	.	.
15.000	1.2274	2.22	.	Q	.V	.	.	.
15.083	1.2421	2.13	.	Q	.V	.	.	.
15.167	1.2567	2.13	.	Q	.V	.	.	.

15.250	1.2714	2.13	.	Q	.	.	.	V	.
15.333	1.2854	2.04	.	Q	.	.	.	V	.
15.417	1.2995	2.04	.	Q	.	.	.	V	.
15.500	1.3135	2.04	.	Q	.	.	.	V	.
15.583	1.3259	1.79	.	Q	.	.	.	V	.
15.667	1.3382	1.79	.	Q	.	.	.	V	.
15.750	1.3506	1.79	.	Q	.	.	.	V	.
15.833	1.3618	1.63	.	Q	.	.	.	V	.
15.917	1.3730	1.63	.	Q	.	.	.	V	.
16.000	1.3842	1.63	.	Q	.	.	.	V	.
16.083	1.3904	0.89	.	Q	.	.	.	V	.
16.167	1.3965	0.89	.	Q	.	.	.	V	.
16.250	1.4027	0.89	.	Q	.	.	.	V	.
16.333	1.4050	0.33	.	Q	.	.	.	V	.
16.417	1.4072	0.33	.	Q	.	.	.	V	.
16.500	1.4095	0.33	.	Q	.	.	.	V	.
16.583	1.4109	0.20	Q	.	.	.	.	V	.
16.667	1.4123	0.20	Q	.	.	.	.	V	.
16.750	1.4137	0.20	Q	.	.	.	.	V	.
16.833	1.4148	0.16	Q	.	.	.	.	V	.
16.917	1.4159	0.16	Q	.	.	.	.	V	.
17.000	1.4170	0.16	Q	.	.	.	.	V	.
17.083	1.4184	0.20	Q	.	.	.	.	V	.
17.167	1.4198	0.20	Q	.	.	.	.	V	.
17.250	1.4212	0.20	Q	.	.	.	.	V	.
17.333	1.4229	0.24	Q	.	.	.	.	V	.
17.417	1.4245	0.24	Q	.	.	.	.	V	.
17.500	1.4262	0.24	Q	.	.	.	.	V	.
17.583	1.4279	0.25	Q	.	.	.	.	V	.
17.667	1.4296	0.25	Q	.	.	.	.	V	.
17.750	1.4313	0.25	Q	.	.	.	.	V	.
17.833	1.4328	0.22	Q	.	.	.	.	V	.
17.917	1.4343	0.22	Q	.	.	.	.	V	.
18.000	1.4358	0.22	Q	.	.	.	.	V	.
18.083	1.4372	0.20	Q	.	.	.	.	V	.
18.167	1.4386	0.20	Q	.	.	.	.	V	.
18.250	1.4400	0.20	Q	.	.	.	.	V	.
18.333	1.4414	0.20	Q	.	.	.	.	V	.
18.417	1.4428	0.20	Q	.	.	.	.	V	.
18.500	1.4441	0.20	Q	.	.	.	.	V	.
18.583	1.4453	0.17	Q	.	.	.	.	V	.
18.667	1.4465	0.17	Q	.	.	.	.	V	.
18.750	1.4477	0.17	Q	.	.	.	.	V	.
18.833	1.4486	0.13	Q	.	.	.	.	V	.
18.917	1.4495	0.13	Q	.	.	.	.	V	.
19.000	1.4504	0.13	Q	.	.	.	.	V	.
19.083	1.4513	0.13	Q	.	.	.	.	V	.
19.167	1.4522	0.13	Q	.	.	.	.	V	.
19.250	1.4531	0.13	Q	.	.	.	.	V	.
19.333	1.4542	0.17	Q	.	.	.	.	V	.
19.417	1.4554	0.17	Q	.	.	.	.	V	.
19.500	1.4566	0.17	Q	.	.	.	.	V	.
19.583	1.4577	0.17	Q	.	.	.	.	V	.
19.667	1.4589	0.17	Q	.	.	.	.	V	.
19.750	1.4600	0.17	Q	.	.	.	.	V	.
19.833	1.4609	0.13	Q	.	.	.	.	V	.
19.917	1.4618	0.13	Q	.	.	.	.	V	.
20.000	1.4627	0.13	Q	.	.	.	.	V	.
20.083	1.4636	0.13	Q	.	.	.	.	V	.
20.167	1.4645	0.13	Q	.	.	.	.	V	.
20.250	1.4653	0.13	Q	.	.	.	.	V	.
20.333	1.4663	0.15	Q	.	.	.	.	V	.
20.417	1.4673	0.15	Q	.	.	.	.	V	.

20.500	1.4683	0.15	Q	.	.	.	V.
20.583	1.4694	0.15	Q	.	.	.	V.
20.667	1.4704	0.15	Q	.	.	.	V.
20.750	1.4714	0.15	Q	.	.	.	V.
20.833	1.4723	0.12	Q	.	.	.	V.
20.917	1.4731	0.12	Q	.	.	.	V.
21.000	1.4740	0.12	Q	.	.	.	V.
21.083	1.4748	0.13	Q	.	.	.	V.
21.167	1.4757	0.13	Q	.	.	.	V.
21.250	1.4766	0.13	Q	.	.	.	V.
21.333	1.4774	0.12	Q	.	.	.	V.
21.417	1.4783	0.12	Q	.	.	.	V.
21.500	1.4791	0.12	Q	.	.	.	V.
21.583	1.4800	0.13	Q	.	.	.	V.
21.667	1.4809	0.13	Q	.	.	.	V.
21.750	1.4817	0.13	Q	.	.	.	V.
21.833	1.4826	0.12	Q	.	.	.	V.
21.917	1.4834	0.12	Q	.	.	.	V.
22.000	1.4842	0.12	Q	.	.	.	V.
22.083	1.4851	0.13	Q	.	.	.	V.
22.167	1.4860	0.13	Q	.	.	.	V.
22.250	1.4869	0.13	Q	.	.	.	V.
22.333	1.4877	0.12	Q	.	.	.	V.
22.417	1.4885	0.12	Q	.	.	.	V.
22.500	1.4893	0.12	Q	.	.	.	V.
22.583	1.4900	0.10	Q	.	.	.	V.
22.667	1.4907	0.10	Q	.	.	.	V.
22.750	1.4915	0.10	Q	.	.	.	V.
22.833	1.4921	0.10	Q	.	.	.	V.
22.917	1.4928	0.10	Q	.	.	.	V.
23.000	1.4935	0.10	Q	.	.	.	V.
23.083	1.4942	0.10	Q	.	.	.	V.
23.166	1.4949	0.10	Q	.	.	.	V.
23.250	1.4956	0.10	Q	.	.	.	V.
23.333	1.4963	0.10	Q	.	.	.	V.
23.416	1.4969	0.10	Q	.	.	.	V.
23.500	1.4976	0.10	Q	.	.	.	V.
23.583	1.4983	0.10	Q	.	.	.	V.
23.666	1.4990	0.10	Q	.	.	.	V.
23.750	1.4997	0.10	Q	.	.	.	V.
23.833	1.5004	0.10	Q	.	.	.	V.
23.916	1.5010	0.10	Q	.	.	.	V.
24.000	1.5017	0.10	Q	.	.	.	V.
24.083	1.5021	0.05	Q	.	.	.	V.
24.166	1.5024	0.05	Q	.	.	.	V.
24.250	1.5027	0.05	Q	.	.	.	V.
24.333	1.5028	0.01	Q	.	.	.	V.
24.416	1.5028	0.01	Q	.	.	.	V.
24.500	1.5029	0.01	Q	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1470.0
10%	735.0
20%	525.0
30%	480.0
40%	405.0
50%	315.0

60%
70%
80%
90%

B3_10024.RES
210.0
165.0
60.0
30.0

=====
END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, Unit Hydrograph, B-4 *
* 10-year, 1-hour *

FILE NAME: B4.DAT
TIME/DATE OF STUDY: 06:09 09/10/2020

FLOW PROCESS FROM NODE 189.00 TO NODE 191.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.210 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 0.89 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 39.683

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	4.224	0.664
2	21.517	2.719
3	48.636	4.264
4	65.936	2.720
5	74.688	1.376
6	80.252	0.875
7	84.243	0.628
8	87.272	0.476
9	89.634	0.371
10	91.567	0.304
11	93.136	0.247
12	94.480	0.211
13	95.640	0.182
14	96.538	0.141
15	97.309	0.121
16	97.991	0.107
17	98.314	0.051
18	98.599	0.045
19	98.884	0.045
20	99.168	0.045
21	99.453	0.045
22	99.738	0.045
23	100.000	0.041



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0449	0.0042	0.0407
2	0.0470	0.0042	0.0428
3	0.0495	0.0042	0.0454
4	0.0538	0.0042	0.0497
5	0.0563	0.0042	0.0522
6	0.0629	0.0042	0.0587
7	0.0720	0.0042	0.0679
8	0.0781	0.0042	0.0740
9	0.1106	0.0042	0.1065
10	0.1986	0.0042	0.1944
11	0.0673	0.0042	0.0632
12	0.0488	0.0042	0.0446

TOTAL STORM RAINFALL(INCHES) = 0.89
 TOTAL SOIL-LOSS(INCHES) = 0.05
 TOTAL EFFECTIVE RAINFALL(INCHES) = 0.84

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0054
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.0910



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	B4_101.RES			
				2.5	5.0	7.5	10.0
0.083	0.0002	0.03	Q	.	.	.	.
0.167	0.0011	0.14	Q	.	.	.	.
0.250	0.0033	0.32	.Q	.	.	.	.
0.333	0.0064	0.45	.QV	.	.	.	.
0.417	0.0101	0.54	. Q V	.	.	.	.
0.500	0.0143	0.61	. Q V	.	.	.	.
0.583	0.0191	0.69	. Q V	.	.	.	.
0.667	0.0244	0.78	. Q V	.	.	.	.
0.750	0.0306	0.90	. Q V	.	.	.	.
0.833	0.0384	1.13	. Q V	.	.	.	.
0.917	0.0485	1.47	. Q V	.	.V	.	.
1.000	0.0595	1.59	. Q V	.	.	V	.
1.083	0.0682	1.26	. Q V	.	.	.	V.
1.167	0.0742	0.87	. Q V	.	.	.	V
1.250	0.0781	0.57	. Q V	.	.	.	V V
1.333	0.0808	0.39	.Q V	.	.	.	V V
1.417	0.0828	0.29	.Q V	.	.	.	V V
1.500	0.0844	0.23	Q V	.	.	.	V V
1.583	0.0856	0.18	Q V	.	.	.	V V
1.667	0.0867	0.15	Q V	.	.	.	V V
1.750	0.0875	0.13	Q V	.	.	.	V V
1.833	0.0882	0.10	Q V	.	.	.	V V
1.917	0.0888	0.09	Q V	.	.	.	V V
2.000	0.0893	0.07	Q V	.	.	.	V V
2.083	0.0897	0.06	Q V	.	.	.	V V
2.167	0.0900	0.04	Q V	.	.	.	V V
2.250	0.0902	0.03	Q V	.	.	.	V V
2.333	0.0904	0.03	Q V	.	.	.	V V
2.417	0.0905	0.02	Q V	.	.	.	V V
2.500	0.0907	0.02	Q V	.	.	.	V V
2.583	0.0908	0.02	Q V	.	.	.	V V
2.667	0.0909	0.01	Q V	.	.	.	V V
2.750	0.0909	0.00	Q V	.	.	.	V V

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	165.0
10%	85.0
20%	70.0
30%	55.0
40%	40.0
50%	30.0
60%	20.0
70%	20.0
80%	10.0
90%	10.0

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, Unit Hydrograph, B-4 *
* 10-year, 24-hour *

FILE NAME: B4.DAT
TIME/DATE OF STUDY: 06:08 09/10/2020

FLOW PROCESS FROM NODE 189.00 TO NODE 191.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.210 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.010
USER-ENTERED RAINFALL = 3.95 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 119.048

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	24.793	1.299
2	73.625	2.559
3	87.050	0.704
4	93.061	0.315
5	96.496	0.180
6	98.301	0.095
7	99.163	0.045
8	99.665	0.026
9	99.916	0.013
10	100.000	0.004



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0079	0.0040	0.0040
2	0.0119	0.0059	0.0059
3	0.0119	0.0059	0.0059
4	0.0158	0.0079	0.0079
5	0.0119	0.0059	0.0059
6	0.0119	0.0059	0.0059
7	0.0119	0.0059	0.0059
8	0.0158	0.0079	0.0079
9	0.0158	0.0079	0.0079
10	0.0158	0.0079	0.0079
11	0.0198	0.0099	0.0099
12	0.0198	0.0099	0.0099
13	0.0198	0.0099	0.0099
14	0.0198	0.0099	0.0099
15	0.0198	0.0099	0.0099
16	0.0237	0.0119	0.0119
17	0.0237	0.0119	0.0119
18	0.0277	0.0138	0.0138
19	0.0277	0.0138	0.0138
20	0.0316	0.0158	0.0158
21	0.0237	0.0119	0.0119
22	0.0277	0.0138	0.0138
23	0.0316	0.0158	0.0158
24	0.0316	0.0158	0.0158
25	0.0356	0.0178	0.0178
26	0.0356	0.0178	0.0178
27	0.0395	0.0180	0.0215
28	0.0395	0.0176	0.0219
29	0.0395	0.0173	0.0222
30	0.0435	0.0169	0.0265
31	0.0474	0.0166	0.0308
32	0.0514	0.0163	0.0351
33	0.0593	0.0159	0.0433
34	0.0593	0.0156	0.0436
35	0.0632	0.0153	0.0479
36	0.0672	0.0150	0.0522
37	0.0751	0.0147	0.0604
38	0.0790	0.0143	0.0647
39	0.0830	0.0140	0.0689
40	0.0869	0.0137	0.0732
41	0.0593	0.0134	0.0458
42	0.0593	0.0131	0.0461
43	0.0790	0.0128	0.0662
44	0.0790	0.0125	0.0665

45	0.0751	0.0122	0.0628
46	0.0751	0.0119	0.0631
47	0.0672	0.0116	0.0555
48	0.0711	0.0114	0.0597
49	0.0988	0.0111	0.0877
50	0.1027	0.0108	0.0919
51	0.1106	0.0105	0.1001
52	0.1146	0.0103	0.1043
53	0.1343	0.0100	0.1243
54	0.1343	0.0097	0.1246
55	0.0909	0.0095	0.0814
56	0.0909	0.0092	0.0817
57	0.1067	0.0089	0.0977
58	0.1027	0.0087	0.0940
59	0.1027	0.0084	0.0943
60	0.0988	0.0082	0.0905
61	0.0948	0.0080	0.0868
62	0.0909	0.0077	0.0831
63	0.0751	0.0075	0.0676
64	0.0751	0.0073	0.0678
65	0.0158	0.0070	0.0088
66	0.0158	0.0068	0.0090
67	0.0119	0.0059	0.0059
68	0.0119	0.0059	0.0059
69	0.0198	0.0062	0.0136
70	0.0198	0.0060	0.0138
71	0.0198	0.0058	0.0140
72	0.0158	0.0056	0.0102
73	0.0158	0.0054	0.0104
74	0.0158	0.0052	0.0106
75	0.0119	0.0050	0.0068
76	0.0079	0.0040	0.0040
77	0.0119	0.0047	0.0072
78	0.0158	0.0045	0.0113
79	0.0119	0.0043	0.0075
80	0.0079	0.0040	0.0040
81	0.0119	0.0040	0.0078
82	0.0119	0.0039	0.0080
83	0.0119	0.0037	0.0081
84	0.0079	0.0036	0.0043
85	0.0119	0.0035	0.0084
86	0.0079	0.0033	0.0046
87	0.0119	0.0032	0.0086
88	0.0079	0.0031	0.0048
89	0.0119	0.0030	0.0089
90	0.0079	0.0029	0.0050
91	0.0079	0.0028	0.0051
92	0.0079	0.0027	0.0052
93	0.0079	0.0027	0.0052
94	0.0079	0.0026	0.0053
95	0.0079	0.0025	0.0054
96	0.0079	0.0025	0.0054

TOTAL STORM RAINFALL(INCHES) = 3.95
 TOTAL SOIL-LOSS(INCHES) = 0.88
 TOTAL EFFECTIVE RAINFALL(INCHES) = 3.07

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0950
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.3328

2 4 - 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

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0000	0.01	Q	.	.	.	.
0.167	0.0001	0.01	Q	.	.	.	.
0.250	0.0001	0.01	Q	.	.	.	.
0.333	0.0002	0.02	Q	.	.	.	.
0.417	0.0004	0.02	Q	.	.	.	.
0.500	0.0005	0.02	Q	.	.	.	.
0.583	0.0007	0.03	Q	.	.	.	.
0.667	0.0008	0.03	Q	.	.	.	.
0.750	0.0010	0.03	Q	.	.	.	.
0.833	0.0012	0.03	Q	.	.	.	.
0.917	0.0014	0.03	Q	.	.	.	.
1.000	0.0016	0.03	Q	.	.	.	.
1.083	0.0019	0.03	Q	.	.	.	.
1.167	0.0021	0.03	Q	.	.	.	.
1.250	0.0024	0.03	Q	.	.	.	.
1.333	0.0026	0.03	Q	.	.	.	.
1.417	0.0028	0.03	Q	.	.	.	.
1.500	0.0030	0.03	Q	.	.	.	.
1.583	0.0032	0.03	Q	.	.	.	.
1.667	0.0034	0.03	Q	.	.	.	.
1.750	0.0037	0.03	Q	.	.	.	.
1.833	0.0039	0.03	Q	.	.	.	.
1.917	0.0041	0.03	Q	.	.	.	.
2.000	0.0044	0.03	Q	.	.	.	.
2.083	0.0046	0.04	Q	.	.	.	.
2.167	0.0049	0.04	Q	.	.	.	.
2.250	0.0052	0.04	Q	.	.	.	.
2.333	0.0054	0.04	Q	.	.	.	.
2.417	0.0057	0.04	Q	.	.	.	.
2.500	0.0060	0.04	Q	.	.	.	.
2.583	0.0063	0.04	Q	.	.	.	.
2.667	0.0066	0.04	Q	.	.	.	.
2.750	0.0069	0.04	Q	.	.	.	.
2.833	0.0072	0.05	Q	.	.	.	.
2.917	0.0076	0.05	Q	.	.	.	.
3.000	0.0079	0.05	Q	.	.	.	.
3.083	0.0082	0.05	Q	.	.	.	.
3.167	0.0086	0.05	QV	.	.	.	.
3.250	0.0089	0.05	QV	.	.	.	.
3.333	0.0093	0.05	QV	.	.	.	.
3.417	0.0096	0.05	QV	.	.	.	.
3.500	0.0100	0.05	QV	.	.	.	.
3.583	0.0103	0.05	QV	.	.	.	.
3.667	0.0107	0.05	QV	.	.	.	.
3.750	0.0110	0.05	QV	.	.	.	.
3.833	0.0114	0.05	QV	.	.	.	.
3.917	0.0118	0.05	QV	.	.	.	.
4.000	0.0122	0.05	QV	.	.	.	.
4.083	0.0126	0.06	QV	.	.	.	.
4.167	0.0130	0.06	QV	.	.	.	.
4.250	0.0134	0.06	QV	.	.	.	.
4.333	0.0138	0.06	QV	.	.	.	.
4.417	0.0143	0.06	QV	.	.	.	.

4.500	0.0147	0.06	QV	.	.	.	.
4.583	0.0152	0.07	QV	.	.	.	.
4.667	0.0156	0.07	QV	.	.	.	.
4.750	0.0161	0.07	QV	.	.	.	.
4.833	0.0166	0.07	QV	.	.	.	.
4.917	0.0171	0.07	Q V	.	.	.	.
5.000	0.0176	0.07	Q V	.	.	.	.
5.083	0.0181	0.07	Q V	.	.	.	.
5.167	0.0187	0.07	Q V	.	.	.	.
5.250	0.0192	0.07	Q V	.	.	.	.
5.333	0.0196	0.07	Q V	.	.	.	.
5.417	0.0201	0.07	Q V	.	.	.	.
5.500	0.0206	0.07	Q V	.	.	.	.
5.583	0.0211	0.07	Q V	.	.	.	.
5.667	0.0216	0.07	Q V	.	.	.	.
5.750	0.0221	0.07	Q V	.	.	.	.
5.833	0.0227	0.08	Q V	.	.	.	.
5.917	0.0232	0.08	Q V	.	.	.	.
6.000	0.0238	0.08	Q V	.	.	.	.
6.083	0.0243	0.08	Q V	.	.	.	.
6.167	0.0249	0.08	Q V	.	.	.	.
6.250	0.0255	0.08	Q V	.	.	.	.
6.333	0.0261	0.09	Q V	.	.	.	.
6.417	0.0267	0.09	Q V	.	.	.	.
6.500	0.0273	0.09	Q V	.	.	.	.
6.583	0.0280	0.10	Q V	.	.	.	.
6.667	0.0287	0.10	Q V	.	.	.	.
6.750	0.0293	0.10	Q V	.	.	.	.
6.833	0.0301	0.11	Q V	.	.	.	.
6.917	0.0308	0.11	Q V	.	.	.	.
7.000	0.0315	0.11	Q V	.	.	.	.
7.083	0.0323	0.11	Q V	.	.	.	.
7.167	0.0331	0.11	Q V	.	.	.	.
7.250	0.0338	0.11	Q V	.	.	.	.
7.333	0.0347	0.12	Q V	.	.	.	.
7.417	0.0355	0.12	Q V	.	.	.	.
7.500	0.0363	0.12	Q V	.	.	.	.
7.583	0.0373	0.14	Q V	.	.	.	.
7.667	0.0382	0.14	Q V	.	.	.	.
7.750	0.0392	0.14	Q V	.	.	.	.
7.833	0.0402	0.16	Q V	.	.	.	.
7.917	0.0413	0.16	Q V	.	.	.	.
8.000	0.0424	0.16	Q V	.	.	.	.
8.083	0.0437	0.18	Q V	.	.	.	.
8.167	0.0449	0.18	Q V	.	.	.	.
8.250	0.0462	0.18	Q V	.	.	.	.
8.333	0.0477	0.21	Q V	.	.	.	.
8.417	0.0491	0.21	Q V	.	.	.	.
8.500	0.0506	0.21	Q V	.	.	.	.
8.583	0.0521	0.23	Q V	.	.	.	.
8.667	0.0537	0.23	Q V	.	.	.	.
8.750	0.0552	0.23	Q V	.	.	.	.
8.833	0.0569	0.25	Q V	.	.	.	.
8.917	0.0586	0.25	Q V	.	.	.	.
9.000	0.0603	0.25	Q V	.	.	.	.
9.083	0.0622	0.27	.Q V	.	.	.	.
9.167	0.0641	0.27	.Q V	.	.	.	.
9.250	0.0659	0.27	.Q V	.	.	.	.
9.333	0.0680	0.31	.Q V	.	.	.	.
9.417	0.0701	0.31	.Q V	.	.	.	.
9.500	0.0722	0.31	.Q V	.	.	.	.
9.583	0.0745	0.33	.Q V	.	.	.	.
9.667	0.0768	0.33	.Q V	.	.	.	.

9.750	0.0791	0.33	.Q	V.	.	.	.
9.833	0.0815	0.35	.Q	V.	.	.	.
9.917	0.0839	0.35	.Q	V	.	.	.
10.000	0.0864	0.35	.Q	V	.	.	.
10.083	0.0887	0.34	.Q	V	.	.	.
10.167	0.0910	0.34	.Q	V	.	.	.
10.250	0.0933	0.34	.Q	V	.	.	.
10.333	0.0952	0.27	.Q	.V	.	.	.
10.417	0.0971	0.27	.Q	.V	.	.	.
10.500	0.0989	0.27	.Q	.V	.	.	.
10.583	0.1009	0.28	.Q	. V	.	.	.
10.667	0.1028	0.28	.Q	. V	.	.	.
10.750	0.1048	0.28	.Q	. V	.	.	.
10.833	0.1070	0.33	.Q	. V	.	.	.
10.917	0.1093	0.33	.Q	. V	.	.	.
11.000	0.1115	0.33	.Q	. V	.	.	.
11.083	0.1138	0.33	.Q	. V	.	.	.
11.167	0.1161	0.33	.Q	. V	.	.	.
11.250	0.1184	0.33	.Q	. V	.	.	.
11.333	0.1207	0.33	.Q	. V	.	.	.
11.417	0.1230	0.33	.Q	. V	.	.	.
11.500	0.1252	0.33	.Q	. V	.	.	.
11.583	0.1275	0.32	.Q	. V	.	.	.
11.667	0.1297	0.32	.Q	. V	.	.	.
11.750	0.1319	0.32	.Q	. V	.	.	.
11.833	0.1340	0.31	.Q	. V	.	.	.
11.917	0.1361	0.31	.Q	. V	.	.	.
12.000	0.1382	0.31	.Q	. V	.	.	.
12.083	0.1406	0.35	.Q	. V	.	.	.
12.167	0.1430	0.35	.Q	. V	.	.	.
12.250	0.1454	0.35	.Q	. V	.	.	.
12.333	0.1483	0.43	.Q	. V	.	.	.
12.417	0.1513	0.43	.Q	. V	.	.	.
12.500	0.1542	0.43	.Q	. V	.	.	.
12.583	0.1574	0.47	.Q	. V	.	.	.
12.667	0.1606	0.47	.Q	. V.	.	.	.
12.750	0.1639	0.47	.Q	. V.	.	.	.
12.833	0.1673	0.51	. Q	. V	.	.	.
12.917	0.1708	0.51	. Q	. V	.	.	.
13.000	0.1743	0.51	. Q	. V	.	.	.
13.083	0.1781	0.55	. Q	. .V	.	.	.
13.167	0.1819	0.55	. Q	. .V	.	.	.
13.250	0.1858	0.55	. Q	. . V	.	.	.
13.333	0.1900	0.62	. Q	. . V	.	.	.
13.417	0.1942	0.62	. Q	. . V	.	.	.
13.500	0.1985	0.62	. Q	. . V	.	.	.
13.583	0.2024	0.58	. Q	. . V	.	.	.
13.667	0.2064	0.58	. Q	. . V	.	.	.
13.750	0.2104	0.58	. Q	. . V	.	.	.
13.833	0.2137	0.48	.Q	. . V	.	.	.
13.917	0.2170	0.48	.Q	. . V	.	.	.
14.000	0.2203	0.48	.Q	. . V	.	.	.
14.083	0.2235	0.47	.Q	. . V	.	.	.
14.167	0.2268	0.47	.Q	. . V	.	.	.
14.250	0.2300	0.47	.Q	. . V	.	.	.
14.333	0.2335	0.50	.Q	. . V	.	.	.
14.417	0.2369	0.50	.Q	. . V	.	.	.
14.500	0.2403	0.50	.Q	. . V	.	.	.
14.583	0.2437	0.49	.Q	. . V.	.	.	.
14.667	0.2471	0.49	.Q	. . V.	.	.	.
14.750	0.2505	0.49	.Q	. . V	.	.	.
14.833	0.2539	0.49	.Q	. . V	.	.	.
14.917	0.2573	0.49	.Q	. . V	.	.	.

15.000	0.2606	0.49	.Q	.	.	V	.
15.083	0.2639	0.47	.Q	.	.	.V	.
15.167	0.2672	0.47	.Q	.	.	.V	.
15.250	0.2705	0.47	.Q	.	.	.V	.
15.333	0.2736	0.46	.Q	.	.	.V	.
15.417	0.2768	0.46	.Q	.	.	.V	.
15.500	0.2799	0.46	.Q	.	.	.V	.
15.583	0.2828	0.42	.Q	.	.	.V	.
15.667	0.2858	0.42	.Q	.	.	.V	.
15.750	0.2887	0.42	.Q	.	.	.V	.
15.833	0.2913	0.38	.Q	.	.	.V	.
15.917	0.2939	0.38	.Q	.	.	.V	.
16.000	0.2965	0.38	.Q	.	.	.V	.
16.083	0.2985	0.29	.Q	.	.	.V	.
16.167	0.3005	0.29	.Q	.	.	.V	.
16.250	0.3026	0.29	.Q	.	.	.V	.
16.333	0.3035	0.13	Q	.	.	.V	.
16.417	0.3044	0.13	Q	.	.	.V	.
16.500	0.3053	0.13	Q	.	.	.V	.
16.583	0.3059	0.09	Q	.	.	.V	.
16.667	0.3065	0.09	Q	.	.	.V	.
16.750	0.3071	0.09	Q	.	.	.V	.
16.833	0.3075	0.06	Q	.	.	.V	.
16.917	0.3079	0.06	Q	.	.	.V	.
17.000	0.3083	0.06	Q	.	.	.V	.
17.083	0.3087	0.05	Q	.	.	.V	.
17.167	0.3091	0.05	Q	.	.	.V	.
17.250	0.3094	0.05	Q	.	.	.V	.
17.333	0.3099	0.07	Q	.	.	.V	.
17.417	0.3104	0.07	Q	.	.	.V	.
17.500	0.3108	0.07	Q	.	.	.V	.
17.583	0.3113	0.07	Q	.	.	.V	.
17.667	0.3118	0.07	Q	.	.	.V	.
17.750	0.3123	0.07	Q	.	.	.V	.
17.833	0.3127	0.07	Q	.	.	.V	.
17.917	0.3132	0.07	Q	.	.	.V	.
18.000	0.3137	0.07	Q	.	.	.V	.
18.083	0.3141	0.06	Q	.	.	.V	.
18.167	0.3145	0.06	Q	.	.	.V	.
18.250	0.3149	0.06	Q	.	.	.V	.
18.333	0.3152	0.06	Q	.	.	.V	.
18.417	0.3156	0.06	Q	.	.	.V	.
18.500	0.3160	0.06	Q	.	.	.V	.
18.583	0.3164	0.05	Q	.	.	.V	.
18.667	0.3167	0.05	Q	.	.	.V	.
18.750	0.3171	0.05	Q	.	.	.V	.
18.833	0.3173	0.04	Q	.	.	.V	.
18.917	0.3176	0.04	Q	.	.	.V	.
19.000	0.3179	0.04	Q	.	.	.V	.
19.083	0.3181	0.03	Q	.	.	.V	.
19.167	0.3183	0.03	Q	.	.	.V	.
19.250	0.3185	0.03	Q	.	.	.V	.
19.333	0.3188	0.04	Q	.	.	.V	.
19.417	0.3191	0.04	Q	.	.	.V	.
19.500	0.3194	0.04	Q	.	.	.V	.
19.583	0.3197	0.05	Q	.	.	.V	.
19.667	0.3200	0.05	Q	.	.	.V	.
19.750	0.3204	0.05	Q	.	.	.V	.
19.833	0.3206	0.04	Q	.	.	.V	.
19.917	0.3209	0.04	Q	.	.	.V	.
20.000	0.3211	0.04	Q	.	.	.V	.
20.083	0.3214	0.03	Q	.	.	.V	.
20.167	0.3216	0.03	Q	.	.	.V	.

20.250	0.3218	0.03	Q	.	.	.	V .
20.333	0.3221	0.04	Q	.	.	.	V .
20.417	0.3223	0.04	Q	.	.	.	V .
20.500	0.3226	0.04	Q	.	.	.	V .
20.583	0.3229	0.04	Q	.	.	.	V .
20.667	0.3232	0.04	Q	.	.	.	V .
20.750	0.3234	0.04	Q	.	.	.	V .
20.833	0.3237	0.04	Q	.	.	.	V .
20.917	0.3239	0.04	Q	.	.	.	V .
21.000	0.3242	0.04	Q	.	.	.	V .
21.083	0.3244	0.03	Q	.	.	.	V .
21.167	0.3246	0.03	Q	.	.	.	V .
21.250	0.3249	0.03	Q	.	.	.	V .
21.333	0.3251	0.04	Q	.	.	.	V .
21.417	0.3254	0.04	Q	.	.	.	V .
21.500	0.3256	0.04	Q	.	.	.	V .
21.583	0.3258	0.03	Q	.	.	.	V .
21.667	0.3261	0.03	Q	.	.	.	V .
21.750	0.3263	0.03	Q	.	.	.	V .
21.833	0.3265	0.04	Q	.	.	.	V .
21.917	0.3268	0.04	Q	.	.	.	V .
22.000	0.3270	0.04	Q	.	.	.	V .
22.083	0.3273	0.03	Q	.	.	.	V .
22.167	0.3275	0.03	Q	.	.	.	V .
22.250	0.3277	0.03	Q	.	.	.	V .
22.333	0.3280	0.04	Q	.	.	.	V .
22.417	0.3283	0.04	Q	.	.	.	V .
22.500	0.3285	0.04	Q	.	.	.	V .
22.583	0.3287	0.03	Q	.	.	.	V .
22.667	0.3289	0.03	Q	.	.	.	V .
22.750	0.3291	0.03	Q	.	.	.	V .
22.833	0.3293	0.03	Q	.	.	.	V .
22.917	0.3295	0.03	Q	.	.	.	V .
23.000	0.3297	0.03	Q	.	.	.	V .
23.083	0.3299	0.03	Q	.	.	.	V .
23.166	0.3301	0.03	Q	.	.	.	V .
23.250	0.3303	0.03	Q	.	.	.	V .
23.333	0.3305	0.03	Q	.	.	.	V .
23.416	0.3307	0.03	Q	.	.	.	V .
23.500	0.3309	0.03	Q	.	.	.	V .
23.583	0.3311	0.03	Q	.	.	.	V .
23.666	0.3313	0.03	Q	.	.	.	V .
23.750	0.3314	0.03	Q	.	.	.	V .
23.833	0.3316	0.03	Q	.	.	.	V .
23.916	0.3318	0.03	Q	.	.	.	V .
24.000	0.3320	0.03	Q	.	.	.	V .
24.083	0.3322	0.02	Q	.	.	.	V .
24.166	0.3323	0.02	Q	.	.	.	V .
24.250	0.3325	0.02	Q	.	.	.	V .
24.333	0.3325	0.01	Q	.	.	.	V .
24.416	0.3326	0.01	Q	.	.	.	V .
24.500	0.3326	0.01	Q	.	.	.	V .

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1470.0
10%	795.0
20%	540.0

	B4_1024.RES
30%	480.0
40%	450.0
50%	345.0
60%	225.0
70%	180.0
80%	90.0
90%	45.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, Unit Hydrograph, B-4 *
* 100-year, 1-hour *

FILE NAME: B4.DAT
TIME/DATE OF STUDY: 06:10 09/10/2020

FLOW PROCESS FROM NODE 189.00 TO NODE 191.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.210 HOURS

CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.

THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED

UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050

LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500

USER-ENTERED RAINFALL = 1.49 INCHES

RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED

(SLOPE OF INTENSITY-DURATION CURVE = 0.41)

*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 39.683

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
--------------------	--------------------------	-----------------------------------

1	4.224	0.664
2	21.517	2.719
3	48.636	4.264
4	65.936	2.720
5	74.688	1.376
6	80.252	0.875
7	84.243	0.628
8	87.272	0.476
9	89.634	0.371
10	91.567	0.304
11	93.136	0.247
12	94.480	0.211
13	95.640	0.182
14	96.538	0.141
15	97.309	0.121
16	97.991	0.107
17	98.314	0.051
18	98.599	0.045
19	98.884	0.045
20	99.168	0.045
21	99.453	0.045
22	99.738	0.045
23	100.000	0.041



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0751	0.0042	0.0710
2	0.0787	0.0042	0.0745
3	0.0829	0.0042	0.0787
4	0.0901	0.0042	0.0860
5	0.0943	0.0042	0.0901
6	0.1053	0.0042	0.1011
7	0.1206	0.0042	0.1164
8	0.1308	0.0042	0.1266
9	0.1852	0.0042	0.1810
10	0.3325	0.0042	0.3283
11	0.1127	0.0042	0.1086
12	0.0817	0.0042	0.0775

TOTAL STORM RAINFALL(INCHES) = 1.49
 TOTAL SOIL-LOSS(INCHES) = 0.05
 TOTAL EFFECTIVE RAINFALL(INCHES) = 1.44

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0054
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.1559



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0003	0.05	Q	.	.	.	.
0.167	0.0020	0.24	Q	.	.	.	.
0.250	0.0058	0.56	.VQ	.	.	.	.
0.333	0.0112	0.78	.VQ	.	.	.	.
0.417	0.0176	0.93	.QV	.	.	.	.
0.500	0.0249	1.06	.Q V	.	.	.	.
0.583	0.0331	1.19	.Q V	.	.	.	.
0.667	0.0424	1.34	.Q V	.	.	.	.
0.750	0.0530	1.55	.Q V	.	.	.	.
0.833	0.0663	1.93	.Q V	.	.	.	.
0.917	0.0835	2.50	.Q	.	.V	.	.
1.000	0.1021	2.71	.Q	.	.	V	.
1.083	0.1170	2.16	.Q	.	.	V	.
1.167	0.1273	1.50	.Q	.	.	V	.
1.250	0.1340	0.97	.Q	.	.	V	.
1.333	0.1385	0.66	.Q	.	.	V	.
1.417	0.1420	0.50	.Q	.	.	V	.
1.500	0.1446	0.39	.Q	.	.	V	.
1.583	0.1468	0.31	.Q	.	.	V	.
1.667	0.1486	0.26	.Q	.	.	V	.
1.750	0.1501	0.21	Q	.	.	V	.
1.833	0.1513	0.18	Q	.	.	V	.
1.917	0.1523	0.15	Q	.	.	V	.
2.000	0.1531	0.12	Q	.	.	V	.
2.083	0.1538	0.10	Q	.	.	V	.
2.167	0.1542	0.07	Q	.	.	V	.
2.250	0.1546	0.06	Q	.	.	V	.
2.333	0.1549	0.05	Q	.	.	V	.
2.417	0.1552	0.04	Q	.	.	V	.
2.500	0.1555	0.04	Q	.	.	V	.
2.583	0.1557	0.03	Q	.	.	V	.
2.667	0.1558	0.02	Q	.	.	V	.
2.750	0.1559	0.01	Q	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:

(Note: 100% of Peak Flow Rate estimate assumed to have an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	165.0
10%	85.0
20%	70.0
30%	55.0
40%	40.0
50%	30.0
60%	20.0
70%	20.0
80%	10.0
90%	10.0

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions Unit Hydrograph- Area B-4 *
* 100-year, 24-hour *

FILE NAME: B4.DAT
TIME/DATE OF STUDY: 06:08 09/10/2020

FLOW PROCESS FROM NODE 189.00 TO NODE 191.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.210 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED

UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.010

USER-ENTERED RAINFALL = 6.32 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 119.048

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	24.793	1.299
2	73.625	2.559
3	87.050	0.704
4	93.061	0.315
5	96.496	0.180
6	98.301	0.095
7	99.163	0.045
8	99.665	0.026
9	99.916	0.013
10	100.000	0.004



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0126	0.0063	0.0063
2	0.0190	0.0095	0.0095
3	0.0190	0.0095	0.0095
4	0.0253	0.0126	0.0126
5	0.0190	0.0095	0.0095
6	0.0190	0.0095	0.0095
7	0.0190	0.0095	0.0095
8	0.0253	0.0126	0.0126
9	0.0253	0.0126	0.0126
10	0.0253	0.0126	0.0126
11	0.0316	0.0158	0.0158
12	0.0316	0.0158	0.0158
13	0.0316	0.0158	0.0158
14	0.0316	0.0158	0.0158
15	0.0316	0.0158	0.0158
16	0.0379	0.0190	0.0190
17	0.0379	0.0190	0.0190
18	0.0442	0.0212	0.0231
19	0.0442	0.0208	0.0234
20	0.0506	0.0205	0.0301
21	0.0379	0.0190	0.0190
22	0.0442	0.0197	0.0245
23	0.0506	0.0194	0.0312
24	0.0506	0.0190	0.0315
25	0.0569	0.0187	0.0382
26	0.0569	0.0183	0.0386
27	0.0632	0.0180	0.0452
28	0.0632	0.0176	0.0456
29	0.0632	0.0173	0.0459
30	0.0695	0.0169	0.0526
31	0.0758	0.0166	0.0592
32	0.0822	0.0163	0.0659
33	0.0948	0.0159	0.0789
34	0.0948	0.0156	0.0792
35	0.1011	0.0153	0.0858
36	0.1074	0.0150	0.0925
37	0.1201	0.0147	0.1054
38	0.1264	0.0143	0.1121
39	0.1327	0.0140	0.1187
40	0.1390	0.0137	0.1253
41	0.0948	0.0134	0.0814
42	0.0948	0.0131	0.0817
43	0.1264	0.0128	0.1136
44	0.1264	0.0125	0.1139

45	0.1201	0.0122	0.1079
46	0.1201	0.0119	0.1081
47	0.1074	0.0116	0.0958
48	0.1138	0.0114	0.1024
49	0.1580	0.0111	0.1469
50	0.1643	0.0108	0.1535
51	0.1770	0.0105	0.1664
52	0.1833	0.0103	0.1730
53	0.2149	0.0100	0.2049
54	0.2149	0.0097	0.2052
55	0.1454	0.0095	0.1359
56	0.1454	0.0092	0.1362
57	0.1706	0.0089	0.1617
58	0.1643	0.0087	0.1556
59	0.1643	0.0084	0.1559
60	0.1580	0.0082	0.1498
61	0.1517	0.0080	0.1437
62	0.1454	0.0077	0.1376
63	0.1201	0.0075	0.1126
64	0.1201	0.0073	0.1128
65	0.0253	0.0070	0.0182
66	0.0253	0.0068	0.0185
67	0.0190	0.0066	0.0124
68	0.0190	0.0064	0.0126
69	0.0316	0.0062	0.0254
70	0.0316	0.0060	0.0256
71	0.0316	0.0058	0.0258
72	0.0253	0.0056	0.0197
73	0.0253	0.0054	0.0199
74	0.0253	0.0052	0.0201
75	0.0190	0.0050	0.0139
76	0.0126	0.0048	0.0078
77	0.0190	0.0047	0.0143
78	0.0253	0.0045	0.0208
79	0.0190	0.0043	0.0146
80	0.0126	0.0042	0.0085
81	0.0190	0.0040	0.0149
82	0.0190	0.0039	0.0151
83	0.0190	0.0037	0.0152
84	0.0126	0.0036	0.0091
85	0.0190	0.0035	0.0155
86	0.0126	0.0033	0.0093
87	0.0190	0.0032	0.0158
88	0.0126	0.0031	0.0095
89	0.0190	0.0030	0.0160
90	0.0126	0.0029	0.0097
91	0.0126	0.0028	0.0098
92	0.0126	0.0027	0.0099
93	0.0126	0.0027	0.0100
94	0.0126	0.0026	0.0101
95	0.0126	0.0025	0.0101
96	0.0126	0.0025	0.0101

TOTAL STORM RAINFALL(INCHES) = 6.32
 TOTAL SOIL-LOSS(INCHES) = 1.00
 TOTAL EFFECTIVE RAINFALL(INCHES) = 5.32

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.1086
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.5758

2 4 - 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

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0001	0.01	Q	.	.	.	.
0.167	0.0001	0.01	Q	.	.	.	.
0.250	0.0002	0.01	Q	.	.	.	.
0.333	0.0004	0.03	Q	.	.	.	.
0.417	0.0006	0.03	Q	.	.	.	.
0.500	0.0008	0.03	Q	.	.	.	.
0.583	0.0010	0.04	Q	.	.	.	.
0.667	0.0013	0.04	Q	.	.	.	.
0.750	0.0016	0.04	Q	.	.	.	.
0.833	0.0019	0.05	Q	.	.	.	.
0.917	0.0023	0.05	Q	.	.	.	.
1.000	0.0026	0.05	Q	.	.	.	.
1.083	0.0030	0.06	Q	.	.	.	.
1.167	0.0034	0.06	Q	.	.	.	.
1.250	0.0038	0.06	Q	.	.	.	.
1.333	0.0041	0.05	Q	.	.	.	.
1.417	0.0045	0.05	Q	.	.	.	.
1.500	0.0048	0.05	Q	.	.	.	.
1.583	0.0052	0.05	Q	.	.	.	.
1.667	0.0055	0.05	Q	.	.	.	.
1.750	0.0059	0.05	Q	.	.	.	.
1.833	0.0062	0.05	Q	.	.	.	.
1.917	0.0066	0.05	Q	.	.	.	.
2.000	0.0070	0.05	Q	.	.	.	.
2.083	0.0074	0.06	Q	.	.	.	.
2.167	0.0078	0.06	Q	.	.	.	.
2.250	0.0083	0.06	Q	.	.	.	.
2.333	0.0087	0.06	Q	.	.	.	.
2.417	0.0091	0.06	Q	.	.	.	.
2.500	0.0096	0.06	Q	.	.	.	.
2.583	0.0101	0.07	Q	.	.	.	.
2.667	0.0105	0.07	Q	.	.	.	.
2.750	0.0110	0.07	Q	.	.	.	.
2.833	0.0116	0.08	Q	.	.	.	.
2.917	0.0121	0.08	Q	.	.	.	.
3.000	0.0126	0.08	Q	.	.	.	.
3.083	0.0132	0.08	Q	.	.	.	.
3.167	0.0137	0.08	Q	.	.	.	.
3.250	0.0143	0.08	Q	.	.	.	.
3.333	0.0148	0.08	QV	.	.	.	.
3.417	0.0154	0.08	QV	.	.	.	.
3.500	0.0160	0.08	QV	.	.	.	.
3.583	0.0165	0.08	QV	.	.	.	.
3.667	0.0171	0.08	QV	.	.	.	.
3.750	0.0177	0.08	QV	.	.	.	.
3.833	0.0183	0.09	QV	.	.	.	.
3.917	0.0189	0.09	QV	.	.	.	.
4.000	0.0195	0.09	QV	.	.	.	.
4.083	0.0201	0.09	QV	.	.	.	.
4.167	0.0208	0.09	QV	.	.	.	.
4.250	0.0214	0.09	QV	.	.	.	.
4.333	0.0221	0.10	QV	.	.	.	.
4.417	0.0228	0.10	QV	.	.	.	.

4.500	0.0235	0.10	QV	.	.	.	.
4.583	0.0243	0.11	QV	.	.	.	.
4.667	0.0251	0.11	QV	.	.	.	.
4.750	0.0259	0.11	QV	.	.	.	.
4.833	0.0268	0.13	QV	.	.	.	.
4.917	0.0277	0.13	QV	.	.	.	.
5.000	0.0285	0.13	QV	.	.	.	.
5.083	0.0294	0.13	Q V	.	.	.	.
5.167	0.0304	0.13	Q V	.	.	.	.
5.250	0.0313	0.13	Q V	.	.	.	.
5.333	0.0321	0.12	Q V	.	.	.	.
5.417	0.0329	0.12	Q V	.	.	.	.
5.500	0.0337	0.12	Q V	.	.	.	.
5.583	0.0346	0.13	Q V	.	.	.	.
5.667	0.0355	0.13	Q V	.	.	.	.
5.750	0.0364	0.13	Q V	.	.	.	.
5.833	0.0375	0.15	Q V	.	.	.	.
5.917	0.0386	0.15	Q V	.	.	.	.
6.000	0.0396	0.15	Q V	.	.	.	.
6.083	0.0408	0.17	Q V	.	.	.	.
6.167	0.0419	0.17	Q V	.	.	.	.
6.250	0.0431	0.17	Q V	.	.	.	.
6.333	0.0444	0.19	Q V	.	.	.	.
6.417	0.0457	0.19	Q V	.	.	.	.
6.500	0.0470	0.19	Q V	.	.	.	.
6.583	0.0484	0.20	Q V	.	.	.	.
6.667	0.0498	0.20	Q V	.	.	.	.
6.750	0.0512	0.20	Q V	.	.	.	.
6.833	0.0528	0.22	Q V	.	.	.	.
6.917	0.0543	0.22	Q V	.	.	.	.
7.000	0.0558	0.22	Q V	.	.	.	.
7.083	0.0575	0.23	Q V	.	.	.	.
7.167	0.0591	0.23	Q V	.	.	.	.
7.250	0.0607	0.23	Q V	.	.	.	.
7.333	0.0623	0.25	Q V	.	.	.	.
7.417	0.0640	0.25	Q V	.	.	.	.
7.500	0.0657	0.25	Q V	.	.	.	.
7.583	0.0676	0.27	.Q V	.	.	.	.
7.667	0.0695	0.27	.Q V	.	.	.	.
7.750	0.0714	0.27	.Q V	.	.	.	.
7.833	0.0735	0.30	.Q V	.	.	.	.
7.917	0.0756	0.30	.Q V	.	.	.	.
8.000	0.0777	0.30	.Q V	.	.	.	.
8.083	0.0800	0.35	.Q V	.	.	.	.
8.167	0.0824	0.35	.Q V	.	.	.	.
8.250	0.0848	0.35	.Q V	.	.	.	.
8.333	0.0875	0.39	.Q V	.	.	.	.
8.417	0.0901	0.39	.Q V	.	.	.	.
8.500	0.0928	0.39	.Q V	.	.	.	.
8.583	0.0956	0.41	.Q V	.	.	.	.
8.667	0.0984	0.41	.Q V	.	.	.	.
8.750	0.1013	0.41	.Q V	.	.	.	.
8.833	0.1043	0.44	.Q V	.	.	.	.
8.917	0.1074	0.44	.Q V	.	.	.	.
9.000	0.1104	0.44	.Q V	.	.	.	.
9.083	0.1137	0.48	.Q V	.	.	.	.
9.167	0.1171	0.48	.Q V	.	.	.	.
9.250	0.1204	0.48	.Q V	.	.	.	.
9.333	0.1241	0.53	. Q V	.	.	.	.
9.417	0.1278	0.53	. Q V	.	.	.	.
9.500	0.1315	0.53	. Q V	.	.	.	.
9.583	0.1354	0.57	. Q V	.	.	.	.
9.667	0.1394	0.57	. Q V	.	.	.	.

9.750	0.1433	0.57	. Q	V.	.	.	.
9.833	0.1475	0.61	. Q	V	.	.	.
9.917	0.1517	0.61	. Q	V	.	.	.
10.000	0.1559	0.61	. Q	V	.	.	.
10.083	0.1599	0.58	. Q	.V	.	.	.
10.167	0.1639	0.58	. Q	.V	.	.	.
10.250	0.1679	0.58	. Q	.V	.	.	.
10.333	0.1712	0.48	.Q	.V	.	.	.
10.417	0.1745	0.48	.Q	. V	.	.	.
10.500	0.1778	0.48	.Q	. V	.	.	.
10.583	0.1812	0.49	.Q	. V	.	.	.
10.667	0.1846	0.49	.Q	. V	.	.	.
10.750	0.1880	0.49	.Q	. V	.	.	.
10.833	0.1919	0.56	. Q	. V	.	.	.
10.917	0.1958	0.56	. Q	. V	.	.	.
11.000	0.1997	0.56	. Q	. V	.	.	.
11.083	0.2036	0.57	. Q	. V	.	.	.
11.167	0.2076	0.57	. Q	. V	.	.	.
11.250	0.2115	0.57	. Q	. V	.	.	.
11.333	0.2154	0.57	. Q	. V	.	.	.
11.417	0.2193	0.57	. Q	. V	.	.	.
11.500	0.2232	0.57	. Q	. V	.	.	.
11.583	0.2270	0.55	. Q	. V	.	.	.
11.667	0.2308	0.55	. Q	. V	.	.	.
11.750	0.2346	0.55	. Q	. V	.	.	.
11.833	0.2382	0.53	. Q	. V	.	.	.
11.917	0.2418	0.53	. Q	. V	.	.	.
12.000	0.2455	0.53	. Q	. V	.	.	.
12.083	0.2495	0.59	. Q	. V	.	.	.
12.167	0.2536	0.59	. Q	. V	.	.	.
12.250	0.2577	0.59	. Q	. V	.	.	.
12.333	0.2627	0.72	. Q	. V	.	.	.
12.417	0.2676	0.72	. Q	. V	.	.	.
12.500	0.2725	0.72	. Q	. V	.	.	.
12.583	0.2779	0.78	. Q	. V.	.	.	.
12.667	0.2833	0.78	. Q	. V.	.	.	.
12.750	0.2887	0.78	. Q	. V	.	.	.
12.833	0.2945	0.84	. Q	. V	.	.	.
12.917	0.3003	0.84	. Q	. V	.	.	.
13.000	0.3061	0.84	. Q	. V	.	.	.
13.083	0.3124	0.92	. Q	. .V	.	.	.
13.167	0.3188	0.92	. Q	. . V	.	.	.
13.250	0.3251	0.92	. Q	. . V	.	.	.
13.333	0.3321	1.02	. Q	. . V	.	.	.
13.417	0.3391	1.02	. Q	. . V	.	.	.
13.500	0.3461	1.02	. Q	. . V	.	.	.
13.583	0.3527	0.96	. Q	. . V	.	.	.
13.667	0.3592	0.96	. Q	. . V	.	.	.
13.750	0.3658	0.96	. Q	. . V	.	.	.
13.833	0.3713	0.79	. Q	. . V	.	.	.
13.917	0.3768	0.79	. Q	. . V	.	.	.
14.000	0.3822	0.79	. Q	. . V	.	.	.
14.083	0.3876	0.79	. Q	. . V	.	.	.
14.167	0.3930	0.79	. Q	. . V	.	.	.
14.250	0.3985	0.79	. Q	. . V	.	.	.
14.333	0.4041	0.83	. Q	. . V	.	.	.
14.417	0.4098	0.83	. Q	. . V	.	.	.
14.500	0.4155	0.83	. Q	. . V	.	.	.
14.583	0.4211	0.82	. Q	. . V.	.	.	.
14.667	0.4268	0.82	. Q	. . V.	.	.	.
14.750	0.4324	0.82	. Q	. . V	.	.	.
14.833	0.4380	0.81	. Q	. . V	.	.	.
14.917	0.4436	0.81	. Q	. . V	.	.	.

15.000	0.4491	0.81	.	Q	.	.	.	V	.
15.083	0.4545	0.79	.	Q	.	.	.	.V	.
15.167	0.4600	0.79	.	Q	.	.	.	.V	.
15.250	0.4654	0.79	.	Q	.	.	.	.V	.
15.333	0.4706	0.76	.	Q	.	.	.	.V	.
15.417	0.4758	0.76	.	Q	.	.	.	.V	.
15.500	0.4810	0.76	.	Q	.	.	.	.V	.
15.583	0.4859	0.70	.	Q	.	.	.	.V	.
15.667	0.4907	0.70	.	Q	.	.	.	.V	.
15.750	0.4956	0.70	.	Q	.	.	.	.V	.
15.833	0.4999	0.63	.	Q	.	.	.	.V	.
15.917	0.5043	0.63	.	Q	.	.	.	.V	.
16.000	0.5086	0.63	.	Q	.	.	.	.V	.
16.083	0.5120	0.49	.	Q	.	.	.	.V	.
16.167	0.5153	0.49	.	Q	.	.	.	.V	.
16.250	0.5187	0.49	.	Q	.	.	.	.V	.
16.333	0.5203	0.24	Q	.	.	.	.	.V	.
16.417	0.5220	0.24	Q	.	.	.	.	.V	.
16.500	0.5236	0.24	Q	.	.	.	.	.V	.
16.583	0.5247	0.16	Q	.	.	.	.	.V	.
16.667	0.5258	0.16	Q	.	.	.	.	.V	.
16.750	0.5269	0.16	Q	.	.	.	.	.V	.
16.833	0.5276	0.11	Q	.	.	.	.	.V	.
16.917	0.5284	0.11	Q	.	.	.	.	.V	.
17.000	0.5292	0.11	Q	.	.	.	.	.V	.
17.083	0.5299	0.10	Q	.	.	.	.	.V	.
17.167	0.5306	0.10	Q	.	.	.	.	.V	.
17.250	0.5313	0.10	Q	.	.	.	.	.V	.
17.333	0.5322	0.13	Q	.	.	.	.	.V	.
17.417	0.5331	0.13	Q	.	.	.	.	.V	.
17.500	0.5340	0.13	Q	.	.	.	.	.V	.
17.583	0.5349	0.13	Q	.	.	.	.	.V	.
17.667	0.5358	0.13	Q	.	.	.	.	.V	.
17.750	0.5367	0.13	Q	.	.	.	.	.V	.
17.833	0.5375	0.12	Q	.	.	.	.	.V	.
17.917	0.5384	0.12	Q	.	.	.	.	.V	.
18.000	0.5392	0.12	Q	.	.	.	.	.V	.
18.083	0.5400	0.11	Q	.	.	.	.	.V	.
18.167	0.5407	0.11	Q	.	.	.	.	.V	.
18.250	0.5415	0.11	Q	.	.	.	.	.V	.
18.333	0.5422	0.11	Q	.	.	.	.	.V	.
18.417	0.5430	0.11	Q	.	.	.	.	.V	.
18.500	0.5437	0.11	Q	.	.	.	.	.V	.
18.583	0.5444	0.10	Q	.	.	.	.	.V	.
18.667	0.5451	0.10	Q	.	.	.	.	.V	.
18.750	0.5458	0.10	Q	.	.	.	.	.V	.
18.833	0.5463	0.07	Q	.	.	.	.	.V	.
18.917	0.5468	0.07	Q	.	.	.	.	.V	.
19.000	0.5473	0.07	Q	.	.	.	.	.V	.
19.083	0.5477	0.06	Q	.	.	.	.	.V	.
19.167	0.5481	0.06	Q	.	.	.	.	.V	.
19.250	0.5486	0.06	Q	.	.	.	.	.V	.
19.333	0.5491	0.08	Q	.	.	.	.	.V	.
19.417	0.5497	0.08	Q	.	.	.	.	.V	.
19.500	0.5503	0.08	Q	.	.	.	.	.V	.
19.583	0.5509	0.09	Q	.	.	.	.	.V	.
19.667	0.5515	0.09	Q	.	.	.	.	.V	.
19.750	0.5521	0.09	Q	.	.	.	.	.V	.
19.833	0.5526	0.07	Q	.	.	.	.	.V	.
19.917	0.5531	0.07	Q	.	.	.	.	.V	.
20.000	0.5536	0.07	Q	.	.	.	.	.V	.
20.083	0.5541	0.06	Q	.	.	.	.	.V	.
20.167	0.5545	0.06	Q	.	.	.	.	.V	.

20.250	0.5549	0.06	Q	.	.	.	V .
20.333	0.5554	0.07	Q	.	.	.	V .
20.417	0.5559	0.07	Q	.	.	.	V .
20.500	0.5565	0.07	Q	.	.	.	V .
20.583	0.5570	0.08	Q	.	.	.	V .
20.667	0.5575	0.08	Q	.	.	.	V .
20.750	0.5581	0.08	Q	.	.	.	V .
20.833	0.5585	0.07	Q	.	.	.	V .
20.917	0.5590	0.07	Q	.	.	.	V .
21.000	0.5595	0.07	Q	.	.	.	V .
21.083	0.5600	0.06	Q	.	.	.	V .
21.167	0.5604	0.06	Q	.	.	.	V .
21.250	0.5608	0.06	Q	.	.	.	V .
21.333	0.5613	0.07	Q	.	.	.	V .
21.417	0.5618	0.07	Q	.	.	.	V .
21.500	0.5622	0.07	Q	.	.	.	V .
21.583	0.5627	0.06	Q	.	.	.	V .
21.667	0.5631	0.06	Q	.	.	.	V .
21.750	0.5636	0.06	Q	.	.	.	V .
21.833	0.5640	0.07	Q	.	.	.	V .
21.917	0.5645	0.07	Q	.	.	.	V .
22.000	0.5650	0.07	Q	.	.	.	V .
22.083	0.5654	0.06	Q	.	.	.	V .
22.167	0.5659	0.06	Q	.	.	.	V .
22.250	0.5663	0.06	Q	.	.	.	V .
22.333	0.5668	0.07	Q	.	.	.	V .
22.417	0.5672	0.07	Q	.	.	.	V .
22.500	0.5677	0.07	Q	.	.	.	V .
22.583	0.5681	0.06	Q	.	.	.	V .
22.667	0.5685	0.06	Q	.	.	.	V .
22.750	0.5689	0.06	Q	.	.	.	V .
22.833	0.5693	0.05	Q	.	.	.	V .
22.917	0.5696	0.05	Q	.	.	.	V .
23.000	0.5700	0.05	Q	.	.	.	V .
23.083	0.5704	0.05	Q	.	.	.	V .
23.166	0.5708	0.05	Q	.	.	.	V .
23.250	0.5711	0.05	Q	.	.	.	V .
23.333	0.5715	0.05	Q	.	.	.	V .
23.416	0.5719	0.05	Q	.	.	.	V .
23.500	0.5722	0.05	Q	.	.	.	V .
23.583	0.5726	0.05	Q	.	.	.	V .
23.666	0.5729	0.05	Q	.	.	.	V .
23.750	0.5733	0.05	Q	.	.	.	V .
23.833	0.5737	0.05	Q	.	.	.	V .
23.916	0.5740	0.05	Q	.	.	.	V .
24.000	0.5744	0.05	Q	.	.	.	V .
24.083	0.5747	0.04	Q	.	.	.	V .
24.166	0.5750	0.04	Q	.	.	.	V .
24.250	0.5752	0.04	Q	.	.	.	V .
24.333	0.5753	0.01	Q	.	.	.	V .
24.416	0.5754	0.01	Q	.	.	.	V .
24.500	0.5755	0.01	Q	.	.	.	V .
24.583	0.5756	0.01	Q	.	.	.	V .
24.666	0.5756	0.01	Q	.	.	.	V .
24.750	0.5757	0.01	Q	.	.	.	V .

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated
 Peak Flow Rate
 =====

Duration
 (minutes)
 =====

	B4_10024.RES
0%	1485.0
10%	855.0
20%	600.0
30%	495.0
40%	465.0
50%	375.0
60%	240.0
70%	195.0
80%	90.0
90%	45.0

=====
END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, unit Hydrograph Area B-5 *
* 10-year, 1-hour *

FILE NAME: B5.DAT
TIME/DATE OF STUDY: 06:14 09/10/2020

FLOW PROCESS FROM NODE 192.00 TO NODE 193.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 0.950 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.900
USER-ENTERED RAINFALL = 0.89 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 83.333

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	13.994	1.608
2	59.664	5.247
3	78.792	2.198
4	86.766	0.916
5	91.428	0.536
6	94.514	0.355
7	96.650	0.245
8	98.044	0.160
9	98.699	0.075
10	99.289	0.068
11	99.716	0.049
12	99.929	0.025
13	100.000	0.008



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0449	0.0042	0.0407
2	0.0470	0.0042	0.0428
3	0.0495	0.0042	0.0454
4	0.0538	0.0042	0.0497
5	0.0563	0.0042	0.0522
6	0.0629	0.0042	0.0587
7	0.0720	0.0042	0.0679
8	0.0781	0.0042	0.0740
9	0.1106	0.0042	0.1065
10	0.1986	0.0042	0.1944
11	0.0673	0.0042	0.0632
12	0.0488	0.0042	0.0446

TOTAL STORM RAINFALL(INCHES) = 0.89
 TOTAL SOIL-LOSS(INCHES) = 0.05
 TOTAL EFFECTIVE RAINFALL(INCHES) = 0.84

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0040
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.0665



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0005	0.07	Q	.	.	.	.
0.167	0.0024	0.28	.Q	.	.	.	.
0.250	0.0051	0.39	.Q V	.	.	.	.
0.333	0.0082	0.45	.Q V	.	.	.	.
0.417	0.0116	0.51	. Q	V	.	.	.
0.500	0.0155	0.56	. Q	V.	.	.	.
0.583	0.0198	0.63	. Q	.V	.	.	.
0.667	0.0247	0.71	. Q	. V	.	.	.

B5_101.RES					
0.750	0.0304	0.83	. Q	.	.
0.833	0.0385	1.17	. Q	.	.
0.917	0.0489	1.51	. Q	.	.
1.000	0.0559	1.02	. Q	.	.
1.083	0.0605	0.67	. Q	.	.
1.167	0.0629	0.34	. Q	.	.
1.250	0.0642	0.19	. Q	.	.
1.333	0.0651	0.13	. Q	.	.
1.417	0.0656	0.08	. Q	.	.
1.500	0.0660	0.05	. Q	.	.
1.583	0.0662	0.03	. Q	.	.
1.667	0.0663	0.02	. Q	.	.
1.750	0.0664	0.01	. Q	.	.
1.833	0.0665	0.01	. Q	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	110.0
10%	70.0
20%	60.0
30%	45.0
40%	35.0
50%	20.0
60%	15.0
70%	10.0
80%	5.0
90%	5.0

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, unit Hydrograph Area B-5 *
* 10-year, 24-hour *

FILE NAME: B5.DAT
TIME/DATE OF STUDY: 06:13 09/10/2020

FLOW PROCESS FROM NODE 192.00 TO NODE 193.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 0.950 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.900
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.010
USER-ENTERED RAINFALL = 3.95 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 250.000

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	50.817	1.946
2	90.903	1.535
3	97.798	0.264
4	99.444	0.063
5	99.778	0.013
6	99.944	0.006
7	100.000	0.002



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
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1	0.0079	0.0071	0.0008
2	0.0119	0.0107	0.0012
3	0.0119	0.0107	0.0012
4	0.0158	0.0142	0.0016
5	0.0119	0.0107	0.0012
6	0.0119	0.0107	0.0012
7	0.0119	0.0107	0.0012
8	0.0158	0.0142	0.0016
9	0.0158	0.0142	0.0016
10	0.0158	0.0142	0.0016
11	0.0198	0.0178	0.0020
12	0.0198	0.0178	0.0020
13	0.0198	0.0178	0.0020
14	0.0198	0.0178	0.0020
15	0.0198	0.0178	0.0020
16	0.0237	0.0213	0.0024
17	0.0237	0.0213	0.0024
18	0.0277	0.0212	0.0065
19	0.0277	0.0208	0.0068
20	0.0316	0.0205	0.0111
21	0.0237	0.0201	0.0036
22	0.0277	0.0197	0.0079
23	0.0316	0.0194	0.0122
24	0.0316	0.0190	0.0126
25	0.0356	0.0187	0.0169
26	0.0356	0.0183	0.0172
27	0.0395	0.0180	0.0215
28	0.0395	0.0176	0.0219
29	0.0395	0.0173	0.0222
30	0.0435	0.0169	0.0265
31	0.0474	0.0166	0.0308
32	0.0514	0.0163	0.0351
33	0.0593	0.0159	0.0433
34	0.0593	0.0156	0.0436
35	0.0632	0.0153	0.0479
36	0.0672	0.0150	0.0522
37	0.0751	0.0147	0.0604
38	0.0790	0.0143	0.0647
39	0.0830	0.0140	0.0689
40	0.0869	0.0137	0.0732
41	0.0593	0.0134	0.0458
42	0.0593	0.0131	0.0461
43	0.0790	0.0128	0.0662
44	0.0790	0.0125	0.0665
45	0.0751	0.0122	0.0628
46	0.0751	0.0119	0.0631
47	0.0672	0.0116	0.0555

48	0.0711	0.0114	0.0597
49	0.0988	0.0111	0.0877
50	0.1027	0.0108	0.0919
51	0.1106	0.0105	0.1001
52	0.1146	0.0103	0.1043
53	0.1343	0.0100	0.1243
54	0.1343	0.0097	0.1246
55	0.0909	0.0095	0.0814
56	0.0909	0.0092	0.0817
57	0.1067	0.0089	0.0977
58	0.1027	0.0087	0.0940
59	0.1027	0.0084	0.0943
60	0.0988	0.0082	0.0905
61	0.0948	0.0080	0.0868
62	0.0909	0.0077	0.0831
63	0.0751	0.0075	0.0676
64	0.0751	0.0073	0.0678
65	0.0158	0.0070	0.0088
66	0.0158	0.0068	0.0090
67	0.0119	0.0066	0.0053
68	0.0119	0.0064	0.0055
69	0.0198	0.0062	0.0136
70	0.0198	0.0060	0.0138
71	0.0198	0.0058	0.0140
72	0.0158	0.0056	0.0102
73	0.0158	0.0054	0.0104
74	0.0158	0.0052	0.0106
75	0.0119	0.0050	0.0068
76	0.0079	0.0048	0.0031
77	0.0119	0.0047	0.0072
78	0.0158	0.0045	0.0113
79	0.0119	0.0043	0.0075
80	0.0079	0.0042	0.0037
81	0.0119	0.0040	0.0078
82	0.0119	0.0039	0.0080
83	0.0119	0.0037	0.0081
84	0.0079	0.0036	0.0043
85	0.0119	0.0035	0.0084
86	0.0079	0.0033	0.0046
87	0.0119	0.0032	0.0086
88	0.0079	0.0031	0.0048
89	0.0119	0.0030	0.0089
90	0.0079	0.0029	0.0050
91	0.0079	0.0028	0.0051
92	0.0079	0.0027	0.0052
93	0.0079	0.0027	0.0052
94	0.0079	0.0026	0.0053
95	0.0079	0.0025	0.0054
96	0.0079	0.0025	0.0054

TOTAL STORM RAINFALL(INCHES) = 3.95
 TOTAL SOIL-LOSS(INCHES) = 1.03
 TOTAL EFFECTIVE RAINFALL(INCHES) = 2.92

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0816
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.2310

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0000	0.00	Q	.	.	.	.
0.333	0.0001	0.00	Q	.	.	.	.
0.417	0.0001	0.00	Q	.	.	.	.
0.500	0.0001	0.00	Q	.	.	.	.
0.583	0.0001	0.00	Q	.	.	.	.
0.667	0.0002	0.00	Q	.	.	.	.
0.750	0.0002	0.00	Q	.	.	.	.
0.833	0.0002	0.01	Q	.	.	.	.
0.917	0.0003	0.01	Q	.	.	.	.
1.000	0.0003	0.01	Q	.	.	.	.
1.083	0.0003	0.01	Q	.	.	.	.
1.167	0.0004	0.01	Q	.	.	.	.
1.250	0.0004	0.01	Q	.	.	.	.
1.333	0.0004	0.00	Q	.	.	.	.
1.417	0.0005	0.00	Q	.	.	.	.
1.500	0.0005	0.00	Q	.	.	.	.
1.583	0.0005	0.00	Q	.	.	.	.
1.667	0.0006	0.00	Q	.	.	.	.
1.750	0.0006	0.00	Q	.	.	.	.
1.833	0.0006	0.01	Q	.	.	.	.
1.917	0.0007	0.01	Q	.	.	.	.
2.000	0.0007	0.01	Q	.	.	.	.
2.083	0.0007	0.01	Q	.	.	.	.
2.167	0.0008	0.01	Q	.	.	.	.
2.250	0.0008	0.01	Q	.	.	.	.
2.333	0.0009	0.01	Q	.	.	.	.
2.417	0.0009	0.01	Q	.	.	.	.
2.500	0.0010	0.01	Q	.	.	.	.
2.583	0.0010	0.01	Q	.	.	.	.
2.667	0.0010	0.01	Q	.	.	.	.
2.750	0.0011	0.01	Q	.	.	.	.
2.833	0.0011	0.01	Q	.	.	.	.
2.917	0.0012	0.01	Q	.	.	.	.
3.000	0.0012	0.01	Q	.	.	.	.
3.083	0.0013	0.01	Q	.	.	.	.
3.167	0.0014	0.01	Q	.	.	.	.
3.250	0.0014	0.01	Q	.	.	.	.
3.333	0.0015	0.01	Q	.	.	.	.
3.417	0.0015	0.01	Q	.	.	.	.
3.500	0.0016	0.01	Q	.	.	.	.
3.583	0.0016	0.01	Q	.	.	.	.
3.667	0.0017	0.01	Q	.	.	.	.
3.750	0.0017	0.01	Q	.	.	.	.
3.833	0.0018	0.01	Q	.	.	.	.
3.917	0.0018	0.01	Q	.	.	.	.
4.000	0.0019	0.01	Q	.	.	.	.
4.083	0.0020	0.01	Q	.	.	.	.
4.167	0.0020	0.01	Q	.	.	.	.
4.250	0.0021	0.01	Q	.	.	.	.
4.333	0.0022	0.02	Q	.	.	.	.
4.417	0.0023	0.02	Q	.	.	.	.
4.500	0.0024	0.02	Q	.	.	.	.
4.583	0.0026	0.02	Q	.	.	.	.
4.667	0.0028	0.02	Q	.	.	.	.

4.750	0.0029	0.02	Q	.	.	.	.
4.833	0.0032	0.03	Q	.	.	.	.
4.917	0.0034	0.03	Q	.	.	.	.
5.000	0.0036	0.03	Q	.	.	.	.
5.083	0.0038	0.03	Q	.	.	.	.
5.167	0.0040	0.03	Q	.	.	.	.
5.250	0.0042	0.03	Q	.	.	.	.
5.333	0.0043	0.02	Q	.	.	.	.
5.417	0.0045	0.02	Q	.	.	.	.
5.500	0.0047	0.02	Q	.	.	.	.
5.583	0.0049	0.04	Q	.	.	.	.
5.667	0.0052	0.04	Q	.	.	.	.
5.750	0.0055	0.04	Q	.	.	.	.
5.833	0.0058	0.05	Q	.	.	.	.
5.917	0.0061	0.05	QV	.	.	.	.
6.000	0.0064	0.05	QV	.	.	.	.
6.083	0.0068	0.06	QV	.	.	.	.
6.167	0.0072	0.06	QV	.	.	.	.
6.250	0.0076	0.06	QV	.	.	.	.
6.333	0.0080	0.06	QV	.	.	.	.
6.417	0.0084	0.06	QV	.	.	.	.
6.500	0.0089	0.06	QV	.	.	.	.
6.583	0.0094	0.07	QV	.	.	.	.
6.667	0.0099	0.07	QV	.	.	.	.
6.750	0.0104	0.07	QV	.	.	.	.
6.833	0.0110	0.08	QV	.	.	.	.
6.917	0.0115	0.08	QV	.	.	.	.
7.000	0.0121	0.08	Q V	.	.	.	.
7.083	0.0127	0.08	Q V	.	.	.	.
7.167	0.0132	0.08	Q V	.	.	.	.
7.250	0.0138	0.08	Q V	.	.	.	.
7.333	0.0145	0.09	Q V	.	.	.	.
7.417	0.0151	0.09	Q V	.	.	.	.
7.500	0.0157	0.09	Q V	.	.	.	.
7.583	0.0165	0.11	Q V	.	.	.	.
7.667	0.0172	0.11	Q V	.	.	.	.
7.750	0.0180	0.11	Q V	.	.	.	.
7.833	0.0188	0.12	Q V	.	.	.	.
7.917	0.0197	0.12	Q V	.	.	.	.
8.000	0.0206	0.12	Q V	.	.	.	.
8.083	0.0216	0.15	Q V	.	.	.	.
8.167	0.0226	0.15	Q V	.	.	.	.
8.250	0.0236	0.15	Q V	.	.	.	.
8.333	0.0247	0.16	Q V	.	.	.	.
8.417	0.0259	0.16	Q V	.	.	.	.
8.500	0.0270	0.16	Q V	.	.	.	.
8.583	0.0282	0.17	Q V	.	.	.	.
8.667	0.0294	0.17	Q V	.	.	.	.
8.750	0.0306	0.17	Q V	.	.	.	.
8.833	0.0319	0.19	Q V	.	.	.	.
8.917	0.0332	0.19	Q V	.	.	.	.
9.000	0.0345	0.19	Q V	.	.	.	.
9.083	0.0360	0.21	Q V	.	.	.	.
9.167	0.0375	0.21	Q V	.	.	.	.
9.250	0.0389	0.21	Q V	.	.	.	.
9.333	0.0406	0.24	Q V	.	.	.	.
9.417	0.0422	0.24	Q V	.	.	.	.
9.500	0.0438	0.24	Q V	.	.	.	.
9.583	0.0456	0.25	.Q V	.	.	.	.
9.667	0.0473	0.25	.Q V	.	.	.	.
9.750	0.0491	0.25	.Q V	.	.	.	.
9.833	0.0509	0.27	.Q V	.	.	.	.
9.917	0.0528	0.27	.Q V	.	.	.	.

10.000	0.0546	0.27	.Q	V.	.	.	.
10.083	0.0562	0.23	Q	V.	.	.	.
10.167	0.0577	0.23	Q	V.	.	.	.
10.250	0.0593	0.23	Q	V	.	.	.
10.333	0.0606	0.19	Q	V	.	.	.
10.417	0.0618	0.19	Q	V	.	.	.
10.500	0.0631	0.19	Q	V	.	.	.
10.583	0.0646	0.22	Q	.V	.	.	.
10.667	0.0661	0.22	Q	.V	.	.	.
10.750	0.0676	0.22	Q	.V	.	.	.
10.833	0.0693	0.25	Q	. V	.	.	.
10.917	0.0710	0.25	Q	. V	.	.	.
11.000	0.0727	0.25	Q	. V	.	.	.
11.083	0.0744	0.25	Q	. V	.	.	.
11.167	0.0761	0.25	Q	. V	.	.	.
11.250	0.0778	0.25	Q	. V	.	.	.
11.333	0.0795	0.24	Q	. V	.	.	.
11.417	0.0811	0.24	Q	. V	.	.	.
11.500	0.0828	0.24	Q	. V	.	.	.
11.583	0.0844	0.23	Q	. V	.	.	.
11.667	0.0859	0.23	Q	. V	.	.	.
11.750	0.0875	0.23	Q	. V	.	.	.
11.833	0.0890	0.22	Q	. V	.	.	.
11.917	0.0906	0.22	Q	. V	.	.	.
12.000	0.0921	0.22	Q	. V	.	.	.
12.083	0.0941	0.28	.Q	. V	.	.	.
12.167	0.0960	0.28	.Q	. V	.	.	.
12.250	0.0979	0.28	.Q	. V	.	.	.
12.333	0.1003	0.33	.Q	. V	.	.	.
12.417	0.1026	0.33	.Q	. V	.	.	.
12.500	0.1049	0.33	.Q	. V	.	.	.
12.583	0.1074	0.36	.Q	. V	.	.	.
12.667	0.1099	0.36	.Q	. V.	.	.	.
12.750	0.1124	0.36	.Q	. V.	.	.	.
12.833	0.1150	0.39	.Q	. V.	.	.	.
12.917	0.1177	0.39	.Q	. V	.	.	.
13.000	0.1204	0.39	.Q	. V	.	.	.
13.083	0.1234	0.44	.Q	.V	.	.	.
13.167	0.1264	0.44	.Q	.V	.	.	.
13.250	0.1294	0.44	.Q	. V	.	.	.
13.333	0.1326	0.47	.Q	. V	.	.	.
13.417	0.1358	0.47	.Q	. V	.	.	.
13.500	0.1391	0.47	.Q	. V	.	.	.
13.583	0.1418	0.39	.Q	. V	.	.	.
13.667	0.1445	0.39	.Q	. V	.	.	.
13.750	0.1472	0.39	.Q	. V	.	.	.
13.833	0.1494	0.33	.Q	. V	.	.	.
13.917	0.1517	0.33	.Q	. V	.	.	.
14.000	0.1539	0.33	.Q	. V	.	.	.
14.083	0.1563	0.35	.Q	. V	.	.	.
14.167	0.1587	0.35	.Q	. V	.	.	.
14.250	0.1611	0.35	.Q	. V	.	.	.
14.333	0.1636	0.36	.Q	. V	.	.	.
14.417	0.1661	0.36	.Q	. V	.	.	.
14.500	0.1686	0.36	.Q	. V.	.	.	.
14.583	0.1711	0.36	.Q	. V.	.	.	.
14.667	0.1735	0.36	.Q	. V	.	.	.
14.750	0.1760	0.36	.Q	. V	.	.	.
14.833	0.1785	0.35	.Q	. V	.	.	.
14.917	0.1809	0.35	.Q	. V	.	.	.
15.000	0.1833	0.35	.Q	. V	.	.	.
15.083	0.1857	0.34	.Q	. V	.	.	.
15.167	0.1880	0.34	.Q	. V	.	.	.

15.250	0.1904	0.34	.Q	.	.	.	V	.
15.333	0.1926	0.33	.Q	.	.	.	V	.
15.417	0.1949	0.33	.Q	.	.	.	V	.
15.500	0.1971	0.33	.Q	.	.	.	V	.
15.583	0.1991	0.29	.Q	.	.	.	V	.
15.667	0.2011	0.29	.Q	.	.	.	V	.
15.750	0.2031	0.29	.Q	.	.	.	V	.
15.833	0.2049	0.27	.Q	.	.	.	V	.
15.917	0.2068	0.27	.Q	.	.	.	V	.
16.000	0.2086	0.27	.Q	.	.	.	V	.
16.083	0.2096	0.15	Q	.	.	.	V	.
16.167	0.2106	0.15	Q	.	.	.	V	.
16.250	0.2116	0.15	Q	.	.	.	V	.
16.333	0.2120	0.05	Q	.	.	.	V	.
16.417	0.2124	0.05	Q	.	.	.	V	.
16.500	0.2127	0.05	Q	.	.	.	V	.
16.583	0.2130	0.03	Q	.	.	.	V	.
16.667	0.2132	0.03	Q	.	.	.	V	.
16.750	0.2134	0.03	Q	.	.	.	V	.
16.833	0.2136	0.02	Q	.	.	.	V	.
16.917	0.2137	0.02	Q	.	.	.	V	.
17.000	0.2139	0.02	Q	.	.	.	V	.
17.083	0.2141	0.04	Q	.	.	.	V	.
17.167	0.2144	0.04	Q	.	.	.	V	.
17.250	0.2147	0.04	Q	.	.	.	V	.
17.333	0.2150	0.05	Q	.	.	.	V	.
17.417	0.2153	0.05	Q	.	.	.	V	.
17.500	0.2157	0.05	Q	.	.	.	V	.
17.583	0.2160	0.05	Q	.	.	.	V	.
17.667	0.2164	0.05	Q	.	.	.	V	.
17.750	0.2168	0.05	Q	.	.	.	V	.
17.833	0.2171	0.05	Q	.	.	.	V	.
17.917	0.2174	0.05	Q	.	.	.	V	.
18.000	0.2177	0.05	Q	.	.	.	V	.
18.083	0.2180	0.04	Q	.	.	.	V	.
18.167	0.2183	0.04	Q	.	.	.	V	.
18.250	0.2186	0.04	Q	.	.	.	V	.
18.333	0.2188	0.04	Q	.	.	.	V	.
18.417	0.2191	0.04	Q	.	.	.	V	.
18.500	0.2194	0.04	Q	.	.	.	V	.
18.583	0.2196	0.03	Q	.	.	.	V	.
18.667	0.2199	0.03	Q	.	.	.	V	.
18.750	0.2201	0.03	Q	.	.	.	V	.
18.833	0.2202	0.02	Q	.	.	.	V	.
18.917	0.2204	0.02	Q	.	.	.	V	.
19.000	0.2205	0.02	Q	.	.	.	V	.
19.083	0.2207	0.02	Q	.	.	.	V	.
19.167	0.2208	0.02	Q	.	.	.	V	.
19.250	0.2209	0.02	Q	.	.	.	V	.
19.333	0.2212	0.03	Q	.	.	.	V	.
19.417	0.2214	0.03	Q	.	.	.	V	.
19.500	0.2217	0.03	Q	.	.	.	V	.
19.583	0.2219	0.03	Q	.	.	.	V	.
19.667	0.2221	0.03	Q	.	.	.	V	.
19.750	0.2224	0.03	Q	.	.	.	V	.
19.833	0.2225	0.02	Q	.	.	.	V	.
19.917	0.2227	0.02	Q	.	.	.	V	.
20.000	0.2228	0.02	Q	.	.	.	V	.
20.083	0.2230	0.02	Q	.	.	.	V	.
20.167	0.2232	0.02	Q	.	.	.	V	.
20.250	0.2233	0.02	Q	.	.	.	V	.
20.333	0.2235	0.03	Q	.	.	.	V	.
20.417	0.2237	0.03	Q	.	.	.	V	.

20.500	0.2239	0.03	Q	.	.	.	V .
20.583	0.2241	0.03	Q	.	.	.	V .
20.667	0.2243	0.03	Q	.	.	.	V .
20.750	0.2246	0.03	Q	.	.	.	V .
20.833	0.2247	0.02	Q	.	.	.	V .
20.917	0.2249	0.02	Q	.	.	.	V .
21.000	0.2250	0.02	Q	.	.	.	V .
21.083	0.2252	0.03	Q	.	.	.	V .
21.167	0.2254	0.03	Q	.	.	.	V .
21.250	0.2256	0.03	Q	.	.	.	V .
21.333	0.2257	0.02	Q	.	.	.	V .
21.417	0.2259	0.02	Q	.	.	.	V .
21.500	0.2261	0.02	Q	.	.	.	V .
21.583	0.2262	0.03	Q	.	.	.	V .
21.667	0.2264	0.03	Q	.	.	.	V .
21.750	0.2266	0.03	Q	.	.	.	V .
21.833	0.2268	0.02	Q	.	.	.	V .
21.917	0.2270	0.02	Q	.	.	.	V .
22.000	0.2271	0.02	Q	.	.	.	V .
22.083	0.2273	0.03	Q	.	.	.	V .
22.167	0.2275	0.03	Q	.	.	.	V .
22.250	0.2277	0.03	Q	.	.	.	V .
22.333	0.2279	0.03	Q	.	.	.	V .
22.417	0.2280	0.03	Q	.	.	.	V .
22.500	0.2282	0.03	Q	.	.	.	V .
22.583	0.2283	0.02	Q	.	.	.	V .
22.667	0.2285	0.02	Q	.	.	.	V .
22.750	0.2286	0.02	Q	.	.	.	V .
22.833	0.2288	0.02	Q	.	.	.	V .
22.917	0.2289	0.02	Q	.	.	.	V .
23.000	0.2290	0.02	Q	.	.	.	V .
23.083	0.2292	0.02	Q	.	.	.	V .
23.166	0.2293	0.02	Q	.	.	.	V .
23.250	0.2295	0.02	Q	.	.	.	V .
23.333	0.2296	0.02	Q	.	.	.	V .
23.416	0.2297	0.02	Q	.	.	.	V .
23.500	0.2299	0.02	Q	.	.	.	V .
23.583	0.2300	0.02	Q	.	.	.	V .
23.666	0.2302	0.02	Q	.	.	.	V .
23.750	0.2303	0.02	Q	.	.	.	V .
23.833	0.2304	0.02	Q	.	.	.	V .
23.916	0.2306	0.02	Q	.	.	.	V .
24.000	0.2307	0.02	Q	.	.	.	V .
24.083	0.2308	0.01	Q	.	.	.	V .
24.166	0.2309	0.01	Q	.	.	.	V .
24.250	0.2309	0.01	Q	.	.	.	V .
24.333	0.2309	0.00	Q	.	.	.	V .
24.416	0.2310	0.00	Q	.	.	.	V .
24.500	0.2310	0.00	Q	.	.	.	V .

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1470.0
10%	660.0
20%	525.0
30%	495.0
40%	420.0
50%	330.0

60%
70%
80%
90%

B5_1024.RES
225.0
165.0
60.0
30.0

=====
END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, unit Hydrograph Area B-5 *
* 100-year, 1-hour *

FILE NAME: B5.DAT
TIME/DATE OF STUDY: 06:15 09/10/2020

FLOW PROCESS FROM NODE 192.00 TO NODE 193.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 0.950 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.100 HOURS

CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.

THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED

UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050

LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.900

USER-ENTERED RAINFALL = 1.49 INCHES

RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED

(SLOPE OF INTENSITY-DURATION CURVE = 0.41)

*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 83.333

===== UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	13.994	1.608
2	59.664	5.247
3	78.792	2.198
4	86.766	0.916
5	91.428	0.536
6	94.514	0.355
7	96.650	0.245
8	98.044	0.160
9	98.699	0.075
10	99.289	0.068
11	99.716	0.049
12	99.929	0.025
13	100.000	0.008



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0751	0.0042	0.0710
2	0.0787	0.0042	0.0745
3	0.0829	0.0042	0.0787
4	0.0901	0.0042	0.0860
5	0.0943	0.0042	0.0901
6	0.1053	0.0042	0.1011
7	0.1206	0.0042	0.1164
8	0.1308	0.0042	0.1266
9	0.1852	0.0042	0.1810
10	0.3325	0.0042	0.3283
11	0.1127	0.0042	0.1086
12	0.0817	0.0042	0.0775

TOTAL STORM RAINFALL(INCHES) = 1.49
 TOTAL SOIL-LOSS(INCHES) = 0.05
 TOTAL EFFECTIVE RAINFALL(INCHES) = 1.44

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0040
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.1139



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0008	0.11	Q	.	.	.	.
0.167	0.0042	0.49	.Q	.	.	.	.
0.250	0.0088	0.67	. QV	.	.	.	.
0.333	0.0142	0.78	. QV	.	.	.	.
0.417	0.0202	0.88	. Q	V	.	.	.
0.500	0.0268	0.96	. Q	V.	.	.	.
0.583	0.0343	1.08	. Q	.	V	.	.
0.667	0.0427	1.22	. Q	.	V	.	.

0.750	0.0525	1.42	.	Q	.	.	.	.	.
0.833	0.0662	1.99	.	.	Q	.	V	.	.
0.917	0.0838	2.56	.	.	.	Q	.	V.	.
1.000	0.0959	1.75	.	Q	.	.	.	V	.
1.083	0.1038	1.15	.	.	Q	.	.	.	V
1.167	0.1078	0.58	.	Q	.	.	.	.	V
1.250	0.1101	0.33	.	.	Q	.	.	.	V
1.333	0.1116	0.21	Q	.	.	.	.	.	V.
1.417	0.1125	0.14	Q	.	.	.	.	.	V.
1.500	0.1131	0.08	Q	.	.	.	.	.	V.
1.583	0.1135	0.06	Q	.	.	.	.	.	V.
1.667	0.1137	0.03	Q	.	.	.	.	.	V.
1.750	0.1139	0.02	Q	.	.	.	.	.	V.
1.833	0.1139	0.01	Q	.	.	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	110.0
10%	70.0
20%	60.0
30%	50.0
40%	35.0
50%	20.0
60%	15.0
70%	10.0
80%	5.0
90%	5.0

 END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, unit Hydrograph Area B-5 *
* 100-year, 24-hour *

FILE NAME: B5.DAT
TIME/DATE OF STUDY: 06:13 09/10/2020

FLOW PROCESS FROM NODE 192.00 TO NODE 193.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 0.950 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.100 HOURS

CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.

THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)

MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED

UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050

LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.900

MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.010

USER-ENTERED RAINFALL = 6.32 INCHES

RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED

*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 250.000

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	50.817	1.946
2	90.903	1.535
3	97.798	0.264
4	99.444	0.063
5	99.778	0.013
6	99.944	0.006
7	100.000	0.002



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
----------------------	------------------------	-------------------------	-----------------------------

1	0.0126	0.0114	0.0013
2	0.0190	0.0171	0.0019
3	0.0190	0.0171	0.0019
4	0.0253	0.0228	0.0025
5	0.0190	0.0171	0.0019
6	0.0190	0.0171	0.0019
7	0.0190	0.0171	0.0019
8	0.0253	0.0228	0.0025
9	0.0253	0.0228	0.0025
10	0.0253	0.0228	0.0025
11	0.0316	0.0238	0.0078
12	0.0316	0.0234	0.0082
13	0.0316	0.0231	0.0085
14	0.0316	0.0227	0.0089
15	0.0316	0.0223	0.0093
16	0.0379	0.0219	0.0160
17	0.0379	0.0216	0.0164
18	0.0442	0.0212	0.0231
19	0.0442	0.0208	0.0234
20	0.0506	0.0205	0.0301
21	0.0379	0.0201	0.0178
22	0.0442	0.0197	0.0245
23	0.0506	0.0194	0.0312
24	0.0506	0.0190	0.0315
25	0.0569	0.0187	0.0382
26	0.0569	0.0183	0.0386
27	0.0632	0.0180	0.0452
28	0.0632	0.0176	0.0456
29	0.0632	0.0173	0.0459
30	0.0695	0.0169	0.0526
31	0.0758	0.0166	0.0592
32	0.0822	0.0163	0.0659
33	0.0948	0.0159	0.0789
34	0.0948	0.0156	0.0792
35	0.1011	0.0153	0.0858
36	0.1074	0.0150	0.0925
37	0.1201	0.0147	0.1054
38	0.1264	0.0143	0.1121
39	0.1327	0.0140	0.1187
40	0.1390	0.0137	0.1253
41	0.0948	0.0134	0.0814
42	0.0948	0.0131	0.0817
43	0.1264	0.0128	0.1136
44	0.1264	0.0125	0.1139
45	0.1201	0.0122	0.1079
46	0.1201	0.0119	0.1081
47	0.1074	0.0116	0.0958

48	0.1138	0.0114	0.1024
49	0.1580	0.0111	0.1469
50	0.1643	0.0108	0.1535
51	0.1770	0.0105	0.1664
52	0.1833	0.0103	0.1730
53	0.2149	0.0100	0.2049
54	0.2149	0.0097	0.2052
55	0.1454	0.0095	0.1359
56	0.1454	0.0092	0.1362
57	0.1706	0.0089	0.1617
58	0.1643	0.0087	0.1556
59	0.1643	0.0084	0.1559
60	0.1580	0.0082	0.1498
61	0.1517	0.0080	0.1437
62	0.1454	0.0077	0.1376
63	0.1201	0.0075	0.1126
64	0.1201	0.0073	0.1128
65	0.0253	0.0070	0.0182
66	0.0253	0.0068	0.0185
67	0.0190	0.0066	0.0124
68	0.0190	0.0064	0.0126
69	0.0316	0.0062	0.0254
70	0.0316	0.0060	0.0256
71	0.0316	0.0058	0.0258
72	0.0253	0.0056	0.0197
73	0.0253	0.0054	0.0199
74	0.0253	0.0052	0.0201
75	0.0190	0.0050	0.0139
76	0.0126	0.0048	0.0078
77	0.0190	0.0047	0.0143
78	0.0253	0.0045	0.0208
79	0.0190	0.0043	0.0146
80	0.0126	0.0042	0.0085
81	0.0190	0.0040	0.0149
82	0.0190	0.0039	0.0151
83	0.0190	0.0037	0.0152
84	0.0126	0.0036	0.0091
85	0.0190	0.0035	0.0155
86	0.0126	0.0033	0.0093
87	0.0190	0.0032	0.0158
88	0.0126	0.0031	0.0095
89	0.0190	0.0030	0.0160
90	0.0126	0.0029	0.0097
91	0.0126	0.0028	0.0098
92	0.0126	0.0027	0.0099
93	0.0126	0.0027	0.0100
94	0.0126	0.0026	0.0101
95	0.0126	0.0025	0.0101
96	0.0126	0.0025	0.0101

TOTAL STORM RAINFALL(INCHES) = 6.32
 TOTAL SOIL-LOSS(INCHES) = 1.13
 TOTAL EFFECTIVE RAINFALL(INCHES) = 5.19

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0893
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.4108

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0001	0.00	Q	.	.	.	.
0.333	0.0001	0.01	Q	.	.	.	.
0.417	0.0001	0.01	Q	.	.	.	.
0.500	0.0002	0.01	Q	.	.	.	.
0.583	0.0002	0.01	Q	.	.	.	.
0.667	0.0003	0.01	Q	.	.	.	.
0.750	0.0003	0.01	Q	.	.	.	.
0.833	0.0004	0.01	Q	.	.	.	.
0.917	0.0004	0.01	Q	.	.	.	.
1.000	0.0005	0.01	Q	.	.	.	.
1.083	0.0005	0.01	Q	.	.	.	.
1.167	0.0006	0.01	Q	.	.	.	.
1.250	0.0007	0.01	Q	.	.	.	.
1.333	0.0007	0.01	Q	.	.	.	.
1.417	0.0008	0.01	Q	.	.	.	.
1.500	0.0008	0.01	Q	.	.	.	.
1.583	0.0009	0.01	Q	.	.	.	.
1.667	0.0009	0.01	Q	.	.	.	.
1.750	0.0010	0.01	Q	.	.	.	.
1.833	0.0010	0.01	Q	.	.	.	.
1.917	0.0011	0.01	Q	.	.	.	.
2.000	0.0011	0.01	Q	.	.	.	.
2.083	0.0012	0.01	Q	.	.	.	.
2.167	0.0013	0.01	Q	.	.	.	.
2.250	0.0013	0.01	Q	.	.	.	.
2.333	0.0014	0.01	Q	.	.	.	.
2.417	0.0015	0.01	Q	.	.	.	.
2.500	0.0015	0.01	Q	.	.	.	.
2.583	0.0017	0.02	Q	.	.	.	.
2.667	0.0018	0.02	Q	.	.	.	.
2.750	0.0019	0.02	Q	.	.	.	.
2.833	0.0021	0.03	Q	.	.	.	.
2.917	0.0023	0.03	Q	.	.	.	.
3.000	0.0025	0.03	Q	.	.	.	.
3.083	0.0027	0.03	Q	.	.	.	.
3.167	0.0030	0.03	Q	.	.	.	.
3.250	0.0032	0.03	Q	.	.	.	.
3.333	0.0034	0.03	Q	.	.	.	.
3.417	0.0036	0.03	Q	.	.	.	.
3.500	0.0039	0.03	Q	.	.	.	.
3.583	0.0041	0.03	Q	.	.	.	.
3.667	0.0043	0.03	Q	.	.	.	.
3.750	0.0046	0.03	Q	.	.	.	.
3.833	0.0049	0.05	Q	.	.	.	.
3.917	0.0052	0.05	Q	.	.	.	.
4.000	0.0056	0.05	Q	.	.	.	.
4.083	0.0060	0.06	Q	.	.	.	.
4.167	0.0064	0.06	Q	.	.	.	.
4.250	0.0068	0.06	Q	.	.	.	.
4.333	0.0073	0.07	Q	.	.	.	.
4.417	0.0078	0.07	Q	.	.	.	.
4.500	0.0084	0.07	Q	.	.	.	.
4.583	0.0090	0.09	Q	.	.	.	.
4.667	0.0096	0.09	Q	.	.	.	.

4.750	0.0102	0.09	Q	.	.	.	.
4.833	0.0109	0.10	QV	.	.	.	.
4.917	0.0116	0.10	QV	.	.	.	.
5.000	0.0123	0.10	QV	.	.	.	.
5.083	0.0129	0.09	QV	.	.	.	.
5.167	0.0135	0.09	QV	.	.	.	.
5.250	0.0141	0.09	QV	.	.	.	.
5.333	0.0147	0.08	QV	.	.	.	.
5.417	0.0153	0.08	QV	.	.	.	.
5.500	0.0158	0.08	QV	.	.	.	.
5.583	0.0166	0.11	QV	.	.	.	.
5.667	0.0173	0.11	QV	.	.	.	.
5.750	0.0180	0.11	QV	.	.	.	.
5.833	0.0188	0.12	QV	.	.	.	.
5.917	0.0196	0.12	QV	.	.	.	.
6.000	0.0205	0.12	QV	.	.	.	.
6.083	0.0214	0.13	Q V	.	.	.	.
6.167	0.0223	0.13	Q V	.	.	.	.
6.250	0.0232	0.13	Q V	.	.	.	.
6.333	0.0242	0.14	Q V	.	.	.	.
6.417	0.0252	0.14	Q V	.	.	.	.
6.500	0.0262	0.14	Q V	.	.	.	.
6.583	0.0273	0.16	Q V	.	.	.	.
6.667	0.0284	0.16	Q V	.	.	.	.
6.750	0.0295	0.16	Q V	.	.	.	.
6.833	0.0307	0.17	Q V	.	.	.	.
6.917	0.0319	0.17	Q V	.	.	.	.
7.000	0.0330	0.17	Q V	.	.	.	.
7.083	0.0342	0.17	Q V	.	.	.	.
7.167	0.0354	0.17	Q V	.	.	.	.
7.250	0.0366	0.17	Q V	.	.	.	.
7.333	0.0379	0.19	Q V	.	.	.	.
7.417	0.0392	0.19	Q V	.	.	.	.
7.500	0.0405	0.19	Q V	.	.	.	.
7.583	0.0420	0.21	Q V	.	.	.	.
7.667	0.0434	0.21	Q V	.	.	.	.
7.750	0.0449	0.21	Q V	.	.	.	.
7.833	0.0465	0.24	Q V	.	.	.	.
7.917	0.0482	0.24	Q V	.	.	.	.
8.000	0.0498	0.24	Q V	.	.	.	.
8.083	0.0517	0.27	.Q V	.	.	.	.
8.167	0.0536	0.27	.Q V	.	.	.	.
8.250	0.0555	0.27	.Q V	.	.	.	.
8.333	0.0575	0.30	.Q V	.	.	.	.
8.417	0.0596	0.30	.Q V	.	.	.	.
8.500	0.0616	0.30	.Q V	.	.	.	.
8.583	0.0638	0.31	.Q V	.	.	.	.
8.667	0.0660	0.31	.Q V	.	.	.	.
8.750	0.0681	0.31	.Q V	.	.	.	.
8.833	0.0705	0.34	.Q V	.	.	.	.
8.917	0.0728	0.34	.Q V	.	.	.	.
9.000	0.0751	0.34	.Q V	.	.	.	.
9.083	0.0777	0.38	.Q V	.	.	.	.
9.167	0.0803	0.38	.Q V	.	.	.	.
9.250	0.0829	0.38	.Q V	.	.	.	.
9.333	0.0857	0.41	.Q V	.	.	.	.
9.417	0.0886	0.41	.Q V	.	.	.	.
9.500	0.0914	0.41	.Q V	.	.	.	.
9.583	0.0944	0.44	.Q V	.	.	.	.
9.667	0.0974	0.44	.Q V	.	.	.	.
9.750	0.1005	0.44	.Q V	.	.	.	.
9.833	0.1037	0.46	.Q V	.	.	.	.
9.917	0.1069	0.46	.Q V	.	.	.	.

10.000	0.1100	0.46	.Q	V	.	.	.
10.083	0.1127	0.39	.Q	V	.	.	.
10.167	0.1154	0.39	.Q	V	.	.	.
10.250	0.1181	0.39	.Q	V	.	.	.
10.333	0.1204	0.33	.Q	.V	.	.	.
10.417	0.1226	0.33	.Q	.V	.	.	.
10.500	0.1249	0.33	.Q	.V	.	.	.
10.583	0.1275	0.38	.Q	.V	.	.	.
10.667	0.1301	0.38	.Q	.V	.	.	.
10.750	0.1327	0.38	.Q	.V	.	.	.
10.833	0.1356	0.43	.Q	.V	.	.	.
10.917	0.1386	0.43	.Q	.V	.	.	.
11.000	0.1415	0.43	.Q	.V	.	.	.
11.083	0.1444	0.42	.Q	.V	.	.	.
11.167	0.1473	0.42	.Q	.V	.	.	.
11.250	0.1502	0.42	.Q	.V	.	.	.
11.333	0.1531	0.42	.Q	.V	.	.	.
11.417	0.1559	0.42	.Q	.V	.	.	.
11.500	0.1588	0.42	.Q	.V	.	.	.
11.583	0.1615	0.39	.Q	.V	.	.	.
11.667	0.1642	0.39	.Q	.V	.	.	.
11.750	0.1668	0.39	.Q	.V	.	.	.
11.833	0.1695	0.38	.Q	.V	.	.	.
11.917	0.1721	0.38	.Q	.V	.	.	.
12.000	0.1748	0.38	.Q	.V	.	.	.
12.083	0.1781	0.48	.Q	.V	.	.	.
12.167	0.1814	0.48	.Q	.V	.	.	.
12.250	0.1846	0.48	.Q	.V	.	.	.
12.333	0.1885	0.56	.Q	.V	.	.	.
12.417	0.1924	0.56	.Q	.V	.	.	.
12.500	0.1962	0.56	.Q	.V	.	.	.
12.583	0.2004	0.61	.Q	.V	.	.	.
12.667	0.2046	0.61	.Q	.V	.	.	.
12.750	0.2088	0.61	.Q	.V	.	.	.
12.833	0.2132	0.64	.Q	.V	.	.	.
12.917	0.2176	0.64	.Q	.V	.	.	.
13.000	0.2221	0.64	.Q	.V	.	.	.
13.083	0.2270	0.72	.Q	.V	.	.	.
13.167	0.2320	0.72	.Q	.V	.	.	.
13.250	0.2370	0.72	.Q	.V	.	.	.
13.333	0.2423	0.77	.Q	.V	.	.	.
13.417	0.2476	0.77	.Q	.V	.	.	.
13.500	0.2529	0.77	.Q	.V	.	.	.
13.583	0.2574	0.65	.Q	.V	.	.	.
13.667	0.2619	0.65	.Q	.V	.	.	.
13.750	0.2663	0.65	.Q	.V	.	.	.
13.833	0.2701	0.54	.Q	.V	.	.	.
13.917	0.2738	0.54	.Q	.V	.	.	.
14.000	0.2776	0.54	.Q	.V	.	.	.
14.083	0.2815	0.58	.Q	.V	.	.	.
14.167	0.2855	0.58	.Q	.V	.	.	.
14.250	0.2895	0.58	.Q	.V	.	.	.
14.333	0.2936	0.60	.Q	.V	.	.	.
14.417	0.2977	0.60	.Q	.V	.	.	.
14.500	0.3019	0.60	.Q	.V	.	.	.
14.583	0.3060	0.60	.Q	.V	.	.	.
14.667	0.3101	0.60	.Q	.V	.	.	.
14.750	0.3142	0.60	.Q	.V	.	.	.
14.833	0.3182	0.59	.Q	.V	.	.	.
14.917	0.3223	0.59	.Q	.V	.	.	.
15.000	0.3263	0.59	.Q	.V	.	.	.
15.083	0.3302	0.56	.Q	.V	.	.	.
15.167	0.3341	0.56	.Q	.V	.	.	.

15.250	0.3379	0.56	. Q	.	.	.	V	.
15.333	0.3417	0.54	. Q	.	.	.	V	.
15.417	0.3454	0.54	. Q	.	.	.	V	.
15.500	0.3491	0.54	. Q	.	.	.	V	.
15.583	0.3524	0.48	.Q	.	.	.	V	.
15.667	0.3558	0.48	.Q	.	.	.	V	.
15.750	0.3591	0.48	.Q	.	.	.	V	.
15.833	0.3621	0.44	.Q	.	.	.	V	.
15.917	0.3651	0.44	.Q	.	.	.	V	.
16.000	0.3682	0.44	.Q	.	.	.	V	.
16.083	0.3699	0.25	.Q	.	.	.	V	.
16.167	0.3716	0.25	.Q	.	.	.	V	.
16.250	0.3734	0.25	.Q	.	.	.	V	.
16.333	0.3741	0.10	Q	.	.	.	V	.
16.417	0.3748	0.10	Q	.	.	.	V	.
16.500	0.3755	0.10	Q	.	.	.	V	.
16.583	0.3760	0.07	Q	.	.	.	V	.
16.667	0.3764	0.07	Q	.	.	.	V	.
16.750	0.3769	0.07	Q	.	.	.	V	.
16.833	0.3772	0.05	Q	.	.	.	V	.
16.917	0.3776	0.05	Q	.	.	.	V	.
17.000	0.3780	0.05	Q	.	.	.	V	.
17.083	0.3785	0.07	Q	.	.	.	V	.
17.167	0.3790	0.07	Q	.	.	.	V	.
17.250	0.3795	0.07	Q	.	.	.	V	.
17.333	0.3801	0.09	Q	.	.	.	V	.
17.417	0.3808	0.09	Q	.	.	.	V	.
17.500	0.3814	0.09	Q	.	.	.	V	.
17.583	0.3821	0.10	Q	.	.	.	V	.
17.667	0.3828	0.10	Q	.	.	.	V	.
17.750	0.3834	0.10	Q	.	.	.	V	.
17.833	0.3840	0.09	Q	.	.	.	V	.
17.917	0.3846	0.09	Q	.	.	.	V	.
18.000	0.3852	0.09	Q	.	.	.	V	.
18.083	0.3858	0.08	Q	.	.	.	V	.
18.167	0.3863	0.08	Q	.	.	.	V	.
18.250	0.3868	0.08	Q	.	.	.	V	.
18.333	0.3874	0.08	Q	.	.	.	V	.
18.417	0.3879	0.08	Q	.	.	.	V	.
18.500	0.3884	0.08	Q	.	.	.	V	.
18.583	0.3889	0.07	Q	.	.	.	V	.
18.667	0.3893	0.07	Q	.	.	.	V	.
18.750	0.3898	0.07	Q	.	.	.	V	.
18.833	0.3901	0.04	Q	.	.	.	V	.
18.917	0.3904	0.04	Q	.	.	.	V	.
19.000	0.3907	0.04	Q	.	.	.	V	.
19.083	0.3910	0.05	Q	.	.	.	V	.
19.167	0.3913	0.05	Q	.	.	.	V	.
19.250	0.3916	0.05	Q	.	.	.	V	.
19.333	0.3921	0.07	Q	.	.	.	V	.
19.417	0.3925	0.07	Q	.	.	.	V	.
19.500	0.3930	0.07	Q	.	.	.	V	.
19.583	0.3934	0.07	Q	.	.	.	V	.
19.667	0.3939	0.07	Q	.	.	.	V	.
19.750	0.3943	0.07	Q	.	.	.	V	.
19.833	0.3946	0.05	Q	.	.	.	V	.
19.917	0.3949	0.05	Q	.	.	.	V	.
20.000	0.3952	0.05	Q	.	.	.	V	.
20.083	0.3956	0.05	Q	.	.	.	V	.
20.167	0.3959	0.05	Q	.	.	.	V	.
20.250	0.3962	0.05	Q	.	.	.	V	.
20.333	0.3966	0.06	Q	.	.	.	V	.
20.417	0.3970	0.06	Q	.	.	.	V	.

20.500	0.3974	0.06	Q	.	.	.	V .
20.583	0.3978	0.06	Q	.	.	.	V .
20.667	0.3982	0.06	Q	.	.	.	V .
20.750	0.3986	0.06	Q	.	.	.	V .
20.833	0.3989	0.05	Q	.	.	.	V .
20.917	0.3992	0.05	Q	.	.	.	V .
21.000	0.3995	0.05	Q	.	.	.	V .
21.083	0.3999	0.05	Q	.	.	.	V .
21.167	0.4002	0.05	Q	.	.	.	V .
21.250	0.4006	0.05	Q	.	.	.	V .
21.333	0.4009	0.05	Q	.	.	.	V .
21.417	0.4012	0.05	Q	.	.	.	V .
21.500	0.4015	0.05	Q	.	.	.	V .
21.583	0.4018	0.05	Q	.	.	.	V .
21.667	0.4022	0.05	Q	.	.	.	V .
21.750	0.4025	0.05	Q	.	.	.	V .
21.833	0.4028	0.05	Q	.	.	.	V .
21.917	0.4032	0.05	Q	.	.	.	V .
22.000	0.4035	0.05	Q	.	.	.	V .
22.083	0.4038	0.05	Q	.	.	.	V .
22.167	0.4042	0.05	Q	.	.	.	V .
22.250	0.4045	0.05	Q	.	.	.	V .
22.333	0.4049	0.05	Q	.	.	.	V .
22.417	0.4052	0.05	Q	.	.	.	V .
22.500	0.4055	0.05	Q	.	.	.	V .
22.583	0.4058	0.04	Q	.	.	.	V .
22.667	0.4060	0.04	Q	.	.	.	V .
22.750	0.4063	0.04	Q	.	.	.	V .
22.833	0.4066	0.04	Q	.	.	.	V .
22.917	0.4068	0.04	Q	.	.	.	V .
23.000	0.4071	0.04	Q	.	.	.	V .
23.083	0.4074	0.04	Q	.	.	.	V .
23.166	0.4076	0.04	Q	.	.	.	V .
23.250	0.4079	0.04	Q	.	.	.	V .
23.333	0.4082	0.04	Q	.	.	.	V .
23.416	0.4084	0.04	Q	.	.	.	V .
23.500	0.4087	0.04	Q	.	.	.	V .
23.583	0.4090	0.04	Q	.	.	.	V .
23.666	0.4092	0.04	Q	.	.	.	V .
23.750	0.4095	0.04	Q	.	.	.	V .
23.833	0.4098	0.04	Q	.	.	.	V .
23.916	0.4100	0.04	Q	.	.	.	V .
24.000	0.4103	0.04	Q	.	.	.	V .
24.083	0.4104	0.02	Q	.	.	.	V .
24.166	0.4106	0.02	Q	.	.	.	V .
24.250	0.4107	0.02	Q	.	.	.	V .
24.333	0.4107	0.00	Q	.	.	.	V .
24.416	0.4107	0.00	Q	.	.	.	V .
24.500	0.4108	0.00	Q	.	.	.	V .

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1470.0
10%	780.0
20%	585.0
30%	510.0
40%	450.0
50%	360.0

60%
70%
80%
90%

B5_10024.RES
240.0
180.0
60.0
30.0

=====
END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, B-2 *
* 10-year, 1-hour *

FILE NAME: B2.DAT
TIME/DATE OF STUDY: 19:59 05/27/2021

FLOW PROCESS FROM NODE 194.00 TO NODE 162.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 7.790 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.130 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.140
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 0.89 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 64.103

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	8.930	8.413
2	45.870	34.801
3	70.931	23.610
4	80.843	9.337
5	86.597	5.421
6	90.396	3.579
7	93.131	2.577
8	95.197	1.946
9	96.716	1.431
10	97.875	1.092
11	98.445	0.538
12	98.906	0.433
13	99.356	0.424
14	99.742	0.364
15	99.936	0.182
16	100.000	0.061



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
----------------------	------------------------	-------------------------	-----------------------------

1	0.0449	0.0117	0.0332
2	0.0470	0.0117	0.0353
3	0.0495	0.0117	0.0379
4	0.0538	0.0117	0.0422
5	0.0563	0.0117	0.0447
6	0.0629	0.0117	0.0512
7	0.0720	0.0117	0.0604
8	0.0781	0.0117	0.0665
9	0.1106	0.0117	0.0990
10	0.1986	0.0117	0.1869
11	0.0673	0.0117	0.0557
12	0.0488	0.0117	0.0371

TOTAL STORM RAINFALL(INCHES) = 0.89
 TOTAL SOIL-LOSS(INCHES) = 0.14
 TOTAL EFFECTIVE RAINFALL(INCHES) = 0.75

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0909
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.4866



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	5.0	10.0	15.0	20.0
0.083	0.0019	0.28	Q	.	.	.	.
0.167	0.0119	1.45	V Q	.	.	.	.
0.250	0.0280	2.33	. V Q	.	.	.	.
0.333	0.0474	2.82	. V Q	.	.	.	.
0.417	0.0698	3.25	. VQ	.	.	.	.

B2_101.RES

0.500	0.0949	3.64	.	Q	.	.	.	.
0.583	0.1235	4.16	.	Q	V	.	.	.
0.667	0.1566	4.81	.	Q.	V	.	.	.
0.750	0.1955	5.66	.	.Q	V	.	.	.
0.833	0.2496	7.86	.	.	Q	V	.	.
0.917	0.3237	10.75	.	.	.	.Q	V	.
1.000	0.3823	8.52	.	.	Q	.	.V	.
1.083	0.4205	5.54	.	.Q	.	.	V	.
1.167	0.4428	3.24	.	Q	.	.	V	.
1.250	0.4561	1.92	.	Q	.	.	V	.
1.333	0.4652	1.32	.	Q	.	.	V	.
1.417	0.4717	0.95	.	.Q	.	.	V	.
1.500	0.4765	0.69	.	.Q	.	.	V	.
1.583	0.4799	0.49	Q	.	.	.	V	.
1.667	0.4821	0.32	Q	.	.	.	V	.
1.750	0.4837	0.23	Q	.	.	.	V	.
1.833	0.4849	0.18	Q	.	.	.	V	.
1.917	0.4858	0.13	Q	.	.	.	V	.
2.000	0.4863	0.08	Q	.	.	.	V	.
2.083	0.4865	0.04	Q	.	.	.	V	.
2.167	0.4866	0.01	Q	.	.	.	V	.
2.250	0.4866	0.00	Q	.	.	.	V	.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	135.0
10%	75.0
20%	60.0
30%	50.0
40%	30.0
50%	25.0
60%	15.0
70%	15.0
80%	5.0
90%	5.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, B-2 *
* 100-year, 1-hour *

FILE NAME: B2.DAT
TIME/DATE OF STUDY: 20:01 05/27/2021

FLOW PROCESS FROM NODE 194.00 TO NODE 162.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 7.790 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.130 HOURS

CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.

THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED

UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.140

LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500

USER-ENTERED RAINFALL = 1.49 INCHES

RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED

(SLOPE OF INTENSITY-DURATION CURVE = 0.41)

*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 64.103

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	8.930	8.413
2	45.870	34.801
3	70.931	23.610
4	80.843	9.337
5	86.597	5.421
6	90.396	3.579
7	93.131	2.577
8	95.197	1.946
9	96.716	1.431
10	97.875	1.092
11	98.445	0.538
12	98.906	0.433
13	99.356	0.424
14	99.742	0.364
15	99.936	0.182
16	100.000	0.061



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0751	0.0117	0.0635
2	0.0787	0.0117	0.0670
3	0.0829	0.0117	0.0712
4	0.0901	0.0117	0.0785
5	0.0943	0.0117	0.0826
6	0.1053	0.0117	0.0936
7	0.1206	0.0117	0.1089
8	0.1308	0.0117	0.1191
9	0.1852	0.0117	0.1735
10	0.3325	0.0117	0.3208
11	0.1127	0.0117	0.1011
12	0.0817	0.0117	0.0700

TOTAL STORM RAINFALL(INCHES) = 1.49
 TOTAL SOIL-LOSS(INCHES) = 0.14
 TOTAL EFFECTIVE RAINFALL(INCHES) = 1.35

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0909
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.8759



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	5.0	10.0	15.0	20.0
0.083	0.0037	0.53	VQ	.	.	.	.
0.167	0.0228	2.77	.V Q	.	.	.	.
0.250	0.0533	4.43	. V Q	.	.	.	.
0.333	0.0899	5.31	. V Q	.	.	.	.
0.417	0.1317	6.08	. V . Q	.	.	.	.

B2_1001.RES

0.500	0.1784	6.77	.	V	.	Q	.	.	.
0.583	0.2311	7.65	.	V	.	Q	.	.	.
0.667	0.2913	8.75	.	.	V	.	Q	.	.
0.750	0.3615	10.18	.	.	.	V	.	Q	.
0.833	0.4570	13.88	.	.	.	.	V	.	Q
0.917	0.5860	18.73	.	.	.	.	.	V	.
1.000	0.6893	14.99	.	.	.	.	.	Q.V	.
1.083	0.7578	9.95	.	.	.	Q.	.	.	V
1.167	0.7979	5.83	.	.	Q	.	.	.	V
1.250	0.8215	3.43	.	.	Q	.	.	.	V
1.333	0.8378	2.36	.	.	Q	.	.	.	V
1.417	0.8494	1.69	.	.	Q	.	.	.	V
1.500	0.8579	1.23	.	.	Q	.	.	.	V
1.583	0.8639	0.88	.	.	Q	.	.	.	V
1.667	0.8678	0.57	.	.	Q	.	.	.	V
1.750	0.8707	0.41	.	.	Q	.	.	.	V
1.833	0.8728	0.31	.	.	Q	.	.	.	V
1.917	0.8744	0.23	.	.	Q	.	.	.	V
2.000	0.8753	0.14	.	.	Q	.	.	.	V
2.083	0.8758	0.06	.	.	Q	.	.	.	V
2.167	0.8759	0.02	.	.	Q	.	.	.	V
2.250	0.8759	0.00	.	.	Q	.	.	.	V

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	135.0
10%	75.0
20%	60.0
30%	50.0
40%	35.0
50%	25.0
60%	15.0
70%	15.0
80%	10.0
90%	5.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
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(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, B-2 *
* 10-year, 24-hour *

FILE NAME: B2.DAT
TIME/DATE OF STUDY: 20:00 05/27/2021

FLOW PROCESS FROM NODE 194.00 TO NODE 162.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 7.790 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.130 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.140
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.070
USER-ENTERED RAINFALL = 3.95 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 192.308

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	41.910	13.161
2	85.945	13.828
3	95.015	2.848
4	98.409	1.066
5	99.464	0.331
6	99.786	0.101
7	99.946	0.051
8	100.000	0.017



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
----------------------	------------------------	-------------------------	-----------------------------

1	0.0079	0.0040	0.0040
2	0.0119	0.0059	0.0059
3	0.0119	0.0059	0.0059
4	0.0158	0.0079	0.0079
5	0.0119	0.0059	0.0059
6	0.0119	0.0059	0.0059
7	0.0119	0.0059	0.0059
8	0.0158	0.0079	0.0079
9	0.0158	0.0079	0.0079
10	0.0158	0.0079	0.0079
11	0.0198	0.0099	0.0099
12	0.0198	0.0099	0.0099
13	0.0198	0.0099	0.0099
14	0.0198	0.0099	0.0099
15	0.0198	0.0099	0.0099
16	0.0237	0.0119	0.0119
17	0.0237	0.0119	0.0119
18	0.0277	0.0138	0.0138
19	0.0277	0.0138	0.0138
20	0.0316	0.0158	0.0158
21	0.0237	0.0119	0.0119
22	0.0277	0.0138	0.0138
23	0.0316	0.0158	0.0158
24	0.0316	0.0158	0.0158
25	0.0356	0.0178	0.0178
26	0.0356	0.0178	0.0178
27	0.0395	0.0198	0.0198
28	0.0395	0.0198	0.0198
29	0.0395	0.0198	0.0198
30	0.0435	0.0217	0.0217
31	0.0474	0.0237	0.0237
32	0.0514	0.0257	0.0257
33	0.0593	0.0296	0.0296
34	0.0593	0.0296	0.0296
35	0.0632	0.0316	0.0316
36	0.0672	0.0336	0.0336
37	0.0751	0.0375	0.0375
38	0.0790	0.0382	0.0408
39	0.0830	0.0377	0.0453
40	0.0869	0.0371	0.0498
41	0.0593	0.0296	0.0296
42	0.0593	0.0296	0.0296
43	0.0790	0.0355	0.0435
44	0.0790	0.0350	0.0440
45	0.0751	0.0345	0.0405
46	0.0751	0.0340	0.0410

47	0.0672	0.0335	0.0337
48	0.0711	0.0330	0.0381
49	0.0988	0.0325	0.0662
50	0.1027	0.0320	0.0707
51	0.1106	0.0315	0.0791
52	0.1146	0.0311	0.0835
53	0.1343	0.0306	0.1037
54	0.1343	0.0301	0.1042
55	0.0909	0.0297	0.0612
56	0.0909	0.0292	0.0616
57	0.1067	0.0288	0.0779
58	0.1027	0.0283	0.0744
59	0.1027	0.0279	0.0748
60	0.0988	0.0275	0.0713
61	0.0948	0.0271	0.0677
62	0.0909	0.0266	0.0642
63	0.0751	0.0262	0.0488
64	0.0751	0.0258	0.0492
65	0.0158	0.0079	0.0079
66	0.0158	0.0079	0.0079
67	0.0119	0.0059	0.0059
68	0.0119	0.0059	0.0059
69	0.0198	0.0099	0.0099
70	0.0198	0.0099	0.0099
71	0.0198	0.0099	0.0099
72	0.0158	0.0079	0.0079
73	0.0158	0.0079	0.0079
74	0.0158	0.0079	0.0079
75	0.0119	0.0059	0.0059
76	0.0079	0.0040	0.0040
77	0.0119	0.0059	0.0059
78	0.0158	0.0079	0.0079
79	0.0119	0.0059	0.0059
80	0.0079	0.0040	0.0040
81	0.0119	0.0059	0.0059
82	0.0119	0.0059	0.0059
83	0.0119	0.0059	0.0059
84	0.0079	0.0040	0.0040
85	0.0119	0.0059	0.0059
86	0.0079	0.0040	0.0040
87	0.0119	0.0059	0.0059
88	0.0079	0.0040	0.0040
89	0.0119	0.0059	0.0059
90	0.0079	0.0040	0.0040
91	0.0079	0.0040	0.0040
92	0.0079	0.0040	0.0040
93	0.0079	0.0040	0.0040
94	0.0079	0.0040	0.0040
95	0.0079	0.0040	0.0040
96	0.0079	0.0040	0.0040

TOTAL STORM RAINFALL(INCHES) = 3.95
 TOTAL SOIL-LOSS(INCHES) = 1.60
 TOTAL EFFECTIVE RAINFALL(INCHES) = 2.35

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1.0382
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1.5252

B2_1024.RES
 R U N O F F H Y D R O G R A P H

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	θ.	2.5	5.0	7.5	10.0
0.083	0.0004	0.05	Q	.	.	.	.
0.167	0.0007	0.05	Q	.	.	.	.
0.250	0.0011	0.05	Q	.	.	.	.
0.333	0.0020	0.13	Q	.	.	.	.
0.417	0.0029	0.13	Q	.	.	.	.
0.500	0.0038	0.13	Q	.	.	.	.
0.583	0.0050	0.17	Q	.	.	.	.
0.667	0.0062	0.17	Q	.	.	.	.
0.750	0.0074	0.17	Q	.	.	.	.
0.833	0.0088	0.21	Q	.	.	.	.
0.917	0.0102	0.21	Q	.	.	.	.
1.000	0.0116	0.21	Q	.	.	.	.
1.083	0.0131	0.21	Q	.	.	.	.
1.167	0.0145	0.21	Q	.	.	.	.
1.250	0.0160	0.21	Q	.	.	.	.
1.333	0.0173	0.19	Q	.	.	.	.
1.417	0.0186	0.19	Q	.	.	.	.
1.500	0.0199	0.19	Q	.	.	.	.
1.583	0.0212	0.19	Q	.	.	.	.
1.667	0.0225	0.19	Q	.	.	.	.
1.750	0.0238	0.19	Q	.	.	.	.
1.833	0.0253	0.21	Q	.	.	.	.
1.917	0.0268	0.21	Q	.	.	.	.
2.000	0.0282	0.21	Q	.	.	.	.
2.083	0.0299	0.24	Q	.	.	.	.
2.167	0.0315	0.24	Q	.	.	.	.
2.250	0.0332	0.24	Q	.	.	.	.
2.333	0.0349	0.25	Q	.	.	.	.
2.417	0.0366	0.25	Q	.	.	.	.
2.500	0.0382	0.25	QV	.	.	.	.
2.583	0.0401	0.27	.Q	.	.	.	.
2.667	0.0420	0.27	.Q	.	.	.	.
2.750	0.0439	0.27	.Q	.	.	.	.
2.833	0.0460	0.30	.Q	.	.	.	.
2.917	0.0480	0.30	.Q	.	.	.	.
3.000	0.0501	0.30	.Q	.	.	.	.
3.083	0.0522	0.31	.Q	.	.	.	.
3.167	0.0543	0.31	.Q	.	.	.	.
3.250	0.0564	0.31	.Q	.	.	.	.
3.333	0.0586	0.31	.Q	.	.	.	.
3.417	0.0607	0.31	.Q	.	.	.	.
3.500	0.0628	0.31	.Q	.	.	.	.
3.583	0.0650	0.31	.Q	.	.	.	.
3.667	0.0671	0.31	.Q	.	.	.	.
3.750	0.0692	0.31	.Q	.	.	.	.
3.833	0.0715	0.34	.Q	.	.	.	.
3.917	0.0739	0.34	.Q	.	.	.	.
4.000	0.0762	0.34	.Q	.	.	.	.
4.083	0.0787	0.36	.QV	.	.	.	.
4.167	0.0812	0.36	.QV	.	.	.	.
4.250	0.0837	0.36	.QV	.	.	.	.
4.333	0.0864	0.40	.QV	.	.	.	.
4.417	0.0891	0.40	.QV	.	.	.	.
4.500	0.0918	0.40	.QV	.	.	.	.
4.583	0.0948	0.42	.QV	.	.	.	.

4.667	0.0977	0.42	.QV	.	.	.	.
4.750	0.1006	0.42	.QV	.	.	.	.
4.833	0.1038	0.46	.QV	.	.	.	.
4.917	0.1069	0.46	.QV	.	.	.	.
5.000	0.1100	0.46	.QV	.	.	.	.
5.083	0.1130	0.43	.QV	.	.	.	.
5.167	0.1160	0.43	.Q V	.	.	.	.
5.250	0.1190	0.43	.Q V	.	.	.	.
5.333	0.1219	0.41	.Q V	.	.	.	.
5.417	0.1247	0.41	.Q V	.	.	.	.
5.500	0.1275	0.41	.Q V	.	.	.	.
5.583	0.1307	0.46	.Q V	.	.	.	.
5.667	0.1338	0.46	.Q V	.	.	.	.
5.750	0.1370	0.46	.Q V	.	.	.	.
5.833	0.1403	0.49	.Q V	.	.	.	.
5.917	0.1437	0.49	.Q V	.	.	.	.
6.000	0.1470	0.49	.Q V	.	.	.	.
6.083	0.1506	0.52	. QV	.	.	.	.
6.167	0.1542	0.52	. Q V	.	.	.	.
6.250	0.1577	0.52	. Q V	.	.	.	.
6.333	0.1615	0.55	. Q V	.	.	.	.
6.417	0.1653	0.55	. Q V	.	.	.	.
6.500	0.1691	0.55	. Q V	.	.	.	.
6.583	0.1731	0.58	. Q V	.	.	.	.
6.667	0.1771	0.58	. Q V	.	.	.	.
6.750	0.1811	0.58	. Q V	.	.	.	.
6.833	0.1853	0.61	. Q V	.	.	.	.
6.917	0.1895	0.61	. Q V	.	.	.	.
7.000	0.1937	0.61	. Q V	.	.	.	.
7.083	0.1979	0.62	. Q V	.	.	.	.
7.167	0.2022	0.62	. Q V	.	.	.	.
7.250	0.2064	0.62	. Q V	.	.	.	.
7.333	0.2108	0.65	. Q V	.	.	.	.
7.417	0.2153	0.65	. Q V	.	.	.	.
7.500	0.2197	0.65	. Q V	.	.	.	.
7.583	0.2246	0.70	. Q V	.	.	.	.
7.667	0.2294	0.70	. Q V	.	.	.	.
7.750	0.2342	0.70	. Q V	.	.	.	.
7.833	0.2394	0.76	. Q V	.	.	.	.
7.917	0.2446	0.76	. Q V	.	.	.	.
8.000	0.2498	0.76	. Q V	.	.	.	.
8.083	0.2557	0.85	. Q V	.	.	.	.
8.167	0.2615	0.85	. Q V	.	.	.	.
8.250	0.2673	0.85	. Q V	.	.	.	.
8.333	0.2736	0.91	. Q V	.	.	.	.
8.417	0.2798	0.91	. Q V	.	.	.	.
8.500	0.2861	0.91	. Q V	.	.	.	.
8.583	0.2926	0.95	. Q V	.	.	.	.
8.667	0.2992	0.95	. Q V	.	.	.	.
8.750	0.3057	0.95	. Q V	.	.	.	.
8.833	0.3126	1.01	. Q V	.	.	.	.
8.917	0.3196	1.01	. Q V	.	.	.	.
9.000	0.3265	1.01	. Q V	.	.	.	.
9.083	0.3340	1.09	. Q V	.	.	.	.
9.167	0.3416	1.09	. Q V	.	.	.	.
9.250	0.3491	1.09	. Q V	.	.	.	.
9.333	0.3574	1.20	. Q V	.	.	.	.
9.417	0.3656	1.20	. Q V	.	.	.	.
9.500	0.3739	1.20	. Q V	.	.	.	.
9.583	0.3829	1.32	. Q V	.	.	.	.
9.667	0.3920	1.32	. Q V	.	.	.	.
9.750	0.4011	1.32	. Q V	.	.	.	.
9.833	0.4111	1.45	. Q V	.	.	.	.

9.917	0.4211	1.45	.	Q	V	.	.	.
10.000	0.4311	1.45	.	Q	V	.	.	.
10.083	0.4399	1.27	.	Q	.V	.	.	.
10.167	0.4486	1.27	.	Q	.V	.	.	.
10.250	0.4573	1.27	.	Q	.V	.	.	.
10.333	0.4643	1.01	.	Q	.V	.	.	.
10.417	0.4712	1.01	.	Q	.V	.	.	.
10.500	0.4782	1.01	.	Q	.V	.	.	.
10.583	0.4860	1.14	.	Q	.V	.	.	.
10.667	0.4939	1.14	.	Q	.V	.	.	.
10.750	0.5017	1.14	.	Q	.V	.	.	.
10.833	0.5108	1.32	.	Q	.V	.	.	.
10.917	0.5199	1.32	.	Q	.V	.	.	.
11.000	0.5290	1.32	.	Q	.V	.	.	.
11.083	0.5381	1.31	.	Q	.V	.	.	.
11.167	0.5471	1.31	.	Q	.V	.	.	.
11.250	0.5562	1.31	.	Q	.V	.	.	.
11.333	0.5650	1.29	.	Q	.V	.	.	.
11.417	0.5739	1.29	.	Q	.V	.	.	.
11.500	0.5828	1.29	.	Q	.V	.	.	.
11.583	0.5910	1.19	.	Q	.V	.	.	.
11.667	0.5992	1.19	.	Q	.V	.	.	.
11.750	0.6074	1.19	.	Q	.V	.	.	.
11.833	0.6153	1.15	.	Q	.V	.	.	.
11.917	0.6232	1.15	.	Q	.V	.	.	.
12.000	0.6311	1.15	.	Q	.V	.	.	.
12.083	0.6419	1.56	.	Q	.V	.	.	.
12.167	0.6526	1.56	.	Q	.V	.	.	.
12.250	0.6634	1.56	.	Q	.V	.	.	.
12.333	0.6772	2.01	.	Q	.V	.	.	.
12.417	0.6911	2.01	.	Q	.V	.	.	.
12.500	0.7049	2.01	.	Q	.V	.	.	.
12.583	0.7205	2.27	.	Q.	.V.	.	.	.
12.667	0.7361	2.27	.	Q.	.V.	.	.	.
12.750	0.7517	2.27	.	Q.	.V.	.	.	.
12.833	0.7688	2.48	.	Q.	.V	.	.	.
12.917	0.7859	2.48	.	Q.	.V	.	.	.
13.000	0.8030	2.48	.	Q.	.V	.	.	.
13.083	0.8226	2.85	.	.Q	.V	.	.	.
13.167	0.8422	2.85	.	.Q	.V	.	.	.
13.250	0.8619	2.85	.	.Q	.V	.	.	.
13.333	0.8836	3.16	.	.Q	.V	.	.	.
13.417	0.9054	3.16	.	.Q	.V	.	.	.
13.500	0.9271	3.16	.	.Q	.V	.	.	.
13.583	0.9455	2.67	.	Q	.V	.	.	.
13.667	0.9639	2.67	.	Q	.V	.	.	.
13.750	0.9822	2.67	.	Q	.V	.	.	.
13.833	0.9967	2.10	.	Q	.V	.	.	.
13.917	1.0112	2.10	.	Q	.V	.	.	.
14.000	1.0257	2.10	.	Q	.V	.	.	.
14.083	1.0410	2.21	.	Q	.V	.	.	.
14.167	1.0562	2.21	.	Q	.V	.	.	.
14.250	1.0714	2.21	.	Q	.V	.	.	.
14.333	1.0876	2.35	.	Q.	.V	.	.	.
14.417	1.1037	2.35	.	Q.	.V	.	.	.
14.500	1.1199	2.35	.	Q.	.V.	.	.	.
14.583	1.1360	2.34	.	Q.	.V.	.	.	.
14.667	1.1521	2.34	.	Q.	.V	.	.	.
14.750	1.1682	2.34	.	Q.	.V	.	.	.
14.833	1.1840	2.30	.	Q.	.V	.	.	.
14.917	1.1999	2.30	.	Q.	.V	.	.	.
15.000	1.2157	2.30	.	Q.	.V	.	.	.
15.083	1.2309	2.21	.	Q	.V	.	.	.

15.167	1.2461	2.21	.	Q	.	.	V	.
15.250	1.2613	2.21	.	Q	.	.	V	.
15.333	1.2758	2.10	.	Q	.	.	V	.
15.417	1.2902	2.10	.	Q	.	.	V	.
15.500	1.3047	2.10	.	Q	.	.	V	.
15.583	1.3174	1.84	.	Q	.	.	V	.
15.667	1.3300	1.84	.	Q	.	.	V	.
15.750	1.3427	1.84	.	Q	.	.	V	.
15.833	1.3538	1.61	.	Q	.	.	V	.
15.917	1.3649	1.61	.	Q	.	.	V	.
16.000	1.3760	1.61	.	Q	.	.	V	.
16.083	1.3831	1.03	.	Q	.	.	V	.
16.167	1.3902	1.03	.	Q	.	.	V	.
16.250	1.3972	1.03	.	Q	.	.	V	.
16.333	1.4002	0.44	.Q	.	.	.	V	.
16.417	1.4033	0.44	.Q	.	.	.	V	.
16.500	1.4063	0.44	.Q	.	.	.	V	.
16.583	1.4083	0.29	.Q	.	.	.	V	.
16.667	1.4103	0.29	.Q	.	.	.	V	.
16.750	1.4123	0.29	.Q	.	.	.	V	.
16.833	1.4138	0.22	Q	.	.	.	V	.
16.917	1.4152	0.22	Q	.	.	.	V	.
17.000	1.4167	0.22	Q	.	.	.	V	.
17.083	1.4184	0.25	Q	.	.	.	V	.
17.167	1.4202	0.25	Q	.	.	.	V	.
17.250	1.4219	0.25	Q	.	.	.	V	.
17.333	1.4239	0.30	.Q	.	.	.	V	.
17.417	1.4260	0.30	.Q	.	.	.	V	.
17.500	1.4280	0.30	.Q	.	.	.	V	.
17.583	1.4301	0.30	.Q	.	.	.	V	.
17.667	1.4322	0.30	.Q	.	.	.	V	.
17.750	1.4343	0.30	.Q	.	.	.	V	.
17.833	1.4362	0.28	.Q	.	.	.	V	.
17.917	1.4382	0.28	.Q	.	.	.	V	.
18.000	1.4401	0.28	.Q	.	.	.	V	.
18.083	1.4419	0.26	.Q	.	.	.	V	.
18.167	1.4437	0.26	.Q	.	.	.	V	.
18.250	1.4454	0.26	.Q	.	.	.	V	.
18.333	1.4471	0.25	.Q	.	.	.	V	.
18.417	1.4489	0.25	.Q	.	.	.	V	.
18.500	1.4506	0.25	.Q	.	.	.	V	.
18.583	1.4521	0.22	Q	.	.	.	V	.
18.667	1.4537	0.22	Q	.	.	.	V	.
18.750	1.4552	0.22	Q	.	.	.	V	.
18.833	1.4564	0.17	Q	.	.	.	V	.
18.917	1.4575	0.17	Q	.	.	.	V	.
19.000	1.4587	0.17	Q	.	.	.	V	.
19.083	1.4598	0.16	Q	.	.	.	V	.
19.167	1.4609	0.16	Q	.	.	.	V	.
19.250	1.4621	0.16	Q	.	.	.	V	.
19.333	1.4635	0.21	Q	.	.	.	V	.
19.417	1.4649	0.21	Q	.	.	.	V	.
19.500	1.4663	0.21	Q	.	.	.	V	.
19.583	1.4678	0.21	Q	.	.	.	V	.
19.667	1.4693	0.21	Q	.	.	.	V	.
19.750	1.4707	0.21	Q	.	.	.	V	.
19.833	1.4718	0.17	Q	.	.	.	V	.
19.917	1.4730	0.17	Q	.	.	.	V	.
20.000	1.4741	0.17	Q	.	.	.	V	.
20.083	1.4752	0.16	Q	.	.	.	V	.
20.167	1.4763	0.16	Q	.	.	.	V	.
20.250	1.4774	0.16	Q	.	.	.	V	.
20.333	1.4787	0.18	Q	.	.	.	V	.

20.417	1.4799	0.18	Q	.	.	.	V .
20.500	1.4812	0.18	Q	.	.	.	V .
20.583	1.4825	0.18	Q	.	.	.	V .
20.667	1.4837	0.18	Q	.	.	.	V .
20.750	1.4850	0.18	Q	.	.	.	V .
20.833	1.4861	0.16	Q	.	.	.	V .
20.917	1.4872	0.16	Q	.	.	.	V .
21.000	1.4883	0.16	Q	.	.	.	V .
21.083	1.4894	0.16	Q	.	.	.	V .
21.167	1.4905	0.16	Q	.	.	.	V .
21.250	1.4916	0.16	Q	.	.	.	V .
21.333	1.4926	0.15	Q	.	.	.	V .
21.417	1.4937	0.15	Q	.	.	.	V .
21.500	1.4947	0.15	Q	.	.	.	V .
21.583	1.4958	0.16	Q	.	.	.	V .
21.667	1.4969	0.16	Q	.	.	.	V .
21.750	1.4980	0.16	Q	.	.	.	V .
21.833	1.4990	0.15	Q	.	.	.	V .
21.917	1.5001	0.15	Q	.	.	.	V .
22.000	1.5012	0.15	Q	.	.	.	V .
22.083	1.5022	0.16	Q	.	.	.	V .
22.167	1.5033	0.16	Q	.	.	.	V .
22.250	1.5044	0.16	Q	.	.	.	V .
22.333	1.5055	0.15	Q	.	.	.	V .
22.417	1.5065	0.15	Q	.	.	.	V .
22.500	1.5076	0.15	Q	.	.	.	V .
22.583	1.5085	0.13	Q	.	.	.	V .
22.667	1.5094	0.13	Q	.	.	.	V .
22.750	1.5103	0.13	Q	.	.	.	V .
22.833	1.5111	0.13	Q	.	.	.	V .
22.917	1.5120	0.13	Q	.	.	.	V .
23.000	1.5129	0.13	Q	.	.	.	V .
23.083	1.5137	0.12	Q	.	.	.	V .
23.166	1.5146	0.12	Q	.	.	.	V .
23.250	1.5155	0.12	Q	.	.	.	V .
23.333	1.5163	0.12	Q	.	.	.	V .
23.416	1.5172	0.12	Q	.	.	.	V .
23.500	1.5180	0.12	Q	.	.	.	V .
23.583	1.5189	0.12	Q	.	.	.	V .
23.666	1.5197	0.12	Q	.	.	.	V .
23.750	1.5206	0.12	Q	.	.	.	V .
23.833	1.5214	0.12	Q	.	.	.	V .
23.916	1.5223	0.12	Q	.	.	.	V .
24.000	1.5232	0.12	Q	.	.	.	V .
24.083	1.5236	0.07	Q	.	.	.	V .
24.166	1.5241	0.07	Q	.	.	.	V .
24.250	1.5246	0.07	Q	.	.	.	V .
24.333	1.5248	0.02	Q	.	.	.	V .
24.416	1.5249	0.02	Q	.	.	.	V .
24.500	1.5250	0.02	Q	.	.	.	V .
24.583	1.5250	0.01	Q	.	.	.	V .
24.666	1.5251	0.01	Q	.	.	.	V .
24.750	1.5251	0.01	Q	.	.	.	V .

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1485.0
10%	765.0

	B2_1024.RES
20%	540.0
30%	465.0
40%	330.0
50%	225.0
60%	195.0
70%	120.0
80%	45.0
90%	30.0

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, B-2 *
* 100-year, 24-hour *

FILE NAME: B2.DAT
TIME/DATE OF STUDY: 16:09 03/29/2021

FLOW PROCESS FROM NODE 194.00 TO NODE 162.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 7.790 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.130 HOURS

CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.

THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)

MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED

UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.140

LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500

MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.070

USER-ENTERED RAINFALL = 6.32 INCHES

RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED

*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 192.308

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	41.910	13.161
2	85.945	13.828
3	95.015	2.848
4	98.409	1.066
5	99.464	0.331
6	99.786	0.101
7	99.946	0.051
8	100.000	0.017



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
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1	0.0126	0.0063	0.0063
2	0.0190	0.0095	0.0095
3	0.0190	0.0095	0.0095
4	0.0253	0.0126	0.0126
5	0.0190	0.0095	0.0095
6	0.0190	0.0095	0.0095
7	0.0190	0.0095	0.0095
8	0.0253	0.0126	0.0126
9	0.0253	0.0126	0.0126
10	0.0253	0.0126	0.0126
11	0.0316	0.0158	0.0158
12	0.0316	0.0158	0.0158
13	0.0316	0.0158	0.0158
14	0.0316	0.0158	0.0158
15	0.0316	0.0158	0.0158
16	0.0379	0.0190	0.0190
17	0.0379	0.0190	0.0190
18	0.0442	0.0221	0.0221
19	0.0442	0.0221	0.0221
20	0.0506	0.0253	0.0253
21	0.0379	0.0190	0.0190
22	0.0442	0.0221	0.0221
23	0.0506	0.0253	0.0253
24	0.0506	0.0253	0.0253
25	0.0569	0.0284	0.0284
26	0.0569	0.0284	0.0284
27	0.0632	0.0316	0.0316
28	0.0632	0.0316	0.0316
29	0.0632	0.0316	0.0316
30	0.0695	0.0348	0.0348
31	0.0758	0.0379	0.0379
32	0.0822	0.0411	0.0411
33	0.0948	0.0410	0.0538
34	0.0948	0.0405	0.0543
35	0.1011	0.0399	0.0612
36	0.1074	0.0393	0.0681
37	0.1201	0.0388	0.0813
38	0.1264	0.0382	0.0882
39	0.1327	0.0377	0.0950
40	0.1390	0.0371	0.1019
41	0.0948	0.0366	0.0582
42	0.0948	0.0361	0.0587
43	0.1264	0.0355	0.0909
44	0.1264	0.0350	0.0914
45	0.1201	0.0345	0.0856
46	0.1201	0.0340	0.0861

47	0.1074	0.0335	0.0739
48	0.1138	0.0330	0.0808
49	0.1580	0.0325	0.1255
50	0.1643	0.0320	0.1323
51	0.1770	0.0315	0.1454
52	0.1833	0.0311	0.1522
53	0.2149	0.0306	0.1843
54	0.2149	0.0301	0.1847
55	0.1454	0.0297	0.1157
56	0.1454	0.0292	0.1161
57	0.1706	0.0288	0.1419
58	0.1643	0.0283	0.1360
59	0.1643	0.0279	0.1364
60	0.1580	0.0275	0.1305
61	0.1517	0.0271	0.1246
62	0.1454	0.0266	0.1187
63	0.1201	0.0262	0.0938
64	0.1201	0.0258	0.0942
65	0.0253	0.0126	0.0126
66	0.0253	0.0126	0.0126
67	0.0190	0.0095	0.0095
68	0.0190	0.0095	0.0095
69	0.0316	0.0158	0.0158
70	0.0316	0.0158	0.0158
71	0.0316	0.0158	0.0158
72	0.0253	0.0126	0.0126
73	0.0253	0.0126	0.0126
74	0.0253	0.0126	0.0126
75	0.0190	0.0095	0.0095
76	0.0126	0.0063	0.0063
77	0.0190	0.0095	0.0095
78	0.0253	0.0126	0.0126
79	0.0190	0.0095	0.0095
80	0.0126	0.0063	0.0063
81	0.0190	0.0095	0.0095
82	0.0190	0.0095	0.0095
83	0.0190	0.0095	0.0095
84	0.0126	0.0063	0.0063
85	0.0190	0.0095	0.0095
86	0.0126	0.0063	0.0063
87	0.0190	0.0095	0.0095
88	0.0126	0.0063	0.0063
89	0.0190	0.0095	0.0095
90	0.0126	0.0063	0.0063
91	0.0126	0.0063	0.0063
92	0.0126	0.0063	0.0063
93	0.0126	0.0063	0.0063
94	0.0126	0.0063	0.0063
95	0.0126	0.0063	0.0063
96	0.0126	0.0063	0.0063

TOTAL STORM RAINFALL(INCHES) = 6.32
 TOTAL SOIL-LOSS(INCHES) = 2.01
 TOTAL EFFECTIVE RAINFALL(INCHES) = 4.31

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1.3029
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 2.7984

B2_10024.RES
 R U N O F F H Y D R O G R A P H

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	θ.	2.5	5.0	7.5	10.0
0.083	0.0006	0.08	Q	.	.	.	.
0.167	0.0011	0.08	Q	.	.	.	.
0.250	0.0017	0.08	Q	.	.	.	.
0.333	0.0032	0.21	Q	.	.	.	.
0.417	0.0046	0.21	Q	.	.	.	.
0.500	0.0061	0.21	Q	.	.	.	.
0.583	0.0080	0.27	VQ	.	.	.	.
0.667	0.0099	0.27	VQ	.	.	.	.
0.750	0.0118	0.27	VQ	.	.	.	.
0.833	0.0140	0.33	VQ	.	.	.	.
0.917	0.0163	0.33	VQ	.	.	.	.
1.000	0.0186	0.33	VQ	.	.	.	.
1.083	0.0209	0.34	VQ	.	.	.	.
1.167	0.0233	0.34	VQ	.	.	.	.
1.250	0.0256	0.34	VQ	.	.	.	.
1.333	0.0277	0.31	VQ	.	.	.	.
1.417	0.0298	0.31	VQ	.	.	.	.
1.500	0.0319	0.31	VQ	.	.	.	.
1.583	0.0340	0.30	VQ	.	.	.	.
1.667	0.0361	0.30	VQ	.	.	.	.
1.750	0.0381	0.30	VQ	.	.	.	.
1.833	0.0405	0.34	VQ	.	.	.	.
1.917	0.0428	0.34	VQ	.	.	.	.
2.000	0.0452	0.34	VQ	.	.	.	.
2.083	0.0478	0.38	VQ	.	.	.	.
2.167	0.0504	0.38	VQ	.	.	.	.
2.250	0.0531	0.38	VQ	.	.	.	.
2.333	0.0558	0.39	VQ	.	.	.	.
2.417	0.0585	0.39	VQ	.	.	.	.
2.500	0.0612	0.39	VQ	.	.	.	.
2.583	0.0642	0.44	VQ	.	.	.	.
2.667	0.0672	0.44	VQ	.	.	.	.
2.750	0.0702	0.44	Q	.	.	.	.
2.833	0.0735	0.48	.Q	.	.	.	.
2.917	0.0769	0.48	.Q	.	.	.	.
3.000	0.0802	0.48	.Q	.	.	.	.
3.083	0.0835	0.49	.Q	.	.	.	.
3.167	0.0869	0.49	.Q	.	.	.	.
3.250	0.0903	0.49	.Q	.	.	.	.
3.333	0.0937	0.49	.Q	.	.	.	.
3.417	0.0971	0.49	.Q	.	.	.	.
3.500	0.1005	0.49	.Q	.	.	.	.
3.583	0.1039	0.50	.Q	.	.	.	.
3.667	0.1074	0.50	.Q	.	.	.	.
3.750	0.1108	0.50	.Q	.	.	.	.
3.833	0.1145	0.54	.VQ	.	.	.	.
3.917	0.1182	0.54	.VQ	.	.	.	.
4.000	0.1219	0.54	.VQ	.	.	.	.
4.083	0.1259	0.58	.VQ	.	.	.	.
4.167	0.1299	0.58	.VQ	.	.	.	.
4.250	0.1339	0.58	.VQ	.	.	.	.
4.333	0.1382	0.63	.VQ	.	.	.	.
4.417	0.1426	0.63	. Q	.	.	.	.
4.500	0.1469	0.63	. Q	.	.	.	.
4.583	0.1516	0.68	. Q	.	.	.	.

4.667	0.1563	0.68	. Q	.	.	.	.
4.750	0.1610	0.68	. Q	.	.	.	.
4.833	0.1660	0.73	. Q	.	.	.	.
4.917	0.1710	0.73	. Q	.	.	.	.
5.000	0.1761	0.73	. Q	.	.	.	.
5.083	0.1809	0.69	. Q	.	.	.	.
5.167	0.1857	0.69	. Q	.	.	.	.
5.250	0.1904	0.69	. Q	.	.	.	.
5.333	0.1950	0.66	. Q	.	.	.	.
5.417	0.1995	0.66	. Q	.	.	.	.
5.500	0.2041	0.66	. Q	.	.	.	.
5.583	0.2091	0.73	. Q	.	.	.	.
5.667	0.2141	0.73	. QV	.	.	.	.
5.750	0.2192	0.73	. QV	.	.	.	.
5.833	0.2245	0.78	. Q	.	.	.	.
5.917	0.2299	0.78	. Q	.	.	.	.
6.000	0.2352	0.78	. Q	.	.	.	.
6.083	0.2409	0.83	. Q	.	.	.	.
6.167	0.2466	0.83	. Q	.	.	.	.
6.250	0.2524	0.83	. Q	.	.	.	.
6.333	0.2584	0.88	. Q	.	.	.	.
6.417	0.2644	0.88	. Q	.	.	.	.
6.500	0.2705	0.88	. Q	.	.	.	.
6.583	0.2769	0.93	. Q	.	.	.	.
6.667	0.2833	0.93	. QV	.	.	.	.
6.750	0.2897	0.93	. QV	.	.	.	.
6.833	0.2964	0.98	. QV	.	.	.	.
6.917	0.3031	0.98	. QV	.	.	.	.
7.000	0.3099	0.98	. QV	.	.	.	.
7.083	0.3167	0.99	. QV	.	.	.	.
7.167	0.3235	0.99	. QV	.	.	.	.
7.250	0.3303	0.99	. QV	.	.	.	.
7.333	0.3374	1.03	. Q	.	.	.	.
7.417	0.3445	1.03	. Q	.	.	.	.
7.500	0.3516	1.03	. QV	.	.	.	.
7.583	0.3593	1.12	. QV	.	.	.	.
7.667	0.3670	1.12	. QV	.	.	.	.
7.750	0.3747	1.12	. QV	.	.	.	.
7.833	0.3830	1.21	. QV	.	.	.	.
7.917	0.3914	1.21	. QV	.	.	.	.
8.000	0.3998	1.21	. QV	.	.	.	.
8.083	0.4097	1.44	. Q	.	.	.	.
8.167	0.4195	1.44	. Q	.	.	.	.
8.250	0.4294	1.44	. QV	.	.	.	.
8.333	0.4407	1.63	. Q	.	.	.	.
8.417	0.4519	1.63	. Q	.	.	.	.
8.500	0.4632	1.63	. Q	.	.	.	.
8.583	0.4754	1.77	. VQ	.	.	.	.
8.667	0.4876	1.77	. VQ	.	.	.	.
8.750	0.4998	1.77	. Q	.	.	.	.
8.833	0.5134	1.97	. Q	.	.	.	.
8.917	0.5270	1.97	. Q	.	.	.	.
9.000	0.5406	1.97	. Q	.	.	.	.
9.083	0.5562	2.27	. V Q.	.	.	.	.
9.167	0.5718	2.27	. VQ.	.	.	.	.
9.250	0.5875	2.27	. VQ.	.	.	.	.
9.333	0.6052	2.57	. V Q	.	.	.	.
9.417	0.6229	2.57	. V Q	.	.	.	.
9.500	0.6406	2.57	. VQ	.	.	.	.
9.583	0.6599	2.80	. V.Q	.	.	.	.
9.667	0.6792	2.80	. V.Q	.	.	.	.
9.750	0.6985	2.80	. V.Q	.	.	.	.
9.833	0.7193	3.03	. V Q	.	.	.	.

9.917	0.7402	3.03	.	V	Q	.	.	.
10.000	0.7610	3.03	.	V	Q	.	.	.
10.083	0.7787	2.58	.	QV	.	.	.	.
10.167	0.7965	2.58	.	QV	.	.	.	.
10.250	0.8143	2.58	.	QV	.	.	.	.
10.333	0.8281	2.01	.	Q	.V	.	.	.
10.417	0.8420	2.01	.	Q	.V	.	.	.
10.500	0.8558	2.01	.	Q	.V	.	.	.
10.583	0.8718	2.33	.	Q.	V	.	.	.
10.667	0.8879	2.33	.	Q.	V	.	.	.
10.750	0.9039	2.33	.	Q.	V	.	.	.
10.833	0.9228	2.74	.	Q	V	.	.	.
10.917	0.9416	2.74	.	Q	V	.	.	.
11.000	0.9605	2.74	.	Q	V	.	.	.
11.083	0.9794	2.75	.	Q	V	.	.	.
11.167	0.9983	2.75	.	Q	V	.	.	.
11.250	1.0172	2.75	.	Q	V	.	.	.
11.333	1.0358	2.71	.	Q	V	.	.	.
11.417	1.0545	2.71	.	Q	V	.	.	.
11.500	1.0731	2.71	.	Q	V	.	.	.
11.583	1.0906	2.55	.	Q	V	.	.	.
11.667	1.1082	2.55	.	Q	V	.	.	.
11.750	1.1257	2.55	.	Q	V	.	.	.
11.833	1.1427	2.47	.	Q.	V	.	.	.
11.917	1.1597	2.47	.	Q.	V	.	.	.
12.000	1.1766	2.47	.	Q.	V	.	.	.
12.083	1.1981	3.11	.	.	Q	V	.	.
12.167	1.2195	3.11	.	.	Q	V	.	.
12.250	1.2410	3.11	.	.	Q	V	.	.
12.333	1.2673	3.83	.	.	Q	V	.	.
12.417	1.2937	3.83	.	.	Q	V	.	.
12.500	1.3201	3.83	.	.	Q	V	.	.
12.583	1.3492	4.23	.	.	Q	V.	.	.
12.667	1.3783	4.23	.	.	Q	V.	.	.
12.750	1.4074	4.23	.	.	Q	V	.	.
12.833	1.4388	4.56	.	.	Q	V	.	.
12.917	1.4703	4.56	.	.	Q	V	.	.
13.000	1.5017	4.56	.	.	Q	V	.	.
13.083	1.5371	5.14	.	.	QV	.	.	.
13.167	1.5725	5.14	.	.	Q	V	.	.
13.250	1.6079	5.14	.	.	Q	V	.	.
13.333	1.6467	5.63	.	.	.	QV	.	.
13.417	1.6855	5.63	.	.	.	Q	V	.
13.500	1.7242	5.63	.	.	.	Q	V	.
13.583	1.7575	4.83	.	.	Q.	V	.	.
13.667	1.7908	4.83	.	.	Q.	V	.	.
13.750	1.8241	4.83	.	.	Q.	V	.	.
13.833	1.8511	3.92	.	.	Q	.	V	.
13.917	1.8782	3.92	.	.	Q	.	V	.
14.000	1.9052	3.92	.	.	Q	.	V	.
14.083	1.9333	4.09	.	.	Q	.	V	.
14.167	1.9615	4.09	.	.	Q	.	V	.
14.250	1.9896	4.09	.	.	Q	.	V	.
14.333	2.0192	4.30	.	.	Q	.	V	.
14.417	2.0488	4.30	.	.	Q	.	V.	.
14.500	2.0784	4.30	.	.	Q	.	V.	.
14.583	2.1078	4.27	.	.	Q	.	V	.
14.667	2.1372	4.27	.	.	Q	.	V	.
14.750	2.1666	4.27	.	.	Q	.	V	.
14.833	2.1956	4.21	.	.	Q	.	.V	.
14.917	2.2246	4.21	.	.	Q	.	.V	.
15.000	2.2535	4.21	.	.	Q	.	.V	.
15.083	2.2814	4.05	.	.	Q	.	.V	.

15.167	2.3093	4.05	.	.	Q	.	.	V	.
15.250	2.3371	4.05	.	.	Q	.	.	V	.
15.333	2.3638	3.87	.	.	Q	.	.	V	.
15.417	2.3904	3.87	.	.	Q	.	.	V	.
15.500	2.4171	3.87	.	.	Q	.	.	V	.
15.583	2.4408	3.44	.	.	Q	.	.	V	.
15.667	2.4645	3.44	.	.	Q	.	.	V	.
15.750	2.4881	3.44	.	.	Q	.	.	V	.
15.833	2.5093	3.08	.	.	Q	.	.	V	.
15.917	2.5305	3.08	.	.	Q	.	.	V	.
16.000	2.5517	3.08	.	.	Q	.	.	V	.
16.083	2.5650	1.93	.	Q	.	.	.	V	.
16.167	2.5782	1.93	.	Q	.	.	.	V	.
16.250	2.5915	1.93	.	Q	.	.	.	V	.
16.333	2.5968	0.77	.	Q	.	.	.	V	.
16.417	2.6021	0.77	.	Q	.	.	.	V	.
16.500	2.6074	0.77	.	Q	.	.	.	V	.
16.583	2.6108	0.49	.	Q	.	.	.	V	.
16.667	2.6141	0.49	.	Q	.	.	.	V	.
16.750	2.6175	0.49	.	Q	.	.	.	V	.
16.833	2.6199	0.35	.	Q	.	.	.	V	.
16.917	2.6224	0.35	.	Q	.	.	.	V	.
17.000	2.6248	0.35	.	Q	.	.	.	V	.
17.083	2.6276	0.40	.	Q	.	.	.	V	.
17.167	2.6303	0.40	.	Q	.	.	.	V	.
17.250	2.6331	0.40	.	Q	.	.	.	V	.
17.333	2.6363	0.48	.	Q	.	.	.	V	.
17.417	2.6396	0.48	.	Q	.	.	.	V	.
17.500	2.6429	0.48	.	Q	.	.	.	V	.
17.583	2.6463	0.49	.	Q	.	.	.	V	.
17.667	2.6496	0.49	.	Q	.	.	.	V	.
17.750	2.6530	0.49	.	Q	.	.	.	V	.
17.833	2.6561	0.45	.	Q	.	.	.	V	.
17.917	2.6592	0.45	.	Q	.	.	.	V	.
18.000	2.6623	0.45	.	Q	.	.	.	V	.
18.083	2.6651	0.41	.	Q	.	.	.	V	.
18.167	2.6680	0.41	.	Q	.	.	.	V	.
18.250	2.6708	0.41	.	Q	.	.	.	V	.
18.333	2.6735	0.40	.	Q	.	.	.	V	.
18.417	2.6763	0.40	.	Q	.	.	.	V	.
18.500	2.6791	0.40	.	Q	.	.	.	V	.
18.583	2.6815	0.36	.	Q	.	.	.	V	.
18.667	2.6840	0.36	.	Q	.	.	.	V	.
18.750	2.6864	0.36	.	Q	.	.	.	V	.
18.833	2.6883	0.27	.	Q	.	.	.	V	.
18.917	2.6902	0.27	.	Q	.	.	.	V	.
19.000	2.6920	0.27	.	Q	.	.	.	V	.
19.083	2.6938	0.26	.	Q	.	.	.	V	.
19.167	2.6956	0.26	.	Q	.	.	.	V	.
19.250	2.6974	0.26	.	Q	.	.	.	V	.
19.333	2.6997	0.33	.	Q	.	.	.	V	.
19.417	2.7020	0.33	.	Q	.	.	.	V	.
19.500	2.7042	0.33	.	Q	.	.	.	V	.
19.583	2.7066	0.34	.	Q	.	.	.	V	.
19.667	2.7089	0.34	.	Q	.	.	.	V	.
19.750	2.7112	0.34	.	Q	.	.	.	V	.
19.833	2.7131	0.26	.	Q	.	.	.	V	.
19.917	2.7149	0.26	.	Q	.	.	.	V	.
20.000	2.7167	0.26	.	Q	.	.	.	V	.
20.083	2.7185	0.26	.	Q	.	.	.	V	.
20.167	2.7202	0.26	.	Q	.	.	.	V	.
20.250	2.7220	0.26	.	Q	.	.	.	V	.
20.333	2.7240	0.29	.	Q	.	.	.	V	.

20.417	2.7260	0.29	.Q	.	.	.	V	.
20.500	2.7280	0.29	.Q	.	.	.	V	.
20.583	2.7300	0.29	.Q	.	.	.	V	.
20.667	2.7321	0.29	.Q	.	.	.	V	.
20.750	2.7341	0.29	.Q	.	.	.	V	.
20.833	2.7358	0.26	.Q	.	.	.	V	.
20.917	2.7376	0.26	.Q	.	.	.	V	.
21.000	2.7394	0.26	.Q	.	.	.	V	.
21.083	2.7411	0.25	.Q	.	.	.	V	.
21.167	2.7429	0.25	.Q	.	.	.	V	.
21.250	2.7446	0.25	.Q	.	.	.	V	.
21.333	2.7463	0.25	Q	.	.	.	V	.
21.417	2.7480	0.25	Q	.	.	.	V	.
21.500	2.7497	0.25	Q	.	.	.	V	.
21.583	2.7514	0.25	.Q	.	.	.	V	.
21.667	2.7532	0.25	.Q	.	.	.	V	.
21.750	2.7549	0.25	.Q	.	.	.	V	.
21.833	2.7566	0.25	Q	.	.	.	V	.
21.917	2.7583	0.25	Q	.	.	.	V	.
22.000	2.7600	0.25	Q	.	.	.	V	.
22.083	2.7617	0.25	.Q	.	.	.	V	.
22.167	2.7634	0.25	.Q	.	.	.	V	.
22.250	2.7651	0.25	.Q	.	.	.	V	.
22.333	2.7668	0.25	Q	.	.	.	V	.
22.417	2.7685	0.25	Q	.	.	.	V	.
22.500	2.7702	0.25	Q	.	.	.	V	.
22.583	2.7717	0.21	Q	.	.	.	V	.
22.667	2.7731	0.21	Q	.	.	.	V	.
22.750	2.7745	0.21	Q	.	.	.	V	.
22.833	2.7759	0.20	Q	.	.	.	V	.
22.917	2.7773	0.20	Q	.	.	.	V	.
23.000	2.7787	0.20	Q	.	.	.	V	.
23.083	2.7801	0.20	Q	.	.	.	V	.
23.166	2.7815	0.20	Q	.	.	.	V	.
23.250	2.7828	0.20	Q	.	.	.	V	.
23.333	2.7842	0.20	Q	.	.	.	V	.
23.416	2.7856	0.20	Q	.	.	.	V	.
23.500	2.7869	0.20	Q	.	.	.	V	.
23.583	2.7883	0.20	Q	.	.	.	V	.
23.666	2.7897	0.20	Q	.	.	.	V	.
23.750	2.7910	0.20	Q	.	.	.	V	.
23.833	2.7924	0.20	Q	.	.	.	V	.
23.916	2.7938	0.20	Q	.	.	.	V	.
24.000	2.7951	0.20	Q	.	.	.	V	.
24.083	2.7959	0.12	Q	.	.	.	V	.
24.166	2.7967	0.12	Q	.	.	.	V	.
24.250	2.7975	0.12	Q	.	.	.	V	.
24.333	2.7977	0.03	Q	.	.	.	V	.
24.416	2.7979	0.03	Q	.	.	.	V	.
24.500	2.7981	0.03	Q	.	.	.	V	.
24.583	2.7982	0.01	Q	.	.	.	V	.
24.666	2.7982	0.01	Q	.	.	.	V	.
24.750	2.7983	0.01	Q	.	.	.	V	.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1485.0
10%	750.0

	B2_10024.RES
20%	510.0
30%	465.0
40%	405.0
50%	255.0
60%	210.0
70%	150.0
80%	60.0
90%	30.0

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* Inland Valley Existing Conditions *
* Area B, unit Hydrograph *
* 10-year, 1-hour *

FILE NAME: E_B.DAT
TIME/DATE OF STUDY: 06:22 09/10/2020

FLOW PROCESS FROM NODE 30.00 TO NODE 48.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 12.240 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.150 HOURS
 CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
 THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
 MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.170
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 0.89 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
RCFC&WCD DEPTH-AREA ADJUSTMENT FACTOR(PLATE E-5.8) = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 55.556

===== UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	7.039	10.420
2	37.811	45.551
3	65.637	41.190
4	77.088	16.951
5	83.494	9.483
6	87.755	6.308
7	90.831	4.553
8	93.134	3.409
9	94.948	2.684
10	96.378	2.118
11	97.463	1.606
12	98.200	1.092
13	98.599	0.590
14	98.998	0.590
15	99.385	0.573
16	99.754	0.546
17	99.938	0.273
18	100.000	0.091

TOTAL STORM RAINFALL(INCHES) = 0.89
TOTAL SOIL-LOSS(INCHES) = 0.17
TOTAL EFFECTIVE RAINFALL(INCHES) = 0.72

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.1734
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.7340

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1 - H O U R S T O R M
R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	5.0	10.0	15.0	20.0
0.083	0.0022	0.32	Q	.	.	.	.
0.167	0.0142	1.74	V Q	.	.	.	.
0.250	0.0357	3.13	.V Q	.	.	.	.
0.333	0.0626	3.90	. V Q	.	.	.	.
0.417	0.0939	4.55	. V Q.	.	.	.	.
0.500	0.1295	5.17	. V Q	.	.	.	.
0.583	0.1702	5.91	. V.Q	.	.	.	.
0.667	0.2176	6.88	. .V Q	.	.	.	.
0.750	0.2736	8.13	. . V Q	.	.	.	.
0.833	0.3501	11.11	. . V. Q	.	.	.	.
0.917	0.4563	15.41	. . V Q	.	.	.	.
1.000	0.5501	13.62	. . Q V.	.	.	.	.
1.083	0.6117	8.95	. . Q .	.	.	V	.
1.167	0.6498	5.53	. .Q	.	.	.	V
1.250	0.6728	3.34	. Q	.	.	.	V
1.333	0.6889	2.33	. Q	.	.	.	V
1.417	0.7008	1.72	. Q	.	.	.	V
1.500	0.7098	1.31	. Q	.	.	.	V
1.583	0.7167	1.00	.Q	.	.	.	V.
1.667	0.7218	0.74	.Q	.	.	.	V.
1.750	0.7254	0.53	.Q	.	.	.	V.

E_B101.RES

1.833	0.7280	0.36	Q	.	.	.	V.
1.917	0.7299	0.29	Q	.	.	.	V.
2.000	0.7315	0.23	Q	.	.	.	V.
2.083	0.7328	0.18	Q	.	.	.	V.
2.167	0.7336	0.11	Q	.	.	.	V.
2.250	0.7339	0.05	Q	.	.	.	V.
2.333	0.7340	0.01	Q	.	.	.	V.
2.417	0.7340	0.00	Q	.	.	.	V

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	145.0
10%	80.0
20%	65.0
30%	45.0
40%	30.0
50%	25.0
60%	15.0
70%	15.0
80%	10.0
90%	5.0

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* Inland Valley Existing Conditions *
* Area B, unit Hydrograph *
* 10-year, 24-hour *

FILE NAME: E_B.DAT
TIME/DATE OF STUDY: 06:23 09/10/2020

FLOW PROCESS FROM NODE 30.00 TO NODE 48.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 12.240 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.150 HOURS
 CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
 THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
 MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.170
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.080
USER-ENTERED RAINFALL = 3.95 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
RCFC&WCD DEPTH-AREA ADJUSTMENT FACTOR(PLATE E-5.8) = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 166.667

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	36.829	18.172
2	82.779	22.673
3	92.971	5.029
4	97.347	2.159
5	98.994	0.812
6	99.522	0.261
7	99.809	0.141
8	99.952	0.071
9	100.000	0.024

TOTAL STORM RAINFALL(INCHES) = 3.95
 TOTAL SOIL-LOSS(INCHES) = 1.72
 TOTAL EFFECTIVE RAINFALL(INCHES) = 2.23

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1.7556
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 2.2722

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2 4 - 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

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0005	0.07	Q	.	.	.	.
0.167	0.0010	0.07	Q	.	.	.	.
0.250	0.0015	0.07	Q	.	.	.	.
0.333	0.0028	0.20	Q	.	.	.	.
0.417	0.0042	0.20	Q	.	.	.	.
0.500	0.0056	0.20	Q	.	.	.	.
0.583	0.0074	0.26	VQ	.	.	.	.
0.667	0.0092	0.26	VQ	.	.	.	.
0.750	0.0110	0.26	VQ	.	.	.	.
0.833	0.0131	0.32	VQ	.	.	.	.
0.917	0.0153	0.32	VQ	.	.	.	.
1.000	0.0175	0.32	VQ	.	.	.	.
1.083	0.0198	0.33	VQ	.	.	.	.
1.167	0.0221	0.33	VQ	.	.	.	.
1.250	0.0244	0.33	VQ	.	.	.	.
1.333	0.0264	0.30	VQ	.	.	.	.
1.417	0.0285	0.30	VQ	.	.	.	.
1.500	0.0306	0.30	VQ	.	.	.	.
1.583	0.0326	0.30	VQ	.	.	.	.
1.667	0.0347	0.30	VQ	.	.	.	.
1.750	0.0367	0.30	VQ	.	.	.	.
1.833	0.0390	0.33	VQ	.	.	.	.
1.917	0.0412	0.33	VQ	.	.	.	.
2.000	0.0435	0.33	VQ	.	.	.	.
2.083	0.0461	0.37	VQ	.	.	.	.
2.167	0.0486	0.37	VQ	.	.	.	.
2.250	0.0512	0.37	VQ	.	.	.	.
2.333	0.0539	0.38	VQ	.	.	.	.
2.417	0.0565	0.38	VQ	.	.	.	.
2.500	0.0591	0.38	Q	.	.	.	.

2.583	0.0620	0.42	.Q	.	.	.	.
2.667	0.0650	0.42	.Q	.	.	.	.
2.750	0.0679	0.42	.Q	.	.	.	.
2.833	0.0711	0.47	.Q	.	.	.	.
2.917	0.0743	0.47	.Q	.	.	.	.
3.000	0.0776	0.47	.Q	.	.	.	.
3.083	0.0809	0.48	.Q	.	.	.	.
3.167	0.0842	0.48	.Q	.	.	.	.
3.250	0.0875	0.48	.Q	.	.	.	.
3.333	0.0908	0.48	.Q	.	.	.	.
3.417	0.0942	0.48	.Q	.	.	.	.
3.500	0.0975	0.48	.Q	.	.	.	.
3.583	0.1009	0.49	.Q	.	.	.	.
3.667	0.1042	0.49	.Q	.	.	.	.
3.750	0.1076	0.49	.Q	.	.	.	.
3.833	0.1112	0.52	.VQ	.	.	.	.
3.917	0.1148	0.52	. Q	.	.	.	.
4.000	0.1184	0.52	. Q	.	.	.	.
4.083	0.1223	0.57	. Q	.	.	.	.
4.167	0.1262	0.57	. Q	.	.	.	.
4.250	0.1301	0.57	. Q	.	.	.	.
4.333	0.1343	0.61	. Q	.	.	.	.
4.417	0.1385	0.61	. Q	.	.	.	.
4.500	0.1428	0.61	. Q	.	.	.	.
4.583	0.1473	0.66	. Q	.	.	.	.
4.667	0.1519	0.66	. Q	.	.	.	.
4.750	0.1565	0.66	. Q	.	.	.	.
4.833	0.1613	0.71	. Q	.	.	.	.
4.917	0.1662	0.71	. Q	.	.	.	.
5.000	0.1711	0.71	. QV	.	.	.	.
5.083	0.1759	0.69	. QV	.	.	.	.
5.167	0.1806	0.69	. QV	.	.	.	.
5.250	0.1853	0.69	. QV	.	.	.	.
5.333	0.1898	0.65	. QV	.	.	.	.
5.417	0.1942	0.65	. QV	.	.	.	.
5.500	0.1987	0.65	. QV	.	.	.	.
5.583	0.2036	0.71	. QV	.	.	.	.
5.667	0.2085	0.71	. QV	.	.	.	.
5.750	0.2134	0.71	. QV	.	.	.	.
5.833	0.2186	0.76	. Q	.	.	.	.
5.917	0.2239	0.76	. Q	.	.	.	.
6.000	0.2291	0.76	. QV	.	.	.	.
6.083	0.2347	0.81	. QV	.	.	.	.
6.167	0.2402	0.81	. QV	.	.	.	.
6.250	0.2458	0.81	. QV	.	.	.	.
6.333	0.2517	0.86	. QV	.	.	.	.
6.417	0.2576	0.86	. QV	.	.	.	.
6.500	0.2635	0.86	. QV	.	.	.	.
6.583	0.2697	0.90	. QV	.	.	.	.
6.667	0.2760	0.90	. QV	.	.	.	.
6.750	0.2822	0.90	. QV	.	.	.	.
6.833	0.2888	0.95	. Q V	.	.	.	.
6.917	0.2953	0.95	. Q V	.	.	.	.
7.000	0.3019	0.95	. Q V	.	.	.	.
7.083	0.3086	0.97	. Q V	.	.	.	.
7.167	0.3152	0.97	. Q V	.	.	.	.
7.250	0.3219	0.97	. Q V	.	.	.	.
7.333	0.3288	1.01	. QV	.	.	.	.
7.417	0.3358	1.01	. QV	.	.	.	.
7.500	0.3427	1.01	. Q V	.	.	.	.
7.583	0.3502	1.09	. Q V	.	.	.	.
7.667	0.3577	1.09	. Q V	.	.	.	.
7.750	0.3652	1.09	. Q V	.	.	.	.

7.833	0.3734	1.18	.	Q	V	.	.	.	.
7.917	0.3815	1.18	.	Q	V	.	.	.	.
8.000	0.3896	1.18	.	Q	V	.	.	.	.
8.083	0.3987	1.31	.	Q	V	.	.	.	.
8.167	0.4077	1.31	.	Q	V	.	.	.	.
8.250	0.4167	1.31	.	Q	V	.	.	.	.
8.333	0.4265	1.42	.	Q	V	.	.	.	.
8.417	0.4363	1.42	.	Q	V	.	.	.	.
8.500	0.4460	1.42	.	Q	V	.	.	.	.
8.583	0.4562	1.48	.	Q	V	.	.	.	.
8.667	0.4664	1.48	.	Q	V	.	.	.	.
8.750	0.4766	1.48	.	Q	V	.	.	.	.
8.833	0.4874	1.57	.	Q	V	.	.	.	.
8.917	0.4982	1.57	.	Q	V	.	.	.	.
9.000	0.5091	1.57	.	Q	V	.	.	.	.
9.083	0.5208	1.70	.	Q	V	.	.	.	.
9.167	0.5325	1.70	.	Q	V	.	.	.	.
9.250	0.5442	1.70	.	Q	V	.	.	.	.
9.333	0.5569	1.84	.	Q	V	.	.	.	.
9.417	0.5696	1.84	.	Q	V	.	.	.	.
9.500	0.5823	1.84	.	Q	V	.	.	.	.
9.583	0.5958	1.95	.	Q	V	.	.	.	.
9.667	0.6092	1.95	.	Q	V	.	.	.	.
9.750	0.6226	1.95	.	Q	V	.	.	.	.
9.833	0.6368	2.05	.	Q	.V	.	.	.	.
9.917	0.6509	2.05	.	Q	.V	.	.	.	.
10.000	0.6650	2.05	.	Q	.V	.	.	.	.
10.083	0.6779	1.86	.	Q	.V	.	.	.	.
10.167	0.6907	1.86	.	Q	.V	.	.	.	.
10.250	0.7035	1.86	.	Q	.V	.	.	.	.
10.333	0.7143	1.57	.	Q	.V	.	.	.	.
10.417	0.7251	1.57	.	Q	.V	.	.	.	.
10.500	0.7359	1.57	.	Q	.V	.	.	.	.
10.583	0.7475	1.68	.	Q	.V	.	.	.	.
10.667	0.7591	1.68	.	Q	.V	.	.	.	.
10.750	0.7707	1.68	.	Q	.V	.	.	.	.
10.833	0.7837	1.88	.	Q	.V	.	.	.	.
10.917	0.7966	1.88	.	Q	.V	.	.	.	.
11.000	0.8096	1.88	.	Q	.V	.	.	.	.
11.083	0.8226	1.89	.	Q	.V	.	.	.	.
11.167	0.8356	1.89	.	Q	.V	.	.	.	.
11.250	0.8485	1.89	.	Q	.V	.	.	.	.
11.333	0.8613	1.86	.	Q	.V	.	.	.	.
11.417	0.8741	1.86	.	Q	.V	.	.	.	.
11.500	0.8869	1.86	.	Q	.V	.	.	.	.
11.583	0.8992	1.78	.	Q	.V	.	.	.	.
11.667	0.9115	1.78	.	Q	.V	.	.	.	.
11.750	0.9238	1.78	.	Q	.V	.	.	.	.
11.833	0.9357	1.73	.	Q	.V	.	.	.	.
11.917	0.9476	1.73	.	Q	.V	.	.	.	.
12.000	0.9595	1.73	.	Q	.V	.	.	.	.
12.083	0.9745	2.19	.	Q	.V	.	.	.	.
12.167	0.9896	2.19	.	Q	.V	.	.	.	.
12.250	1.0046	2.19	.	Q	.V	.	.	.	.
12.333	1.0240	2.81	.	.Q	.V	.	.	.	.
12.417	1.0433	2.81	.	.Q	.V	.	.	.	.
12.500	1.0627	2.81	.	.Q	.V	.	.	.	.
12.583	1.0847	3.19	.	.Q	.V	.	.	.	.
12.667	1.1067	3.19	.	.Q	.V	.	.	.	.
12.750	1.1287	3.19	.	.Q	.V
12.833	1.1531	3.54	.	.	Q	.V	.	.	.
12.917	1.1775	3.54	.	.	Q	.V	.	.	.
13.000	1.2019	3.54	.	.	Q	.V	.	.	.

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13.083	1.2300	4.09	.	.	Q	.V	.	.
13.167	1.2582	4.09	.	.	Q	.V	.	.
13.250	1.2863	4.09	.	.	Q	.V	.	.
13.333	1.3181	4.61	.	.	Q	.V	.	.
13.417	1.3498	4.61	.	.	Q	.V	.	.
13.500	1.3816	4.61	.	.	Q	.V	.	.
13.583	1.4090	3.97	.	.	Q	.V	.	.
13.667	1.4363	3.97	.	.	Q	.V	.	.
13.750	1.4636	3.97	.	.	Q	.V	.	.
13.833	1.4847	3.06	.	.Q	.	.V	.	.
13.917	1.5058	3.06	.	.Q	.	.V	.	.
14.000	1.5270	3.06	.	.Q	.	.V	.	.
14.083	1.5489	3.18	.	.Q	.	.V	.	.
14.167	1.5708	3.18	.	.Q	.	.V	.	.
14.250	1.5927	3.18	.	.Q	.	.V	.	.
14.333	1.6161	3.41	.	.Q	.	.V	.	.
14.417	1.6396	3.41	.	.Q	.	.V	.	.
14.500	1.6631	3.41	.	.Q	.	.V	.	.
14.583	1.6864	3.39	.	.Q	.	.V	.	.
14.667	1.7098	3.39	.	.Q	.	.V	.	.
14.750	1.7332	3.39	.	.Q	.	.V	.	.
14.833	1.7563	3.35	.	.Q	.	.V	.	.
14.917	1.7794	3.35	.	.Q	.	.V	.	.
15.000	1.8025	3.35	.	.Q	.	.V	.	.
15.083	1.8246	3.22	.	.Q	.	.V	.	.
15.167	1.8468	3.22	.	.Q	.	.V	.	.
15.250	1.8690	3.22	.	.Q	.	.V	.	.
15.333	1.8900	3.06	.	.Q	.	.V	.	.
15.417	1.9111	3.06	.	.Q	.	.V	.	.
15.500	1.9322	3.06	.	.Q	.	.V	.	.
15.583	1.9507	2.68	.	.Q	.	.V	.	.
15.667	1.9692	2.68	.	.Q	.	.V	.	.
15.750	1.9876	2.68	.	.Q	.	.V	.	.
15.833	2.0036	2.32	.	.Q	.	.V	.	.
15.917	2.0196	2.32	.	.Q	.	.V	.	.
16.000	2.0355	2.32	.	.Q	.	.V	.	.
16.083	2.0464	1.58	.	.Q	.	.V	.	.
16.167	2.0573	1.58	.	.Q	.	.V	.	.
16.250	2.0682	1.58	.	.Q	.	.V	.	.
16.333	2.0732	0.72	.Q	.	.	.V	.	.
16.417	2.0781	0.72	.Q	.	.	.V	.	.
16.500	2.0831	0.72	.Q	.	.	.V	.	.
16.583	2.0865	0.49	.Q	.	.	.V	.	.
16.667	2.0898	0.49	.Q	.	.	.V	.	.
16.750	2.0932	0.49	.Q	.	.	.V	.	.
16.833	2.0957	0.36	.Q	.	.	.V	.	.
16.917	2.0982	0.36	.Q	.	.	.V	.	.
17.000	2.1006	0.36	.Q	.	.	.V	.	.
17.083	2.1033	0.39	.Q	.	.	.V	.	.
17.167	2.1060	0.39	.Q	.	.	.V	.	.
17.250	2.1087	0.39	.Q	.	.	.V	.	.
17.333	2.1119	0.47	.Q	.	.	.V	.	.
17.417	2.1151	0.47	.Q	.	.	.V	.	.
17.500	2.1183	0.47	.Q	.	.	.V	.	.
17.583	2.1216	0.48	.Q	.	.	.V	.	.
17.667	2.1249	0.48	.Q	.	.	.V	.	.
17.750	2.1282	0.48	.Q	.	.	.V	.	.
17.833	2.1313	0.45	.Q	.	.	.V	.	.
17.917	2.1344	0.45	.Q	.	.	.V	.	.
18.000	2.1374	0.45	.Q	.	.	.V	.	.
18.083	2.1402	0.40	.Q	.	.	.V	.	.
18.167	2.1430	0.40	.Q	.	.	.V	.	.
18.250	2.1458	0.40	.Q	.	.	.V	.	.

18.333	2.1485	0.40	.Q	.	.	.	V	.
18.417	2.1512	0.40	.Q	.	.	.	V	.
18.500	2.1540	0.40	.Q	.	.	.	V	.
18.583	2.1564	0.36	.Q	.	.	.	V	.
18.667	2.1589	0.36	.Q	.	.	.	V	.
18.750	2.1613	0.36	.Q	.	.	.	V	.
18.833	2.1632	0.27	.Q	.	.	.	V	.
18.917	2.1651	0.27	.Q	.	.	.	V	.
19.000	2.1670	0.27	.Q	.	.	.	V	.
19.083	2.1688	0.25	.Q	.	.	.	V	.
19.167	2.1705	0.25	.Q	.	.	.	V	.
19.250	2.1723	0.25	.Q	.	.	.	V	.
19.333	2.1745	0.32	.Q	.	.	.	V	.
19.417	2.1767	0.32	.Q	.	.	.	V	.
19.500	2.1789	0.32	.Q	.	.	.	V	.
19.583	2.1812	0.33	.Q	.	.	.	V	.
19.667	2.1835	0.33	.Q	.	.	.	V	.
19.750	2.1858	0.33	.Q	.	.	.	V	.
19.833	2.1876	0.27	.Q	.	.	.	V	.
19.917	2.1894	0.27	.Q	.	.	.	V	.
20.000	2.1913	0.27	.Q	.	.	.	V	.
20.083	2.1930	0.25	.Q	.	.	.	V	.
20.167	2.1947	0.25	.Q	.	.	.	V	.
20.250	2.1965	0.25	.Q	.	.	.	V	.
20.333	2.1984	0.28	.Q	.	.	.	V	.
20.417	2.2004	0.28	.Q	.	.	.	V	.
20.500	2.2023	0.28	.Q	.	.	.	V	.
20.583	2.2043	0.29	.Q	.	.	.	V	.
20.667	2.2063	0.29	.Q	.	.	.	V	.
20.750	2.2083	0.29	.Q	.	.	.	V	.
20.833	2.2101	0.26	.Q	.	.	.	V	.
20.917	2.2118	0.26	.Q	.	.	.	V	.
21.000	2.2136	0.26	.Q	.	.	.	V	.
21.083	2.2153	0.25	Q	.	.	.	V	.
21.167	2.2170	0.25	Q	.	.	.	V	.
21.250	2.2187	0.25	Q	.	.	.	V	.
21.333	2.2204	0.25	Q	.	.	.	V	.
21.417	2.2221	0.25	Q	.	.	.	V	.
21.500	2.2238	0.25	Q	.	.	.	V	.
21.583	2.2254	0.24	Q	.	.	.	V	.
21.667	2.2271	0.24	Q	.	.	.	V	.
21.750	2.2288	0.24	Q	.	.	.	V	.
21.833	2.2305	0.24	Q	.	.	.	V	.
21.917	2.2322	0.24	Q	.	.	.	V	.
22.000	2.2338	0.24	Q	.	.	.	V	.
22.083	2.2355	0.24	Q	.	.	.	V	.
22.167	2.2372	0.24	Q	.	.	.	V	.
22.250	2.2389	0.24	Q	.	.	.	V	.
22.333	2.2405	0.24	Q	.	.	.	V	.
22.417	2.2422	0.24	Q	.	.	.	V	.
22.500	2.2439	0.24	Q	.	.	.	V	.
22.583	2.2453	0.21	Q	.	.	.	V	.
22.667	2.2468	0.21	Q	.	.	.	V	.
22.750	2.2482	0.21	Q	.	.	.	V	.
22.833	2.2496	0.20	Q	.	.	.	V	.
22.917	2.2509	0.20	Q	.	.	.	V	.
23.000	2.2523	0.20	Q	.	.	.	V	.
23.083	2.2537	0.20	Q	.	.	.	V	.
23.166	2.2550	0.20	Q	.	.	.	V	.
23.250	2.2564	0.20	Q	.	.	.	V	.
23.333	2.2577	0.20	Q	.	.	.	V	.
23.416	2.2591	0.20	Q	.	.	.	V	.
23.500	2.2604	0.20	Q	.	.	.	V	.

23.583	2.2618	0.20	Q	.	.	.	V.
23.666	2.2631	0.20	Q	.	.	.	V.
23.750	2.2645	0.20	Q	.	.	.	V.
23.833	2.2658	0.20	Q	.	.	.	V.
23.916	2.2671	0.20	Q	.	.	.	V.
24.000	2.2685	0.20	Q	.	.	.	V.
24.083	2.2693	0.12	Q	.	.	.	V.
24.166	2.2702	0.12	Q	.	.	.	V.
24.250	2.2710	0.12	Q	.	.	.	V.
24.333	2.2713	0.03	Q	.	.	.	V.
24.416	2.2715	0.03	Q	.	.	.	V.
24.500	2.2717	0.03	Q	.	.	.	V.
24.583	2.2718	0.01	Q	.	.	.	V.
24.666	2.2719	0.01	Q	.	.	.	V.
24.750	2.2720	0.01	Q	.	.	.	V.
24.833	2.2720	0.01	Q	.	.	.	V.
24.916	2.2721	0.01	Q	.	.	.	V.
25.000	2.2721	0.01	Q	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1500.0
10%	870.0
20%	570.0
30%	480.0
40%	330.0
50%	225.0
60%	195.0
70%	105.0
80%	45.0
90%	15.0

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* Inland Valley Existing Conditions *
* Area B, unit Hydrograph *
* 100-year, 1-hour *

FILE NAME: E_B.DAT
TIME/DATE OF STUDY: 06:22 09/10/2020

FLOW PROCESS FROM NODE 30.00 TO NODE 48.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 12.240 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.150 HOURS
 CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
 THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
 MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.170
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 1.49 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
RCFC&WCD DEPTH-AREA ADJUSTMENT FACTOR(PLATE E-5.8) = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 55.556

===== UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	7.039	10.420
2	37.811	45.551
3	65.637	41.190
4	77.088	16.951
5	83.494	9.483
6	87.755	6.308
7	90.831	4.553
8	93.134	3.409
9	94.948	2.684
10	96.378	2.118
11	97.463	1.606
12	98.200	1.092
13	98.599	0.590
14	98.998	0.590
15	99.385	0.573
16	99.754	0.546
17	99.938	0.273
18	100.000	0.091

TOTAL STORM RAINFALL(INCHES) = 1.49
 TOTAL SOIL-LOSS(INCHES) = 0.17
 TOTAL EFFECTIVE RAINFALL(INCHES) = 1.32

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.1734
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1.3457

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1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	7.5	15.0	22.5	30.0
0.083	0.0044	0.64	Q	.	.	.	.
0.167	0.0281	3.45	V Q	.	.	.	.
0.250	0.0706	6.17	. V	Q .	.	.	.
0.333	0.1230	7.61	. V	Q	.	.	.
0.417	0.1836	8.80	. V	.Q	.	.	.
0.500	0.2517	9.89	. V	. Q	.	.	.
0.583	0.3288	11.19	. V	Q	.	.	.
0.667	0.4171	12.83	. V	Q	.	.	.
0.750	0.5202	14.96	. V	Q.	.	.	.
0.833	0.6577	19.97	. V	V.	Q	.	.
0.917	0.8448	27.18	. V	.	V	.	Q
1.000	1.0114	24.19	. V	.	.	V Q	.
1.083	1.1236	16.28	. V	.	.Q	.	V
1.167	1.1933	10.13	. V	Q	.	.	V
1.250	1.2351	6.07	. V	Q	.	.	V
1.333	1.2642	4.22	. V	Q	.	.	V
1.417	1.2857	3.12	. V	Q	.	.	V
1.500	1.3020	2.37	. V	Q	.	.	V
1.583	1.3144	1.80	. V	Q	.	.	V
1.667	1.3236	1.34	. V	Q	.	.	V
1.750	1.3302	0.96	. V	Q	.	.	V

1.833	1.3348	0.66	Q	.	.	.	V.
1.917	1.3384	0.52	Q	.	.	.	V.
2.000	1.3412	0.42	Q	.	.	.	V.
2.083	1.3435	0.33	Q	.	.	.	V.
2.167	1.3448	0.20	Q	.	.	.	V.
2.250	1.3455	0.09	Q	.	.	.	V.
2.333	1.3457	0.03	Q	.	.	.	V.
2.417	1.3457	0.01	Q	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	145.0
10%	80.0
20%	65.0
30%	50.0
40%	35.0
50%	25.0
60%	15.0
70%	15.0
80%	10.0
90%	5.0

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* Inland Valley Existing Conditions *
* Area B, unit Hydrograph *
* 100-year, 24-hour *

FILE NAME: E_B.DAT
TIME/DATE OF STUDY: 06:25 09/10/2020

FLOW PROCESS FROM NODE 30.00 TO NODE 48.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 12.240 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.150 HOURS
 CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
 THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
 MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.170
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.080
USER-ENTERED RAINFALL = 6.32 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
RCFC&WCD DEPTH-AREA ADJUSTMENT FACTOR(PLATE E-5.8) = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 166.667

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	36.829	18.172
2	82.779	22.673
3	92.971	5.029
4	97.347	2.159
5	98.994	0.812
6	99.522	0.261
7	99.809	0.141
8	99.952	0.071
9	100.000	0.024

TOTAL STORM RAINFALL(INCHES) = 6.32
TOTAL SOIL-LOSS(INCHES) = 2.22
TOTAL EFFECTIVE RAINFALL(INCHES) = 4.10

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 2.2681
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 4.1760

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2 4 - 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

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0008	0.11	Q	.	.	.	.
0.167	0.0016	0.11	Q	.	.	.	.
0.250	0.0024	0.11	Q	.	.	.	.
0.333	0.0045	0.32	VQ	.	.	.	.
0.417	0.0067	0.32	VQ	.	.	.	.
0.500	0.0089	0.32	VQ	.	.	.	.
0.583	0.0118	0.42	VQ	.	.	.	.
0.667	0.0147	0.42	VQ	.	.	.	.
0.750	0.0175	0.42	VQ	.	.	.	.
0.833	0.0210	0.51	V Q	.	.	.	.
0.917	0.0245	0.51	V Q	.	.	.	.
1.000	0.0280	0.51	V Q	.	.	.	.
1.083	0.0317	0.53	V Q	.	.	.	.
1.167	0.0353	0.53	V Q	.	.	.	.
1.250	0.0390	0.53	V Q	.	.	.	.
1.333	0.0423	0.48	VQ	.	.	.	.
1.417	0.0456	0.48	VQ	.	.	.	.
1.500	0.0489	0.48	VQ	.	.	.	.
1.583	0.0522	0.47	VQ	.	.	.	.
1.667	0.0554	0.47	VQ	.	.	.	.
1.750	0.0587	0.47	VQ	.	.	.	.
1.833	0.0623	0.53	V Q	.	.	.	.
1.917	0.0660	0.53	V Q	.	.	.	.
2.000	0.0696	0.53	V Q	.	.	.	.
2.083	0.0737	0.60	V Q	.	.	.	.
2.167	0.0778	0.60	V Q	.	.	.	.
2.250	0.0819	0.60	V Q	.	.	.	.
2.333	0.0862	0.61	V Q	.	.	.	.
2.417	0.0904	0.61	V Q	.	.	.	.
2.500	0.0946	0.61	V Q	.	.	.	.

2.583	0.0993	0.68	V Q	.	.	.	.
2.667	0.1039	0.68	V Q	.	.	.	.
2.750	0.1086	0.68	VQ	.	.	.	.
2.833	0.1138	0.75	.V Q	.	.	.	.
2.917	0.1190	0.75	.V Q	.	.	.	.
3.000	0.1241	0.75	.V Q	.	.	.	.
3.083	0.1294	0.77	.V Q	.	.	.	.
3.167	0.1347	0.77	.V Q	.	.	.	.
3.250	0.1400	0.77	.V Q	.	.	.	.
3.333	0.1453	0.78	.V Q	.	.	.	.
3.417	0.1507	0.78	.V Q	.	.	.	.
3.500	0.1560	0.78	.V Q	.	.	.	.
3.583	0.1614	0.78	.V Q	.	.	.	.
3.667	0.1667	0.78	.V Q	.	.	.	.
3.750	0.1721	0.78	.V Q	.	.	.	.
3.833	0.1778	0.84	.V Q	.	.	.	.
3.917	0.1836	0.84	.V Q	.	.	.	.
4.000	0.1894	0.84	.V Q	.	.	.	.
4.083	0.1956	0.91	.V Q	.	.	.	.
4.167	0.2019	0.91	.V Q	.	.	.	.
4.250	0.2081	0.91	.V Q	.	.	.	.
4.333	0.2149	0.98	. VQ	.	.	.	.
4.417	0.2217	0.98	. VQ	.	.	.	.
4.500	0.2284	0.98	. VQ	.	.	.	.
4.583	0.2357	1.06	. V Q	.	.	.	.
4.667	0.2430	1.06	. V Q	.	.	.	.
4.750	0.2503	1.06	. V Q	.	.	.	.
4.833	0.2582	1.14	. V Q	.	.	.	.
4.917	0.2660	1.14	. V Q	.	.	.	.
5.000	0.2738	1.14	. V Q	.	.	.	.
5.083	0.2814	1.10	. V Q	.	.	.	.
5.167	0.2890	1.10	. V Q	.	.	.	.
5.250	0.2965	1.10	. V Q	.	.	.	.
5.333	0.3037	1.03	. V Q	.	.	.	.
5.417	0.3108	1.03	. V Q	.	.	.	.
5.500	0.3179	1.03	. VQ	.	.	.	.
5.583	0.3258	1.14	. VQ	.	.	.	.
5.667	0.3336	1.14	. VQ	.	.	.	.
5.750	0.3414	1.14	. VQ	.	.	.	.
5.833	0.3498	1.22	. VQ	.	.	.	.
5.917	0.3582	1.22	. VQ	.	.	.	.
6.000	0.3666	1.22	. VQ	.	.	.	.
6.083	0.3755	1.29	. V Q	.	.	.	.
6.167	0.3844	1.29	. V Q	.	.	.	.
6.250	0.3933	1.29	. V Q	.	.	.	.
6.333	0.4027	1.37	. V Q	.	.	.	.
6.417	0.4122	1.37	. V Q	.	.	.	.
6.500	0.4216	1.37	. VQ	.	.	.	.
6.583	0.4316	1.45	. VQ	.	.	.	.
6.667	0.4415	1.45	. VQ	.	.	.	.
6.750	0.4515	1.45	. VQ	.	.	.	.
6.833	0.4620	1.53	. V Q	.	.	.	.
6.917	0.4726	1.53	. V Q	.	.	.	.
7.000	0.4831	1.53	. V Q	.	.	.	.
7.083	0.4937	1.55	. V Q	.	.	.	.
7.167	0.5044	1.55	. V Q	.	.	.	.
7.250	0.5150	1.55	. V Q	.	.	.	.
7.333	0.5261	1.61	. VQ	.	.	.	.
7.417	0.5372	1.61	. VQ	.	.	.	.
7.500	0.5483	1.61	. VQ	.	.	.	.
7.583	0.5603	1.74	. VQ	.	.	.	.
7.667	0.5723	1.74	. VQ	.	.	.	.
7.750	0.5843	1.74	. VQ	.	.	.	.

7.833	0.5974	1.89	.	V Q	.	.	.	.
7.917	0.6104	1.89	.	V Q	.	.	.	.
8.000	0.6234	1.89	.	V Q	.	.	.	.
8.083	0.6379	2.10	.	V Q	.	.	.	.
8.167	0.6523	2.10	.	V Q	.	.	.	.
8.250	0.6668	2.10	.	V Q	.	.	.	.
8.333	0.6824	2.27	.	V Q.	.	.	.	.
8.417	0.6980	2.27	.	V Q.	.	.	.	.
8.500	0.7136	2.27	.	V Q.	.	.	.	.
8.583	0.7302	2.40	.	V Q.	.	.	.	.
8.667	0.7467	2.40	.	V Q.	.	.	.	.
8.750	0.7632	2.40	.	V Q.	.	.	.	.
8.833	0.7815	2.66	.	V Q	.	.	.	.
8.917	0.7998	2.66	.	V Q	.	.	.	.
9.000	0.8181	2.66	.	V Q	.	.	.	.
9.083	0.8394	3.09	.	V . Q	.	.	.	.
9.167	0.8607	3.09	.	V . Q	.	.	.	.
9.250	0.8820	3.09	.	V . Q	.	.	.	.
9.333	0.9066	3.57	.	V . Q	.	.	.	.
9.417	0.9311	3.57	.	V . Q	.	.	.	.
9.500	0.9557	3.57	.	V . Q	.	.	.	.
9.583	0.9829	3.94	.	V . Q	.	.	.	.
9.667	1.0101	3.94	.	V . Q	.	.	.	.
9.750	1.0372	3.94	.	V . Q	.	.	.	.
9.833	1.0669	4.30	.	V Q	.	.	.	.
9.917	1.0965	4.30	.	V Q	.	.	.	.
10.000	1.1261	4.30	.	V Q	.	.	.	.
10.083	1.1518	3.73	.	.V Q	.	.	.	.
10.167	1.1776	3.73	.	.V Q	.	.	.	.
10.250	1.2033	3.73	.	.V Q	.	.	.	.
10.333	1.2227	2.82	.	.Q	.	.	.	.
10.417	1.2421	2.82	.	.Q	.	.	.	.
10.500	1.2615	2.82	.	.QV	.	.	.	.
10.583	1.2838	3.23	.	. Q	.	.	.	.
10.667	1.3060	3.23	.	. Q	.	.	.	.
10.750	1.3282	3.23	.	. Q	.	.	.	.
10.833	1.3550	3.89	.	. V Q	.	.	.	.
10.917	1.3818	3.89	.	. V Q	.	.	.	.
11.000	1.4086	3.89	.	. V Q	.	.	.	.
11.083	1.4358	3.94	.	. V Q	.	.	.	.
11.167	1.4629	3.94	.	. VQ	.	.	.	.
11.250	1.4900	3.94	.	. VQ	.	.	.	.
11.333	1.5167	3.88	.	. VQ	.	.	.	.
11.417	1.5435	3.88	.	. VQ	.	.	.	.
11.500	1.5702	3.88	.	. Q	.	.	.	.
11.583	1.5955	3.67	.	. QV	.	.	.	.
11.667	1.6208	3.67	.	. QV	.	.	.	.
11.750	1.6461	3.67	.	. QV	.	.	.	.
11.833	1.6704	3.53	.	. Q V	.	.	.	.
11.917	1.6947	3.53	.	. Q V	.	.	.	.
12.000	1.7190	3.53	.	. Q V	.	.	.	.
12.083	1.7495	4.44	.	. VQ	.	.	.	.
12.167	1.7801	4.44	.	. Q	.	.	.	.
12.250	1.8107	4.44	.	. Q	.	.	.	.
12.333	1.8492	5.59	.	. V . Q	.	.	.	.
12.417	1.8877	5.59	.	. V . Q	.	.	.	.
12.500	1.9263	5.59	.	. V . Q	.	.	.	.
12.583	1.9691	6.22	.	. V . Q	.	.	.	.
12.667	2.0120	6.22	.	. V . Q	.	.	.	.
12.750	2.0548	6.22	.	. V . Q	.	.	.	.
12.833	2.1016	6.78	.	. V Q	.	.	.	.
12.917	2.1483	6.78	.	. V Q	.	.	.	.
13.000	2.1950	6.78	.	. V Q	.	.	.	.

E_B10024.RES

13.083	2.2476	7.64	.	.	.V	Q	.
13.167	2.3003	7.64	.	.	.V	Q	.
13.250	2.3529	7.64	.	.	.V	Q	.
13.333	2.4112	8.47	.	.	.V	.	Q
13.417	2.4696	8.47	.	.	.V	.	Q
13.500	2.5279	8.47	.	.	.V	.	Q
13.583	2.5790	7.42	.	.	.V	Q.	.
13.667	2.6301	7.42	.	.	.V	Q.	.
13.750	2.6812	7.42	.	.	.V	Q.	.
13.833	2.7223	5.96	.	.	.Q	V	.
13.917	2.7633	5.96	.	.	.Q	V	.
14.000	2.8043	5.96	.	.	.Q	V	.
14.083	2.8465	6.13	.	.	.Q	V	.
14.167	2.8887	6.13	.	.	.Q	V	.
14.250	2.9309	6.13	.	.	.Q	V	.
14.333	2.9755	6.47	.	.	.Q	V	.
14.417	3.0200	6.47	.	.	.Q	V	.
14.500	3.0646	6.47	.	.	.Q	V.	.
14.583	3.1089	6.43	.	.	.Q	V.	.
14.667	3.1532	6.43	.	.	.Q	V	.
14.750	3.1975	6.43	.	.	.Q	V	.
14.833	3.2413	6.35	.	.	.Q	.V	.
14.917	3.2850	6.35	.	.	.Q	.V	.
15.000	3.3288	6.35	.	.	.Q	.V	.
15.083	3.3709	6.12	.	.	.Q	.V	.
15.167	3.4131	6.12	.	.	.Q	.V	.
15.250	3.4552	6.12	.	.	.Q	.V	.
15.333	3.4955	5.85	.	.	.Q	.V	.
15.417	3.5358	5.85	.	.	.Q	.V	.
15.500	3.5761	5.85	.	.	.Q	.V	.
15.583	3.6121	5.23	.	.	.Q	.V	.
15.667	3.6482	5.23	.	.	.Q	.V	.
15.750	3.6842	5.23	.	.	.Q	.V	.
15.833	3.7161	4.63	.	.	.Q	.V	.
15.917	3.7480	4.63	.	.	.Q	.V	.
16.000	3.7799	4.63	.	.	.Q	.V	.
16.083	3.8013	3.11	.	.Q	.	.V	.
16.167	3.8228	3.11	.	.Q	.	.V	.
16.250	3.8442	3.11	.	.Q	.	.V	.
16.333	3.8532	1.31	.	Q	.	.V	.
16.417	3.8622	1.31	.	Q	.	.V	.
16.500	3.8713	1.31	.	Q	.	.V	.
16.583	3.8771	0.85	.	Q	.	.V	.
16.667	3.8829	0.85	.	Q	.	.V	.
16.750	3.8887	0.85	.	Q	.	.V	.
16.833	3.8929	0.60	.	Q	.	.V	.
16.917	3.8970	0.60	.	Q	.	.V	.
17.000	3.9012	0.60	.	Q	.	.V	.
17.083	3.9055	0.63	.	Q	.	.V	.
17.167	3.9099	0.63	.	Q	.	.V	.
17.250	3.9143	0.63	.	Q	.	.V	.
17.333	3.9194	0.75	.	Q	.	.V	.
17.417	3.9246	0.75	.	Q	.	.V	.
17.500	3.9297	0.75	.	Q	.	.V	.
17.583	3.9350	0.77	.	Q	.	.V	.
17.667	3.9403	0.77	.	Q	.	.V	.
17.750	3.9456	0.77	.	Q	.	.V	.
17.833	3.9505	0.72	.	Q	.	.V	.
17.917	3.9554	0.72	.	Q	.	.V	.
18.000	3.9604	0.72	.	Q	.	.V	.
18.083	3.9648	0.65	.	Q	.	.V	.
18.167	3.9693	0.65	.	Q	.	.V	.
18.250	3.9737	0.65	.	Q	.	.V	.

18.333	3.9781	0.63	. Q	.	.	.	V .
18.417	3.9825	0.63	. Q	.	.	.	V .
18.500	3.9868	0.63	. Q	.	.	.	V .
18.583	3.9907	0.57	. Q	.	.	.	V .
18.667	3.9947	0.57	. Q	.	.	.	V .
18.750	3.9986	0.57	. Q	.	.	.	V .
18.833	4.0016	0.44	.Q	.	.	.	V .
18.917	4.0046	0.44	.Q	.	.	.	V .
19.000	4.0077	0.44	.Q	.	.	.	V .
19.083	4.0105	0.41	.Q	.	.	.	V .
19.167	4.0133	0.41	.Q	.	.	.	V .
19.250	4.0161	0.41	.Q	.	.	.	V .
19.333	4.0196	0.51	. Q	.	.	.	V .
19.417	4.0232	0.51	. Q	.	.	.	V .
19.500	4.0267	0.51	. Q	.	.	.	V .
19.583	4.0304	0.53	. Q	.	.	.	V .
19.667	4.0341	0.53	. Q	.	.	.	V .
19.750	4.0377	0.53	. Q	.	.	.	V .
19.833	4.0407	0.42	.Q	.	.	.	V .
19.917	4.0436	0.42	.Q	.	.	.	V .
20.000	4.0465	0.42	.Q	.	.	.	V .
20.083	4.0493	0.40	.Q	.	.	.	V .
20.167	4.0520	0.40	.Q	.	.	.	V .
20.250	4.0548	0.40	.Q	.	.	.	V .
20.333	4.0579	0.45	.Q	.	.	.	V .
20.417	4.0611	0.45	.Q	.	.	.	V .
20.500	4.0642	0.45	.Q	.	.	.	V .
20.583	4.0674	0.46	.Q	.	.	.	V .
20.667	4.0706	0.46	.Q	.	.	.	V .
20.750	4.0737	0.46	.Q	.	.	.	V .
20.833	4.0765	0.41	.Q	.	.	.	V .
20.917	4.0794	0.41	.Q	.	.	.	V .
21.000	4.0822	0.41	.Q	.	.	.	V .
21.083	4.0849	0.40	.Q	.	.	.	V .
21.167	4.0876	0.40	.Q	.	.	.	V .
21.250	4.0903	0.40	.Q	.	.	.	V .
21.333	4.0931	0.39	.Q	.	.	.	V .
21.417	4.0958	0.39	.Q	.	.	.	V .
21.500	4.0985	0.39	.Q	.	.	.	V .
21.583	4.1012	0.39	.Q	.	.	.	V .
21.667	4.1038	0.39	.Q	.	.	.	V .
21.750	4.1065	0.39	.Q	.	.	.	V .
21.833	4.1092	0.39	.Q	.	.	.	V .
21.917	4.1119	0.39	.Q	.	.	.	V .
22.000	4.1146	0.39	.Q	.	.	.	V .
22.083	4.1173	0.39	.Q	.	.	.	V .
22.167	4.1200	0.39	.Q	.	.	.	V .
22.250	4.1226	0.39	.Q	.	.	.	V .
22.333	4.1253	0.39	.Q	.	.	.	V .
22.417	4.1280	0.39	.Q	.	.	.	V .
22.500	4.1307	0.39	.Q	.	.	.	V .
22.583	4.1330	0.33	.Q	.	.	.	V .
22.667	4.1353	0.33	.Q	.	.	.	V .
22.750	4.1376	0.33	.Q	.	.	.	V .
22.833	4.1398	0.32	.Q	.	.	.	V .
22.917	4.1420	0.32	.Q	.	.	.	V .
23.000	4.1442	0.32	.Q	.	.	.	V .
23.083	4.1463	0.31	.Q	.	.	.	V .
23.166	4.1485	0.31	.Q	.	.	.	V .
23.250	4.1507	0.31	.Q	.	.	.	V .
23.333	4.1528	0.31	.Q	.	.	.	V .
23.416	4.1550	0.31	.Q	.	.	.	V .
23.500	4.1571	0.31	.Q	.	.	.	V .

23.583	4.1593	0.31	.Q	.	.	.	V.
23.666	4.1614	0.31	.Q	.	.	.	V.
23.750	4.1636	0.31	.Q	.	.	.	V.
23.833	4.1657	0.31	.Q	.	.	.	V.
23.916	4.1679	0.31	.Q	.	.	.	V.
24.000	4.1700	0.31	.Q	.	.	.	V.
24.083	4.1714	0.20	Q	.	.	.	V.
24.166	4.1728	0.20	Q	.	.	.	V.
24.250	4.1741	0.20	Q	.	.	.	V.
24.333	4.1745	0.05	Q	.	.	.	V.
24.416	4.1749	0.05	Q	.	.	.	V.
24.500	4.1752	0.05	Q	.	.	.	V.
24.583	4.1754	0.02	Q	.	.	.	V.
24.666	4.1755	0.02	Q	.	.	.	V.
24.750	4.1757	0.02	Q	.	.	.	V.
24.833	4.1757	0.01	Q	.	.	.	V.
24.916	4.1758	0.01	Q	.	.	.	V.
25.000	4.1758	0.01	Q	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1500.0
10%	750.0
20%	525.0
30%	450.0
40%	375.0
50%	255.0
60%	210.0
70%	165.0
80%	60.0
90%	30.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions Unit Hydrograph *
* 10-year, 1-hour *

FILE NAME: B3.DAT
TIME/DATE OF STUDY: 22:51 12/10/2020

FLOW PROCESS FROM NODE 181.00 TO NODE 183.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 3.890 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.100 HOURS

CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.

THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED

UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.100

LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500

USER-ENTERED RAINFALL = 0.89 INCHES

RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED

(SLOPE OF INTENSITY-DURATION CURVE = 0.41)

*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 83.333

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	13.994	6.583
2	59.664	21.485
3	78.792	8.999
4	86.766	3.751
5	91.428	2.193
6	94.514	1.452
7	96.650	1.005
8	98.044	0.656
9	98.699	0.308
10	99.289	0.278
11	99.716	0.201
12	99.929	0.100
13	100.000	0.033



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0447	0.0083	0.0363
2	0.0468	0.0083	0.0385
3	0.0493	0.0083	0.0410
4	0.0536	0.0083	0.0453
5	0.0561	0.0083	0.0477
6	0.0626	0.0083	0.0543
7	0.0717	0.0083	0.0634
8	0.0778	0.0083	0.0694
9	0.1101	0.0083	0.1018
10	0.1977	0.0083	0.1894
11	0.0670	0.0083	0.0587
12	0.0486	0.0083	0.0403

TOTAL STORM RAINFALL(INCHES) = 0.89
 TOTAL SOIL-LOSS(INCHES) = 0.10
 TOTAL EFFECTIVE RAINFALL(INCHES) = 0.79

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0324
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.2547



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0016	0.24	Q	.	.	.	.
0.167	0.0088	1.03	.V Q	.	.	.	.
0.250	0.0186	1.42	. V Q	.	.	.	.
0.333	0.0300	1.66	. V Q	.	.	.	.
0.417	0.0429	1.88	. VQ	.	.	.	.
0.500	0.0573	2.08	. Q	.	.	.	.
0.583	0.0736	2.37	. Q.V	.	.	.	.
0.667	0.0922	2.71	. Q V	.	.	.	.

0.750	0.1141	3.18	.	.	Q	.	.	.	.
0.833	0.1457	4.58	.	.	.	Q	.	V	.
0.917	0.1867	5.96	.	.	.	.	.	Q	V.
1.000	0.2141	3.98	.	.	.	Q	.	.	V
1.083	0.2318	2.57	.	.	Q	.	.	.	V
1.167	0.2408	1.30	.	Q	.	.	.	.	V
1.250	0.2459	0.75	.	Q	.	.	.	.	V
1.333	0.2493	0.49	.	Q	.	.	.	.	V
1.417	0.2515	0.31	.	Q	.	.	.	.	V
1.500	0.2527	0.19	Q	.	.	.	.	.	V
1.583	0.2536	0.13	Q	.	.	.	.	.	V
1.667	0.2542	0.08	Q	.	.	.	.	.	V
1.750	0.2545	0.05	Q	.	.	.	.	.	V
1.833	0.2546	0.02	Q	.	.	.	.	.	V
1.917	0.2547	0.01	Q	.	.	.	.	.	V

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	115.0
10%	70.0
20%	60.0
30%	45.0
40%	30.0
50%	20.0
60%	15.0
70%	10.0
80%	5.0
90%	5.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions Unit Hydrograph *
* 10-yea, 24-hour *

FILE NAME: B3.DAT
TIME/DATE OF STUDY: 22:50 12/10/2020

FLOW PROCESS FROM NODE 181.00 TO NODE 183.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 3.890 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.100 HOURS

CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.

THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED

UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.100

LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500

MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.050

USER-ENTERED RAINFALL = 3.95 INCHES

RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED

*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 250.000

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
--------------------	--------------------------	-----------------------------------

1	50.817	7.969
2	90.903	6.286
3	97.798	1.081
4	99.444	0.258
5	99.778	0.052
6	99.944	0.026
7	100.000	0.009



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
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1	0.0079	0.0040	0.0040
2	0.0119	0.0059	0.0059
3	0.0119	0.0059	0.0059
4	0.0158	0.0079	0.0079
5	0.0119	0.0059	0.0059
6	0.0119	0.0059	0.0059
7	0.0119	0.0059	0.0059
8	0.0158	0.0079	0.0079
9	0.0158	0.0079	0.0079
10	0.0158	0.0079	0.0079
11	0.0198	0.0099	0.0099
12	0.0198	0.0099	0.0099
13	0.0198	0.0099	0.0099
14	0.0198	0.0099	0.0099
15	0.0198	0.0099	0.0099
16	0.0237	0.0119	0.0119
17	0.0237	0.0119	0.0119
18	0.0277	0.0138	0.0138
19	0.0277	0.0138	0.0138
20	0.0316	0.0158	0.0158
21	0.0237	0.0119	0.0119
22	0.0277	0.0138	0.0138
23	0.0316	0.0158	0.0158
24	0.0316	0.0158	0.0158
25	0.0356	0.0178	0.0178
26	0.0356	0.0178	0.0178
27	0.0395	0.0198	0.0198
28	0.0395	0.0198	0.0198
29	0.0395	0.0198	0.0198
30	0.0435	0.0217	0.0217
31	0.0474	0.0237	0.0237
32	0.0514	0.0257	0.0257
33	0.0593	0.0293	0.0299
34	0.0593	0.0289	0.0303
35	0.0632	0.0285	0.0347
36	0.0672	0.0281	0.0391
37	0.0751	0.0277	0.0474
38	0.0790	0.0273	0.0517
39	0.0830	0.0269	0.0560
40	0.0869	0.0265	0.0604
41	0.0593	0.0261	0.0331
42	0.0593	0.0258	0.0335
43	0.0790	0.0254	0.0536
44	0.0790	0.0250	0.0540
45	0.0751	0.0247	0.0504
46	0.0751	0.0243	0.0508
47	0.0672	0.0239	0.0432

48	0.0711	0.0236	0.0475
49	0.0988	0.0232	0.0755
50	0.1027	0.0229	0.0798
51	0.1106	0.0225	0.0881
52	0.1146	0.0222	0.0924
53	0.1343	0.0219	0.1124
54	0.1343	0.0215	0.1128
55	0.0909	0.0212	0.0697
56	0.0909	0.0209	0.0700
57	0.1067	0.0206	0.0861
58	0.1027	0.0202	0.0825
59	0.1027	0.0199	0.0828
60	0.0988	0.0196	0.0791
61	0.0948	0.0193	0.0755
62	0.0909	0.0190	0.0718
63	0.0751	0.0187	0.0563
64	0.0751	0.0185	0.0566
65	0.0158	0.0079	0.0079
66	0.0158	0.0079	0.0079
67	0.0119	0.0059	0.0059
68	0.0119	0.0059	0.0059
69	0.0198	0.0099	0.0099
70	0.0198	0.0099	0.0099
71	0.0198	0.0099	0.0099
72	0.0158	0.0079	0.0079
73	0.0158	0.0079	0.0079
74	0.0158	0.0079	0.0079
75	0.0119	0.0059	0.0059
76	0.0079	0.0040	0.0040
77	0.0119	0.0059	0.0059
78	0.0158	0.0079	0.0079
79	0.0119	0.0059	0.0059
80	0.0079	0.0040	0.0040
81	0.0119	0.0059	0.0059
82	0.0119	0.0059	0.0059
83	0.0119	0.0059	0.0059
84	0.0079	0.0040	0.0040
85	0.0119	0.0059	0.0059
86	0.0079	0.0040	0.0040
87	0.0119	0.0059	0.0059
88	0.0079	0.0040	0.0040
89	0.0119	0.0059	0.0059
90	0.0079	0.0040	0.0040
91	0.0079	0.0040	0.0040
92	0.0079	0.0040	0.0040
93	0.0079	0.0040	0.0040
94	0.0079	0.0040	0.0040
95	0.0079	0.0040	0.0040
96	0.0079	0.0040	0.0040

TOTAL STORM RAINFALL(INCHES) = 3.95
 TOTAL SOIL-LOSS(INCHES) = 1.35
 TOTAL EFFECTIVE RAINFALL(INCHES) = 2.60

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.4372
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.8428

↑
 =====
 2 4 - 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 FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0002	0.03	Q	.	.	.	.
0.167	0.0004	0.03	Q	.	.	.	.
0.250	0.0007	0.03	Q	.	.	.	.
0.333	0.0011	0.07	Q	.	.	.	.
0.417	0.0016	0.07	Q	.	.	.	.
0.500	0.0021	0.07	Q	.	.	.	.
0.583	0.0027	0.09	Q	.	.	.	.
0.667	0.0034	0.09	Q	.	.	.	.
0.750	0.0040	0.09	Q	.	.	.	.
0.833	0.0047	0.11	Q	.	.	.	.
0.917	0.0055	0.11	Q	.	.	.	.
1.000	0.0062	0.11	Q	.	.	.	.
1.083	0.0069	0.11	Q	.	.	.	.
1.167	0.0076	0.11	Q	.	.	.	.
1.250	0.0084	0.11	Q	.	.	.	.
1.333	0.0090	0.09	Q	.	.	.	.
1.417	0.0097	0.09	Q	.	.	.	.
1.500	0.0103	0.09	Q	.	.	.	.
1.583	0.0110	0.09	Q	.	.	.	.
1.667	0.0116	0.09	Q	.	.	.	.
1.750	0.0123	0.09	Q	.	.	.	.
1.833	0.0130	0.11	Q	.	.	.	.
1.917	0.0138	0.11	Q	.	.	.	.
2.000	0.0145	0.11	Q	.	.	.	.
2.083	0.0153	0.12	Q	.	.	.	.
2.167	0.0162	0.12	Q	.	.	.	.
2.250	0.0170	0.12	Q	.	.	.	.
2.333	0.0179	0.12	Q	.	.	.	.
2.417	0.0187	0.12	Q	.	.	.	.
2.500	0.0196	0.12	Q	.	.	.	.
2.583	0.0205	0.14	Q	.	.	.	.
2.667	0.0215	0.14	QV	.	.	.	.
2.750	0.0224	0.14	QV	.	.	.	.
2.833	0.0235	0.15	QV	.	.	.	.
2.917	0.0245	0.15	QV	.	.	.	.
3.000	0.0256	0.15	QV	.	.	.	.
3.083	0.0266	0.15	QV	.	.	.	.
3.167	0.0277	0.15	QV	.	.	.	.
3.250	0.0288	0.15	QV	.	.	.	.
3.333	0.0298	0.15	QV	.	.	.	.
3.417	0.0309	0.15	QV	.	.	.	.
3.500	0.0320	0.15	QV	.	.	.	.
3.583	0.0330	0.15	QV	.	.	.	.
3.667	0.0341	0.15	QV	.	.	.	.
3.750	0.0352	0.15	QV	.	.	.	.
3.833	0.0363	0.17	QV	.	.	.	.
3.917	0.0375	0.17	QV	.	.	.	.
4.000	0.0387	0.17	QV	.	.	.	.
4.083	0.0399	0.18	QV	.	.	.	.
4.167	0.0412	0.18	QV	.	.	.	.
4.250	0.0425	0.18	Q V	.	.	.	.
4.333	0.0438	0.20	Q V	.	.	.	.
4.417	0.0452	0.20	Q V	.	.	.	.
4.500	0.0466	0.20	Q V	.	.	.	.
4.583	0.0481	0.21	Q V	.	.	.	.
4.667	0.0496	0.21	Q V	.	.	.	.

4.750	0.0510	0.21	Q V	.	.	.	.
4.833	0.0526	0.23	Q V	.	.	.	.
4.917	0.0542	0.23	Q V	.	.	.	.
5.000	0.0558	0.23	Q V	.	.	.	.
5.083	0.0573	0.21	Q V	.	.	.	.
5.167	0.0588	0.21	Q V	.	.	.	.
5.250	0.0602	0.21	Q V	.	.	.	.
5.333	0.0616	0.21	Q V	.	.	.	.
5.417	0.0631	0.21	Q V	.	.	.	.
5.500	0.0645	0.21	Q V	.	.	.	.
5.583	0.0661	0.23	Q V	.	.	.	.
5.667	0.0677	0.23	Q V	.	.	.	.
5.750	0.0693	0.23	Q V	.	.	.	.
5.833	0.0709	0.24	Q V	.	.	.	.
5.917	0.0726	0.24	Q V	.	.	.	.
6.000	0.0743	0.24	Q V	.	.	.	.
6.083	0.0761	0.26	.Q V	.	.	.	.
6.167	0.0779	0.26	.Q V	.	.	.	.
6.250	0.0797	0.26	.Q V	.	.	.	.
6.333	0.0816	0.28	.Q V	.	.	.	.
6.417	0.0835	0.28	.Q V	.	.	.	.
6.500	0.0854	0.28	.Q V	.	.	.	.
6.583	0.0875	0.29	.Q V	.	.	.	.
6.667	0.0895	0.29	.Q V	.	.	.	.
6.750	0.0915	0.29	.Q V	.	.	.	.
6.833	0.0936	0.31	.Q V	.	.	.	.
6.917	0.0957	0.31	.Q V	.	.	.	.
7.000	0.0978	0.31	.Q V	.	.	.	.
7.083	0.1000	0.31	.Q V	.	.	.	.
7.167	0.1021	0.31	.Q V	.	.	.	.
7.250	0.1042	0.31	.Q V	.	.	.	.
7.333	0.1065	0.33	.Q V	.	.	.	.
7.417	0.1087	0.33	.Q V	.	.	.	.
7.500	0.1109	0.33	.Q V	.	.	.	.
7.583	0.1134	0.35	.Q V	.	.	.	.
7.667	0.1158	0.35	.Q V	.	.	.	.
7.750	0.1182	0.35	.Q V	.	.	.	.
7.833	0.1209	0.38	.Q V	.	.	.	.
7.917	0.1235	0.38	.Q V	.	.	.	.
8.000	0.1262	0.38	.Q V	.	.	.	.
8.083	0.1292	0.43	.Q V	.	.	.	.
8.167	0.1321	0.43	.Q V	.	.	.	.
8.250	0.1351	0.43	.Q V	.	.	.	.
8.333	0.1383	0.47	.Q V	.	.	.	.
8.417	0.1415	0.47	.Q V	.	.	.	.
8.500	0.1447	0.47	.Q V	.	.	.	.
8.583	0.1482	0.51	. Q V	.	.	.	.
8.667	0.1517	0.51	. Q V	.	.	.	.
8.750	0.1552	0.51	. Q V	.	.	.	.
8.833	0.1592	0.57	. Q V	.	.	.	.
8.917	0.1631	0.57	. Q V	.	.	.	.
9.000	0.1671	0.57	. Q V	.	.	.	.
9.083	0.1717	0.67	. Q V	.	.	.	.
9.167	0.1763	0.67	. Q V	.	.	.	.
9.250	0.1809	0.67	. Q V	.	.	.	.
9.333	0.1862	0.76	. Q V	.	.	.	.
9.417	0.1914	0.76	. Q V	.	.	.	.
9.500	0.1967	0.76	. Q V	.	.	.	.
9.583	0.2025	0.84	. Q V	.	.	.	.
9.667	0.2082	0.84	. Q V	.	.	.	.
9.750	0.2140	0.84	. Q V	.	.	.	.
9.833	0.2202	0.90	. Q V	.	.	.	.
9.917	0.2264	0.90	. Q V	.	.	.	.

10.000	0.2327	0.90	. Q	V	.	.	.
10.083	0.2376	0.72	. Q	.V	.	.	.
10.167	0.2426	0.72	. Q	.V	.	.	.
10.250	0.2476	0.72	. Q	.V	.	.	.
10.333	0.2514	0.56	. Q	.V	.	.	.
10.417	0.2553	0.56	. Q	. V	.	.	.
10.500	0.2591	0.56	. Q	. V	.	.	.
10.583	0.2639	0.69	. Q	. V	.	.	.
10.667	0.2687	0.69	. Q	. V	.	.	.
10.750	0.2734	0.69	. Q	. V	.	.	.
10.833	0.2791	0.82	. Q	. V	.	.	.
10.917	0.2847	0.82	. Q	. V	.	.	.
11.000	0.2903	0.82	. Q	. V	.	.	.
11.083	0.2959	0.81	. Q	. V	.	.	.
11.167	0.3015	0.81	. Q	. V	.	.	.
11.250	0.3071	0.81	. Q	. V	.	.	.
11.333	0.3126	0.80	. Q	. V	.	.	.
11.417	0.3181	0.80	. Q	. V	.	.	.
11.500	0.3235	0.80	. Q	. V	.	.	.
11.583	0.3286	0.74	. Q	. V	.	.	.
11.667	0.3337	0.74	. Q	. V	.	.	.
11.750	0.3387	0.74	. Q	. V	.	.	.
11.833	0.3437	0.72	. Q	. V	.	.	.
11.917	0.3487	0.72	. Q	. V	.	.	.
12.000	0.3537	0.72	. Q	. V	.	.	.
12.083	0.3603	0.97	. Q	. V	.	.	.
12.167	0.3670	0.97	. Q	. V	.	.	.
12.250	0.3736	0.97	. Q	. V	.	.	.
12.333	0.3817	1.18	. Q	. V	.	.	.
12.417	0.3898	1.18	. Q	. V	.	.	.
12.500	0.3980	1.18	. Q	. V	.	.	.
12.583	0.4069	1.30	. Q	. V.	.	.	.
12.667	0.4159	1.30	. Q	. V.	.	.	.
12.750	0.4248	1.30	. Q	. V	.	.	.
12.833	0.4345	1.40	. Q	. V	.	.	.
12.917	0.4441	1.40	. Q	. V	.	.	.
13.000	0.4538	1.40	. Q	. V	.	.	.
13.083	0.4648	1.60	. Q	. V	.	.	.
13.167	0.4758	1.60	. Q	. V	.	.	.
13.250	0.4868	1.60	. Q	. V	.	.	.
13.333	0.4987	1.73	. Q	. V	.	.	.
13.417	0.5107	1.73	. Q	. V	.	.	.
13.500	0.5226	1.73	. Q	. V	.	.	.
13.583	0.5324	1.42	. Q	. V	.	.	.
13.667	0.5421	1.42	. Q	. V	.	.	.
13.750	0.5519	1.42	. Q	. V	.	.	.
13.833	0.5598	1.15	. Q	. V	.	.	.
13.917	0.5678	1.15	. Q	. V	.	.	.
14.000	0.5757	1.15	. Q	. V	.	.	.
14.083	0.5843	1.24	. Q	. V	.	.	.
14.167	0.5928	1.24	. Q	. V	.	.	.
14.250	0.6014	1.24	. Q	. V	.	.	.
14.333	0.6103	1.30	. Q	. V	.	.	.
14.417	0.6193	1.30	. Q	. V.	.	.	.
14.500	0.6282	1.30	. Q	. V.	.	.	.
14.583	0.6372	1.30	. Q	. V	.	.	.
14.667	0.6461	1.30	. Q	. V	.	.	.
14.750	0.6550	1.30	. Q	. V	.	.	.
14.833	0.6638	1.27	. Q	. .V	.	.	.
14.917	0.6725	1.27	. Q	. .V	.	.	.
15.000	0.6812	1.27	. Q	. . V	.	.	.
15.083	0.6896	1.22	. Q	. . V	.	.	.
15.167	0.6980	1.22	. Q	. . V	.	.	.

15.250	0.7064	1.22	.	Q	.	.	.	V	.
15.333	0.7144	1.16	.	Q	.	.	.	V	.
15.417	0.7224	1.16	.	Q	.	.	.	V	.
15.500	0.7304	1.16	.	Q	.	.	.	V	.
15.583	0.7373	1.01	.	Q	.	.	.	V	.
15.667	0.7443	1.01	.	Q	.	.	.	V	.
15.750	0.7512	1.01	.	Q	.	.	.	V	.
15.833	0.7575	0.91	.	Q	.	.	.	V	.
15.917	0.7637	0.91	.	Q	.	.	.	V	.
16.000	0.7700	0.91	.	Q	.	.	.	V	.
16.083	0.7735	0.50	.	Q	.	.	.	V	.
16.167	0.7770	0.50	.	Q	.	.	.	V	.
16.250	0.7804	0.50	.	Q	.	.	.	V	.
16.333	0.7818	0.19	Q	.	.	.	.	V	.
16.417	0.7831	0.19	Q	.	.	.	.	V	.
16.500	0.7845	0.19	Q	.	.	.	.	V	.
16.583	0.7853	0.13	Q	.	.	.	.	V	.
16.667	0.7862	0.13	Q	.	.	.	.	V	.
16.750	0.7871	0.13	Q	.	.	.	.	V	.
16.833	0.7877	0.10	Q	.	.	.	.	V	.
16.917	0.7884	0.10	Q	.	.	.	.	V	.
17.000	0.7891	0.10	Q	.	.	.	.	V	.
17.083	0.7900	0.13	Q	.	.	.	.	V	.
17.167	0.7909	0.13	Q	.	.	.	.	V	.
17.250	0.7917	0.13	Q	.	.	.	.	V	.
17.333	0.7928	0.15	Q	.	.	.	.	V	.
17.417	0.7938	0.15	Q	.	.	.	.	V	.
17.500	0.7948	0.15	Q	.	.	.	.	V	.
17.583	0.7959	0.15	Q	.	.	.	.	V	.
17.667	0.7970	0.15	Q	.	.	.	.	V	.
17.750	0.7980	0.15	Q	.	.	.	.	V	.
17.833	0.7990	0.14	Q	.	.	.	.	V	.
17.917	0.7999	0.14	Q	.	.	.	.	V	.
18.000	0.8009	0.14	Q	.	.	.	.	V	.
18.083	0.8017	0.13	Q	.	.	.	.	V	.
18.167	0.8026	0.13	Q	.	.	.	.	V	.
18.250	0.8035	0.13	Q	.	.	.	.	V	.
18.333	0.8044	0.12	Q	.	.	.	.	V	.
18.417	0.8052	0.12	Q	.	.	.	.	V	.
18.500	0.8061	0.12	Q	.	.	.	.	V	.
18.583	0.8068	0.11	Q	.	.	.	.	V	.
18.667	0.8076	0.11	Q	.	.	.	.	V	.
18.750	0.8083	0.11	Q	.	.	.	.	V	.
18.833	0.8089	0.08	Q	.	.	.	.	V	.
18.917	0.8094	0.08	Q	.	.	.	.	V	.
19.000	0.8100	0.08	Q	.	.	.	.	V	.
19.083	0.8105	0.08	Q	.	.	.	.	V	.
19.167	0.8111	0.08	Q	.	.	.	.	V	.
19.250	0.8116	0.08	Q	.	.	.	.	V	.
19.333	0.8124	0.11	Q	.	.	.	.	V	.
19.417	0.8131	0.11	Q	.	.	.	.	V	.
19.500	0.8138	0.11	Q	.	.	.	.	V	.
19.583	0.8146	0.10	Q	.	.	.	.	V	.
19.667	0.8153	0.10	Q	.	.	.	.	V	.
19.750	0.8160	0.10	Q	.	.	.	.	V	.
19.833	0.8166	0.08	Q	.	.	.	.	V	.
19.917	0.8171	0.08	Q	.	.	.	.	V	.
20.000	0.8176	0.08	Q	.	.	.	.	V	.
20.083	0.8182	0.08	Q	.	.	.	.	V	.
20.167	0.8188	0.08	Q	.	.	.	.	V	.
20.250	0.8193	0.08	Q	.	.	.	.	V	.
20.333	0.8199	0.09	Q	.	.	.	.	V	.
20.417	0.8206	0.09	Q	.	.	.	.	V	.

20.500	0.8212	0.09	Q	.	.	.	V
20.583	0.8218	0.09	Q	.	.	.	V.
20.667	0.8225	0.09	Q	.	.	.	V.
20.750	0.8231	0.09	Q	.	.	.	V.
20.833	0.8236	0.08	Q	.	.	.	V.
20.917	0.8242	0.08	Q	.	.	.	V.
21.000	0.8247	0.08	Q	.	.	.	V.
21.083	0.8253	0.08	Q	.	.	.	V.
21.167	0.8258	0.08	Q	.	.	.	V.
21.250	0.8264	0.08	Q	.	.	.	V.
21.333	0.8269	0.08	Q	.	.	.	V.
21.417	0.8274	0.08	Q	.	.	.	V.
21.500	0.8279	0.08	Q	.	.	.	V.
21.583	0.8285	0.08	Q	.	.	.	V.
21.667	0.8290	0.08	Q	.	.	.	V.
21.750	0.8296	0.08	Q	.	.	.	V.
21.833	0.8301	0.07	Q	.	.	.	V.
21.917	0.8306	0.07	Q	.	.	.	V.
22.000	0.8311	0.07	Q	.	.	.	V.
22.083	0.8317	0.08	Q	.	.	.	V.
22.167	0.8322	0.08	Q	.	.	.	V.
22.250	0.8328	0.08	Q	.	.	.	V.
22.333	0.8333	0.07	Q	.	.	.	V.
22.417	0.8338	0.07	Q	.	.	.	V.
22.500	0.8343	0.07	Q	.	.	.	V.
22.583	0.8348	0.06	Q	.	.	.	V.
22.667	0.8352	0.06	Q	.	.	.	V.
22.750	0.8356	0.06	Q	.	.	.	V.
22.833	0.8361	0.06	Q	.	.	.	V.
22.917	0.8365	0.06	Q	.	.	.	V.
23.000	0.8369	0.06	Q	.	.	.	V.
23.083	0.8374	0.06	Q	.	.	.	V.
23.166	0.8378	0.06	Q	.	.	.	V.
23.250	0.8382	0.06	Q	.	.	.	V.
23.333	0.8386	0.06	Q	.	.	.	V.
23.416	0.8391	0.06	Q	.	.	.	V.
23.500	0.8395	0.06	Q	.	.	.	V.
23.583	0.8399	0.06	Q	.	.	.	V.
23.666	0.8403	0.06	Q	.	.	.	V.
23.750	0.8408	0.06	Q	.	.	.	V.
23.833	0.8412	0.06	Q	.	.	.	V.
23.916	0.8416	0.06	Q	.	.	.	V.
24.000	0.8421	0.06	Q	.	.	.	V.
24.083	0.8423	0.03	Q	.	.	.	V.
24.166	0.8425	0.03	Q	.	.	.	V.
24.250	0.8427	0.03	Q	.	.	.	V.
24.333	0.8427	0.01	Q	.	.	.	V.
24.416	0.8428	0.01	Q	.	.	.	V.
24.500	0.8428	0.01	Q	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1470.0
10%	750.0
20%	525.0
30%	435.0
40%	375.0
50%	255.0

	B3_1024.RES
60%	195.0
70%	150.0
80%	60.0
90%	30.0

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions Unit Hydrograph *
* 100-year, 1-hour *

FILE NAME: B3.DAT
TIME/DATE OF STUDY: 22:52 12/10/2020

FLOW PROCESS FROM NODE 181.00 TO NODE 183.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 3.890 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.100
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 1.48 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 83.333

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	13.994	6.583
2	59.664	21.485
3	78.792	8.999
4	86.766	3.751
5	91.428	2.193
6	94.514	1.452
7	96.650	1.005
8	98.044	0.656
9	98.699	0.308
10	99.289	0.278
11	99.716	0.201
12	99.929	0.100
13	100.000	0.033

UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0746	0.0083	0.0663
2	0.0782	0.0083	0.0698
3	0.0823	0.0083	0.0740
4	0.0895	0.0083	0.0812
5	0.0937	0.0083	0.0853
6	0.1046	0.0083	0.0963
7	0.1198	0.0083	0.1114
8	0.1299	0.0083	0.1216
9	0.1839	0.0083	0.1756
10	0.3303	0.0083	0.3219
11	0.1120	0.0083	0.1037
12	0.0812	0.0083	0.0728

TOTAL STORM RAINFALL(INCHES) = 1.48
 TOTAL SOIL-LOSS(INCHES) = 0.10
 TOTAL EFFECTIVE RAINFALL(INCHES) = 1.38

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0324
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.4471

1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	5.0	10.0	15.0	20.0
0.083	0.0030	0.44	Q	.	.	.	.
0.167	0.0160	1.88	.V Q	.	.	.	.
0.250	0.0338	2.58	. V Q	.	.	.	.
0.333	0.0545	3.00	. V Q	.	.	.	.
0.417	0.0777	3.38	. Q	.	.	.	.
0.500	0.1034	3.72	. Q V.	.	.	.	.
0.583	0.1323	4.20	. Q .V	.	.	.	.
0.667	0.1653	4.78	. Q. V	.	.	.	.

B3_1001.RES						
0.750	0.2037	5.58	.	.Q	V	.
0.833	0.2582	7.91	.	.	Q	V
0.917	0.3285	10.21	.	.	.	Q
1.000	0.3761	6.91	.	.	Q	.
1.083	0.4072	4.51	.	Q.	.	V
1.167	0.4229	2.28	.	Q	.	V
1.250	0.4319	1.31	.	Q	.	V
1.333	0.4378	0.85	.	Q	.	V
1.417	0.4415	0.54	.	Q	.	V
1.500	0.4438	0.33	Q	.	.	V
1.583	0.4453	0.22	Q	.	.	V
1.667	0.4462	0.14	Q	.	.	V
1.750	0.4468	0.08	Q	.	.	V
1.833	0.4470	0.04	Q	.	.	V
1.917	0.4471	0.01	Q	.	.	V
2.000	0.4471	0.00	Q	.	.	V

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	120.0
10%	70.0
20%	60.0
30%	45.0
40%	35.0
50%	20.0
60%	15.0
70%	10.0
80%	5.0
90%	5.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions Unit Hydrograph *
* 100-year, 24-hour *

FILE NAME: B3.DAT
TIME/DATE OF STUDY: 22:51 12/10/2020

FLOW PROCESS FROM NODE 181.00 TO NODE 183.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 3.890 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.100
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.050
USER-ENTERED RAINFALL = 6.32 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 250.000

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	50.817	7.969
2	90.903	6.286
3	97.798	1.081
4	99.444	0.258
5	99.778	0.052
6	99.944	0.026
7	100.000	0.009



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
----------------------	------------------------	-------------------------	-----------------------------

1	0.0126	0.0063	0.0063
2	0.0190	0.0095	0.0095
3	0.0190	0.0095	0.0095
4	0.0253	0.0126	0.0126
5	0.0190	0.0095	0.0095
6	0.0190	0.0095	0.0095
7	0.0190	0.0095	0.0095
8	0.0253	0.0126	0.0126
9	0.0253	0.0126	0.0126
10	0.0253	0.0126	0.0126
11	0.0316	0.0158	0.0158
12	0.0316	0.0158	0.0158
13	0.0316	0.0158	0.0158
14	0.0316	0.0158	0.0158
15	0.0316	0.0158	0.0158
16	0.0379	0.0190	0.0190
17	0.0379	0.0190	0.0190
18	0.0442	0.0221	0.0221
19	0.0442	0.0221	0.0221
20	0.0506	0.0253	0.0253
21	0.0379	0.0190	0.0190
22	0.0442	0.0221	0.0221
23	0.0506	0.0253	0.0253
24	0.0506	0.0253	0.0253
25	0.0569	0.0284	0.0284
26	0.0569	0.0284	0.0284
27	0.0632	0.0316	0.0316
28	0.0632	0.0314	0.0318
29	0.0632	0.0310	0.0322
30	0.0695	0.0306	0.0390
31	0.0758	0.0301	0.0457
32	0.0822	0.0297	0.0524
33	0.0948	0.0293	0.0655
34	0.0948	0.0289	0.0659
35	0.1011	0.0285	0.0726
36	0.1074	0.0281	0.0793
37	0.1201	0.0277	0.0924
38	0.1264	0.0273	0.0991
39	0.1327	0.0269	0.1058
40	0.1390	0.0265	0.1125
41	0.0948	0.0261	0.0687
42	0.0948	0.0258	0.0690
43	0.1264	0.0254	0.1010
44	0.1264	0.0250	0.1014
45	0.1201	0.0247	0.0954
46	0.1201	0.0243	0.0958
47	0.1074	0.0239	0.0835

48	0.1138	0.0236	0.0902
49	0.1580	0.0232	0.1348
50	0.1643	0.0229	0.1414
51	0.1770	0.0225	0.1544
52	0.1833	0.0222	0.1611
53	0.2149	0.0219	0.1930
54	0.2149	0.0215	0.1934
55	0.1454	0.0212	0.1242
56	0.1454	0.0209	0.1245
57	0.1706	0.0206	0.1501
58	0.1643	0.0202	0.1441
59	0.1643	0.0199	0.1444
60	0.1580	0.0196	0.1384
61	0.1517	0.0193	0.1324
62	0.1454	0.0190	0.1263
63	0.1201	0.0187	0.1013
64	0.1201	0.0185	0.1016
65	0.0253	0.0126	0.0126
66	0.0253	0.0126	0.0126
67	0.0190	0.0095	0.0095
68	0.0190	0.0095	0.0095
69	0.0316	0.0158	0.0158
70	0.0316	0.0158	0.0158
71	0.0316	0.0158	0.0158
72	0.0253	0.0126	0.0126
73	0.0253	0.0126	0.0126
74	0.0253	0.0126	0.0126
75	0.0190	0.0095	0.0095
76	0.0126	0.0063	0.0063
77	0.0190	0.0095	0.0095
78	0.0253	0.0126	0.0126
79	0.0190	0.0095	0.0095
80	0.0126	0.0063	0.0063
81	0.0190	0.0095	0.0095
82	0.0190	0.0095	0.0095
83	0.0190	0.0095	0.0095
84	0.0126	0.0063	0.0063
85	0.0190	0.0095	0.0095
86	0.0126	0.0063	0.0063
87	0.0190	0.0095	0.0095
88	0.0126	0.0063	0.0063
89	0.0190	0.0095	0.0095
90	0.0126	0.0063	0.0063
91	0.0126	0.0063	0.0063
92	0.0126	0.0063	0.0063
93	0.0126	0.0063	0.0063
94	0.0126	0.0063	0.0063
95	0.0126	0.0063	0.0063
96	0.0126	0.0063	0.0063

TOTAL STORM RAINFALL(INCHES) = 6.32
 TOTAL SOIL-LOSS(INCHES) = 1.68
 TOTAL EFFECTIVE RAINFALL(INCHES) = 4.64

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.5450
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1.5030

2 4 - 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 FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0003	0.05	Q	.	.	.	.
0.167	0.0007	0.05	Q	.	.	.	.
0.250	0.0010	0.05	Q	.	.	.	.
0.333	0.0018	0.12	Q	.	.	.	.
0.417	0.0026	0.12	Q	.	.	.	.
0.500	0.0034	0.12	Q	.	.	.	.
0.583	0.0044	0.14	Q	.	.	.	.
0.667	0.0054	0.14	Q	.	.	.	.
0.750	0.0064	0.14	Q	.	.	.	.
0.833	0.0075	0.17	Q	.	.	.	.
0.917	0.0087	0.17	Q	.	.	.	.
1.000	0.0099	0.17	Q	.	.	.	.
1.083	0.0111	0.17	Q	.	.	.	.
1.167	0.0122	0.17	Q	.	.	.	.
1.250	0.0134	0.17	Q	.	.	.	.
1.333	0.0144	0.15	Q	.	.	.	.
1.417	0.0155	0.15	Q	.	.	.	.
1.500	0.0165	0.15	Q	.	.	.	.
1.583	0.0176	0.15	Q	.	.	.	.
1.667	0.0186	0.15	Q	.	.	.	.
1.750	0.0196	0.15	Q	.	.	.	.
1.833	0.0208	0.17	Q	.	.	.	.
1.917	0.0220	0.17	Q	.	.	.	.
2.000	0.0232	0.17	Q	.	.	.	.
2.083	0.0245	0.19	Q	.	.	.	.
2.167	0.0259	0.19	Q	.	.	.	.
2.250	0.0272	0.19	Q	.	.	.	.
2.333	0.0286	0.20	Q	.	.	.	.
2.417	0.0299	0.20	Q	.	.	.	.
2.500	0.0313	0.20	Q	.	.	.	.
2.583	0.0328	0.22	Q	.	.	.	.
2.667	0.0344	0.22	Q	.	.	.	.
2.750	0.0359	0.22	Q	.	.	.	.
2.833	0.0376	0.24	Q	.	.	.	.
2.917	0.0392	0.24	QV	.	.	.	.
3.000	0.0409	0.24	QV	.	.	.	.
3.083	0.0426	0.25	QV	.	.	.	.
3.167	0.0443	0.25	QV	.	.	.	.
3.250	0.0460	0.25	QV	.	.	.	.
3.333	0.0477	0.25	QV	.	.	.	.
3.417	0.0494	0.25	QV	.	.	.	.
3.500	0.0511	0.25	QV	.	.	.	.
3.583	0.0528	0.25	QV	.	.	.	.
3.667	0.0545	0.25	QV	.	.	.	.
3.750	0.0562	0.25	QV	.	.	.	.
3.833	0.0581	0.27	.Q	.	.	.	.
3.917	0.0600	0.27	.Q	.	.	.	.
4.000	0.0619	0.27	.Q	.	.	.	.
4.083	0.0639	0.29	.Q	.	.	.	.
4.167	0.0659	0.29	.Q	.	.	.	.
4.250	0.0679	0.29	.Q	.	.	.	.
4.333	0.0701	0.32	.Q	.	.	.	.
4.417	0.0724	0.32	.Q	.	.	.	.
4.500	0.0746	0.32	.Q	.	.	.	.
4.583	0.0769	0.34	.QV	.	.	.	.
4.667	0.0793	0.34	.QV	.	.	.	.

4.750	0.0816	0.34	.QV	.	.	.	.
4.833	0.0842	0.37	.QV	.	.	.	.
4.917	0.0868	0.37	.QV	.	.	.	.
5.000	0.0893	0.37	.QV	.	.	.	.
5.083	0.0917	0.34	.QV	.	.	.	.
5.167	0.0940	0.34	.QV	.	.	.	.
5.250	0.0964	0.34	.QV	.	.	.	.
5.333	0.0986	0.33	.QV	.	.	.	.
5.417	0.1009	0.33	.QV	.	.	.	.
5.500	0.1032	0.33	.QV	.	.	.	.
5.583	0.1057	0.37	.QV	.	.	.	.
5.667	0.1083	0.37	.QV	.	.	.	.
5.750	0.1108	0.37	.QV	.	.	.	.
5.833	0.1135	0.39	.Q V	.	.	.	.
5.917	0.1162	0.39	.Q V	.	.	.	.
6.000	0.1189	0.39	.Q V	.	.	.	.
6.083	0.1218	0.42	.Q V	.	.	.	.
6.167	0.1247	0.42	.Q V	.	.	.	.
6.250	0.1276	0.42	.Q V	.	.	.	.
6.333	0.1306	0.44	.Q V	.	.	.	.
6.417	0.1337	0.44	.Q V	.	.	.	.
6.500	0.1367	0.44	.Q V	.	.	.	.
6.583	0.1399	0.47	.Q V	.	.	.	.
6.667	0.1432	0.47	.Q V	.	.	.	.
6.750	0.1464	0.47	.Q V	.	.	.	.
6.833	0.1498	0.49	.Q V	.	.	.	.
6.917	0.1532	0.49	.Q V	.	.	.	.
7.000	0.1566	0.49	.Q V	.	.	.	.
7.083	0.1600	0.50	. Q V	.	.	.	.
7.167	0.1635	0.50	. Q V	.	.	.	.
7.250	0.1669	0.50	. Q V	.	.	.	.
7.333	0.1708	0.56	. Q V	.	.	.	.
7.417	0.1746	0.56	. Q V	.	.	.	.
7.500	0.1784	0.56	. Q V	.	.	.	.
7.583	0.1830	0.65	. Q V	.	.	.	.
7.667	0.1875	0.65	. Q V	.	.	.	.
7.750	0.1920	0.65	. Q V	.	.	.	.
7.833	0.1972	0.76	. Q V	.	.	.	.
7.917	0.2024	0.76	. Q V	.	.	.	.
8.000	0.2076	0.76	. Q V	.	.	.	.
8.083	0.2139	0.91	. Q V	.	.	.	.
8.167	0.2202	0.91	. Q V	.	.	.	.
8.250	0.2265	0.91	. Q V	.	.	.	.
8.333	0.2335	1.01	. Q V	.	.	.	.
8.417	0.2404	1.01	. Q V	.	.	.	.
8.500	0.2474	1.01	. Q V	.	.	.	.
8.583	0.2548	1.08	. Q V	.	.	.	.
8.667	0.2622	1.08	. Q V	.	.	.	.
8.750	0.2697	1.08	. Q V	.	.	.	.
8.833	0.2778	1.18	. Q V	.	.	.	.
8.917	0.2860	1.18	. Q V	.	.	.	.
9.000	0.2941	1.18	. Q V	.	.	.	.
9.083	0.3033	1.34	. Q V	.	.	.	.
9.167	0.3125	1.34	. Q V	.	.	.	.
9.250	0.3217	1.34	. Q V	.	.	.	.
9.333	0.3319	1.48	. Q V	.	.	.	.
9.417	0.3421	1.48	. Q V	.	.	.	.
9.500	0.3523	1.48	. Q V	.	.	.	.
9.583	0.3633	1.59	. Q V	.	.	.	.
9.667	0.3742	1.59	. Q V	.	.	.	.
9.750	0.3852	1.59	. Q V	.	.	.	.
9.833	0.3969	1.70	. Q V	.	.	.	.
9.917	0.4086	1.70	. Q V	.	.	.	.

10.000	0.4203	1.70	.	Q	V	.	.	.
10.083	0.4300	1.40	.	Q	.V	.	.	.
10.167	0.4396	1.40	.	Q	.V	.	.	.
10.250	0.4493	1.40	.	Q	.V	.	.	.
10.333	0.4571	1.14	.	Q	.V	.	.	.
10.417	0.4649	1.14	.	Q	.V	.	.	.
10.500	0.4728	1.14	.	Q	.V	.	.	.
10.583	0.4821	1.35	.	Q	.V	.	.	.
10.667	0.4914	1.35	.	Q	.V	.	.	.
10.750	0.5007	1.35	.	Q	.V	.	.	.
10.833	0.5113	1.54	.	Q	.V	.	.	.
10.917	0.5220	1.54	.	Q	.V	.	.	.
11.000	0.5326	1.54	.	Q	.V	.	.	.
11.083	0.5432	1.53	.	Q	.V	.	.	.
11.167	0.5537	1.53	.	Q	.V	.	.	.
11.250	0.5643	1.53	.	Q	.V	.	.	.
11.333	0.5746	1.51	.	Q	.V	.	.	.
11.417	0.5850	1.51	.	Q	.V	.	.	.
11.500	0.5954	1.51	.	Q	.V	.	.	.
11.583	0.6051	1.40	.	Q	.V	.	.	.
11.667	0.6147	1.40	.	Q	.V	.	.	.
11.750	0.6244	1.40	.	Q	.V	.	.	.
11.833	0.6339	1.38	.	Q	.V	.	.	.
11.917	0.6434	1.38	.	Q	.V	.	.	.
12.000	0.6529	1.38	.	Q	.V	.	.	.
12.083	0.6651	1.76	.	Q	.V	.	.	.
12.167	0.6772	1.76	.	Q	.V	.	.	.
12.250	0.6894	1.76	.	Q	.V	.	.	.
12.333	0.7039	2.10	.	Q	.V	.	.	.
12.417	0.7183	2.10	.	Q	.V	.	.	.
12.500	0.7328	2.10	.	Q	.V	.	.	.
12.583	0.7486	2.30	.	Q.	.V	.	.	.
12.667	0.7644	2.30	.	Q.	.V	.	.	.
12.750	0.7803	2.30	.	Q.	.V	.	.	.
12.833	0.7971	2.45	.	Q.	.V	.	.	.
12.917	0.8140	2.45	.	Q.	.V	.	.	.
13.000	0.8309	2.45	.	Q.	.V	.	.	.
13.083	0.8499	2.76	.	.Q	.V	.	.	.
13.167	0.8690	2.76	.	.Q	.V	.	.	.
13.250	0.8880	2.76	.	.Q	.V	.	.	.
13.333	0.9085	2.98	.	.Q	.V	.	.	.
13.417	0.9290	2.98	.	.Q	.V	.	.	.
13.500	0.9496	2.98	.	.Q	.V	.	.	.
13.583	0.9666	2.47	.	Q.	.V	.	.	.
13.667	0.9836	2.47	.	Q.	.V	.	.	.
13.750	1.0006	2.47	.	Q.	.V	.	.	.
13.833	1.0146	2.05	.	Q	.V	.	.	.
13.917	1.0287	2.05	.	Q	.V	.	.	.
14.000	1.0428	2.05	.	Q	.V	.	.	.
14.083	1.0578	2.18	.	Q	.V	.	.	.
14.167	1.0728	2.18	.	Q	.V	.	.	.
14.250	1.0878	2.18	.	Q	.V	.	.	.
14.333	1.1035	2.27	.	Q.	.V	.	.	.
14.417	1.1192	2.27	.	Q.	.V	.	.	.
14.500	1.1348	2.27	.	Q.	.V	.	.	.
14.583	1.1504	2.26	.	Q.	.V	.	.	.
14.667	1.1660	2.26	.	Q.	.V	.	.	.
14.750	1.1816	2.26	.	Q.	.V	.	.	.
14.833	1.1969	2.22	.	Q	.V	.	.	.
14.917	1.2121	2.22	.	Q	.V	.	.	.
15.000	1.2274	2.22	.	Q	.V	.	.	.
15.083	1.2421	2.13	.	Q	.V	.	.	.
15.167	1.2567	2.13	.	Q	.V	.	.	.

15.250	1.2714	2.13	.	Q	.	.	.	V	.
15.333	1.2854	2.04	.	Q	.	.	.	V	.
15.417	1.2995	2.04	.	Q	.	.	.	V	.
15.500	1.3135	2.04	.	Q	.	.	.	V	.
15.583	1.3259	1.79	.	Q	.	.	.	V	.
15.667	1.3382	1.79	.	Q	.	.	.	V	.
15.750	1.3506	1.79	.	Q	.	.	.	V	.
15.833	1.3618	1.63	.	Q	.	.	.	V	.
15.917	1.3730	1.63	.	Q	.	.	.	V	.
16.000	1.3842	1.63	.	Q	.	.	.	V	.
16.083	1.3904	0.89	.	Q	.	.	.	V	.
16.167	1.3965	0.89	.	Q	.	.	.	V	.
16.250	1.4027	0.89	.	Q	.	.	.	V	.
16.333	1.4050	0.33	.	Q	.	.	.	V	.
16.417	1.4072	0.33	.	Q	.	.	.	V	.
16.500	1.4095	0.33	.	Q	.	.	.	V	.
16.583	1.4109	0.20	Q	.	.	.	.	V	.
16.667	1.4123	0.20	Q	.	.	.	.	V	.
16.750	1.4137	0.20	Q	.	.	.	.	V	.
16.833	1.4148	0.16	Q	.	.	.	.	V	.
16.917	1.4159	0.16	Q	.	.	.	.	V	.
17.000	1.4170	0.16	Q	.	.	.	.	V	.
17.083	1.4184	0.20	Q	.	.	.	.	V	.
17.167	1.4198	0.20	Q	.	.	.	.	V	.
17.250	1.4212	0.20	Q	.	.	.	.	V	.
17.333	1.4229	0.24	Q	.	.	.	.	V	.
17.417	1.4245	0.24	Q	.	.	.	.	V	.
17.500	1.4262	0.24	Q	.	.	.	.	V	.
17.583	1.4279	0.25	Q	.	.	.	.	V	.
17.667	1.4296	0.25	Q	.	.	.	.	V	.
17.750	1.4313	0.25	Q	.	.	.	.	V	.
17.833	1.4328	0.22	Q	.	.	.	.	V	.
17.917	1.4343	0.22	Q	.	.	.	.	V	.
18.000	1.4358	0.22	Q	.	.	.	.	V	.
18.083	1.4372	0.20	Q	.	.	.	.	V	.
18.167	1.4386	0.20	Q	.	.	.	.	V	.
18.250	1.4400	0.20	Q	.	.	.	.	V	.
18.333	1.4414	0.20	Q	.	.	.	.	V	.
18.417	1.4428	0.20	Q	.	.	.	.	V	.
18.500	1.4441	0.20	Q	.	.	.	.	V	.
18.583	1.4453	0.17	Q	.	.	.	.	V	.
18.667	1.4465	0.17	Q	.	.	.	.	V	.
18.750	1.4477	0.17	Q	.	.	.	.	V	.
18.833	1.4486	0.13	Q	.	.	.	.	V	.
18.917	1.4495	0.13	Q	.	.	.	.	V	.
19.000	1.4504	0.13	Q	.	.	.	.	V	.
19.083	1.4513	0.13	Q	.	.	.	.	V	.
19.167	1.4522	0.13	Q	.	.	.	.	V	.
19.250	1.4531	0.13	Q	.	.	.	.	V	.
19.333	1.4542	0.17	Q	.	.	.	.	V	.
19.417	1.4554	0.17	Q	.	.	.	.	V	.
19.500	1.4566	0.17	Q	.	.	.	.	V	.
19.583	1.4577	0.17	Q	.	.	.	.	V	.
19.667	1.4589	0.17	Q	.	.	.	.	V	.
19.750	1.4600	0.17	Q	.	.	.	.	V	.
19.833	1.4609	0.13	Q	.	.	.	.	V	.
19.917	1.4618	0.13	Q	.	.	.	.	V	.
20.000	1.4627	0.13	Q	.	.	.	.	V	.
20.083	1.4636	0.13	Q	.	.	.	.	V	.
20.167	1.4645	0.13	Q	.	.	.	.	V	.
20.250	1.4653	0.13	Q	.	.	.	.	V	.
20.333	1.4663	0.15	Q	.	.	.	.	V	.
20.417	1.4673	0.15	Q	.	.	.	.	V	.

20.500	1.4683	0.15	Q	.	.	.	V.
20.583	1.4694	0.15	Q	.	.	.	V.
20.667	1.4704	0.15	Q	.	.	.	V.
20.750	1.4714	0.15	Q	.	.	.	V.
20.833	1.4723	0.12	Q	.	.	.	V.
20.917	1.4731	0.12	Q	.	.	.	V.
21.000	1.4740	0.12	Q	.	.	.	V.
21.083	1.4748	0.13	Q	.	.	.	V.
21.167	1.4757	0.13	Q	.	.	.	V.
21.250	1.4766	0.13	Q	.	.	.	V.
21.333	1.4774	0.12	Q	.	.	.	V.
21.417	1.4783	0.12	Q	.	.	.	V.
21.500	1.4791	0.12	Q	.	.	.	V.
21.583	1.4800	0.13	Q	.	.	.	V.
21.667	1.4809	0.13	Q	.	.	.	V.
21.750	1.4817	0.13	Q	.	.	.	V.
21.833	1.4826	0.12	Q	.	.	.	V.
21.917	1.4834	0.12	Q	.	.	.	V.
22.000	1.4842	0.12	Q	.	.	.	V.
22.083	1.4851	0.13	Q	.	.	.	V.
22.167	1.4860	0.13	Q	.	.	.	V.
22.250	1.4869	0.13	Q	.	.	.	V.
22.333	1.4877	0.12	Q	.	.	.	V.
22.417	1.4885	0.12	Q	.	.	.	V.
22.500	1.4893	0.12	Q	.	.	.	V.
22.583	1.4900	0.10	Q	.	.	.	V.
22.667	1.4907	0.10	Q	.	.	.	V.
22.750	1.4915	0.10	Q	.	.	.	V.
22.833	1.4921	0.10	Q	.	.	.	V.
22.917	1.4928	0.10	Q	.	.	.	V.
23.000	1.4935	0.10	Q	.	.	.	V.
23.083	1.4942	0.10	Q	.	.	.	V.
23.166	1.4949	0.10	Q	.	.	.	V.
23.250	1.4956	0.10	Q	.	.	.	V.
23.333	1.4963	0.10	Q	.	.	.	V.
23.416	1.4969	0.10	Q	.	.	.	V.
23.500	1.4976	0.10	Q	.	.	.	V.
23.583	1.4983	0.10	Q	.	.	.	V.
23.666	1.4990	0.10	Q	.	.	.	V.
23.750	1.4997	0.10	Q	.	.	.	V.
23.833	1.5004	0.10	Q	.	.	.	V.
23.916	1.5010	0.10	Q	.	.	.	V.
24.000	1.5017	0.10	Q	.	.	.	V.
24.083	1.5021	0.05	Q	.	.	.	V.
24.166	1.5024	0.05	Q	.	.	.	V.
24.250	1.5027	0.05	Q	.	.	.	V.
24.333	1.5028	0.01	Q	.	.	.	V.
24.416	1.5028	0.01	Q	.	.	.	V.
24.500	1.5029	0.01	Q	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1470.0
10%	735.0
20%	525.0
30%	480.0
40%	405.0
50%	315.0

60%
70%
80%
90%

B3_10024.RES
210.0
165.0
60.0
30.0

=====
END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, Unit Hydrograph, B-4 *
* 10-year, 1-hour *

FILE NAME: B4.DAT
TIME/DATE OF STUDY: 06:09 09/10/2020

FLOW PROCESS FROM NODE 189.00 TO NODE 191.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.210 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 0.89 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 39.683

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	4.224	0.664
2	21.517	2.719
3	48.636	4.264
4	65.936	2.720
5	74.688	1.376
6	80.252	0.875
7	84.243	0.628
8	87.272	0.476
9	89.634	0.371
10	91.567	0.304
11	93.136	0.247
12	94.480	0.211
13	95.640	0.182
14	96.538	0.141
15	97.309	0.121
16	97.991	0.107
17	98.314	0.051
18	98.599	0.045
19	98.884	0.045
20	99.168	0.045
21	99.453	0.045
22	99.738	0.045
23	100.000	0.041



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0449	0.0042	0.0407
2	0.0470	0.0042	0.0428
3	0.0495	0.0042	0.0454
4	0.0538	0.0042	0.0497
5	0.0563	0.0042	0.0522
6	0.0629	0.0042	0.0587
7	0.0720	0.0042	0.0679
8	0.0781	0.0042	0.0740
9	0.1106	0.0042	0.1065
10	0.1986	0.0042	0.1944
11	0.0673	0.0042	0.0632
12	0.0488	0.0042	0.0446

TOTAL STORM RAINFALL(INCHES) = 0.89
 TOTAL SOIL-LOSS(INCHES) = 0.05
 TOTAL EFFECTIVE RAINFALL(INCHES) = 0.84

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0054
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.0910



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	B4_101.RES			
				2.5	5.0	7.5	10.0
0.083	0.0002	0.03	Q	.	.	.	.
0.167	0.0011	0.14	Q	.	.	.	.
0.250	0.0033	0.32	.Q	.	.	.	.
0.333	0.0064	0.45	.QV	.	.	.	.
0.417	0.0101	0.54	. Q V	.	.	.	.
0.500	0.0143	0.61	. Q V	.	.	.	.
0.583	0.0191	0.69	. Q V	.	.	.	.
0.667	0.0244	0.78	. Q V	.	.	.	.
0.750	0.0306	0.90	. Q V	.	.	.	.
0.833	0.0384	1.13	. Q V	.	.	.	.
0.917	0.0485	1.47	. Q V	.	.	.	.
1.000	0.0595	1.59	. Q V	.	.	.	.
1.083	0.0682	1.26	. Q V	.	.	.	.
1.167	0.0742	0.87	. Q V	.	.	.	.
1.250	0.0781	0.57	. Q V	.	.	.	.
1.333	0.0808	0.39	.Q V	.	.	.	.
1.417	0.0828	0.29	.Q V	.	.	.	.
1.500	0.0844	0.23	Q V	.	.	.	.
1.583	0.0856	0.18	Q V	.	.	.	.
1.667	0.0867	0.15	Q V	.	.	.	.
1.750	0.0875	0.13	Q V	.	.	.	.
1.833	0.0882	0.10	Q V	.	.	.	.
1.917	0.0888	0.09	Q V	.	.	.	.
2.000	0.0893	0.07	Q V	.	.	.	.
2.083	0.0897	0.06	Q V	.	.	.	.
2.167	0.0900	0.04	Q V	.	.	.	.
2.250	0.0902	0.03	Q V	.	.	.	.
2.333	0.0904	0.03	Q V	.	.	.	.
2.417	0.0905	0.02	Q V	.	.	.	.
2.500	0.0907	0.02	Q V	.	.	.	.
2.583	0.0908	0.02	Q V	.	.	.	.
2.667	0.0909	0.01	Q V	.	.	.	.
2.750	0.0909	0.00	Q V	.	.	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	165.0
10%	85.0
20%	70.0
30%	55.0
40%	40.0
50%	30.0
60%	20.0
70%	20.0
80%	10.0
90%	10.0

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, Unit Hydrograph, B-4 *
* 10-year, 24-hour *

FILE NAME: B4.DAT
TIME/DATE OF STUDY: 06:08 09/10/2020

FLOW PROCESS FROM NODE 189.00 TO NODE 191.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.210 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.010
USER-ENTERED RAINFALL = 3.95 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 119.048

===== UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	24.793	1.299
2	73.625	2.559
3	87.050	0.704
4	93.061	0.315
5	96.496	0.180
6	98.301	0.095
7	99.163	0.045
8	99.665	0.026
9	99.916	0.013
10	100.000	0.004



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0079	0.0040	0.0040
2	0.0119	0.0059	0.0059
3	0.0119	0.0059	0.0059
4	0.0158	0.0079	0.0079
5	0.0119	0.0059	0.0059
6	0.0119	0.0059	0.0059
7	0.0119	0.0059	0.0059
8	0.0158	0.0079	0.0079
9	0.0158	0.0079	0.0079
10	0.0158	0.0079	0.0079
11	0.0198	0.0099	0.0099
12	0.0198	0.0099	0.0099
13	0.0198	0.0099	0.0099
14	0.0198	0.0099	0.0099
15	0.0198	0.0099	0.0099
16	0.0237	0.0119	0.0119
17	0.0237	0.0119	0.0119
18	0.0277	0.0138	0.0138
19	0.0277	0.0138	0.0138
20	0.0316	0.0158	0.0158
21	0.0237	0.0119	0.0119
22	0.0277	0.0138	0.0138
23	0.0316	0.0158	0.0158
24	0.0316	0.0158	0.0158
25	0.0356	0.0178	0.0178
26	0.0356	0.0178	0.0178
27	0.0395	0.0180	0.0215
28	0.0395	0.0176	0.0219
29	0.0395	0.0173	0.0222
30	0.0435	0.0169	0.0265
31	0.0474	0.0166	0.0308
32	0.0514	0.0163	0.0351
33	0.0593	0.0159	0.0433
34	0.0593	0.0156	0.0436
35	0.0632	0.0153	0.0479
36	0.0672	0.0150	0.0522
37	0.0751	0.0147	0.0604
38	0.0790	0.0143	0.0647
39	0.0830	0.0140	0.0689
40	0.0869	0.0137	0.0732
41	0.0593	0.0134	0.0458
42	0.0593	0.0131	0.0461
43	0.0790	0.0128	0.0662
44	0.0790	0.0125	0.0665

45	0.0751	0.0122	0.0628
46	0.0751	0.0119	0.0631
47	0.0672	0.0116	0.0555
48	0.0711	0.0114	0.0597
49	0.0988	0.0111	0.0877
50	0.1027	0.0108	0.0919
51	0.1106	0.0105	0.1001
52	0.1146	0.0103	0.1043
53	0.1343	0.0100	0.1243
54	0.1343	0.0097	0.1246
55	0.0909	0.0095	0.0814
56	0.0909	0.0092	0.0817
57	0.1067	0.0089	0.0977
58	0.1027	0.0087	0.0940
59	0.1027	0.0084	0.0943
60	0.0988	0.0082	0.0905
61	0.0948	0.0080	0.0868
62	0.0909	0.0077	0.0831
63	0.0751	0.0075	0.0676
64	0.0751	0.0073	0.0678
65	0.0158	0.0070	0.0088
66	0.0158	0.0068	0.0090
67	0.0119	0.0059	0.0059
68	0.0119	0.0059	0.0059
69	0.0198	0.0062	0.0136
70	0.0198	0.0060	0.0138
71	0.0198	0.0058	0.0140
72	0.0158	0.0056	0.0102
73	0.0158	0.0054	0.0104
74	0.0158	0.0052	0.0106
75	0.0119	0.0050	0.0068
76	0.0079	0.0040	0.0040
77	0.0119	0.0047	0.0072
78	0.0158	0.0045	0.0113
79	0.0119	0.0043	0.0075
80	0.0079	0.0040	0.0040
81	0.0119	0.0040	0.0078
82	0.0119	0.0039	0.0080
83	0.0119	0.0037	0.0081
84	0.0079	0.0036	0.0043
85	0.0119	0.0035	0.0084
86	0.0079	0.0033	0.0046
87	0.0119	0.0032	0.0086
88	0.0079	0.0031	0.0048
89	0.0119	0.0030	0.0089
90	0.0079	0.0029	0.0050
91	0.0079	0.0028	0.0051
92	0.0079	0.0027	0.0052
93	0.0079	0.0027	0.0052
94	0.0079	0.0026	0.0053
95	0.0079	0.0025	0.0054
96	0.0079	0.0025	0.0054

TOTAL STORM RAINFALL(INCHES) = 3.95
 TOTAL SOIL-LOSS(INCHES) = 0.88
 TOTAL EFFECTIVE RAINFALL(INCHES) = 3.07

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0950
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.3328

2 4 - 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

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0000	0.01	Q	.	.	.	.
0.167	0.0001	0.01	Q	.	.	.	.
0.250	0.0001	0.01	Q	.	.	.	.
0.333	0.0002	0.02	Q	.	.	.	.
0.417	0.0004	0.02	Q	.	.	.	.
0.500	0.0005	0.02	Q	.	.	.	.
0.583	0.0007	0.03	Q	.	.	.	.
0.667	0.0008	0.03	Q	.	.	.	.
0.750	0.0010	0.03	Q	.	.	.	.
0.833	0.0012	0.03	Q	.	.	.	.
0.917	0.0014	0.03	Q	.	.	.	.
1.000	0.0016	0.03	Q	.	.	.	.
1.083	0.0019	0.03	Q	.	.	.	.
1.167	0.0021	0.03	Q	.	.	.	.
1.250	0.0024	0.03	Q	.	.	.	.
1.333	0.0026	0.03	Q	.	.	.	.
1.417	0.0028	0.03	Q	.	.	.	.
1.500	0.0030	0.03	Q	.	.	.	.
1.583	0.0032	0.03	Q	.	.	.	.
1.667	0.0034	0.03	Q	.	.	.	.
1.750	0.0037	0.03	Q	.	.	.	.
1.833	0.0039	0.03	Q	.	.	.	.
1.917	0.0041	0.03	Q	.	.	.	.
2.000	0.0044	0.03	Q	.	.	.	.
2.083	0.0046	0.04	Q	.	.	.	.
2.167	0.0049	0.04	Q	.	.	.	.
2.250	0.0052	0.04	Q	.	.	.	.
2.333	0.0054	0.04	Q	.	.	.	.
2.417	0.0057	0.04	Q	.	.	.	.
2.500	0.0060	0.04	Q	.	.	.	.
2.583	0.0063	0.04	Q	.	.	.	.
2.667	0.0066	0.04	Q	.	.	.	.
2.750	0.0069	0.04	Q	.	.	.	.
2.833	0.0072	0.05	Q	.	.	.	.
2.917	0.0076	0.05	Q	.	.	.	.
3.000	0.0079	0.05	Q	.	.	.	.
3.083	0.0082	0.05	Q	.	.	.	.
3.167	0.0086	0.05	QV	.	.	.	.
3.250	0.0089	0.05	QV	.	.	.	.
3.333	0.0093	0.05	QV	.	.	.	.
3.417	0.0096	0.05	QV	.	.	.	.
3.500	0.0100	0.05	QV	.	.	.	.
3.583	0.0103	0.05	QV	.	.	.	.
3.667	0.0107	0.05	QV	.	.	.	.
3.750	0.0110	0.05	QV	.	.	.	.
3.833	0.0114	0.05	QV	.	.	.	.
3.917	0.0118	0.05	QV	.	.	.	.
4.000	0.0122	0.05	QV	.	.	.	.
4.083	0.0126	0.06	QV	.	.	.	.
4.167	0.0130	0.06	QV	.	.	.	.
4.250	0.0134	0.06	QV	.	.	.	.
4.333	0.0138	0.06	QV	.	.	.	.
4.417	0.0143	0.06	QV	.	.	.	.

4.500	0.0147	0.06	QV	.	.	.	.
4.583	0.0152	0.07	QV	.	.	.	.
4.667	0.0156	0.07	QV	.	.	.	.
4.750	0.0161	0.07	QV	.	.	.	.
4.833	0.0166	0.07	QV	.	.	.	.
4.917	0.0171	0.07	Q V	.	.	.	.
5.000	0.0176	0.07	Q V	.	.	.	.
5.083	0.0181	0.07	Q V	.	.	.	.
5.167	0.0187	0.07	Q V	.	.	.	.
5.250	0.0192	0.07	Q V	.	.	.	.
5.333	0.0196	0.07	Q V	.	.	.	.
5.417	0.0201	0.07	Q V	.	.	.	.
5.500	0.0206	0.07	Q V	.	.	.	.
5.583	0.0211	0.07	Q V	.	.	.	.
5.667	0.0216	0.07	Q V	.	.	.	.
5.750	0.0221	0.07	Q V	.	.	.	.
5.833	0.0227	0.08	Q V	.	.	.	.
5.917	0.0232	0.08	Q V	.	.	.	.
6.000	0.0238	0.08	Q V	.	.	.	.
6.083	0.0243	0.08	Q V	.	.	.	.
6.167	0.0249	0.08	Q V	.	.	.	.
6.250	0.0255	0.08	Q V	.	.	.	.
6.333	0.0261	0.09	Q V	.	.	.	.
6.417	0.0267	0.09	Q V	.	.	.	.
6.500	0.0273	0.09	Q V	.	.	.	.
6.583	0.0280	0.10	Q V	.	.	.	.
6.667	0.0287	0.10	Q V	.	.	.	.
6.750	0.0293	0.10	Q V	.	.	.	.
6.833	0.0301	0.11	Q V	.	.	.	.
6.917	0.0308	0.11	Q V	.	.	.	.
7.000	0.0315	0.11	Q V	.	.	.	.
7.083	0.0323	0.11	Q V	.	.	.	.
7.167	0.0331	0.11	Q V	.	.	.	.
7.250	0.0338	0.11	Q V	.	.	.	.
7.333	0.0347	0.12	Q V	.	.	.	.
7.417	0.0355	0.12	Q V	.	.	.	.
7.500	0.0363	0.12	Q V	.	.	.	.
7.583	0.0373	0.14	Q V	.	.	.	.
7.667	0.0382	0.14	Q V	.	.	.	.
7.750	0.0392	0.14	Q V	.	.	.	.
7.833	0.0402	0.16	Q V	.	.	.	.
7.917	0.0413	0.16	Q V	.	.	.	.
8.000	0.0424	0.16	Q V	.	.	.	.
8.083	0.0437	0.18	Q V	.	.	.	.
8.167	0.0449	0.18	Q V	.	.	.	.
8.250	0.0462	0.18	Q V	.	.	.	.
8.333	0.0477	0.21	Q V	.	.	.	.
8.417	0.0491	0.21	Q V	.	.	.	.
8.500	0.0506	0.21	Q V	.	.	.	.
8.583	0.0521	0.23	Q V	.	.	.	.
8.667	0.0537	0.23	Q V	.	.	.	.
8.750	0.0552	0.23	Q V	.	.	.	.
8.833	0.0569	0.25	Q V	.	.	.	.
8.917	0.0586	0.25	Q V	.	.	.	.
9.000	0.0603	0.25	Q V	.	.	.	.
9.083	0.0622	0.27	.Q V	.	.	.	.
9.167	0.0641	0.27	.Q V	.	.	.	.
9.250	0.0659	0.27	.Q V	.	.	.	.
9.333	0.0680	0.31	.Q V	.	.	.	.
9.417	0.0701	0.31	.Q V	.	.	.	.
9.500	0.0722	0.31	.Q V	.	.	.	.
9.583	0.0745	0.33	.Q V	.	.	.	.
9.667	0.0768	0.33	.Q V	.	.	.	.

9.750	0.0791	0.33	.Q	V.	.	.	.
9.833	0.0815	0.35	.Q	V.	.	.	.
9.917	0.0839	0.35	.Q	V	.	.	.
10.000	0.0864	0.35	.Q	V	.	.	.
10.083	0.0887	0.34	.Q	V	.	.	.
10.167	0.0910	0.34	.Q	V	.	.	.
10.250	0.0933	0.34	.Q	V	.	.	.
10.333	0.0952	0.27	.Q	.V	.	.	.
10.417	0.0971	0.27	.Q	.V	.	.	.
10.500	0.0989	0.27	.Q	.V	.	.	.
10.583	0.1009	0.28	.Q	. V	.	.	.
10.667	0.1028	0.28	.Q	. V	.	.	.
10.750	0.1048	0.28	.Q	. V	.	.	.
10.833	0.1070	0.33	.Q	. V	.	.	.
10.917	0.1093	0.33	.Q	. V	.	.	.
11.000	0.1115	0.33	.Q	. V	.	.	.
11.083	0.1138	0.33	.Q	. V	.	.	.
11.167	0.1161	0.33	.Q	. V	.	.	.
11.250	0.1184	0.33	.Q	. V	.	.	.
11.333	0.1207	0.33	.Q	. V	.	.	.
11.417	0.1230	0.33	.Q	. V	.	.	.
11.500	0.1252	0.33	.Q	. V	.	.	.
11.583	0.1275	0.32	.Q	. V	.	.	.
11.667	0.1297	0.32	.Q	. V	.	.	.
11.750	0.1319	0.32	.Q	. V	.	.	.
11.833	0.1340	0.31	.Q	. V	.	.	.
11.917	0.1361	0.31	.Q	. V	.	.	.
12.000	0.1382	0.31	.Q	. V	.	.	.
12.083	0.1406	0.35	.Q	. V	.	.	.
12.167	0.1430	0.35	.Q	. V	.	.	.
12.250	0.1454	0.35	.Q	. V	.	.	.
12.333	0.1483	0.43	.Q	. V	.	.	.
12.417	0.1513	0.43	.Q	. V	.	.	.
12.500	0.1542	0.43	.Q	. V	.	.	.
12.583	0.1574	0.47	.Q	. V	.	.	.
12.667	0.1606	0.47	.Q	. V.	.	.	.
12.750	0.1639	0.47	.Q	. V.	.	.	.
12.833	0.1673	0.51	. Q	. V	.	.	.
12.917	0.1708	0.51	. Q	. V	.	.	.
13.000	0.1743	0.51	. Q	. V	.	.	.
13.083	0.1781	0.55	. Q	. V	.	.	.
13.167	0.1819	0.55	. Q	. V	.	.	.
13.250	0.1858	0.55	. Q	. V	.	.	.
13.333	0.1900	0.62	. Q	. V	.	.	.
13.417	0.1942	0.62	. Q	. V	.	.	.
13.500	0.1985	0.62	. Q	. V	.	.	.
13.583	0.2024	0.58	. Q	. V	.	.	.
13.667	0.2064	0.58	. Q	. V	.	.	.
13.750	0.2104	0.58	. Q	. V	.	.	.
13.833	0.2137	0.48	.Q	. V	.	.	.
13.917	0.2170	0.48	.Q	. V	.	.	.
14.000	0.2203	0.48	.Q	. V	.	.	.
14.083	0.2235	0.47	.Q	. V	.	.	.
14.167	0.2268	0.47	.Q	. V	.	.	.
14.250	0.2300	0.47	.Q	. V	.	.	.
14.333	0.2335	0.50	.Q	. V	.	.	.
14.417	0.2369	0.50	.Q	. V	.	.	.
14.500	0.2403	0.50	.Q	. V	.	.	.
14.583	0.2437	0.49	.Q	. V.	.	.	.
14.667	0.2471	0.49	.Q	. V.	.	.	.
14.750	0.2505	0.49	.Q	. V	.	.	.
14.833	0.2539	0.49	.Q	. V	.	.	.
14.917	0.2573	0.49	.Q	. V	.	.	.

15.000	0.2606	0.49	.Q	.	.	V	.
15.083	0.2639	0.47	.Q	.	.	.V	.
15.167	0.2672	0.47	.Q	.	.	.V	.
15.250	0.2705	0.47	.Q	.	.	.V	.
15.333	0.2736	0.46	.Q	.	.	.V	.
15.417	0.2768	0.46	.Q	.	.	.V	.
15.500	0.2799	0.46	.Q	.	.	.V	.
15.583	0.2828	0.42	.Q	.	.	.V	.
15.667	0.2858	0.42	.Q	.	.	.V	.
15.750	0.2887	0.42	.Q	.	.	.V	.
15.833	0.2913	0.38	.Q	.	.	.V	.
15.917	0.2939	0.38	.Q	.	.	.V	.
16.000	0.2965	0.38	.Q	.	.	.V	.
16.083	0.2985	0.29	.Q	.	.	.V	.
16.167	0.3005	0.29	.Q	.	.	.V	.
16.250	0.3026	0.29	.Q	.	.	.V	.
16.333	0.3035	0.13	Q	.	.	.V	.
16.417	0.3044	0.13	Q	.	.	.V	.
16.500	0.3053	0.13	Q	.	.	.V	.
16.583	0.3059	0.09	Q	.	.	.V	.
16.667	0.3065	0.09	Q	.	.	.V	.
16.750	0.3071	0.09	Q	.	.	.V	.
16.833	0.3075	0.06	Q	.	.	.V	.
16.917	0.3079	0.06	Q	.	.	.V	.
17.000	0.3083	0.06	Q	.	.	.V	.
17.083	0.3087	0.05	Q	.	.	.V	.
17.167	0.3091	0.05	Q	.	.	.V	.
17.250	0.3094	0.05	Q	.	.	.V	.
17.333	0.3099	0.07	Q	.	.	.V	.
17.417	0.3104	0.07	Q	.	.	.V	.
17.500	0.3108	0.07	Q	.	.	.V	.
17.583	0.3113	0.07	Q	.	.	.V	.
17.667	0.3118	0.07	Q	.	.	.V	.
17.750	0.3123	0.07	Q	.	.	.V	.
17.833	0.3127	0.07	Q	.	.	.V	.
17.917	0.3132	0.07	Q	.	.	.V	.
18.000	0.3137	0.07	Q	.	.	.V	.
18.083	0.3141	0.06	Q	.	.	.V	.
18.167	0.3145	0.06	Q	.	.	.V	.
18.250	0.3149	0.06	Q	.	.	.V	.
18.333	0.3152	0.06	Q	.	.	.V	.
18.417	0.3156	0.06	Q	.	.	.V	.
18.500	0.3160	0.06	Q	.	.	.V	.
18.583	0.3164	0.05	Q	.	.	.V	.
18.667	0.3167	0.05	Q	.	.	.V	.
18.750	0.3171	0.05	Q	.	.	.V	.
18.833	0.3173	0.04	Q	.	.	.V	.
18.917	0.3176	0.04	Q	.	.	.V	.
19.000	0.3179	0.04	Q	.	.	.V	.
19.083	0.3181	0.03	Q	.	.	.V	.
19.167	0.3183	0.03	Q	.	.	.V	.
19.250	0.3185	0.03	Q	.	.	.V	.
19.333	0.3188	0.04	Q	.	.	.V	.
19.417	0.3191	0.04	Q	.	.	.V	.
19.500	0.3194	0.04	Q	.	.	.V	.
19.583	0.3197	0.05	Q	.	.	.V	.
19.667	0.3200	0.05	Q	.	.	.V	.
19.750	0.3204	0.05	Q	.	.	.V	.
19.833	0.3206	0.04	Q	.	.	.V	.
19.917	0.3209	0.04	Q	.	.	.V	.
20.000	0.3211	0.04	Q	.	.	.V	.
20.083	0.3214	0.03	Q	.	.	.V	.
20.167	0.3216	0.03	Q	.	.	.V	.

20.250	0.3218	0.03	Q	.	.	.	V .
20.333	0.3221	0.04	Q	.	.	.	V .
20.417	0.3223	0.04	Q	.	.	.	V .
20.500	0.3226	0.04	Q	.	.	.	V .
20.583	0.3229	0.04	Q	.	.	.	V .
20.667	0.3232	0.04	Q	.	.	.	V .
20.750	0.3234	0.04	Q	.	.	.	V .
20.833	0.3237	0.04	Q	.	.	.	V .
20.917	0.3239	0.04	Q	.	.	.	V .
21.000	0.3242	0.04	Q	.	.	.	V .
21.083	0.3244	0.03	Q	.	.	.	V .
21.167	0.3246	0.03	Q	.	.	.	V .
21.250	0.3249	0.03	Q	.	.	.	V .
21.333	0.3251	0.04	Q	.	.	.	V .
21.417	0.3254	0.04	Q	.	.	.	V .
21.500	0.3256	0.04	Q	.	.	.	V .
21.583	0.3258	0.03	Q	.	.	.	V .
21.667	0.3261	0.03	Q	.	.	.	V .
21.750	0.3263	0.03	Q	.	.	.	V .
21.833	0.3265	0.04	Q	.	.	.	V .
21.917	0.3268	0.04	Q	.	.	.	V .
22.000	0.3270	0.04	Q	.	.	.	V .
22.083	0.3273	0.03	Q	.	.	.	V .
22.167	0.3275	0.03	Q	.	.	.	V .
22.250	0.3277	0.03	Q	.	.	.	V .
22.333	0.3280	0.04	Q	.	.	.	V .
22.417	0.3283	0.04	Q	.	.	.	V .
22.500	0.3285	0.04	Q	.	.	.	V .
22.583	0.3287	0.03	Q	.	.	.	V .
22.667	0.3289	0.03	Q	.	.	.	V .
22.750	0.3291	0.03	Q	.	.	.	V .
22.833	0.3293	0.03	Q	.	.	.	V .
22.917	0.3295	0.03	Q	.	.	.	V .
23.000	0.3297	0.03	Q	.	.	.	V .
23.083	0.3299	0.03	Q	.	.	.	V .
23.166	0.3301	0.03	Q	.	.	.	V .
23.250	0.3303	0.03	Q	.	.	.	V .
23.333	0.3305	0.03	Q	.	.	.	V .
23.416	0.3307	0.03	Q	.	.	.	V .
23.500	0.3309	0.03	Q	.	.	.	V .
23.583	0.3311	0.03	Q	.	.	.	V .
23.666	0.3313	0.03	Q	.	.	.	V .
23.750	0.3314	0.03	Q	.	.	.	V .
23.833	0.3316	0.03	Q	.	.	.	V .
23.916	0.3318	0.03	Q	.	.	.	V .
24.000	0.3320	0.03	Q	.	.	.	V .
24.083	0.3322	0.02	Q	.	.	.	V .
24.166	0.3323	0.02	Q	.	.	.	V .
24.250	0.3325	0.02	Q	.	.	.	V .
24.333	0.3325	0.01	Q	.	.	.	V .
24.416	0.3326	0.01	Q	.	.	.	V .
24.500	0.3326	0.01	Q	.	.	.	V .

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1470.0
10%	795.0
20%	540.0

	B4_1024.RES
30%	480.0
40%	450.0
50%	345.0
60%	225.0
70%	180.0
80%	90.0
90%	45.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, Unit Hydrograph, B-4 *
* 100-year, 1-hour *

FILE NAME: B4.DAT
TIME/DATE OF STUDY: 06:10 09/10/2020

FLOW PROCESS FROM NODE 189.00 TO NODE 191.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.210 HOURS

CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.

THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED

UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050

LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500

USER-ENTERED RAINFALL = 1.49 INCHES

RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED

(SLOPE OF INTENSITY-DURATION CURVE = 0.41)

*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 39.683

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
--------------------	--------------------------	-----------------------------------

1	4.224	0.664
2	21.517	2.719
3	48.636	4.264
4	65.936	2.720
5	74.688	1.376
6	80.252	0.875
7	84.243	0.628
8	87.272	0.476
9	89.634	0.371
10	91.567	0.304
11	93.136	0.247
12	94.480	0.211
13	95.640	0.182
14	96.538	0.141
15	97.309	0.121
16	97.991	0.107
17	98.314	0.051
18	98.599	0.045
19	98.884	0.045
20	99.168	0.045
21	99.453	0.045
22	99.738	0.045
23	100.000	0.041



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0751	0.0042	0.0710
2	0.0787	0.0042	0.0745
3	0.0829	0.0042	0.0787
4	0.0901	0.0042	0.0860
5	0.0943	0.0042	0.0901
6	0.1053	0.0042	0.1011
7	0.1206	0.0042	0.1164
8	0.1308	0.0042	0.1266
9	0.1852	0.0042	0.1810
10	0.3325	0.0042	0.3283
11	0.1127	0.0042	0.1086
12	0.0817	0.0042	0.0775

TOTAL STORM RAINFALL(INCHES) = 1.49
 TOTAL SOIL-LOSS(INCHES) = 0.05
 TOTAL EFFECTIVE RAINFALL(INCHES) = 1.44

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0054
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.1559



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0003	0.05	Q	.	.	.	.
0.167	0.0020	0.24	Q	.	.	.	.
0.250	0.0058	0.56	.VQ	.	.	.	.
0.333	0.0112	0.78	.VQ	.	.	.	.
0.417	0.0176	0.93	.QV	.	.	.	.
0.500	0.0249	1.06	.Q V	.	.	.	.
0.583	0.0331	1.19	.Q V	.	.	.	.
0.667	0.0424	1.34	.Q V	.	.	.	.
0.750	0.0530	1.55	.Q V	.	.	.	.
0.833	0.0663	1.93	.Q V	.	.	.	.
0.917	0.0835	2.50	.Q	.	.V	.	.
1.000	0.1021	2.71	.Q	.	.	V	.
1.083	0.1170	2.16	.Q	.	.	V	.
1.167	0.1273	1.50	.Q	.	.	V	.
1.250	0.1340	0.97	.Q	.	.	V	.
1.333	0.1385	0.66	.Q	.	.	V	.
1.417	0.1420	0.50	.Q	.	.	V	.
1.500	0.1446	0.39	.Q	.	.	V	.
1.583	0.1468	0.31	.Q	.	.	V	.
1.667	0.1486	0.26	.Q	.	.	V	.
1.750	0.1501	0.21	Q	.	.	V	.
1.833	0.1513	0.18	Q	.	.	V	.
1.917	0.1523	0.15	Q	.	.	V	.
2.000	0.1531	0.12	Q	.	.	V	.
2.083	0.1538	0.10	Q	.	.	V	.
2.167	0.1542	0.07	Q	.	.	V	.
2.250	0.1546	0.06	Q	.	.	V	.
2.333	0.1549	0.05	Q	.	.	V	.
2.417	0.1552	0.04	Q	.	.	V	.
2.500	0.1555	0.04	Q	.	.	V	.
2.583	0.1557	0.03	Q	.	.	V	.
2.667	0.1558	0.02	Q	.	.	V	.
2.750	0.1559	0.01	Q	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:

(Note: 100% of Peak Flow Rate estimate assumed to have an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	165.0
10%	85.0
20%	70.0
30%	55.0
40%	40.0
50%	30.0
60%	20.0
70%	20.0
80%	10.0
90%	10.0

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions Unit Hydrograph- Area B-4 *
* 100-year, 24-hour *

FILE NAME: B4.DAT
TIME/DATE OF STUDY: 06:08 09/10/2020

FLOW PROCESS FROM NODE 189.00 TO NODE 191.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 1.300 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.210 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.010
USER-ENTERED RAINFALL = 6.32 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 119.048

===== UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	24.793	1.299
2	73.625	2.559
3	87.050	0.704
4	93.061	0.315
5	96.496	0.180
6	98.301	0.095
7	99.163	0.045
8	99.665	0.026
9	99.916	0.013
10	100.000	0.004



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0126	0.0063	0.0063
2	0.0190	0.0095	0.0095
3	0.0190	0.0095	0.0095
4	0.0253	0.0126	0.0126
5	0.0190	0.0095	0.0095
6	0.0190	0.0095	0.0095
7	0.0190	0.0095	0.0095
8	0.0253	0.0126	0.0126
9	0.0253	0.0126	0.0126
10	0.0253	0.0126	0.0126
11	0.0316	0.0158	0.0158
12	0.0316	0.0158	0.0158
13	0.0316	0.0158	0.0158
14	0.0316	0.0158	0.0158
15	0.0316	0.0158	0.0158
16	0.0379	0.0190	0.0190
17	0.0379	0.0190	0.0190
18	0.0442	0.0212	0.0231
19	0.0442	0.0208	0.0234
20	0.0506	0.0205	0.0301
21	0.0379	0.0190	0.0190
22	0.0442	0.0197	0.0245
23	0.0506	0.0194	0.0312
24	0.0506	0.0190	0.0315
25	0.0569	0.0187	0.0382
26	0.0569	0.0183	0.0386
27	0.0632	0.0180	0.0452
28	0.0632	0.0176	0.0456
29	0.0632	0.0173	0.0459
30	0.0695	0.0169	0.0526
31	0.0758	0.0166	0.0592
32	0.0822	0.0163	0.0659
33	0.0948	0.0159	0.0789
34	0.0948	0.0156	0.0792
35	0.1011	0.0153	0.0858
36	0.1074	0.0150	0.0925
37	0.1201	0.0147	0.1054
38	0.1264	0.0143	0.1121
39	0.1327	0.0140	0.1187
40	0.1390	0.0137	0.1253
41	0.0948	0.0134	0.0814
42	0.0948	0.0131	0.0817
43	0.1264	0.0128	0.1136
44	0.1264	0.0125	0.1139

45	0.1201	0.0122	0.1079
46	0.1201	0.0119	0.1081
47	0.1074	0.0116	0.0958
48	0.1138	0.0114	0.1024
49	0.1580	0.0111	0.1469
50	0.1643	0.0108	0.1535
51	0.1770	0.0105	0.1664
52	0.1833	0.0103	0.1730
53	0.2149	0.0100	0.2049
54	0.2149	0.0097	0.2052
55	0.1454	0.0095	0.1359
56	0.1454	0.0092	0.1362
57	0.1706	0.0089	0.1617
58	0.1643	0.0087	0.1556
59	0.1643	0.0084	0.1559
60	0.1580	0.0082	0.1498
61	0.1517	0.0080	0.1437
62	0.1454	0.0077	0.1376
63	0.1201	0.0075	0.1126
64	0.1201	0.0073	0.1128
65	0.0253	0.0070	0.0182
66	0.0253	0.0068	0.0185
67	0.0190	0.0066	0.0124
68	0.0190	0.0064	0.0126
69	0.0316	0.0062	0.0254
70	0.0316	0.0060	0.0256
71	0.0316	0.0058	0.0258
72	0.0253	0.0056	0.0197
73	0.0253	0.0054	0.0199
74	0.0253	0.0052	0.0201
75	0.0190	0.0050	0.0139
76	0.0126	0.0048	0.0078
77	0.0190	0.0047	0.0143
78	0.0253	0.0045	0.0208
79	0.0190	0.0043	0.0146
80	0.0126	0.0042	0.0085
81	0.0190	0.0040	0.0149
82	0.0190	0.0039	0.0151
83	0.0190	0.0037	0.0152
84	0.0126	0.0036	0.0091
85	0.0190	0.0035	0.0155
86	0.0126	0.0033	0.0093
87	0.0190	0.0032	0.0158
88	0.0126	0.0031	0.0095
89	0.0190	0.0030	0.0160
90	0.0126	0.0029	0.0097
91	0.0126	0.0028	0.0098
92	0.0126	0.0027	0.0099
93	0.0126	0.0027	0.0100
94	0.0126	0.0026	0.0101
95	0.0126	0.0025	0.0101
96	0.0126	0.0025	0.0101

TOTAL STORM RAINFALL(INCHES) = 6.32
 TOTAL SOIL-LOSS(INCHES) = 1.00
 TOTAL EFFECTIVE RAINFALL(INCHES) = 5.32

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.1086
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.5758

2 4 - 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

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0001	0.01	Q	.	.	.	.
0.167	0.0001	0.01	Q	.	.	.	.
0.250	0.0002	0.01	Q	.	.	.	.
0.333	0.0004	0.03	Q	.	.	.	.
0.417	0.0006	0.03	Q	.	.	.	.
0.500	0.0008	0.03	Q	.	.	.	.
0.583	0.0010	0.04	Q	.	.	.	.
0.667	0.0013	0.04	Q	.	.	.	.
0.750	0.0016	0.04	Q	.	.	.	.
0.833	0.0019	0.05	Q	.	.	.	.
0.917	0.0023	0.05	Q	.	.	.	.
1.000	0.0026	0.05	Q	.	.	.	.
1.083	0.0030	0.06	Q	.	.	.	.
1.167	0.0034	0.06	Q	.	.	.	.
1.250	0.0038	0.06	Q	.	.	.	.
1.333	0.0041	0.05	Q	.	.	.	.
1.417	0.0045	0.05	Q	.	.	.	.
1.500	0.0048	0.05	Q	.	.	.	.
1.583	0.0052	0.05	Q	.	.	.	.
1.667	0.0055	0.05	Q	.	.	.	.
1.750	0.0059	0.05	Q	.	.	.	.
1.833	0.0062	0.05	Q	.	.	.	.
1.917	0.0066	0.05	Q	.	.	.	.
2.000	0.0070	0.05	Q	.	.	.	.
2.083	0.0074	0.06	Q	.	.	.	.
2.167	0.0078	0.06	Q	.	.	.	.
2.250	0.0083	0.06	Q	.	.	.	.
2.333	0.0087	0.06	Q	.	.	.	.
2.417	0.0091	0.06	Q	.	.	.	.
2.500	0.0096	0.06	Q	.	.	.	.
2.583	0.0101	0.07	Q	.	.	.	.
2.667	0.0105	0.07	Q	.	.	.	.
2.750	0.0110	0.07	Q	.	.	.	.
2.833	0.0116	0.08	Q	.	.	.	.
2.917	0.0121	0.08	Q	.	.	.	.
3.000	0.0126	0.08	Q	.	.	.	.
3.083	0.0132	0.08	Q	.	.	.	.
3.167	0.0137	0.08	Q	.	.	.	.
3.250	0.0143	0.08	Q	.	.	.	.
3.333	0.0148	0.08	QV	.	.	.	.
3.417	0.0154	0.08	QV	.	.	.	.
3.500	0.0160	0.08	QV	.	.	.	.
3.583	0.0165	0.08	QV	.	.	.	.
3.667	0.0171	0.08	QV	.	.	.	.
3.750	0.0177	0.08	QV	.	.	.	.
3.833	0.0183	0.09	QV	.	.	.	.
3.917	0.0189	0.09	QV	.	.	.	.
4.000	0.0195	0.09	QV	.	.	.	.
4.083	0.0201	0.09	QV	.	.	.	.
4.167	0.0208	0.09	QV	.	.	.	.
4.250	0.0214	0.09	QV	.	.	.	.
4.333	0.0221	0.10	QV	.	.	.	.
4.417	0.0228	0.10	QV	.	.	.	.

4.500	0.0235	0.10	QV	.	.	.	.
4.583	0.0243	0.11	QV	.	.	.	.
4.667	0.0251	0.11	QV	.	.	.	.
4.750	0.0259	0.11	QV	.	.	.	.
4.833	0.0268	0.13	QV	.	.	.	.
4.917	0.0277	0.13	QV	.	.	.	.
5.000	0.0285	0.13	QV	.	.	.	.
5.083	0.0294	0.13	Q V	.	.	.	.
5.167	0.0304	0.13	Q V	.	.	.	.
5.250	0.0313	0.13	Q V	.	.	.	.
5.333	0.0321	0.12	Q V	.	.	.	.
5.417	0.0329	0.12	Q V	.	.	.	.
5.500	0.0337	0.12	Q V	.	.	.	.
5.583	0.0346	0.13	Q V	.	.	.	.
5.667	0.0355	0.13	Q V	.	.	.	.
5.750	0.0364	0.13	Q V	.	.	.	.
5.833	0.0375	0.15	Q V	.	.	.	.
5.917	0.0386	0.15	Q V	.	.	.	.
6.000	0.0396	0.15	Q V	.	.	.	.
6.083	0.0408	0.17	Q V	.	.	.	.
6.167	0.0419	0.17	Q V	.	.	.	.
6.250	0.0431	0.17	Q V	.	.	.	.
6.333	0.0444	0.19	Q V	.	.	.	.
6.417	0.0457	0.19	Q V	.	.	.	.
6.500	0.0470	0.19	Q V	.	.	.	.
6.583	0.0484	0.20	Q V	.	.	.	.
6.667	0.0498	0.20	Q V	.	.	.	.
6.750	0.0512	0.20	Q V	.	.	.	.
6.833	0.0528	0.22	Q V	.	.	.	.
6.917	0.0543	0.22	Q V	.	.	.	.
7.000	0.0558	0.22	Q V	.	.	.	.
7.083	0.0575	0.23	Q V	.	.	.	.
7.167	0.0591	0.23	Q V	.	.	.	.
7.250	0.0607	0.23	Q V	.	.	.	.
7.333	0.0623	0.25	Q V	.	.	.	.
7.417	0.0640	0.25	Q V	.	.	.	.
7.500	0.0657	0.25	Q V	.	.	.	.
7.583	0.0676	0.27	.Q V	.	.	.	.
7.667	0.0695	0.27	.Q V	.	.	.	.
7.750	0.0714	0.27	.Q V	.	.	.	.
7.833	0.0735	0.30	.Q V	.	.	.	.
7.917	0.0756	0.30	.Q V	.	.	.	.
8.000	0.0777	0.30	.Q V	.	.	.	.
8.083	0.0800	0.35	.Q V	.	.	.	.
8.167	0.0824	0.35	.Q V	.	.	.	.
8.250	0.0848	0.35	.Q V	.	.	.	.
8.333	0.0875	0.39	.Q V	.	.	.	.
8.417	0.0901	0.39	.Q V	.	.	.	.
8.500	0.0928	0.39	.Q V	.	.	.	.
8.583	0.0956	0.41	.Q V	.	.	.	.
8.667	0.0984	0.41	.Q V	.	.	.	.
8.750	0.1013	0.41	.Q V	.	.	.	.
8.833	0.1043	0.44	.Q V	.	.	.	.
8.917	0.1074	0.44	.Q V	.	.	.	.
9.000	0.1104	0.44	.Q V	.	.	.	.
9.083	0.1137	0.48	.Q V	.	.	.	.
9.167	0.1171	0.48	.Q V	.	.	.	.
9.250	0.1204	0.48	.Q V	.	.	.	.
9.333	0.1241	0.53	. Q V	.	.	.	.
9.417	0.1278	0.53	. Q V	.	.	.	.
9.500	0.1315	0.53	. Q V	.	.	.	.
9.583	0.1354	0.57	. Q V	.	.	.	.
9.667	0.1394	0.57	. Q V	.	.	.	.

9.750	0.1433	0.57	. Q	V.	.	.	.
9.833	0.1475	0.61	. Q	V	.	.	.
9.917	0.1517	0.61	. Q	V	.	.	.
10.000	0.1559	0.61	. Q	V	.	.	.
10.083	0.1599	0.58	. Q	.V	.	.	.
10.167	0.1639	0.58	. Q	.V	.	.	.
10.250	0.1679	0.58	. Q	.V	.	.	.
10.333	0.1712	0.48	.Q	.V	.	.	.
10.417	0.1745	0.48	.Q	. V	.	.	.
10.500	0.1778	0.48	.Q	. V	.	.	.
10.583	0.1812	0.49	.Q	. V	.	.	.
10.667	0.1846	0.49	.Q	. V	.	.	.
10.750	0.1880	0.49	.Q	. V	.	.	.
10.833	0.1919	0.56	. Q	. V	.	.	.
10.917	0.1958	0.56	. Q	. V	.	.	.
11.000	0.1997	0.56	. Q	. V	.	.	.
11.083	0.2036	0.57	. Q	. V	.	.	.
11.167	0.2076	0.57	. Q	. V	.	.	.
11.250	0.2115	0.57	. Q	. V	.	.	.
11.333	0.2154	0.57	. Q	. V	.	.	.
11.417	0.2193	0.57	. Q	. V	.	.	.
11.500	0.2232	0.57	. Q	. V	.	.	.
11.583	0.2270	0.55	. Q	. V	.	.	.
11.667	0.2308	0.55	. Q	. V	.	.	.
11.750	0.2346	0.55	. Q	. V	.	.	.
11.833	0.2382	0.53	. Q	. V	.	.	.
11.917	0.2418	0.53	. Q	. V	.	.	.
12.000	0.2455	0.53	. Q	. V	.	.	.
12.083	0.2495	0.59	. Q	. V	.	.	.
12.167	0.2536	0.59	. Q	. V	.	.	.
12.250	0.2577	0.59	. Q	. V	.	.	.
12.333	0.2627	0.72	. Q	. V	.	.	.
12.417	0.2676	0.72	. Q	. V	.	.	.
12.500	0.2725	0.72	. Q	. V	.	.	.
12.583	0.2779	0.78	. Q	. V.	.	.	.
12.667	0.2833	0.78	. Q	. V.	.	.	.
12.750	0.2887	0.78	. Q	. V	.	.	.
12.833	0.2945	0.84	. Q	. V	.	.	.
12.917	0.3003	0.84	. Q	. V	.	.	.
13.000	0.3061	0.84	. Q	. V	.	.	.
13.083	0.3124	0.92	. Q	. .V	.	.	.
13.167	0.3188	0.92	. Q	. . V	.	.	.
13.250	0.3251	0.92	. Q	. . V	.	.	.
13.333	0.3321	1.02	. Q	. . V	.	.	.
13.417	0.3391	1.02	. Q	. . V	.	.	.
13.500	0.3461	1.02	. Q	. . V	.	.	.
13.583	0.3527	0.96	. Q	. . V	.	.	.
13.667	0.3592	0.96	. Q	. . V	.	.	.
13.750	0.3658	0.96	. Q	. . V	.	.	.
13.833	0.3713	0.79	. Q	. . V	.	.	.
13.917	0.3768	0.79	. Q	. . V	.	.	.
14.000	0.3822	0.79	. Q	. . V	.	.	.
14.083	0.3876	0.79	. Q	. . V	.	.	.
14.167	0.3930	0.79	. Q	. . V	.	.	.
14.250	0.3985	0.79	. Q	. . V	.	.	.
14.333	0.4041	0.83	. Q	. . V	.	.	.
14.417	0.4098	0.83	. Q	. . V	.	.	.
14.500	0.4155	0.83	. Q	. . V	.	.	.
14.583	0.4211	0.82	. Q	. . V.	.	.	.
14.667	0.4268	0.82	. Q	. . V.	.	.	.
14.750	0.4324	0.82	. Q	. . V	.	.	.
14.833	0.4380	0.81	. Q	. . V	.	.	.
14.917	0.4436	0.81	. Q	. . V	.	.	.

15.000	0.4491	0.81	.	Q	.	.	.	V	.
15.083	0.4545	0.79	.	Q	.	.	.	.V	.
15.167	0.4600	0.79	.	Q	.	.	.	.V	.
15.250	0.4654	0.79	.	Q	.	.	.	.V	.
15.333	0.4706	0.76	.	Q	.	.	.	.V	.
15.417	0.4758	0.76	.	Q	.	.	.	.V	.
15.500	0.4810	0.76	.	Q	.	.	.	.V	.
15.583	0.4859	0.70	.	Q	.	.	.	.V	.
15.667	0.4907	0.70	.	Q	.	.	.	.V	.
15.750	0.4956	0.70	.	Q	.	.	.	.V	.
15.833	0.4999	0.63	.	Q	.	.	.	.V	.
15.917	0.5043	0.63	.	Q	.	.	.	.V	.
16.000	0.5086	0.63	.	Q	.	.	.	.V	.
16.083	0.5120	0.49	.	.Q	.	.	.	.V	.
16.167	0.5153	0.49	.	.Q	.	.	.	.V	.
16.250	0.5187	0.49	.	.Q	.	.	.	.V	.
16.333	0.5203	0.24	Q	.	.	.	.	.V	.
16.417	0.5220	0.24	Q	.	.	.	.	.V	.
16.500	0.5236	0.24	Q	.	.	.	.	.V	.
16.583	0.5247	0.16	Q	.	.	.	.	.V	.
16.667	0.5258	0.16	Q	.	.	.	.	.V	.
16.750	0.5269	0.16	Q	.	.	.	.	.V	.
16.833	0.5276	0.11	Q	.	.	.	.	.V	.
16.917	0.5284	0.11	Q	.	.	.	.	.V	.
17.000	0.5292	0.11	Q	.	.	.	.	.V	.
17.083	0.5299	0.10	Q	.	.	.	.	.V	.
17.167	0.5306	0.10	Q	.	.	.	.	.V	.
17.250	0.5313	0.10	Q	.	.	.	.	.V	.
17.333	0.5322	0.13	Q	.	.	.	.	.V	.
17.417	0.5331	0.13	Q	.	.	.	.	.V	.
17.500	0.5340	0.13	Q	.	.	.	.	.V	.
17.583	0.5349	0.13	Q	.	.	.	.	.V	.
17.667	0.5358	0.13	Q	.	.	.	.	.V	.
17.750	0.5367	0.13	Q	.	.	.	.	.V	.
17.833	0.5375	0.12	Q	.	.	.	.	.V	.
17.917	0.5384	0.12	Q	.	.	.	.	.V	.
18.000	0.5392	0.12	Q	.	.	.	.	.V	.
18.083	0.5400	0.11	Q	.	.	.	.	.V	.
18.167	0.5407	0.11	Q	.	.	.	.	.V	.
18.250	0.5415	0.11	Q	.	.	.	.	.V	.
18.333	0.5422	0.11	Q	.	.	.	.	.V	.
18.417	0.5430	0.11	Q	.	.	.	.	.V	.
18.500	0.5437	0.11	Q	.	.	.	.	.V	.
18.583	0.5444	0.10	Q	.	.	.	.	.V	.
18.667	0.5451	0.10	Q	.	.	.	.	.V	.
18.750	0.5458	0.10	Q	.	.	.	.	.V	.
18.833	0.5463	0.07	Q	.	.	.	.	.V	.
18.917	0.5468	0.07	Q	.	.	.	.	.V	.
19.000	0.5473	0.07	Q	.	.	.	.	.V	.
19.083	0.5477	0.06	Q	.	.	.	.	.V	.
19.167	0.5481	0.06	Q	.	.	.	.	.V	.
19.250	0.5486	0.06	Q	.	.	.	.	.V	.
19.333	0.5491	0.08	Q	.	.	.	.	.V	.
19.417	0.5497	0.08	Q	.	.	.	.	.V	.
19.500	0.5503	0.08	Q	.	.	.	.	.V	.
19.583	0.5509	0.09	Q	.	.	.	.	.V	.
19.667	0.5515	0.09	Q	.	.	.	.	.V	.
19.750	0.5521	0.09	Q	.	.	.	.	.V	.
19.833	0.5526	0.07	Q	.	.	.	.	.V	.
19.917	0.5531	0.07	Q	.	.	.	.	.V	.
20.000	0.5536	0.07	Q	.	.	.	.	.V	.
20.083	0.5541	0.06	Q	.	.	.	.	.V	.
20.167	0.5545	0.06	Q	.	.	.	.	.V	.

20.250	0.5549	0.06	Q	.	.	.	V .
20.333	0.5554	0.07	Q	.	.	.	V .
20.417	0.5559	0.07	Q	.	.	.	V .
20.500	0.5565	0.07	Q	.	.	.	V .
20.583	0.5570	0.08	Q	.	.	.	V .
20.667	0.5575	0.08	Q	.	.	.	V .
20.750	0.5581	0.08	Q	.	.	.	V .
20.833	0.5585	0.07	Q	.	.	.	V .
20.917	0.5590	0.07	Q	.	.	.	V .
21.000	0.5595	0.07	Q	.	.	.	V .
21.083	0.5600	0.06	Q	.	.	.	V .
21.167	0.5604	0.06	Q	.	.	.	V .
21.250	0.5608	0.06	Q	.	.	.	V .
21.333	0.5613	0.07	Q	.	.	.	V .
21.417	0.5618	0.07	Q	.	.	.	V .
21.500	0.5622	0.07	Q	.	.	.	V .
21.583	0.5627	0.06	Q	.	.	.	V .
21.667	0.5631	0.06	Q	.	.	.	V .
21.750	0.5636	0.06	Q	.	.	.	V .
21.833	0.5640	0.07	Q	.	.	.	V .
21.917	0.5645	0.07	Q	.	.	.	V .
22.000	0.5650	0.07	Q	.	.	.	V .
22.083	0.5654	0.06	Q	.	.	.	V .
22.167	0.5659	0.06	Q	.	.	.	V .
22.250	0.5663	0.06	Q	.	.	.	V .
22.333	0.5668	0.07	Q	.	.	.	V .
22.417	0.5672	0.07	Q	.	.	.	V .
22.500	0.5677	0.07	Q	.	.	.	V .
22.583	0.5681	0.06	Q	.	.	.	V .
22.667	0.5685	0.06	Q	.	.	.	V .
22.750	0.5689	0.06	Q	.	.	.	V .
22.833	0.5693	0.05	Q	.	.	.	V .
22.917	0.5696	0.05	Q	.	.	.	V .
23.000	0.5700	0.05	Q	.	.	.	V .
23.083	0.5704	0.05	Q	.	.	.	V .
23.166	0.5708	0.05	Q	.	.	.	V .
23.250	0.5711	0.05	Q	.	.	.	V .
23.333	0.5715	0.05	Q	.	.	.	V .
23.416	0.5719	0.05	Q	.	.	.	V .
23.500	0.5722	0.05	Q	.	.	.	V .
23.583	0.5726	0.05	Q	.	.	.	V .
23.666	0.5729	0.05	Q	.	.	.	V .
23.750	0.5733	0.05	Q	.	.	.	V .
23.833	0.5737	0.05	Q	.	.	.	V .
23.916	0.5740	0.05	Q	.	.	.	V .
24.000	0.5744	0.05	Q	.	.	.	V .
24.083	0.5747	0.04	Q	.	.	.	V .
24.166	0.5750	0.04	Q	.	.	.	V .
24.250	0.5752	0.04	Q	.	.	.	V .
24.333	0.5753	0.01	Q	.	.	.	V .
24.416	0.5754	0.01	Q	.	.	.	V .
24.500	0.5755	0.01	Q	.	.	.	V .
24.583	0.5756	0.01	Q	.	.	.	V .
24.666	0.5756	0.01	Q	.	.	.	V .
24.750	0.5757	0.01	Q	.	.	.	V .

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated
 Peak Flow Rate
 =====

Duration
 (minutes)
 =====

	B4_10024.RES
0%	1485.0
10%	855.0
20%	600.0
30%	495.0
40%	465.0
50%	375.0
60%	240.0
70%	195.0
80%	90.0
90%	45.0

=====
END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, unit Hydrograph Area B-5 *
* 10-year, 1-hour *

FILE NAME: B5.DAT
TIME/DATE OF STUDY: 06:14 09/10/2020

FLOW PROCESS FROM NODE 192.00 TO NODE 193.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 0.950 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.900
USER-ENTERED RAINFALL = 0.89 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 83.333

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	13.994	1.608
2	59.664	5.247
3	78.792	2.198
4	86.766	0.916
5	91.428	0.536
6	94.514	0.355
7	96.650	0.245
8	98.044	0.160
9	98.699	0.075
10	99.289	0.068
11	99.716	0.049
12	99.929	0.025
13	100.000	0.008

UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0449	0.0042	0.0407
2	0.0470	0.0042	0.0428
3	0.0495	0.0042	0.0454
4	0.0538	0.0042	0.0497
5	0.0563	0.0042	0.0522
6	0.0629	0.0042	0.0587
7	0.0720	0.0042	0.0679
8	0.0781	0.0042	0.0740
9	0.1106	0.0042	0.1065
10	0.1986	0.0042	0.1944
11	0.0673	0.0042	0.0632
12	0.0488	0.0042	0.0446

TOTAL STORM RAINFALL(INCHES) = 0.89
 TOTAL SOIL-LOSS(INCHES) = 0.05
 TOTAL EFFECTIVE RAINFALL(INCHES) = 0.84

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0040
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.0665

1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0005	0.07	Q	.	.	.	.
0.167	0.0024	0.28	.Q	.	.	.	.
0.250	0.0051	0.39	.Q V	.	.	.	.
0.333	0.0082	0.45	.Q V	.	.	.	.
0.417	0.0116	0.51	. Q	V	.	.	.
0.500	0.0155	0.56	. Q	V.	.	.	.
0.583	0.0198	0.63	. Q	.V	.	.	.
0.667	0.0247	0.71	. Q	. V	.	.	.

B5_101.RES					
0.750	0.0304	0.83	. Q	.	.
0.833	0.0385	1.17	. Q	.	.
0.917	0.0489	1.51	. Q	.	.
1.000	0.0559	1.02	. Q	.	.
1.083	0.0605	0.67	. Q	.	.
1.167	0.0629	0.34	. Q	.	.
1.250	0.0642	0.19	. Q	.	.
1.333	0.0651	0.13	. Q	.	.
1.417	0.0656	0.08	. Q	.	.
1.500	0.0660	0.05	. Q	.	.
1.583	0.0662	0.03	. Q	.	.
1.667	0.0663	0.02	. Q	.	.
1.750	0.0664	0.01	. Q	.	.
1.833	0.0665	0.01	. Q	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	110.0
10%	70.0
20%	60.0
30%	45.0
40%	35.0
50%	20.0
60%	15.0
70%	10.0
80%	5.0
90%	5.0

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, unit Hydrograph Area B-5 *
* 10-year, 24-hour *

FILE NAME: B5.DAT
TIME/DATE OF STUDY: 06:13 09/10/2020

FLOW PROCESS FROM NODE 192.00 TO NODE 193.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 0.950 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.900
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.010
USER-ENTERED RAINFALL = 3.95 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 250.000

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	50.817	1.946
2	90.903	1.535
3	97.798	0.264
4	99.444	0.063
5	99.778	0.013
6	99.944	0.006
7	100.000	0.002



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
----------------------	------------------------	-------------------------	-----------------------------

1	0.0079	0.0071	0.0008
2	0.0119	0.0107	0.0012
3	0.0119	0.0107	0.0012
4	0.0158	0.0142	0.0016
5	0.0119	0.0107	0.0012
6	0.0119	0.0107	0.0012
7	0.0119	0.0107	0.0012
8	0.0158	0.0142	0.0016
9	0.0158	0.0142	0.0016
10	0.0158	0.0142	0.0016
11	0.0198	0.0178	0.0020
12	0.0198	0.0178	0.0020
13	0.0198	0.0178	0.0020
14	0.0198	0.0178	0.0020
15	0.0198	0.0178	0.0020
16	0.0237	0.0213	0.0024
17	0.0237	0.0213	0.0024
18	0.0277	0.0212	0.0065
19	0.0277	0.0208	0.0068
20	0.0316	0.0205	0.0111
21	0.0237	0.0201	0.0036
22	0.0277	0.0197	0.0079
23	0.0316	0.0194	0.0122
24	0.0316	0.0190	0.0126
25	0.0356	0.0187	0.0169
26	0.0356	0.0183	0.0172
27	0.0395	0.0180	0.0215
28	0.0395	0.0176	0.0219
29	0.0395	0.0173	0.0222
30	0.0435	0.0169	0.0265
31	0.0474	0.0166	0.0308
32	0.0514	0.0163	0.0351
33	0.0593	0.0159	0.0433
34	0.0593	0.0156	0.0436
35	0.0632	0.0153	0.0479
36	0.0672	0.0150	0.0522
37	0.0751	0.0147	0.0604
38	0.0790	0.0143	0.0647
39	0.0830	0.0140	0.0689
40	0.0869	0.0137	0.0732
41	0.0593	0.0134	0.0458
42	0.0593	0.0131	0.0461
43	0.0790	0.0128	0.0662
44	0.0790	0.0125	0.0665
45	0.0751	0.0122	0.0628
46	0.0751	0.0119	0.0631
47	0.0672	0.0116	0.0555

48	0.0711	0.0114	0.0597
49	0.0988	0.0111	0.0877
50	0.1027	0.0108	0.0919
51	0.1106	0.0105	0.1001
52	0.1146	0.0103	0.1043
53	0.1343	0.0100	0.1243
54	0.1343	0.0097	0.1246
55	0.0909	0.0095	0.0814
56	0.0909	0.0092	0.0817
57	0.1067	0.0089	0.0977
58	0.1027	0.0087	0.0940
59	0.1027	0.0084	0.0943
60	0.0988	0.0082	0.0905
61	0.0948	0.0080	0.0868
62	0.0909	0.0077	0.0831
63	0.0751	0.0075	0.0676
64	0.0751	0.0073	0.0678
65	0.0158	0.0070	0.0088
66	0.0158	0.0068	0.0090
67	0.0119	0.0066	0.0053
68	0.0119	0.0064	0.0055
69	0.0198	0.0062	0.0136
70	0.0198	0.0060	0.0138
71	0.0198	0.0058	0.0140
72	0.0158	0.0056	0.0102
73	0.0158	0.0054	0.0104
74	0.0158	0.0052	0.0106
75	0.0119	0.0050	0.0068
76	0.0079	0.0048	0.0031
77	0.0119	0.0047	0.0072
78	0.0158	0.0045	0.0113
79	0.0119	0.0043	0.0075
80	0.0079	0.0042	0.0037
81	0.0119	0.0040	0.0078
82	0.0119	0.0039	0.0080
83	0.0119	0.0037	0.0081
84	0.0079	0.0036	0.0043
85	0.0119	0.0035	0.0084
86	0.0079	0.0033	0.0046
87	0.0119	0.0032	0.0086
88	0.0079	0.0031	0.0048
89	0.0119	0.0030	0.0089
90	0.0079	0.0029	0.0050
91	0.0079	0.0028	0.0051
92	0.0079	0.0027	0.0052
93	0.0079	0.0027	0.0052
94	0.0079	0.0026	0.0053
95	0.0079	0.0025	0.0054
96	0.0079	0.0025	0.0054

TOTAL STORM RAINFALL(INCHES) = 3.95
 TOTAL SOIL-LOSS(INCHES) = 1.03
 TOTAL EFFECTIVE RAINFALL(INCHES) = 2.92

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0816
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.2310

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0000	0.00	Q	.	.	.	.
0.333	0.0001	0.00	Q	.	.	.	.
0.417	0.0001	0.00	Q	.	.	.	.
0.500	0.0001	0.00	Q	.	.	.	.
0.583	0.0001	0.00	Q	.	.	.	.
0.667	0.0002	0.00	Q	.	.	.	.
0.750	0.0002	0.00	Q	.	.	.	.
0.833	0.0002	0.01	Q	.	.	.	.
0.917	0.0003	0.01	Q	.	.	.	.
1.000	0.0003	0.01	Q	.	.	.	.
1.083	0.0003	0.01	Q	.	.	.	.
1.167	0.0004	0.01	Q	.	.	.	.
1.250	0.0004	0.01	Q	.	.	.	.
1.333	0.0004	0.00	Q	.	.	.	.
1.417	0.0005	0.00	Q	.	.	.	.
1.500	0.0005	0.00	Q	.	.	.	.
1.583	0.0005	0.00	Q	.	.	.	.
1.667	0.0006	0.00	Q	.	.	.	.
1.750	0.0006	0.00	Q	.	.	.	.
1.833	0.0006	0.01	Q	.	.	.	.
1.917	0.0007	0.01	Q	.	.	.	.
2.000	0.0007	0.01	Q	.	.	.	.
2.083	0.0007	0.01	Q	.	.	.	.
2.167	0.0008	0.01	Q	.	.	.	.
2.250	0.0008	0.01	Q	.	.	.	.
2.333	0.0009	0.01	Q	.	.	.	.
2.417	0.0009	0.01	Q	.	.	.	.
2.500	0.0010	0.01	Q	.	.	.	.
2.583	0.0010	0.01	Q	.	.	.	.
2.667	0.0010	0.01	Q	.	.	.	.
2.750	0.0011	0.01	Q	.	.	.	.
2.833	0.0011	0.01	Q	.	.	.	.
2.917	0.0012	0.01	Q	.	.	.	.
3.000	0.0012	0.01	Q	.	.	.	.
3.083	0.0013	0.01	Q	.	.	.	.
3.167	0.0014	0.01	Q	.	.	.	.
3.250	0.0014	0.01	Q	.	.	.	.
3.333	0.0015	0.01	Q	.	.	.	.
3.417	0.0015	0.01	Q	.	.	.	.
3.500	0.0016	0.01	Q	.	.	.	.
3.583	0.0016	0.01	Q	.	.	.	.
3.667	0.0017	0.01	Q	.	.	.	.
3.750	0.0017	0.01	Q	.	.	.	.
3.833	0.0018	0.01	Q	.	.	.	.
3.917	0.0018	0.01	Q	.	.	.	.
4.000	0.0019	0.01	Q	.	.	.	.
4.083	0.0020	0.01	Q	.	.	.	.
4.167	0.0020	0.01	Q	.	.	.	.
4.250	0.0021	0.01	Q	.	.	.	.
4.333	0.0022	0.02	Q	.	.	.	.
4.417	0.0023	0.02	Q	.	.	.	.
4.500	0.0024	0.02	Q	.	.	.	.
4.583	0.0026	0.02	Q	.	.	.	.
4.667	0.0028	0.02	Q	.	.	.	.

4.750	0.0029	0.02	Q	.	.	.	.
4.833	0.0032	0.03	Q	.	.	.	.
4.917	0.0034	0.03	Q	.	.	.	.
5.000	0.0036	0.03	Q	.	.	.	.
5.083	0.0038	0.03	Q	.	.	.	.
5.167	0.0040	0.03	Q	.	.	.	.
5.250	0.0042	0.03	Q	.	.	.	.
5.333	0.0043	0.02	Q	.	.	.	.
5.417	0.0045	0.02	Q	.	.	.	.
5.500	0.0047	0.02	Q	.	.	.	.
5.583	0.0049	0.04	Q	.	.	.	.
5.667	0.0052	0.04	Q	.	.	.	.
5.750	0.0055	0.04	Q	.	.	.	.
5.833	0.0058	0.05	Q	.	.	.	.
5.917	0.0061	0.05	QV	.	.	.	.
6.000	0.0064	0.05	QV	.	.	.	.
6.083	0.0068	0.06	QV	.	.	.	.
6.167	0.0072	0.06	QV	.	.	.	.
6.250	0.0076	0.06	QV	.	.	.	.
6.333	0.0080	0.06	QV	.	.	.	.
6.417	0.0084	0.06	QV	.	.	.	.
6.500	0.0089	0.06	QV	.	.	.	.
6.583	0.0094	0.07	QV	.	.	.	.
6.667	0.0099	0.07	QV	.	.	.	.
6.750	0.0104	0.07	QV	.	.	.	.
6.833	0.0110	0.08	QV	.	.	.	.
6.917	0.0115	0.08	QV	.	.	.	.
7.000	0.0121	0.08	Q V	.	.	.	.
7.083	0.0127	0.08	Q V	.	.	.	.
7.167	0.0132	0.08	Q V	.	.	.	.
7.250	0.0138	0.08	Q V	.	.	.	.
7.333	0.0145	0.09	Q V	.	.	.	.
7.417	0.0151	0.09	Q V	.	.	.	.
7.500	0.0157	0.09	Q V	.	.	.	.
7.583	0.0165	0.11	Q V	.	.	.	.
7.667	0.0172	0.11	Q V	.	.	.	.
7.750	0.0180	0.11	Q V	.	.	.	.
7.833	0.0188	0.12	Q V	.	.	.	.
7.917	0.0197	0.12	Q V	.	.	.	.
8.000	0.0206	0.12	Q V	.	.	.	.
8.083	0.0216	0.15	Q V	.	.	.	.
8.167	0.0226	0.15	Q V	.	.	.	.
8.250	0.0236	0.15	Q V	.	.	.	.
8.333	0.0247	0.16	Q V	.	.	.	.
8.417	0.0259	0.16	Q V	.	.	.	.
8.500	0.0270	0.16	Q V	.	.	.	.
8.583	0.0282	0.17	Q V	.	.	.	.
8.667	0.0294	0.17	Q V	.	.	.	.
8.750	0.0306	0.17	Q V	.	.	.	.
8.833	0.0319	0.19	Q V	.	.	.	.
8.917	0.0332	0.19	Q V	.	.	.	.
9.000	0.0345	0.19	Q V	.	.	.	.
9.083	0.0360	0.21	Q V	.	.	.	.
9.167	0.0375	0.21	Q V	.	.	.	.
9.250	0.0389	0.21	Q V	.	.	.	.
9.333	0.0406	0.24	Q V	.	.	.	.
9.417	0.0422	0.24	Q V	.	.	.	.
9.500	0.0438	0.24	Q V	.	.	.	.
9.583	0.0456	0.25	.Q V	.	.	.	.
9.667	0.0473	0.25	.Q V	.	.	.	.
9.750	0.0491	0.25	.Q V	.	.	.	.
9.833	0.0509	0.27	.Q V	.	.	.	.
9.917	0.0528	0.27	.Q V	.	.	.	.

10.000	0.0546	0.27	.Q	V.	.	.	.
10.083	0.0562	0.23	Q	V.	.	.	.
10.167	0.0577	0.23	Q	V.	.	.	.
10.250	0.0593	0.23	Q	V	.	.	.
10.333	0.0606	0.19	Q	V	.	.	.
10.417	0.0618	0.19	Q	V	.	.	.
10.500	0.0631	0.19	Q	V	.	.	.
10.583	0.0646	0.22	Q	.V	.	.	.
10.667	0.0661	0.22	Q	.V	.	.	.
10.750	0.0676	0.22	Q	.V	.	.	.
10.833	0.0693	0.25	Q	. V	.	.	.
10.917	0.0710	0.25	Q	. V	.	.	.
11.000	0.0727	0.25	Q	. V	.	.	.
11.083	0.0744	0.25	Q	. V	.	.	.
11.167	0.0761	0.25	Q	. V	.	.	.
11.250	0.0778	0.25	Q	. V	.	.	.
11.333	0.0795	0.24	Q	. V	.	.	.
11.417	0.0811	0.24	Q	. V	.	.	.
11.500	0.0828	0.24	Q	. V	.	.	.
11.583	0.0844	0.23	Q	. V	.	.	.
11.667	0.0859	0.23	Q	. V	.	.	.
11.750	0.0875	0.23	Q	. V	.	.	.
11.833	0.0890	0.22	Q	. V	.	.	.
11.917	0.0906	0.22	Q	. V	.	.	.
12.000	0.0921	0.22	Q	. V	.	.	.
12.083	0.0941	0.28	.Q	. V	.	.	.
12.167	0.0960	0.28	.Q	. V	.	.	.
12.250	0.0979	0.28	.Q	. V	.	.	.
12.333	0.1003	0.33	.Q	. V	.	.	.
12.417	0.1026	0.33	.Q	. V	.	.	.
12.500	0.1049	0.33	.Q	. V	.	.	.
12.583	0.1074	0.36	.Q	. V	.	.	.
12.667	0.1099	0.36	.Q	. V.	.	.	.
12.750	0.1124	0.36	.Q	. V.	.	.	.
12.833	0.1150	0.39	.Q	. V.	.	.	.
12.917	0.1177	0.39	.Q	. V	.	.	.
13.000	0.1204	0.39	.Q	. V	.	.	.
13.083	0.1234	0.44	.Q	.V	.	.	.
13.167	0.1264	0.44	.Q	.V	.	.	.
13.250	0.1294	0.44	.Q	. V	.	.	.
13.333	0.1326	0.47	.Q	. V	.	.	.
13.417	0.1358	0.47	.Q	. V	.	.	.
13.500	0.1391	0.47	.Q	. V	.	.	.
13.583	0.1418	0.39	.Q	. V	.	.	.
13.667	0.1445	0.39	.Q	. V	.	.	.
13.750	0.1472	0.39	.Q	. V	.	.	.
13.833	0.1494	0.33	.Q	. V	.	.	.
13.917	0.1517	0.33	.Q	. V	.	.	.
14.000	0.1539	0.33	.Q	. V	.	.	.
14.083	0.1563	0.35	.Q	. V	.	.	.
14.167	0.1587	0.35	.Q	. V	.	.	.
14.250	0.1611	0.35	.Q	. V	.	.	.
14.333	0.1636	0.36	.Q	. V	.	.	.
14.417	0.1661	0.36	.Q	. V	.	.	.
14.500	0.1686	0.36	.Q	. V.	.	.	.
14.583	0.1711	0.36	.Q	. V.	.	.	.
14.667	0.1735	0.36	.Q	. V	.	.	.
14.750	0.1760	0.36	.Q	. V	.	.	.
14.833	0.1785	0.35	.Q	. V	.	.	.
14.917	0.1809	0.35	.Q	. V	.	.	.
15.000	0.1833	0.35	.Q	. V	.	.	.
15.083	0.1857	0.34	.Q	. V	.	.	.
15.167	0.1880	0.34	.Q	. V	.	.	.

15.250	0.1904	0.34	.Q	.	.	.	V	.
15.333	0.1926	0.33	.Q	.	.	.	V	.
15.417	0.1949	0.33	.Q	.	.	.	V	.
15.500	0.1971	0.33	.Q	.	.	.	V	.
15.583	0.1991	0.29	.Q	.	.	.	V	.
15.667	0.2011	0.29	.Q	.	.	.	V	.
15.750	0.2031	0.29	.Q	.	.	.	V	.
15.833	0.2049	0.27	.Q	.	.	.	V	.
15.917	0.2068	0.27	.Q	.	.	.	V	.
16.000	0.2086	0.27	.Q	.	.	.	V	.
16.083	0.2096	0.15	Q	.	.	.	V	.
16.167	0.2106	0.15	Q	.	.	.	V	.
16.250	0.2116	0.15	Q	.	.	.	V	.
16.333	0.2120	0.05	Q	.	.	.	V	.
16.417	0.2124	0.05	Q	.	.	.	V	.
16.500	0.2127	0.05	Q	.	.	.	V	.
16.583	0.2130	0.03	Q	.	.	.	V	.
16.667	0.2132	0.03	Q	.	.	.	V	.
16.750	0.2134	0.03	Q	.	.	.	V	.
16.833	0.2136	0.02	Q	.	.	.	V	.
16.917	0.2137	0.02	Q	.	.	.	V	.
17.000	0.2139	0.02	Q	.	.	.	V	.
17.083	0.2141	0.04	Q	.	.	.	V	.
17.167	0.2144	0.04	Q	.	.	.	V	.
17.250	0.2147	0.04	Q	.	.	.	V	.
17.333	0.2150	0.05	Q	.	.	.	V	.
17.417	0.2153	0.05	Q	.	.	.	V	.
17.500	0.2157	0.05	Q	.	.	.	V	.
17.583	0.2160	0.05	Q	.	.	.	V	.
17.667	0.2164	0.05	Q	.	.	.	V	.
17.750	0.2168	0.05	Q	.	.	.	V	.
17.833	0.2171	0.05	Q	.	.	.	V	.
17.917	0.2174	0.05	Q	.	.	.	V	.
18.000	0.2177	0.05	Q	.	.	.	V	.
18.083	0.2180	0.04	Q	.	.	.	V	.
18.167	0.2183	0.04	Q	.	.	.	V	.
18.250	0.2186	0.04	Q	.	.	.	V	.
18.333	0.2188	0.04	Q	.	.	.	V	.
18.417	0.2191	0.04	Q	.	.	.	V	.
18.500	0.2194	0.04	Q	.	.	.	V	.
18.583	0.2196	0.03	Q	.	.	.	V	.
18.667	0.2199	0.03	Q	.	.	.	V	.
18.750	0.2201	0.03	Q	.	.	.	V	.
18.833	0.2202	0.02	Q	.	.	.	V	.
18.917	0.2204	0.02	Q	.	.	.	V	.
19.000	0.2205	0.02	Q	.	.	.	V	.
19.083	0.2207	0.02	Q	.	.	.	V	.
19.167	0.2208	0.02	Q	.	.	.	V	.
19.250	0.2209	0.02	Q	.	.	.	V	.
19.333	0.2212	0.03	Q	.	.	.	V	.
19.417	0.2214	0.03	Q	.	.	.	V	.
19.500	0.2217	0.03	Q	.	.	.	V	.
19.583	0.2219	0.03	Q	.	.	.	V	.
19.667	0.2221	0.03	Q	.	.	.	V	.
19.750	0.2224	0.03	Q	.	.	.	V	.
19.833	0.2225	0.02	Q	.	.	.	V	.
19.917	0.2227	0.02	Q	.	.	.	V	.
20.000	0.2228	0.02	Q	.	.	.	V	.
20.083	0.2230	0.02	Q	.	.	.	V	.
20.167	0.2232	0.02	Q	.	.	.	V	.
20.250	0.2233	0.02	Q	.	.	.	V	.
20.333	0.2235	0.03	Q	.	.	.	V	.
20.417	0.2237	0.03	Q	.	.	.	V	.

20.500	0.2239	0.03	Q	.	.	.	V .
20.583	0.2241	0.03	Q	.	.	.	V .
20.667	0.2243	0.03	Q	.	.	.	V .
20.750	0.2246	0.03	Q	.	.	.	V .
20.833	0.2247	0.02	Q	.	.	.	V .
20.917	0.2249	0.02	Q	.	.	.	V .
21.000	0.2250	0.02	Q	.	.	.	V .
21.083	0.2252	0.03	Q	.	.	.	V .
21.167	0.2254	0.03	Q	.	.	.	V .
21.250	0.2256	0.03	Q	.	.	.	V .
21.333	0.2257	0.02	Q	.	.	.	V .
21.417	0.2259	0.02	Q	.	.	.	V .
21.500	0.2261	0.02	Q	.	.	.	V .
21.583	0.2262	0.03	Q	.	.	.	V .
21.667	0.2264	0.03	Q	.	.	.	V .
21.750	0.2266	0.03	Q	.	.	.	V .
21.833	0.2268	0.02	Q	.	.	.	V .
21.917	0.2270	0.02	Q	.	.	.	V .
22.000	0.2271	0.02	Q	.	.	.	V .
22.083	0.2273	0.03	Q	.	.	.	V .
22.167	0.2275	0.03	Q	.	.	.	V .
22.250	0.2277	0.03	Q	.	.	.	V .
22.333	0.2279	0.03	Q	.	.	.	V .
22.417	0.2280	0.03	Q	.	.	.	V .
22.500	0.2282	0.03	Q	.	.	.	V .
22.583	0.2283	0.02	Q	.	.	.	V .
22.667	0.2285	0.02	Q	.	.	.	V .
22.750	0.2286	0.02	Q	.	.	.	V .
22.833	0.2288	0.02	Q	.	.	.	V .
22.917	0.2289	0.02	Q	.	.	.	V .
23.000	0.2290	0.02	Q	.	.	.	V .
23.083	0.2292	0.02	Q	.	.	.	V .
23.166	0.2293	0.02	Q	.	.	.	V .
23.250	0.2295	0.02	Q	.	.	.	V .
23.333	0.2296	0.02	Q	.	.	.	V .
23.416	0.2297	0.02	Q	.	.	.	V .
23.500	0.2299	0.02	Q	.	.	.	V .
23.583	0.2300	0.02	Q	.	.	.	V .
23.666	0.2302	0.02	Q	.	.	.	V .
23.750	0.2303	0.02	Q	.	.	.	V .
23.833	0.2304	0.02	Q	.	.	.	V .
23.916	0.2306	0.02	Q	.	.	.	V .
24.000	0.2307	0.02	Q	.	.	.	V .
24.083	0.2308	0.01	Q	.	.	.	V .
24.166	0.2309	0.01	Q	.	.	.	V .
24.250	0.2309	0.01	Q	.	.	.	V .
24.333	0.2309	0.00	Q	.	.	.	V .
24.416	0.2310	0.00	Q	.	.	.	V .
24.500	0.2310	0.00	Q	.	.	.	V .

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1470.0
10%	660.0
20%	525.0
30%	495.0
40%	420.0
50%	330.0

60%
70%
80%
90%

B5_1024.RES
225.0
165.0
60.0
30.0

=====
END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, unit Hydrograph Area B-5 *
* 100-year, 1-hour *

FILE NAME: B5.DAT
TIME/DATE OF STUDY: 06:15 09/10/2020

FLOW PROCESS FROM NODE 192.00 TO NODE 193.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 0.950 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE

Warning: Watershed Area is less than 10 acres

*USER ENTERED "LAG" TIME = 0.100 HOURS

CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.

THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY S-GRAPH SELECTED

UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050

LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.900

USER-ENTERED RAINFALL = 1.49 INCHES

RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED

(SLOPE OF INTENSITY-DURATION CURVE = 0.41)

*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 83.333

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
--------------------	--------------------------	-----------------------------------

1	13.994	1.608
2	59.664	5.247
3	78.792	2.198
4	86.766	0.916
5	91.428	0.536
6	94.514	0.355
7	96.650	0.245
8	98.044	0.160
9	98.699	0.075
10	99.289	0.068
11	99.716	0.049
12	99.929	0.025
13	100.000	0.008



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0751	0.0042	0.0710
2	0.0787	0.0042	0.0745
3	0.0829	0.0042	0.0787
4	0.0901	0.0042	0.0860
5	0.0943	0.0042	0.0901
6	0.1053	0.0042	0.1011
7	0.1206	0.0042	0.1164
8	0.1308	0.0042	0.1266
9	0.1852	0.0042	0.1810
10	0.3325	0.0042	0.3283
11	0.1127	0.0042	0.1086
12	0.0817	0.0042	0.0775

TOTAL STORM RAINFALL(INCHES) = 1.49
 TOTAL SOIL-LOSS(INCHES) = 0.05
 TOTAL EFFECTIVE RAINFALL(INCHES) = 1.44

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0040
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.1139



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0008	0.11	Q	.	.	.	.
0.167	0.0042	0.49	.Q	.	.	.	.
0.250	0.0088	0.67	. QV	.	.	.	.
0.333	0.0142	0.78	. QV	.	.	.	.
0.417	0.0202	0.88	. Q	V	.	.	.
0.500	0.0268	0.96	. Q	V.	.	.	.
0.583	0.0343	1.08	. Q	. V	.	.	.
0.667	0.0427	1.22	. Q	. V	.	.	.

0.750	0.0525	1.42	.	Q	.	.	.	.	.
0.833	0.0662	1.99	.	.	Q	.	V	.	.
0.917	0.0838	2.56	.	.	.	Q	.	V.	.
1.000	0.0959	1.75	.	Q	.	.	.	V	.
1.083	0.1038	1.15	.	.	Q	.	.	.	V
1.167	0.1078	0.58	.	Q	.	.	.	.	V
1.250	0.1101	0.33	.	Q	.	.	.	.	V
1.333	0.1116	0.21	Q	.	.	.	.	.	V.
1.417	0.1125	0.14	Q	.	.	.	.	.	V.
1.500	0.1131	0.08	Q	.	.	.	.	.	V.
1.583	0.1135	0.06	Q	.	.	.	.	.	V.
1.667	0.1137	0.03	Q	.	.	.	.	.	V.
1.750	0.1139	0.02	Q	.	.	.	.	.	V.
1.833	0.1139	0.01	Q	.	.	.	.	.	V.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	110.0
10%	70.0
20%	60.0
30%	50.0
40%	35.0
50%	20.0
60%	15.0
70%	10.0
80%	5.0
90%	5.0

 END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, unit Hydrograph Area B-5 *
* 100-year, 24-hour *

FILE NAME: B5.DAT
TIME/DATE OF STUDY: 06:13 09/10/2020

FLOW PROCESS FROM NODE 192.00 TO NODE 193.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 0.950 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.100 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.050
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.900
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.010
USER-ENTERED RAINFALL = 6.32 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 250.000

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	50.817	1.946
2	90.903	1.535
3	97.798	0.264
4	99.444	0.063
5	99.778	0.013
6	99.944	0.006
7	100.000	0.002



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
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1	0.0126	0.0114	0.0013
2	0.0190	0.0171	0.0019
3	0.0190	0.0171	0.0019
4	0.0253	0.0228	0.0025
5	0.0190	0.0171	0.0019
6	0.0190	0.0171	0.0019
7	0.0190	0.0171	0.0019
8	0.0253	0.0228	0.0025
9	0.0253	0.0228	0.0025
10	0.0253	0.0228	0.0025
11	0.0316	0.0238	0.0078
12	0.0316	0.0234	0.0082
13	0.0316	0.0231	0.0085
14	0.0316	0.0227	0.0089
15	0.0316	0.0223	0.0093
16	0.0379	0.0219	0.0160
17	0.0379	0.0216	0.0164
18	0.0442	0.0212	0.0231
19	0.0442	0.0208	0.0234
20	0.0506	0.0205	0.0301
21	0.0379	0.0201	0.0178
22	0.0442	0.0197	0.0245
23	0.0506	0.0194	0.0312
24	0.0506	0.0190	0.0315
25	0.0569	0.0187	0.0382
26	0.0569	0.0183	0.0386
27	0.0632	0.0180	0.0452
28	0.0632	0.0176	0.0456
29	0.0632	0.0173	0.0459
30	0.0695	0.0169	0.0526
31	0.0758	0.0166	0.0592
32	0.0822	0.0163	0.0659
33	0.0948	0.0159	0.0789
34	0.0948	0.0156	0.0792
35	0.1011	0.0153	0.0858
36	0.1074	0.0150	0.0925
37	0.1201	0.0147	0.1054
38	0.1264	0.0143	0.1121
39	0.1327	0.0140	0.1187
40	0.1390	0.0137	0.1253
41	0.0948	0.0134	0.0814
42	0.0948	0.0131	0.0817
43	0.1264	0.0128	0.1136
44	0.1264	0.0125	0.1139
45	0.1201	0.0122	0.1079
46	0.1201	0.0119	0.1081
47	0.1074	0.0116	0.0958

48	0.1138	0.0114	0.1024
49	0.1580	0.0111	0.1469
50	0.1643	0.0108	0.1535
51	0.1770	0.0105	0.1664
52	0.1833	0.0103	0.1730
53	0.2149	0.0100	0.2049
54	0.2149	0.0097	0.2052
55	0.1454	0.0095	0.1359
56	0.1454	0.0092	0.1362
57	0.1706	0.0089	0.1617
58	0.1643	0.0087	0.1556
59	0.1643	0.0084	0.1559
60	0.1580	0.0082	0.1498
61	0.1517	0.0080	0.1437
62	0.1454	0.0077	0.1376
63	0.1201	0.0075	0.1126
64	0.1201	0.0073	0.1128
65	0.0253	0.0070	0.0182
66	0.0253	0.0068	0.0185
67	0.0190	0.0066	0.0124
68	0.0190	0.0064	0.0126
69	0.0316	0.0062	0.0254
70	0.0316	0.0060	0.0256
71	0.0316	0.0058	0.0258
72	0.0253	0.0056	0.0197
73	0.0253	0.0054	0.0199
74	0.0253	0.0052	0.0201
75	0.0190	0.0050	0.0139
76	0.0126	0.0048	0.0078
77	0.0190	0.0047	0.0143
78	0.0253	0.0045	0.0208
79	0.0190	0.0043	0.0146
80	0.0126	0.0042	0.0085
81	0.0190	0.0040	0.0149
82	0.0190	0.0039	0.0151
83	0.0190	0.0037	0.0152
84	0.0126	0.0036	0.0091
85	0.0190	0.0035	0.0155
86	0.0126	0.0033	0.0093
87	0.0190	0.0032	0.0158
88	0.0126	0.0031	0.0095
89	0.0190	0.0030	0.0160
90	0.0126	0.0029	0.0097
91	0.0126	0.0028	0.0098
92	0.0126	0.0027	0.0099
93	0.0126	0.0027	0.0100
94	0.0126	0.0026	0.0101
95	0.0126	0.0025	0.0101
96	0.0126	0.0025	0.0101

TOTAL STORM RAINFALL(INCHES) = 6.32
 TOTAL SOIL-LOSS(INCHES) = 1.13
 TOTAL EFFECTIVE RAINFALL(INCHES) = 5.19

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0893
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.4108

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2.5	5.0	7.5	10.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0001	0.00	Q	.	.	.	.
0.333	0.0001	0.01	Q	.	.	.	.
0.417	0.0001	0.01	Q	.	.	.	.
0.500	0.0002	0.01	Q	.	.	.	.
0.583	0.0002	0.01	Q	.	.	.	.
0.667	0.0003	0.01	Q	.	.	.	.
0.750	0.0003	0.01	Q	.	.	.	.
0.833	0.0004	0.01	Q	.	.	.	.
0.917	0.0004	0.01	Q	.	.	.	.
1.000	0.0005	0.01	Q	.	.	.	.
1.083	0.0005	0.01	Q	.	.	.	.
1.167	0.0006	0.01	Q	.	.	.	.
1.250	0.0007	0.01	Q	.	.	.	.
1.333	0.0007	0.01	Q	.	.	.	.
1.417	0.0008	0.01	Q	.	.	.	.
1.500	0.0008	0.01	Q	.	.	.	.
1.583	0.0009	0.01	Q	.	.	.	.
1.667	0.0009	0.01	Q	.	.	.	.
1.750	0.0010	0.01	Q	.	.	.	.
1.833	0.0010	0.01	Q	.	.	.	.
1.917	0.0011	0.01	Q	.	.	.	.
2.000	0.0011	0.01	Q	.	.	.	.
2.083	0.0012	0.01	Q	.	.	.	.
2.167	0.0013	0.01	Q	.	.	.	.
2.250	0.0013	0.01	Q	.	.	.	.
2.333	0.0014	0.01	Q	.	.	.	.
2.417	0.0015	0.01	Q	.	.	.	.
2.500	0.0015	0.01	Q	.	.	.	.
2.583	0.0017	0.02	Q	.	.	.	.
2.667	0.0018	0.02	Q	.	.	.	.
2.750	0.0019	0.02	Q	.	.	.	.
2.833	0.0021	0.03	Q	.	.	.	.
2.917	0.0023	0.03	Q	.	.	.	.
3.000	0.0025	0.03	Q	.	.	.	.
3.083	0.0027	0.03	Q	.	.	.	.
3.167	0.0030	0.03	Q	.	.	.	.
3.250	0.0032	0.03	Q	.	.	.	.
3.333	0.0034	0.03	Q	.	.	.	.
3.417	0.0036	0.03	Q	.	.	.	.
3.500	0.0039	0.03	Q	.	.	.	.
3.583	0.0041	0.03	Q	.	.	.	.
3.667	0.0043	0.03	Q	.	.	.	.
3.750	0.0046	0.03	Q	.	.	.	.
3.833	0.0049	0.05	Q	.	.	.	.
3.917	0.0052	0.05	Q	.	.	.	.
4.000	0.0056	0.05	Q	.	.	.	.
4.083	0.0060	0.06	Q	.	.	.	.
4.167	0.0064	0.06	Q	.	.	.	.
4.250	0.0068	0.06	Q	.	.	.	.
4.333	0.0073	0.07	Q	.	.	.	.
4.417	0.0078	0.07	Q	.	.	.	.
4.500	0.0084	0.07	Q	.	.	.	.
4.583	0.0090	0.09	Q	.	.	.	.
4.667	0.0096	0.09	Q	.	.	.	.

4.750	0.0102	0.09	Q	.	.	.	.
4.833	0.0109	0.10	QV	.	.	.	.
4.917	0.0116	0.10	QV	.	.	.	.
5.000	0.0123	0.10	QV	.	.	.	.
5.083	0.0129	0.09	QV	.	.	.	.
5.167	0.0135	0.09	QV	.	.	.	.
5.250	0.0141	0.09	QV	.	.	.	.
5.333	0.0147	0.08	QV	.	.	.	.
5.417	0.0153	0.08	QV	.	.	.	.
5.500	0.0158	0.08	QV	.	.	.	.
5.583	0.0166	0.11	QV	.	.	.	.
5.667	0.0173	0.11	QV	.	.	.	.
5.750	0.0180	0.11	QV	.	.	.	.
5.833	0.0188	0.12	QV	.	.	.	.
5.917	0.0196	0.12	QV	.	.	.	.
6.000	0.0205	0.12	QV	.	.	.	.
6.083	0.0214	0.13	Q V	.	.	.	.
6.167	0.0223	0.13	Q V	.	.	.	.
6.250	0.0232	0.13	Q V	.	.	.	.
6.333	0.0242	0.14	Q V	.	.	.	.
6.417	0.0252	0.14	Q V	.	.	.	.
6.500	0.0262	0.14	Q V	.	.	.	.
6.583	0.0273	0.16	Q V	.	.	.	.
6.667	0.0284	0.16	Q V	.	.	.	.
6.750	0.0295	0.16	Q V	.	.	.	.
6.833	0.0307	0.17	Q V	.	.	.	.
6.917	0.0319	0.17	Q V	.	.	.	.
7.000	0.0330	0.17	Q V	.	.	.	.
7.083	0.0342	0.17	Q V	.	.	.	.
7.167	0.0354	0.17	Q V	.	.	.	.
7.250	0.0366	0.17	Q V	.	.	.	.
7.333	0.0379	0.19	Q V	.	.	.	.
7.417	0.0392	0.19	Q V	.	.	.	.
7.500	0.0405	0.19	Q V	.	.	.	.
7.583	0.0420	0.21	Q V	.	.	.	.
7.667	0.0434	0.21	Q V	.	.	.	.
7.750	0.0449	0.21	Q V	.	.	.	.
7.833	0.0465	0.24	Q V	.	.	.	.
7.917	0.0482	0.24	Q V	.	.	.	.
8.000	0.0498	0.24	Q V	.	.	.	.
8.083	0.0517	0.27	.Q V	.	.	.	.
8.167	0.0536	0.27	.Q V	.	.	.	.
8.250	0.0555	0.27	.Q V	.	.	.	.
8.333	0.0575	0.30	.Q V	.	.	.	.
8.417	0.0596	0.30	.Q V	.	.	.	.
8.500	0.0616	0.30	.Q V	.	.	.	.
8.583	0.0638	0.31	.Q V	.	.	.	.
8.667	0.0660	0.31	.Q V	.	.	.	.
8.750	0.0681	0.31	.Q V	.	.	.	.
8.833	0.0705	0.34	.Q V	.	.	.	.
8.917	0.0728	0.34	.Q V	.	.	.	.
9.000	0.0751	0.34	.Q V	.	.	.	.
9.083	0.0777	0.38	.Q V	.	.	.	.
9.167	0.0803	0.38	.Q V	.	.	.	.
9.250	0.0829	0.38	.Q V	.	.	.	.
9.333	0.0857	0.41	.Q V	.	.	.	.
9.417	0.0886	0.41	.Q V	.	.	.	.
9.500	0.0914	0.41	.Q V	.	.	.	.
9.583	0.0944	0.44	.Q V	.	.	.	.
9.667	0.0974	0.44	.Q V	.	.	.	.
9.750	0.1005	0.44	.Q V	.	.	.	.
9.833	0.1037	0.46	.Q V	.	.	.	.
9.917	0.1069	0.46	.Q V	.	.	.	.

10.000	0.1100	0.46	.Q	V	.	.	.
10.083	0.1127	0.39	.Q	V	.	.	.
10.167	0.1154	0.39	.Q	V	.	.	.
10.250	0.1181	0.39	.Q	V	.	.	.
10.333	0.1204	0.33	.Q	.V	.	.	.
10.417	0.1226	0.33	.Q	.V	.	.	.
10.500	0.1249	0.33	.Q	.V	.	.	.
10.583	0.1275	0.38	.Q	.V	.	.	.
10.667	0.1301	0.38	.Q	.V	.	.	.
10.750	0.1327	0.38	.Q	.V	.	.	.
10.833	0.1356	0.43	.Q	.V	.	.	.
10.917	0.1386	0.43	.Q	.V	.	.	.
11.000	0.1415	0.43	.Q	.V	.	.	.
11.083	0.1444	0.42	.Q	.V	.	.	.
11.167	0.1473	0.42	.Q	.V	.	.	.
11.250	0.1502	0.42	.Q	.V	.	.	.
11.333	0.1531	0.42	.Q	.V	.	.	.
11.417	0.1559	0.42	.Q	.V	.	.	.
11.500	0.1588	0.42	.Q	.V	.	.	.
11.583	0.1615	0.39	.Q	.V	.	.	.
11.667	0.1642	0.39	.Q	.V	.	.	.
11.750	0.1668	0.39	.Q	.V	.	.	.
11.833	0.1695	0.38	.Q	.V	.	.	.
11.917	0.1721	0.38	.Q	.V	.	.	.
12.000	0.1748	0.38	.Q	.V	.	.	.
12.083	0.1781	0.48	.Q	.V	.	.	.
12.167	0.1814	0.48	.Q	.V	.	.	.
12.250	0.1846	0.48	.Q	.V	.	.	.
12.333	0.1885	0.56	.Q	.V	.	.	.
12.417	0.1924	0.56	.Q	.V	.	.	.
12.500	0.1962	0.56	.Q	.V	.	.	.
12.583	0.2004	0.61	.Q	.V	.	.	.
12.667	0.2046	0.61	.Q	.V	.	.	.
12.750	0.2088	0.61	.Q	.V	.	.	.
12.833	0.2132	0.64	.Q	.V	.	.	.
12.917	0.2176	0.64	.Q	.V	.	.	.
13.000	0.2221	0.64	.Q	.V	.	.	.
13.083	0.2270	0.72	.Q	.V	.	.	.
13.167	0.2320	0.72	.Q	.V	.	.	.
13.250	0.2370	0.72	.Q	.V	.	.	.
13.333	0.2423	0.77	.Q	.V	.	.	.
13.417	0.2476	0.77	.Q	.V	.	.	.
13.500	0.2529	0.77	.Q	.V	.	.	.
13.583	0.2574	0.65	.Q	.V	.	.	.
13.667	0.2619	0.65	.Q	.V	.	.	.
13.750	0.2663	0.65	.Q	.V	.	.	.
13.833	0.2701	0.54	.Q	.V	.	.	.
13.917	0.2738	0.54	.Q	.V	.	.	.
14.000	0.2776	0.54	.Q	.V	.	.	.
14.083	0.2815	0.58	.Q	.V	.	.	.
14.167	0.2855	0.58	.Q	.V	.	.	.
14.250	0.2895	0.58	.Q	.V	.	.	.
14.333	0.2936	0.60	.Q	.V	.	.	.
14.417	0.2977	0.60	.Q	.V	.	.	.
14.500	0.3019	0.60	.Q	.V	.	.	.
14.583	0.3060	0.60	.Q	.V	.	.	.
14.667	0.3101	0.60	.Q	.V	.	.	.
14.750	0.3142	0.60	.Q	.V	.	.	.
14.833	0.3182	0.59	.Q	.V	.	.	.
14.917	0.3223	0.59	.Q	.V	.	.	.
15.000	0.3263	0.59	.Q	.V	.	.	.
15.083	0.3302	0.56	.Q	.	.V	.	.
15.167	0.3341	0.56	.Q	.	.V	.	.

15.250	0.3379	0.56	. Q	.	.	.	V	.
15.333	0.3417	0.54	. Q	.	.	.	V	.
15.417	0.3454	0.54	. Q	.	.	.	V	.
15.500	0.3491	0.54	. Q	.	.	.	V	.
15.583	0.3524	0.48	.Q	.	.	.	V	.
15.667	0.3558	0.48	.Q	.	.	.	V	.
15.750	0.3591	0.48	.Q	.	.	.	V	.
15.833	0.3621	0.44	.Q	.	.	.	V	.
15.917	0.3651	0.44	.Q	.	.	.	V	.
16.000	0.3682	0.44	.Q	.	.	.	V	.
16.083	0.3699	0.25	.Q	.	.	.	V	.
16.167	0.3716	0.25	.Q	.	.	.	V	.
16.250	0.3734	0.25	.Q	.	.	.	V	.
16.333	0.3741	0.10	Q	.	.	.	V	.
16.417	0.3748	0.10	Q	.	.	.	V	.
16.500	0.3755	0.10	Q	.	.	.	V	.
16.583	0.3760	0.07	Q	.	.	.	V	.
16.667	0.3764	0.07	Q	.	.	.	V	.
16.750	0.3769	0.07	Q	.	.	.	V	.
16.833	0.3772	0.05	Q	.	.	.	V	.
16.917	0.3776	0.05	Q	.	.	.	V	.
17.000	0.3780	0.05	Q	.	.	.	V	.
17.083	0.3785	0.07	Q	.	.	.	V	.
17.167	0.3790	0.07	Q	.	.	.	V	.
17.250	0.3795	0.07	Q	.	.	.	V	.
17.333	0.3801	0.09	Q	.	.	.	V	.
17.417	0.3808	0.09	Q	.	.	.	V	.
17.500	0.3814	0.09	Q	.	.	.	V	.
17.583	0.3821	0.10	Q	.	.	.	V	.
17.667	0.3828	0.10	Q	.	.	.	V	.
17.750	0.3834	0.10	Q	.	.	.	V	.
17.833	0.3840	0.09	Q	.	.	.	V	.
17.917	0.3846	0.09	Q	.	.	.	V	.
18.000	0.3852	0.09	Q	.	.	.	V	.
18.083	0.3858	0.08	Q	.	.	.	V	.
18.167	0.3863	0.08	Q	.	.	.	V	.
18.250	0.3868	0.08	Q	.	.	.	V	.
18.333	0.3874	0.08	Q	.	.	.	V	.
18.417	0.3879	0.08	Q	.	.	.	V	.
18.500	0.3884	0.08	Q	.	.	.	V	.
18.583	0.3889	0.07	Q	.	.	.	V	.
18.667	0.3893	0.07	Q	.	.	.	V	.
18.750	0.3898	0.07	Q	.	.	.	V	.
18.833	0.3901	0.04	Q	.	.	.	V	.
18.917	0.3904	0.04	Q	.	.	.	V	.
19.000	0.3907	0.04	Q	.	.	.	V	.
19.083	0.3910	0.05	Q	.	.	.	V	.
19.167	0.3913	0.05	Q	.	.	.	V	.
19.250	0.3916	0.05	Q	.	.	.	V	.
19.333	0.3921	0.07	Q	.	.	.	V	.
19.417	0.3925	0.07	Q	.	.	.	V	.
19.500	0.3930	0.07	Q	.	.	.	V	.
19.583	0.3934	0.07	Q	.	.	.	V	.
19.667	0.3939	0.07	Q	.	.	.	V	.
19.750	0.3943	0.07	Q	.	.	.	V	.
19.833	0.3946	0.05	Q	.	.	.	V	.
19.917	0.3949	0.05	Q	.	.	.	V	.
20.000	0.3952	0.05	Q	.	.	.	V	.
20.083	0.3956	0.05	Q	.	.	.	V	.
20.167	0.3959	0.05	Q	.	.	.	V	.
20.250	0.3962	0.05	Q	.	.	.	V	.
20.333	0.3966	0.06	Q	.	.	.	V	.
20.417	0.3970	0.06	Q	.	.	.	V	.

20.500	0.3974	0.06	Q	.	.	.	V .
20.583	0.3978	0.06	Q	.	.	.	V .
20.667	0.3982	0.06	Q	.	.	.	V .
20.750	0.3986	0.06	Q	.	.	.	V .
20.833	0.3989	0.05	Q	.	.	.	V .
20.917	0.3992	0.05	Q	.	.	.	V .
21.000	0.3995	0.05	Q	.	.	.	V .
21.083	0.3999	0.05	Q	.	.	.	V .
21.167	0.4002	0.05	Q	.	.	.	V .
21.250	0.4006	0.05	Q	.	.	.	V .
21.333	0.4009	0.05	Q	.	.	.	V .
21.417	0.4012	0.05	Q	.	.	.	V .
21.500	0.4015	0.05	Q	.	.	.	V .
21.583	0.4018	0.05	Q	.	.	.	V .
21.667	0.4022	0.05	Q	.	.	.	V .
21.750	0.4025	0.05	Q	.	.	.	V .
21.833	0.4028	0.05	Q	.	.	.	V .
21.917	0.4032	0.05	Q	.	.	.	V .
22.000	0.4035	0.05	Q	.	.	.	V .
22.083	0.4038	0.05	Q	.	.	.	V .
22.167	0.4042	0.05	Q	.	.	.	V .
22.250	0.4045	0.05	Q	.	.	.	V .
22.333	0.4049	0.05	Q	.	.	.	V .
22.417	0.4052	0.05	Q	.	.	.	V .
22.500	0.4055	0.05	Q	.	.	.	V .
22.583	0.4058	0.04	Q	.	.	.	V .
22.667	0.4060	0.04	Q	.	.	.	V .
22.750	0.4063	0.04	Q	.	.	.	V .
22.833	0.4066	0.04	Q	.	.	.	V .
22.917	0.4068	0.04	Q	.	.	.	V .
23.000	0.4071	0.04	Q	.	.	.	V .
23.083	0.4074	0.04	Q	.	.	.	V .
23.166	0.4076	0.04	Q	.	.	.	V .
23.250	0.4079	0.04	Q	.	.	.	V .
23.333	0.4082	0.04	Q	.	.	.	V .
23.416	0.4084	0.04	Q	.	.	.	V .
23.500	0.4087	0.04	Q	.	.	.	V .
23.583	0.4090	0.04	Q	.	.	.	V .
23.666	0.4092	0.04	Q	.	.	.	V .
23.750	0.4095	0.04	Q	.	.	.	V .
23.833	0.4098	0.04	Q	.	.	.	V .
23.916	0.4100	0.04	Q	.	.	.	V .
24.000	0.4103	0.04	Q	.	.	.	V .
24.083	0.4104	0.02	Q	.	.	.	V .
24.166	0.4106	0.02	Q	.	.	.	V .
24.250	0.4107	0.02	Q	.	.	.	V .
24.333	0.4107	0.00	Q	.	.	.	V .
24.416	0.4107	0.00	Q	.	.	.	V .
24.500	0.4108	0.00	Q	.	.	.	V .

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1470.0
10%	780.0
20%	585.0
30%	510.0
40%	450.0
50%	360.0

60%
70%
80%
90%

B5_10024.RES
240.0
180.0
60.0
30.0

=====
END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, B-2 *
* 10-year, 1-hour *

FILE NAME: B2.DAT
TIME/DATE OF STUDY: 19:59 05/27/2021

FLOW PROCESS FROM NODE 194.00 TO NODE 162.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 7.790 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.130 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.140
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 0.89 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 64.103

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	8.930	8.413
2	45.870	34.801
3	70.931	23.610
4	80.843	9.337
5	86.597	5.421
6	90.396	3.579
7	93.131	2.577
8	95.197	1.946
9	96.716	1.431
10	97.875	1.092
11	98.445	0.538
12	98.906	0.433
13	99.356	0.424
14	99.742	0.364
15	99.936	0.182
16	100.000	0.061



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0449	0.0117	0.0332
2	0.0470	0.0117	0.0353
3	0.0495	0.0117	0.0379
4	0.0538	0.0117	0.0422
5	0.0563	0.0117	0.0447
6	0.0629	0.0117	0.0512
7	0.0720	0.0117	0.0604
8	0.0781	0.0117	0.0665
9	0.1106	0.0117	0.0990
10	0.1986	0.0117	0.1869
11	0.0673	0.0117	0.0557
12	0.0488	0.0117	0.0371

TOTAL STORM RAINFALL(INCHES) = 0.89
 TOTAL SOIL-LOSS(INCHES) = 0.14
 TOTAL EFFECTIVE RAINFALL(INCHES) = 0.75

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0909
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.4866



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	5.0	10.0	15.0	20.0
0.083	0.0019	0.28	Q	.	.	.	.
0.167	0.0119	1.45	V Q	.	.	.	.
0.250	0.0280	2.33	. V Q	.	.	.	.
0.333	0.0474	2.82	. V Q	.	.	.	.
0.417	0.0698	3.25	. VQ	.	.	.	.

B2_101.RES

0.500	0.0949	3.64	.	Q	.	.	.	.
0.583	0.1235	4.16	.	Q	V	.	.	.
0.667	0.1566	4.81	.	Q.	V	.	.	.
0.750	0.1955	5.66	.	.	V	.	.	.
0.833	0.2496	7.86	.	.	Q	V	.	.
0.917	0.3237	10.75	.	.	.	.Q	V	.
1.000	0.3823	8.52	.	.	Q	.	.V	.
1.083	0.4205	5.54	.	.	.Q	.	.	V
1.167	0.4428	3.24	.	Q	.	.	.	V
1.250	0.4561	1.92	.	Q	.	.	.	V
1.333	0.4652	1.32	.	Q	.	.	.	V
1.417	0.4717	0.95	.	.Q	.	.	.	V
1.500	0.4765	0.69	.	.Q	.	.	.	V
1.583	0.4799	0.49	Q	.	.	.	.	V
1.667	0.4821	0.32	Q	.	.	.	.	V
1.750	0.4837	0.23	Q	.	.	.	.	V
1.833	0.4849	0.18	Q	.	.	.	.	V
1.917	0.4858	0.13	Q	.	.	.	.	V
2.000	0.4863	0.08	Q	.	.	.	.	V
2.083	0.4865	0.04	Q	.	.	.	.	V
2.167	0.4866	0.01	Q	.	.	.	.	V
2.250	0.4866	0.00	Q	.	.	.	.	V

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	135.0
10%	75.0
20%	60.0
30%	50.0
40%	30.0
50%	25.0
60%	15.0
70%	15.0
80%	5.0
90%	5.0

=====

END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, B-2 *
* 100-year, 1-hour *

FILE NAME: B2.DAT
TIME/DATE OF STUDY: 20:01 05/27/2021

FLOW PROCESS FROM NODE 194.00 TO NODE 162.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 7.790 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.130 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.140
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
USER-ENTERED RAINFALL = 1.49 INCHES
RCFC&WCD 1-Hour Storm (5-Minute period) SELECTED
(SLOPE OF INTENSITY-DURATION CURVE = 0.41)
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 64.103

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	8.930	8.413
2	45.870	34.801
3	70.931	23.610
4	80.843	9.337
5	86.597	5.421
6	90.396	3.579
7	93.131	2.577
8	95.197	1.946
9	96.716	1.431
10	97.875	1.092
11	98.445	0.538
12	98.906	0.433
13	99.356	0.424
14	99.742	0.364
15	99.936	0.182
16	100.000	0.061



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
1	0.0751	0.0117	0.0635
2	0.0787	0.0117	0.0670
3	0.0829	0.0117	0.0712
4	0.0901	0.0117	0.0785
5	0.0943	0.0117	0.0826
6	0.1053	0.0117	0.0936
7	0.1206	0.0117	0.1089
8	0.1308	0.0117	0.1191
9	0.1852	0.0117	0.1735
10	0.3325	0.0117	0.3208
11	0.1127	0.0117	0.1011
12	0.0817	0.0117	0.0700

TOTAL STORM RAINFALL(INCHES) = 1.49
 TOTAL SOIL-LOSS(INCHES) = 0.14
 TOTAL EFFECTIVE RAINFALL(INCHES) = 1.35

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 0.0909
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 0.8759



1 - H O U R S T O R M
 R U N O F F H Y D R O G R A P H

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	5.0	10.0	15.0	20.0
0.083	0.0037	0.53	VQ	.	.	.	.
0.167	0.0228	2.77	.V Q	.	.	.	.
0.250	0.0533	4.43	. V Q	.	.	.	.
0.333	0.0899	5.31	. V Q	.	.	.	.
0.417	0.1317	6.08	. V . Q	.	.	.	.

B2_1001.RES

0.500	0.1784	6.77	.	V	.	Q	.	.	.	.
0.583	0.2311	7.65	.	V	.	Q	.	.	.	.
0.667	0.2913	8.75	.	.	V	.	Q	.	.	.
0.750	0.3615	10.18	.	.	.	V	.	Q	.	.
0.833	0.4570	13.88	.	.	.	.	V	.	Q	.
0.917	0.5860	18.73	.	.	.	.	.	V	.	Q
1.000	0.6893	14.99	.	.	.	.	.	Q.V	.	.
1.083	0.7578	9.95	.	.	.	Q.	.	.	V	.
1.167	0.7979	5.83	.	.	Q	.	.	.	.	V
1.250	0.8215	3.43	.	Q	.	.	.	.	.	V
1.333	0.8378	2.36	.	.	Q	.	.	.	.	V
1.417	0.8494	1.69	.	.	Q	.	.	.	.	V
1.500	0.8579	1.23	.	.	Q	.	.	.	.	V
1.583	0.8639	0.88	.	.	Q	.	.	.	.	V
1.667	0.8678	0.57	.	.	Q	.	.	.	.	V
1.750	0.8707	0.41	.	Q	.	.	.	.	.	V
1.833	0.8728	0.31	.	Q	.	.	.	.	.	V
1.917	0.8744	0.23	.	Q	.	.	.	.	.	V
2.000	0.8753	0.14	.	Q	.	.	.	.	.	V
2.083	0.8758	0.06	.	Q	.	.	.	.	.	V
2.167	0.8759	0.02	.	Q	.	.	.	.	.	V
2.250	0.8759	0.00	.	Q	.	.	.	.	.	V

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	135.0
10%	75.0
20%	60.0
30%	50.0
40%	35.0
50%	25.0
60%	15.0
70%	15.0
80%	10.0
90%	5.0

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, B-2 *
* 10-year, 24-hour *

FILE NAME: B2.DAT
TIME/DATE OF STUDY: 20:00 05/27/2021

FLOW PROCESS FROM NODE 194.00 TO NODE 162.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 7.790 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.130 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.140
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.070
USER-ENTERED RAINFALL = 3.95 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 192.308

===== UNIT HYDROGRAPH DETERMINATION =====

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	41.910	13.161
2	85.945	13.828
3	95.015	2.848
4	98.409	1.066
5	99.464	0.331
6	99.786	0.101
7	99.946	0.051
8	100.000	0.017



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
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1	0.0079	0.0040	0.0040
2	0.0119	0.0059	0.0059
3	0.0119	0.0059	0.0059
4	0.0158	0.0079	0.0079
5	0.0119	0.0059	0.0059
6	0.0119	0.0059	0.0059
7	0.0119	0.0059	0.0059
8	0.0158	0.0079	0.0079
9	0.0158	0.0079	0.0079
10	0.0158	0.0079	0.0079
11	0.0198	0.0099	0.0099
12	0.0198	0.0099	0.0099
13	0.0198	0.0099	0.0099
14	0.0198	0.0099	0.0099
15	0.0198	0.0099	0.0099
16	0.0237	0.0119	0.0119
17	0.0237	0.0119	0.0119
18	0.0277	0.0138	0.0138
19	0.0277	0.0138	0.0138
20	0.0316	0.0158	0.0158
21	0.0237	0.0119	0.0119
22	0.0277	0.0138	0.0138
23	0.0316	0.0158	0.0158
24	0.0316	0.0158	0.0158
25	0.0356	0.0178	0.0178
26	0.0356	0.0178	0.0178
27	0.0395	0.0198	0.0198
28	0.0395	0.0198	0.0198
29	0.0395	0.0198	0.0198
30	0.0435	0.0217	0.0217
31	0.0474	0.0237	0.0237
32	0.0514	0.0257	0.0257
33	0.0593	0.0296	0.0296
34	0.0593	0.0296	0.0296
35	0.0632	0.0316	0.0316
36	0.0672	0.0336	0.0336
37	0.0751	0.0375	0.0375
38	0.0790	0.0382	0.0408
39	0.0830	0.0377	0.0453
40	0.0869	0.0371	0.0498
41	0.0593	0.0296	0.0296
42	0.0593	0.0296	0.0296
43	0.0790	0.0355	0.0435
44	0.0790	0.0350	0.0440
45	0.0751	0.0345	0.0405
46	0.0751	0.0340	0.0410

47	0.0672	0.0335	0.0337
48	0.0711	0.0330	0.0381
49	0.0988	0.0325	0.0662
50	0.1027	0.0320	0.0707
51	0.1106	0.0315	0.0791
52	0.1146	0.0311	0.0835
53	0.1343	0.0306	0.1037
54	0.1343	0.0301	0.1042
55	0.0909	0.0297	0.0612
56	0.0909	0.0292	0.0616
57	0.1067	0.0288	0.0779
58	0.1027	0.0283	0.0744
59	0.1027	0.0279	0.0748
60	0.0988	0.0275	0.0713
61	0.0948	0.0271	0.0677
62	0.0909	0.0266	0.0642
63	0.0751	0.0262	0.0488
64	0.0751	0.0258	0.0492
65	0.0158	0.0079	0.0079
66	0.0158	0.0079	0.0079
67	0.0119	0.0059	0.0059
68	0.0119	0.0059	0.0059
69	0.0198	0.0099	0.0099
70	0.0198	0.0099	0.0099
71	0.0198	0.0099	0.0099
72	0.0158	0.0079	0.0079
73	0.0158	0.0079	0.0079
74	0.0158	0.0079	0.0079
75	0.0119	0.0059	0.0059
76	0.0079	0.0040	0.0040
77	0.0119	0.0059	0.0059
78	0.0158	0.0079	0.0079
79	0.0119	0.0059	0.0059
80	0.0079	0.0040	0.0040
81	0.0119	0.0059	0.0059
82	0.0119	0.0059	0.0059
83	0.0119	0.0059	0.0059
84	0.0079	0.0040	0.0040
85	0.0119	0.0059	0.0059
86	0.0079	0.0040	0.0040
87	0.0119	0.0059	0.0059
88	0.0079	0.0040	0.0040
89	0.0119	0.0059	0.0059
90	0.0079	0.0040	0.0040
91	0.0079	0.0040	0.0040
92	0.0079	0.0040	0.0040
93	0.0079	0.0040	0.0040
94	0.0079	0.0040	0.0040
95	0.0079	0.0040	0.0040
96	0.0079	0.0040	0.0040

TOTAL STORM RAINFALL(INCHES) = 3.95
 TOTAL SOIL-LOSS(INCHES) = 1.60
 TOTAL EFFECTIVE RAINFALL(INCHES) = 2.35

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1.0382
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1.5252

B2_1024.RES
 R U N O F F H Y D R O G R A P H

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	θ.	2.5	5.0	7.5	10.0
0.083	0.0004	0.05	Q	.	.	.	.
0.167	0.0007	0.05	Q	.	.	.	.
0.250	0.0011	0.05	Q	.	.	.	.
0.333	0.0020	0.13	Q	.	.	.	.
0.417	0.0029	0.13	Q	.	.	.	.
0.500	0.0038	0.13	Q	.	.	.	.
0.583	0.0050	0.17	Q	.	.	.	.
0.667	0.0062	0.17	Q	.	.	.	.
0.750	0.0074	0.17	Q	.	.	.	.
0.833	0.0088	0.21	Q	.	.	.	.
0.917	0.0102	0.21	Q	.	.	.	.
1.000	0.0116	0.21	Q	.	.	.	.
1.083	0.0131	0.21	Q	.	.	.	.
1.167	0.0145	0.21	Q	.	.	.	.
1.250	0.0160	0.21	Q	.	.	.	.
1.333	0.0173	0.19	Q	.	.	.	.
1.417	0.0186	0.19	Q	.	.	.	.
1.500	0.0199	0.19	Q	.	.	.	.
1.583	0.0212	0.19	Q	.	.	.	.
1.667	0.0225	0.19	Q	.	.	.	.
1.750	0.0238	0.19	Q	.	.	.	.
1.833	0.0253	0.21	Q	.	.	.	.
1.917	0.0268	0.21	Q	.	.	.	.
2.000	0.0282	0.21	Q	.	.	.	.
2.083	0.0299	0.24	Q	.	.	.	.
2.167	0.0315	0.24	Q	.	.	.	.
2.250	0.0332	0.24	Q	.	.	.	.
2.333	0.0349	0.25	Q	.	.	.	.
2.417	0.0366	0.25	Q	.	.	.	.
2.500	0.0382	0.25	QV	.	.	.	.
2.583	0.0401	0.27	.Q	.	.	.	.
2.667	0.0420	0.27	.Q	.	.	.	.
2.750	0.0439	0.27	.Q	.	.	.	.
2.833	0.0460	0.30	.Q	.	.	.	.
2.917	0.0480	0.30	.Q	.	.	.	.
3.000	0.0501	0.30	.Q	.	.	.	.
3.083	0.0522	0.31	.Q	.	.	.	.
3.167	0.0543	0.31	.Q	.	.	.	.
3.250	0.0564	0.31	.Q	.	.	.	.
3.333	0.0586	0.31	.Q	.	.	.	.
3.417	0.0607	0.31	.Q	.	.	.	.
3.500	0.0628	0.31	.Q	.	.	.	.
3.583	0.0650	0.31	.Q	.	.	.	.
3.667	0.0671	0.31	.Q	.	.	.	.
3.750	0.0692	0.31	.Q	.	.	.	.
3.833	0.0715	0.34	.Q	.	.	.	.
3.917	0.0739	0.34	.Q	.	.	.	.
4.000	0.0762	0.34	.Q	.	.	.	.
4.083	0.0787	0.36	.QV	.	.	.	.
4.167	0.0812	0.36	.QV	.	.	.	.
4.250	0.0837	0.36	.QV	.	.	.	.
4.333	0.0864	0.40	.QV	.	.	.	.
4.417	0.0891	0.40	.QV	.	.	.	.
4.500	0.0918	0.40	.QV	.	.	.	.
4.583	0.0948	0.42	.QV	.	.	.	.

4.667	0.0977	0.42	.QV	.	.	.	.
4.750	0.1006	0.42	.QV	.	.	.	.
4.833	0.1038	0.46	.QV	.	.	.	.
4.917	0.1069	0.46	.QV	.	.	.	.
5.000	0.1100	0.46	.QV	.	.	.	.
5.083	0.1130	0.43	.QV	.	.	.	.
5.167	0.1160	0.43	.Q V	.	.	.	.
5.250	0.1190	0.43	.Q V	.	.	.	.
5.333	0.1219	0.41	.Q V	.	.	.	.
5.417	0.1247	0.41	.Q V	.	.	.	.
5.500	0.1275	0.41	.Q V	.	.	.	.
5.583	0.1307	0.46	.Q V	.	.	.	.
5.667	0.1338	0.46	.Q V	.	.	.	.
5.750	0.1370	0.46	.Q V	.	.	.	.
5.833	0.1403	0.49	.Q V	.	.	.	.
5.917	0.1437	0.49	.Q V	.	.	.	.
6.000	0.1470	0.49	.Q V	.	.	.	.
6.083	0.1506	0.52	. QV	.	.	.	.
6.167	0.1542	0.52	. Q V	.	.	.	.
6.250	0.1577	0.52	. Q V	.	.	.	.
6.333	0.1615	0.55	. Q V	.	.	.	.
6.417	0.1653	0.55	. Q V	.	.	.	.
6.500	0.1691	0.55	. Q V	.	.	.	.
6.583	0.1731	0.58	. Q V	.	.	.	.
6.667	0.1771	0.58	. Q V	.	.	.	.
6.750	0.1811	0.58	. Q V	.	.	.	.
6.833	0.1853	0.61	. Q V	.	.	.	.
6.917	0.1895	0.61	. Q V	.	.	.	.
7.000	0.1937	0.61	. Q V	.	.	.	.
7.083	0.1979	0.62	. Q V	.	.	.	.
7.167	0.2022	0.62	. Q V	.	.	.	.
7.250	0.2064	0.62	. Q V	.	.	.	.
7.333	0.2108	0.65	. Q V	.	.	.	.
7.417	0.2153	0.65	. Q V	.	.	.	.
7.500	0.2197	0.65	. Q V	.	.	.	.
7.583	0.2246	0.70	. Q V	.	.	.	.
7.667	0.2294	0.70	. Q V	.	.	.	.
7.750	0.2342	0.70	. Q V	.	.	.	.
7.833	0.2394	0.76	. Q V	.	.	.	.
7.917	0.2446	0.76	. Q V	.	.	.	.
8.000	0.2498	0.76	. Q V	.	.	.	.
8.083	0.2557	0.85	. Q V	.	.	.	.
8.167	0.2615	0.85	. Q V	.	.	.	.
8.250	0.2673	0.85	. Q V	.	.	.	.
8.333	0.2736	0.91	. Q V	.	.	.	.
8.417	0.2798	0.91	. Q V	.	.	.	.
8.500	0.2861	0.91	. Q V	.	.	.	.
8.583	0.2926	0.95	. Q V	.	.	.	.
8.667	0.2992	0.95	. Q V	.	.	.	.
8.750	0.3057	0.95	. Q V	.	.	.	.
8.833	0.3126	1.01	. Q V	.	.	.	.
8.917	0.3196	1.01	. Q V	.	.	.	.
9.000	0.3265	1.01	. Q V	.	.	.	.
9.083	0.3340	1.09	. Q V	.	.	.	.
9.167	0.3416	1.09	. Q V	.	.	.	.
9.250	0.3491	1.09	. Q V	.	.	.	.
9.333	0.3574	1.20	. Q V	.	.	.	.
9.417	0.3656	1.20	. Q V	.	.	.	.
9.500	0.3739	1.20	. Q V	.	.	.	.
9.583	0.3829	1.32	. Q V	.	.	.	.
9.667	0.3920	1.32	. Q V	.	.	.	.
9.750	0.4011	1.32	. Q V	.	.	.	.
9.833	0.4111	1.45	. Q V	.	.	.	.

9.917	0.4211	1.45	.	Q	V	.	.	.
10.000	0.4311	1.45	.	Q	V	.	.	.
10.083	0.4399	1.27	.	Q	.V	.	.	.
10.167	0.4486	1.27	.	Q	.V	.	.	.
10.250	0.4573	1.27	.	Q	.V	.	.	.
10.333	0.4643	1.01	.	Q	.V	.	.	.
10.417	0.4712	1.01	.	Q	.V	.	.	.
10.500	0.4782	1.01	.	Q	.V	.	.	.
10.583	0.4860	1.14	.	Q	.V	.	.	.
10.667	0.4939	1.14	.	Q	.V	.	.	.
10.750	0.5017	1.14	.	Q	.V	.	.	.
10.833	0.5108	1.32	.	Q	.V	.	.	.
10.917	0.5199	1.32	.	Q	.V	.	.	.
11.000	0.5290	1.32	.	Q	.V	.	.	.
11.083	0.5381	1.31	.	Q	.V	.	.	.
11.167	0.5471	1.31	.	Q	.V	.	.	.
11.250	0.5562	1.31	.	Q	.V	.	.	.
11.333	0.5650	1.29	.	Q	.V	.	.	.
11.417	0.5739	1.29	.	Q	.V	.	.	.
11.500	0.5828	1.29	.	Q	.V	.	.	.
11.583	0.5910	1.19	.	Q	.V	.	.	.
11.667	0.5992	1.19	.	Q	.V	.	.	.
11.750	0.6074	1.19	.	Q	.V	.	.	.
11.833	0.6153	1.15	.	Q	.V	.	.	.
11.917	0.6232	1.15	.	Q	.V	.	.	.
12.000	0.6311	1.15	.	Q	.V	.	.	.
12.083	0.6419	1.56	.	Q	.V	.	.	.
12.167	0.6526	1.56	.	Q	.V	.	.	.
12.250	0.6634	1.56	.	Q	.V	.	.	.
12.333	0.6772	2.01	.	Q	.V	.	.	.
12.417	0.6911	2.01	.	Q	.V	.	.	.
12.500	0.7049	2.01	.	Q	.V	.	.	.
12.583	0.7205	2.27	.	Q.	.V.	.	.	.
12.667	0.7361	2.27	.	Q.	.V.	.	.	.
12.750	0.7517	2.27	.	Q.	.V.	.	.	.
12.833	0.7688	2.48	.	Q.	.V	.	.	.
12.917	0.7859	2.48	.	Q.	.V	.	.	.
13.000	0.8030	2.48	.	Q.	.V	.	.	.
13.083	0.8226	2.85	.	.Q	.V	.	.	.
13.167	0.8422	2.85	.	.Q	.V	.	.	.
13.250	0.8619	2.85	.	.Q	.V	.	.	.
13.333	0.8836	3.16	.	.Q	.V	.	.	.
13.417	0.9054	3.16	.	.Q	.V	.	.	.
13.500	0.9271	3.16	.	.Q	.V	.	.	.
13.583	0.9455	2.67	.	Q	.V	.	.	.
13.667	0.9639	2.67	.	Q	.V	.	.	.
13.750	0.9822	2.67	.	Q	.V	.	.	.
13.833	0.9967	2.10	.	Q	.V	.	.	.
13.917	1.0112	2.10	.	Q	.V	.	.	.
14.000	1.0257	2.10	.	Q	.V	.	.	.
14.083	1.0410	2.21	.	Q	.V	.	.	.
14.167	1.0562	2.21	.	Q	.V	.	.	.
14.250	1.0714	2.21	.	Q	.V	.	.	.
14.333	1.0876	2.35	.	Q.	.V	.	.	.
14.417	1.1037	2.35	.	Q.	.V	.	.	.
14.500	1.1199	2.35	.	Q.	.V.	.	.	.
14.583	1.1360	2.34	.	Q.	.V.	.	.	.
14.667	1.1521	2.34	.	Q.	.V	.	.	.
14.750	1.1682	2.34	.	Q.	.V	.	.	.
14.833	1.1840	2.30	.	Q.	.V	.	.	.
14.917	1.1999	2.30	.	Q.	.V	.	.	.
15.000	1.2157	2.30	.	Q.	.V	.	.	.
15.083	1.2309	2.21	.	Q	.V	.	.	.

15.167	1.2461	2.21	.	Q	.	.	V	.
15.250	1.2613	2.21	.	Q	.	.	V	.
15.333	1.2758	2.10	.	Q	.	.	V	.
15.417	1.2902	2.10	.	Q	.	.	V	.
15.500	1.3047	2.10	.	Q	.	.	V	.
15.583	1.3174	1.84	.	Q	.	.	V	.
15.667	1.3300	1.84	.	Q	.	.	V	.
15.750	1.3427	1.84	.	Q	.	.	V	.
15.833	1.3538	1.61	.	Q	.	.	V	.
15.917	1.3649	1.61	.	Q	.	.	V	.
16.000	1.3760	1.61	.	Q	.	.	V	.
16.083	1.3831	1.03	.	Q	.	.	V	.
16.167	1.3902	1.03	.	Q	.	.	V	.
16.250	1.3972	1.03	.	Q	.	.	V	.
16.333	1.4002	0.44	.Q	.	.	.	V	.
16.417	1.4033	0.44	.Q	.	.	.	V	.
16.500	1.4063	0.44	.Q	.	.	.	V	.
16.583	1.4083	0.29	.Q	.	.	.	V	.
16.667	1.4103	0.29	.Q	.	.	.	V	.
16.750	1.4123	0.29	.Q	.	.	.	V	.
16.833	1.4138	0.22	Q	.	.	.	V	.
16.917	1.4152	0.22	Q	.	.	.	V	.
17.000	1.4167	0.22	Q	.	.	.	V	.
17.083	1.4184	0.25	Q	.	.	.	V	.
17.167	1.4202	0.25	Q	.	.	.	V	.
17.250	1.4219	0.25	Q	.	.	.	V	.
17.333	1.4239	0.30	.Q	.	.	.	V	.
17.417	1.4260	0.30	.Q	.	.	.	V	.
17.500	1.4280	0.30	.Q	.	.	.	V	.
17.583	1.4301	0.30	.Q	.	.	.	V	.
17.667	1.4322	0.30	.Q	.	.	.	V	.
17.750	1.4343	0.30	.Q	.	.	.	V	.
17.833	1.4362	0.28	.Q	.	.	.	V	.
17.917	1.4382	0.28	.Q	.	.	.	V	.
18.000	1.4401	0.28	.Q	.	.	.	V	.
18.083	1.4419	0.26	.Q	.	.	.	V	.
18.167	1.4437	0.26	.Q	.	.	.	V	.
18.250	1.4454	0.26	.Q	.	.	.	V	.
18.333	1.4471	0.25	.Q	.	.	.	V	.
18.417	1.4489	0.25	.Q	.	.	.	V	.
18.500	1.4506	0.25	.Q	.	.	.	V	.
18.583	1.4521	0.22	Q	.	.	.	V	.
18.667	1.4537	0.22	Q	.	.	.	V	.
18.750	1.4552	0.22	Q	.	.	.	V	.
18.833	1.4564	0.17	Q	.	.	.	V	.
18.917	1.4575	0.17	Q	.	.	.	V	.
19.000	1.4587	0.17	Q	.	.	.	V	.
19.083	1.4598	0.16	Q	.	.	.	V	.
19.167	1.4609	0.16	Q	.	.	.	V	.
19.250	1.4621	0.16	Q	.	.	.	V	.
19.333	1.4635	0.21	Q	.	.	.	V	.
19.417	1.4649	0.21	Q	.	.	.	V	.
19.500	1.4663	0.21	Q	.	.	.	V	.
19.583	1.4678	0.21	Q	.	.	.	V	.
19.667	1.4693	0.21	Q	.	.	.	V	.
19.750	1.4707	0.21	Q	.	.	.	V	.
19.833	1.4718	0.17	Q	.	.	.	V	.
19.917	1.4730	0.17	Q	.	.	.	V	.
20.000	1.4741	0.17	Q	.	.	.	V	.
20.083	1.4752	0.16	Q	.	.	.	V	.
20.167	1.4763	0.16	Q	.	.	.	V	.
20.250	1.4774	0.16	Q	.	.	.	V	.
20.333	1.4787	0.18	Q	.	.	.	V	.

20.417	1.4799	0.18	Q	.	.	.	V .
20.500	1.4812	0.18	Q	.	.	.	V .
20.583	1.4825	0.18	Q	.	.	.	V .
20.667	1.4837	0.18	Q	.	.	.	V .
20.750	1.4850	0.18	Q	.	.	.	V .
20.833	1.4861	0.16	Q	.	.	.	V .
20.917	1.4872	0.16	Q	.	.	.	V .
21.000	1.4883	0.16	Q	.	.	.	V .
21.083	1.4894	0.16	Q	.	.	.	V .
21.167	1.4905	0.16	Q	.	.	.	V .
21.250	1.4916	0.16	Q	.	.	.	V .
21.333	1.4926	0.15	Q	.	.	.	V .
21.417	1.4937	0.15	Q	.	.	.	V .
21.500	1.4947	0.15	Q	.	.	.	V .
21.583	1.4958	0.16	Q	.	.	.	V .
21.667	1.4969	0.16	Q	.	.	.	V .
21.750	1.4980	0.16	Q	.	.	.	V .
21.833	1.4990	0.15	Q	.	.	.	V .
21.917	1.5001	0.15	Q	.	.	.	V .
22.000	1.5012	0.15	Q	.	.	.	V .
22.083	1.5022	0.16	Q	.	.	.	V .
22.167	1.5033	0.16	Q	.	.	.	V .
22.250	1.5044	0.16	Q	.	.	.	V .
22.333	1.5055	0.15	Q	.	.	.	V .
22.417	1.5065	0.15	Q	.	.	.	V .
22.500	1.5076	0.15	Q	.	.	.	V .
22.583	1.5085	0.13	Q	.	.	.	V .
22.667	1.5094	0.13	Q	.	.	.	V .
22.750	1.5103	0.13	Q	.	.	.	V .
22.833	1.5111	0.13	Q	.	.	.	V .
22.917	1.5120	0.13	Q	.	.	.	V .
23.000	1.5129	0.13	Q	.	.	.	V .
23.083	1.5137	0.12	Q	.	.	.	V .
23.166	1.5146	0.12	Q	.	.	.	V .
23.250	1.5155	0.12	Q	.	.	.	V .
23.333	1.5163	0.12	Q	.	.	.	V .
23.416	1.5172	0.12	Q	.	.	.	V .
23.500	1.5180	0.12	Q	.	.	.	V .
23.583	1.5189	0.12	Q	.	.	.	V .
23.666	1.5197	0.12	Q	.	.	.	V .
23.750	1.5206	0.12	Q	.	.	.	V .
23.833	1.5214	0.12	Q	.	.	.	V .
23.916	1.5223	0.12	Q	.	.	.	V .
24.000	1.5232	0.12	Q	.	.	.	V .
24.083	1.5236	0.07	Q	.	.	.	V .
24.166	1.5241	0.07	Q	.	.	.	V .
24.250	1.5246	0.07	Q	.	.	.	V .
24.333	1.5248	0.02	Q	.	.	.	V .
24.416	1.5249	0.02	Q	.	.	.	V .
24.500	1.5250	0.02	Q	.	.	.	V .
24.583	1.5250	0.01	Q	.	.	.	V .
24.666	1.5251	0.01	Q	.	.	.	V .
24.750	1.5251	0.01	Q	.	.	.	V .

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1485.0
10%	765.0

	B2_1024.RES
20%	540.0
30%	465.0
40%	330.0
50%	225.0
60%	195.0
70%	120.0
80%	45.0
90%	30.0

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S

ACCORDING TO RIVERSIDE COUNTY FLOOD CONTORL AND WATER CONSERVATION DISTRICT
(RCFC&WCD) 1978 HYDROLOGY MANUAL
(c) Copyright 1989-2011 Advanced Engineering Software (aes)
(Synthetic Unit Hydrograph Version 18.0)
Release Date: 05/01/2011 License ID 1499

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* UHS Inland Valley *
* Proposed Conditions, B-2 *
* 100-year, 24-hour *

FILE NAME: B2.DAT
TIME/DATE OF STUDY: 16:09 03/29/2021

FLOW PROCESS FROM NODE 194.00 TO NODE 162.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 7.790 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
Warning: Watershed Area is less than 10 acres
*USER ENTERED "LAG" TIME = 0.130 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY S-GRAPH SELECTED
UNIFORM MEAN SOIL-LOSS(INCH/HOUR) = 0.140
LOW SOIL-LOSS RATE PERCENT(DECIMAL) = 0.500
MINIMUM SOIL-LOSS RATE(INCH/HOUR) = 0.070
USER-ENTERED RAINFALL = 6.32 INCHES
RCFC&WCD 24-Hour Storm (15-Minute period) SELECTED
*USER SPECIFIED PRECIPITATION DEPTH-AREA ADJUSTMENT FACTOR = 1.0000

UNIT HYDROGRAPH TIME UNIT = 15.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 192.308

UNIT HYDROGRAPH DETERMINATION

INTERVAL "S" GRAPH UNIT HYDROGRAPH
NUMBER MEAN VALUES ORDINATES(CFS)

1	41.910	13.161
2	85.945	13.828
3	95.015	2.848
4	98.409	1.066
5	99.464	0.331
6	99.786	0.101
7	99.946	0.051
8	100.000	0.017



UNIT PERIOD (NUMBER)	UNIT RAINFALL (INCHES)	UNIT SOIL-LOSS (INCHES)	EFFECTIVE RAINFALL (INCHES)
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1	0.0126	0.0063	0.0063
2	0.0190	0.0095	0.0095
3	0.0190	0.0095	0.0095
4	0.0253	0.0126	0.0126
5	0.0190	0.0095	0.0095
6	0.0190	0.0095	0.0095
7	0.0190	0.0095	0.0095
8	0.0253	0.0126	0.0126
9	0.0253	0.0126	0.0126
10	0.0253	0.0126	0.0126
11	0.0316	0.0158	0.0158
12	0.0316	0.0158	0.0158
13	0.0316	0.0158	0.0158
14	0.0316	0.0158	0.0158
15	0.0316	0.0158	0.0158
16	0.0379	0.0190	0.0190
17	0.0379	0.0190	0.0190
18	0.0442	0.0221	0.0221
19	0.0442	0.0221	0.0221
20	0.0506	0.0253	0.0253
21	0.0379	0.0190	0.0190
22	0.0442	0.0221	0.0221
23	0.0506	0.0253	0.0253
24	0.0506	0.0253	0.0253
25	0.0569	0.0284	0.0284
26	0.0569	0.0284	0.0284
27	0.0632	0.0316	0.0316
28	0.0632	0.0316	0.0316
29	0.0632	0.0316	0.0316
30	0.0695	0.0348	0.0348
31	0.0758	0.0379	0.0379
32	0.0822	0.0411	0.0411
33	0.0948	0.0410	0.0538
34	0.0948	0.0405	0.0543
35	0.1011	0.0399	0.0612
36	0.1074	0.0393	0.0681
37	0.1201	0.0388	0.0813
38	0.1264	0.0382	0.0882
39	0.1327	0.0377	0.0950
40	0.1390	0.0371	0.1019
41	0.0948	0.0366	0.0582
42	0.0948	0.0361	0.0587
43	0.1264	0.0355	0.0909
44	0.1264	0.0350	0.0914
45	0.1201	0.0345	0.0856
46	0.1201	0.0340	0.0861

47	0.1074	0.0335	0.0739
48	0.1138	0.0330	0.0808
49	0.1580	0.0325	0.1255
50	0.1643	0.0320	0.1323
51	0.1770	0.0315	0.1454
52	0.1833	0.0311	0.1522
53	0.2149	0.0306	0.1843
54	0.2149	0.0301	0.1847
55	0.1454	0.0297	0.1157
56	0.1454	0.0292	0.1161
57	0.1706	0.0288	0.1419
58	0.1643	0.0283	0.1360
59	0.1643	0.0279	0.1364
60	0.1580	0.0275	0.1305
61	0.1517	0.0271	0.1246
62	0.1454	0.0266	0.1187
63	0.1201	0.0262	0.0938
64	0.1201	0.0258	0.0942
65	0.0253	0.0126	0.0126
66	0.0253	0.0126	0.0126
67	0.0190	0.0095	0.0095
68	0.0190	0.0095	0.0095
69	0.0316	0.0158	0.0158
70	0.0316	0.0158	0.0158
71	0.0316	0.0158	0.0158
72	0.0253	0.0126	0.0126
73	0.0253	0.0126	0.0126
74	0.0253	0.0126	0.0126
75	0.0190	0.0095	0.0095
76	0.0126	0.0063	0.0063
77	0.0190	0.0095	0.0095
78	0.0253	0.0126	0.0126
79	0.0190	0.0095	0.0095
80	0.0126	0.0063	0.0063
81	0.0190	0.0095	0.0095
82	0.0190	0.0095	0.0095
83	0.0190	0.0095	0.0095
84	0.0126	0.0063	0.0063
85	0.0190	0.0095	0.0095
86	0.0126	0.0063	0.0063
87	0.0190	0.0095	0.0095
88	0.0126	0.0063	0.0063
89	0.0190	0.0095	0.0095
90	0.0126	0.0063	0.0063
91	0.0126	0.0063	0.0063
92	0.0126	0.0063	0.0063
93	0.0126	0.0063	0.0063
94	0.0126	0.0063	0.0063
95	0.0126	0.0063	0.0063
96	0.0126	0.0063	0.0063

TOTAL STORM RAINFALL(INCHES) = 6.32
 TOTAL SOIL-LOSS(INCHES) = 2.01
 TOTAL EFFECTIVE RAINFALL(INCHES) = 4.31

 TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1.3029
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 2.7984

B2_10024.RES
R U N O F F H Y D R O G R A P H

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	θ.	2.5	5.0	7.5	10.0
0.083	0.0006	0.08	Q	.	.	.	.
0.167	0.0011	0.08	Q	.	.	.	.
0.250	0.0017	0.08	Q	.	.	.	.
0.333	0.0032	0.21	Q	.	.	.	.
0.417	0.0046	0.21	Q	.	.	.	.
0.500	0.0061	0.21	Q	.	.	.	.
0.583	0.0080	0.27	VQ	.	.	.	.
0.667	0.0099	0.27	VQ	.	.	.	.
0.750	0.0118	0.27	VQ	.	.	.	.
0.833	0.0140	0.33	VQ	.	.	.	.
0.917	0.0163	0.33	VQ	.	.	.	.
1.000	0.0186	0.33	VQ	.	.	.	.
1.083	0.0209	0.34	VQ	.	.	.	.
1.167	0.0233	0.34	VQ	.	.	.	.
1.250	0.0256	0.34	VQ	.	.	.	.
1.333	0.0277	0.31	VQ	.	.	.	.
1.417	0.0298	0.31	VQ	.	.	.	.
1.500	0.0319	0.31	VQ	.	.	.	.
1.583	0.0340	0.30	VQ	.	.	.	.
1.667	0.0361	0.30	VQ	.	.	.	.
1.750	0.0381	0.30	VQ	.	.	.	.
1.833	0.0405	0.34	VQ	.	.	.	.
1.917	0.0428	0.34	VQ	.	.	.	.
2.000	0.0452	0.34	VQ	.	.	.	.
2.083	0.0478	0.38	VQ	.	.	.	.
2.167	0.0504	0.38	VQ	.	.	.	.
2.250	0.0531	0.38	VQ	.	.	.	.
2.333	0.0558	0.39	VQ	.	.	.	.
2.417	0.0585	0.39	VQ	.	.	.	.
2.500	0.0612	0.39	VQ	.	.	.	.
2.583	0.0642	0.44	VQ	.	.	.	.
2.667	0.0672	0.44	VQ	.	.	.	.
2.750	0.0702	0.44	Q	.	.	.	.
2.833	0.0735	0.48	.Q	.	.	.	.
2.917	0.0769	0.48	.Q	.	.	.	.
3.000	0.0802	0.48	.Q	.	.	.	.
3.083	0.0835	0.49	.Q	.	.	.	.
3.167	0.0869	0.49	.Q	.	.	.	.
3.250	0.0903	0.49	.Q	.	.	.	.
3.333	0.0937	0.49	.Q	.	.	.	.
3.417	0.0971	0.49	.Q	.	.	.	.
3.500	0.1005	0.49	.Q	.	.	.	.
3.583	0.1039	0.50	.Q	.	.	.	.
3.667	0.1074	0.50	.Q	.	.	.	.
3.750	0.1108	0.50	.Q	.	.	.	.
3.833	0.1145	0.54	.VQ	.	.	.	.
3.917	0.1182	0.54	.VQ	.	.	.	.
4.000	0.1219	0.54	.VQ	.	.	.	.
4.083	0.1259	0.58	.VQ	.	.	.	.
4.167	0.1299	0.58	.VQ	.	.	.	.
4.250	0.1339	0.58	.VQ	.	.	.	.
4.333	0.1382	0.63	.VQ	.	.	.	.
4.417	0.1426	0.63	. Q	.	.	.	.
4.500	0.1469	0.63	. Q	.	.	.	.
4.583	0.1516	0.68	. Q	.	.	.	.

4.667	0.1563	0.68	. Q	.	.	.	.
4.750	0.1610	0.68	. Q	.	.	.	.
4.833	0.1660	0.73	. Q	.	.	.	.
4.917	0.1710	0.73	. Q	.	.	.	.
5.000	0.1761	0.73	. Q	.	.	.	.
5.083	0.1809	0.69	. Q	.	.	.	.
5.167	0.1857	0.69	. Q	.	.	.	.
5.250	0.1904	0.69	. Q	.	.	.	.
5.333	0.1950	0.66	. Q	.	.	.	.
5.417	0.1995	0.66	. Q	.	.	.	.
5.500	0.2041	0.66	. Q	.	.	.	.
5.583	0.2091	0.73	. Q	.	.	.	.
5.667	0.2141	0.73	. QV	.	.	.	.
5.750	0.2192	0.73	. QV	.	.	.	.
5.833	0.2245	0.78	. Q	.	.	.	.
5.917	0.2299	0.78	. Q	.	.	.	.
6.000	0.2352	0.78	. Q	.	.	.	.
6.083	0.2409	0.83	. Q	.	.	.	.
6.167	0.2466	0.83	. Q	.	.	.	.
6.250	0.2524	0.83	. Q	.	.	.	.
6.333	0.2584	0.88	. Q	.	.	.	.
6.417	0.2644	0.88	. Q	.	.	.	.
6.500	0.2705	0.88	. Q	.	.	.	.
6.583	0.2769	0.93	. Q	.	.	.	.
6.667	0.2833	0.93	. QV	.	.	.	.
6.750	0.2897	0.93	. QV	.	.	.	.
6.833	0.2964	0.98	. QV	.	.	.	.
6.917	0.3031	0.98	. QV	.	.	.	.
7.000	0.3099	0.98	. QV	.	.	.	.
7.083	0.3167	0.99	. QV	.	.	.	.
7.167	0.3235	0.99	. QV	.	.	.	.
7.250	0.3303	0.99	. QV	.	.	.	.
7.333	0.3374	1.03	. Q	.	.	.	.
7.417	0.3445	1.03	. Q	.	.	.	.
7.500	0.3516	1.03	. QV	.	.	.	.
7.583	0.3593	1.12	. QV	.	.	.	.
7.667	0.3670	1.12	. QV	.	.	.	.
7.750	0.3747	1.12	. QV	.	.	.	.
7.833	0.3830	1.21	. QV	.	.	.	.
7.917	0.3914	1.21	. QV	.	.	.	.
8.000	0.3998	1.21	. QV	.	.	.	.
8.083	0.4097	1.44	. Q	.	.	.	.
8.167	0.4195	1.44	. Q	.	.	.	.
8.250	0.4294	1.44	. QV	.	.	.	.
8.333	0.4407	1.63	. Q	.	.	.	.
8.417	0.4519	1.63	. Q	.	.	.	.
8.500	0.4632	1.63	. Q	.	.	.	.
8.583	0.4754	1.77	. VQ	.	.	.	.
8.667	0.4876	1.77	. VQ	.	.	.	.
8.750	0.4998	1.77	. Q	.	.	.	.
8.833	0.5134	1.97	. Q	.	.	.	.
8.917	0.5270	1.97	. Q	.	.	.	.
9.000	0.5406	1.97	. Q	.	.	.	.
9.083	0.5562	2.27	. V Q.	.	.	.	.
9.167	0.5718	2.27	. VQ.	.	.	.	.
9.250	0.5875	2.27	. VQ.	.	.	.	.
9.333	0.6052	2.57	. V Q	.	.	.	.
9.417	0.6229	2.57	. V Q	.	.	.	.
9.500	0.6406	2.57	. VQ	.	.	.	.
9.583	0.6599	2.80	. V.Q	.	.	.	.
9.667	0.6792	2.80	. V.Q	.	.	.	.
9.750	0.6985	2.80	. V.Q	.	.	.	.
9.833	0.7193	3.03	. V Q	.	.	.	.

9.917	0.7402	3.03	.	V	Q	.	.	.
10.000	0.7610	3.03	.	V	Q	.	.	.
10.083	0.7787	2.58	.	QV	.	.	.	.
10.167	0.7965	2.58	.	QV	.	.	.	.
10.250	0.8143	2.58	.	QV	.	.	.	.
10.333	0.8281	2.01	.	Q	.V	.	.	.
10.417	0.8420	2.01	.	Q	.V	.	.	.
10.500	0.8558	2.01	.	Q	.V	.	.	.
10.583	0.8718	2.33	.	Q.	V	.	.	.
10.667	0.8879	2.33	.	Q.	V	.	.	.
10.750	0.9039	2.33	.	Q.	V	.	.	.
10.833	0.9228	2.74	.	Q	V	.	.	.
10.917	0.9416	2.74	.	Q	V	.	.	.
11.000	0.9605	2.74	.	Q	V	.	.	.
11.083	0.9794	2.75	.	Q	V	.	.	.
11.167	0.9983	2.75	.	Q	V	.	.	.
11.250	1.0172	2.75	.	Q	V	.	.	.
11.333	1.0358	2.71	.	Q	V	.	.	.
11.417	1.0545	2.71	.	Q	V	.	.	.
11.500	1.0731	2.71	.	Q	V	.	.	.
11.583	1.0906	2.55	.	Q	V	.	.	.
11.667	1.1082	2.55	.	Q	V	.	.	.
11.750	1.1257	2.55	.	Q	V	.	.	.
11.833	1.1427	2.47	.	Q.	V	.	.	.
11.917	1.1597	2.47	.	Q.	V	.	.	.
12.000	1.1766	2.47	.	Q.	V	.	.	.
12.083	1.1981	3.11	.	.	Q	V	.	.
12.167	1.2195	3.11	.	.	Q	V	.	.
12.250	1.2410	3.11	.	.	Q	V	.	.
12.333	1.2673	3.83	.	.	Q	V	.	.
12.417	1.2937	3.83	.	.	Q	V	.	.
12.500	1.3201	3.83	.	.	Q	V	.	.
12.583	1.3492	4.23	.	.	Q	V.	.	.
12.667	1.3783	4.23	.	.	Q	V.	.	.
12.750	1.4074	4.23	.	.	Q	V	.	.
12.833	1.4388	4.56	.	.	Q	V	.	.
12.917	1.4703	4.56	.	.	Q	V	.	.
13.000	1.5017	4.56	.	.	Q	V	.	.
13.083	1.5371	5.14	.	.	QV	.	.	.
13.167	1.5725	5.14	.	.	Q	V	.	.
13.250	1.6079	5.14	.	.	Q	V	.	.
13.333	1.6467	5.63	.	.	.	QV	.	.
13.417	1.6855	5.63	.	.	.	Q	V	.
13.500	1.7242	5.63	.	.	.	Q	V	.
13.583	1.7575	4.83	.	.	Q.	V	.	.
13.667	1.7908	4.83	.	.	Q.	V	.	.
13.750	1.8241	4.83	.	.	Q.	V	.	.
13.833	1.8511	3.92	.	.	Q	.	V	.
13.917	1.8782	3.92	.	.	Q	.	V	.
14.000	1.9052	3.92	.	.	Q	.	V	.
14.083	1.9333	4.09	.	.	Q	.	V	.
14.167	1.9615	4.09	.	.	Q	.	V	.
14.250	1.9896	4.09	.	.	Q	.	V	.
14.333	2.0192	4.30	.	.	Q	.	V	.
14.417	2.0488	4.30	.	.	Q	.	V.	.
14.500	2.0784	4.30	.	.	Q	.	V.	.
14.583	2.1078	4.27	.	.	Q	.	V	.
14.667	2.1372	4.27	.	.	Q	.	V	.
14.750	2.1666	4.27	.	.	Q	.	V	.
14.833	2.1956	4.21	.	.	Q	.	.V	.
14.917	2.2246	4.21	.	.	Q	.	.V	.
15.000	2.2535	4.21	.	.	Q	.	.V	.
15.083	2.2814	4.05	.	.	Q	.	.V	.

15.167	2.3093	4.05	.	.	Q	.	.	V	.
15.250	2.3371	4.05	.	.	Q	.	.	V	.
15.333	2.3638	3.87	.	.	Q	.	.	V	.
15.417	2.3904	3.87	.	.	Q	.	.	V	.
15.500	2.4171	3.87	.	.	Q	.	.	V	.
15.583	2.4408	3.44	.	.	Q	.	.	V	.
15.667	2.4645	3.44	.	.	Q	.	.	V	.
15.750	2.4881	3.44	.	.	Q	.	.	V	.
15.833	2.5093	3.08	.	.	Q	.	.	V	.
15.917	2.5305	3.08	.	.	Q	.	.	V	.
16.000	2.5517	3.08	.	.	Q	.	.	V	.
16.083	2.5650	1.93	.	Q	.	.	.	V	.
16.167	2.5782	1.93	.	Q	.	.	.	V	.
16.250	2.5915	1.93	.	Q	.	.	.	V	.
16.333	2.5968	0.77	.	Q	.	.	.	V	.
16.417	2.6021	0.77	.	Q	.	.	.	V	.
16.500	2.6074	0.77	.	Q	.	.	.	V	.
16.583	2.6108	0.49	.	Q	.	.	.	V	.
16.667	2.6141	0.49	.	Q	.	.	.	V	.
16.750	2.6175	0.49	.	Q	.	.	.	V	.
16.833	2.6199	0.35	.	Q	.	.	.	V	.
16.917	2.6224	0.35	.	Q	.	.	.	V	.
17.000	2.6248	0.35	.	Q	.	.	.	V	.
17.083	2.6276	0.40	.	Q	.	.	.	V	.
17.167	2.6303	0.40	.	Q	.	.	.	V	.
17.250	2.6331	0.40	.	Q	.	.	.	V	.
17.333	2.6363	0.48	.	Q	.	.	.	V	.
17.417	2.6396	0.48	.	Q	.	.	.	V	.
17.500	2.6429	0.48	.	Q	.	.	.	V	.
17.583	2.6463	0.49	.	Q	.	.	.	V	.
17.667	2.6496	0.49	.	Q	.	.	.	V	.
17.750	2.6530	0.49	.	Q	.	.	.	V	.
17.833	2.6561	0.45	.	Q	.	.	.	V	.
17.917	2.6592	0.45	.	Q	.	.	.	V	.
18.000	2.6623	0.45	.	Q	.	.	.	V	.
18.083	2.6651	0.41	.	Q	.	.	.	V	.
18.167	2.6680	0.41	.	Q	.	.	.	V	.
18.250	2.6708	0.41	.	Q	.	.	.	V	.
18.333	2.6735	0.40	.	Q	.	.	.	V	.
18.417	2.6763	0.40	.	Q	.	.	.	V	.
18.500	2.6791	0.40	.	Q	.	.	.	V	.
18.583	2.6815	0.36	.	Q	.	.	.	V	.
18.667	2.6840	0.36	.	Q	.	.	.	V	.
18.750	2.6864	0.36	.	Q	.	.	.	V	.
18.833	2.6883	0.27	.	Q	.	.	.	V	.
18.917	2.6902	0.27	.	Q	.	.	.	V	.
19.000	2.6920	0.27	.	Q	.	.	.	V	.
19.083	2.6938	0.26	.	Q	.	.	.	V	.
19.167	2.6956	0.26	.	Q	.	.	.	V	.
19.250	2.6974	0.26	.	Q	.	.	.	V	.
19.333	2.6997	0.33	.	Q	.	.	.	V	.
19.417	2.7020	0.33	.	Q	.	.	.	V	.
19.500	2.7042	0.33	.	Q	.	.	.	V	.
19.583	2.7066	0.34	.	Q	.	.	.	V	.
19.667	2.7089	0.34	.	Q	.	.	.	V	.
19.750	2.7112	0.34	.	Q	.	.	.	V	.
19.833	2.7131	0.26	.	Q	.	.	.	V	.
19.917	2.7149	0.26	.	Q	.	.	.	V	.
20.000	2.7167	0.26	.	Q	.	.	.	V	.
20.083	2.7185	0.26	.	Q	.	.	.	V	.
20.167	2.7202	0.26	.	Q	.	.	.	V	.
20.250	2.7220	0.26	.	Q	.	.	.	V	.
20.333	2.7240	0.29	.	Q	.	.	.	V	.

20.417	2.7260	0.29	.Q	.	.	.	V	.
20.500	2.7280	0.29	.Q	.	.	.	V	.
20.583	2.7300	0.29	.Q	.	.	.	V	.
20.667	2.7321	0.29	.Q	.	.	.	V	.
20.750	2.7341	0.29	.Q	.	.	.	V	.
20.833	2.7358	0.26	.Q	.	.	.	V	.
20.917	2.7376	0.26	.Q	.	.	.	V	.
21.000	2.7394	0.26	.Q	.	.	.	V	.
21.083	2.7411	0.25	.Q	.	.	.	V	.
21.167	2.7429	0.25	.Q	.	.	.	V	.
21.250	2.7446	0.25	.Q	.	.	.	V	.
21.333	2.7463	0.25	Q	.	.	.	V	.
21.417	2.7480	0.25	Q	.	.	.	V	.
21.500	2.7497	0.25	Q	.	.	.	V	.
21.583	2.7514	0.25	.Q	.	.	.	V	.
21.667	2.7532	0.25	.Q	.	.	.	V	.
21.750	2.7549	0.25	.Q	.	.	.	V	.
21.833	2.7566	0.25	Q	.	.	.	V	.
21.917	2.7583	0.25	Q	.	.	.	V	.
22.000	2.7600	0.25	Q	.	.	.	V	.
22.083	2.7617	0.25	.Q	.	.	.	V	.
22.167	2.7634	0.25	.Q	.	.	.	V	.
22.250	2.7651	0.25	.Q	.	.	.	V	.
22.333	2.7668	0.25	Q	.	.	.	V	.
22.417	2.7685	0.25	Q	.	.	.	V	.
22.500	2.7702	0.25	Q	.	.	.	V	.
22.583	2.7717	0.21	Q	.	.	.	V	.
22.667	2.7731	0.21	Q	.	.	.	V	.
22.750	2.7745	0.21	Q	.	.	.	V	.
22.833	2.7759	0.20	Q	.	.	.	V	.
22.917	2.7773	0.20	Q	.	.	.	V	.
23.000	2.7787	0.20	Q	.	.	.	V	.
23.083	2.7801	0.20	Q	.	.	.	V	.
23.166	2.7815	0.20	Q	.	.	.	V	.
23.250	2.7828	0.20	Q	.	.	.	V	.
23.333	2.7842	0.20	Q	.	.	.	V	.
23.416	2.7856	0.20	Q	.	.	.	V	.
23.500	2.7869	0.20	Q	.	.	.	V	.
23.583	2.7883	0.20	Q	.	.	.	V	.
23.666	2.7897	0.20	Q	.	.	.	V	.
23.750	2.7910	0.20	Q	.	.	.	V	.
23.833	2.7924	0.20	Q	.	.	.	V	.
23.916	2.7938	0.20	Q	.	.	.	V	.
24.000	2.7951	0.20	Q	.	.	.	V	.
24.083	2.7959	0.12	Q	.	.	.	V	.
24.166	2.7967	0.12	Q	.	.	.	V	.
24.250	2.7975	0.12	Q	.	.	.	V	.
24.333	2.7977	0.03	Q	.	.	.	V	.
24.416	2.7979	0.03	Q	.	.	.	V	.
24.500	2.7981	0.03	Q	.	.	.	V	.
24.583	2.7982	0.01	Q	.	.	.	V	.
24.666	2.7982	0.01	Q	.	.	.	V	.
24.750	2.7983	0.01	Q	.	.	.	V	.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1485.0
10%	750.0

	B2_10024.RES
20%	510.0
30%	465.0
40%	405.0
50%	255.0
60%	210.0
70%	150.0
80%	60.0
90%	30.0

=====

END OF FLOODSCx ROUTING ANALYSIS

APPENDIX E: PONDPACK DETENTION CALCULATIONS

Project Summary

Title	UHS Inland Valley - 10yr, 1-hr
Engineer	
Company	Kimley-Horn and Associates, Inc.
Date	12/10/2020

Notes	<ol style="list-style-type: none">1. Inflow hydrographs calculated based on Synthetic Unit Hydrograph Method from Riverside County Flood Control and Water Conservation District Hydrology Manual (April 1978) using AES software.2. Flow-through basin analysis completed using modified Pul's (storage indication routing).
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Subsection: User Notifications

User Notifications

Message Id	43
Scenario	Base
Element Type	Pond
Element Id	35
Label	Det-B2
Time	(N/A)
Message	Outflow > 0 for first rating table elevation.
Source	Warning

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)
B-2	Base	0	21,096.000	55.000	10.75000
B-3	Base	0	11,096.000	55.000	5.96000

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)
Outfall B-2	Base	0	21,093.000	96.000	0.45728
Outfall B-3	Base	0	2,353.000	108.000	0.02886

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft ³)
Det-B2 (IN)	Base	0	21,073.000	54.000	10.17200	(N/A)	(N/A)
Det-B2 (OUT)	Base	0	21,093.000	96.000	0.45728	1,319.202	18,305.000
Det-B3 (IN)	Base	0	12,025.000	54.000	5.68400	(N/A)	(N/A)
Det-B3 (OUT)	Base	0	2,353.000	108.000	0.02886	1,321.003	10,945.000

Subsection: Read Hydrograph
 Label: B-2

Scenario: Base

Peak Discharge	10.75000 ft ³ /s
Time to Peak	55.000 min
Hydrograph Volume	21,096.000 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 5.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.00000	0.28000	1.45000	2.33000	2.82000
25.000	3.25000	3.64000	4.16000	4.81000	5.66000
50.000	7.86000	10.75000	8.52000	5.54000	3.24000
75.000	1.92000	1.32000	0.95000	0.69000	0.49000
100.000	0.32000	0.23000	0.18000	(N/A)	(N/A)

Subsection: Read Hydrograph
 Label: B-3

Scenario: Base

Peak Discharge	5.96000 ft ³ /s
Time to Peak	55.000 min
Hydrograph Volume	11,095.500 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 5.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.00000	0.24000	1.03000	1.42000	1.66000
25.000	1.88000	2.08000	2.37000	2.71000	3.18000
50.000	4.58000	5.96000	3.98000	2.57000	1.30000
75.000	0.75000	0.49000	0.31000	0.19000	0.13000
100.000	0.08000	0.05000	0.02000	0.01000	(N/A)

Subsection: Addition Summary
Label: Outfall B-2

Scenario: Base

Summary for Hydrograph Addition at 'Outfall B-2'

Upstream Link	Upstream Node
Outlet-2	Det-B2

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	Outlet-2	21,092.954	96.000	0.45728
Flow (In)	Outfall B-2	21,092.954	96.000	0.45728

Subsection: Addition Summary
Label: Outfall B-3

Scenario: Base

Summary for Hydrograph Addition at 'Outfall B-3'

Upstream Link	Upstream Node
Outlet-4	Det-B3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	Outlet-4	2,353.372	108.000	0.02886
Flow (In)	Outfall B-3	2,353.372	108.000	0.02886

Subsection: Time vs. Elevation
 Label: Det-B2 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,318.000	1,318.000	1,318.000	1,318.008	1,318.022
15.000	1,318.043	1,318.068	1,318.098	1,318.131	1,318.167
30.000	1,318.207	1,318.249	1,318.296	1,318.347	1,318.404
45.000	1,318.467	1,318.538	1,318.622	1,318.724	1,318.833
60.000	1,318.934	1,319.015	1,319.072	1,319.113	1,319.142
75.000	1,319.161	1,319.174	1,319.184	1,319.191	1,319.196
90.000	1,319.200	1,319.202	1,319.202	1,319.202	1,319.200
105.000	1,319.198	1,319.195	1,319.192	1,319.187	1,319.182
120.000	1,319.177	1,319.173	1,319.168	1,319.163	1,319.158
135.000	1,319.154	1,319.149	1,319.144	1,319.139	1,319.134
150.000	1,319.130	1,319.125	1,319.120	1,319.115	1,319.111
165.000	1,319.106	1,319.101	1,319.096	1,319.092	1,319.087
180.000	1,319.082	1,319.077	1,319.073	1,319.068	1,319.063
195.000	1,319.058	1,319.053	1,319.049	1,319.044	1,319.039
210.000	1,319.034	1,319.030	1,319.025	1,319.020	1,319.015
225.000	1,319.011	1,319.006	1,319.001	1,318.996	1,318.991
240.000	1,318.986	1,318.980	1,318.975	1,318.970	1,318.965
255.000	1,318.960	1,318.954	1,318.949	1,318.944	1,318.939
270.000	1,318.934	1,318.928	1,318.923	1,318.918	1,318.913
285.000	1,318.908	1,318.903	1,318.897	1,318.892	1,318.887
300.000	1,318.882	1,318.877	1,318.872	1,318.866	1,318.861
315.000	1,318.856	1,318.851	1,318.846	1,318.841	1,318.835
330.000	1,318.830	1,318.825	1,318.820	1,318.815	1,318.810
345.000	1,318.805	1,318.799	1,318.794	1,318.789	1,318.784
360.000	1,318.779	1,318.774	1,318.769	1,318.764	1,318.758
375.000	1,318.753	1,318.748	1,318.743	1,318.738	1,318.733
390.000	1,318.728	1,318.723	1,318.718	1,318.713	1,318.707
405.000	1,318.702	1,318.697	1,318.692	1,318.687	1,318.682
420.000	1,318.677	1,318.672	1,318.667	1,318.662	1,318.656
435.000	1,318.651	1,318.646	1,318.641	1,318.636	1,318.631
450.000	1,318.626	1,318.621	1,318.616	1,318.611	1,318.606
465.000	1,318.601	1,318.596	1,318.591	1,318.586	1,318.581
480.000	1,318.576	1,318.571	1,318.566	1,318.560	1,318.555
495.000	1,318.550	1,318.545	1,318.540	1,318.535	1,318.530
510.000	1,318.525	1,318.520	1,318.515	1,318.510	1,318.505
525.000	1,318.500	1,318.495	1,318.489	1,318.484	1,318.478
540.000	1,318.473	1,318.467	1,318.461	1,318.456	1,318.450
555.000	1,318.445	1,318.439	1,318.434	1,318.428	1,318.423
570.000	1,318.417	1,318.411	1,318.406	1,318.400	1,318.395
585.000	1,318.389	1,318.384	1,318.378	1,318.373	1,318.367
600.000	1,318.362	1,318.356	1,318.351	1,318.345	1,318.339
615.000	1,318.334	1,318.328	1,318.323	1,318.317	1,318.312
630.000	1,318.306	1,318.301	1,318.295	1,318.290	1,318.284

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
645.000	1,318.278	1,318.273	1,318.267	1,318.262	1,318.256
660.000	1,318.251	1,318.245	1,318.240	1,318.234	1,318.229
675.000	1,318.223	1,318.218	1,318.212	1,318.206	1,318.201
690.000	1,318.195	1,318.190	1,318.184	1,318.179	1,318.173
705.000	1,318.168	1,318.162	1,318.156	1,318.151	1,318.145
720.000	1,318.140	1,318.134	1,318.129	1,318.123	1,318.118
735.000	1,318.112	1,318.107	1,318.101	1,318.096	1,318.090
750.000	1,318.084	1,318.079	1,318.073	1,318.068	1,318.062
765.000	1,318.057	1,318.051	1,318.046	1,318.040	1,318.035
780.000	1,318.029	1,318.023	1,318.018	1,318.012	1,318.007
795.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
810.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
825.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
840.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
855.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
870.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
885.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
900.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
915.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
930.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
945.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
960.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
975.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
990.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,005.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,020.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,035.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,050.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,065.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,080.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,095.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,110.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,125.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,140.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,155.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,170.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,185.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,200.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,215.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,230.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,245.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,260.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,275.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000

Subsection: Time vs. Elevation
Label: Det-B2 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,290.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,305.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,320.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,335.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,350.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,365.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,380.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,395.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,410.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,425.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,440.000	1,318.000	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,319.740	1,319.741	1,319.747	1,319.760	1,319.782
15.000	1,319.809	1,319.840	1,319.874	1,319.910	1,319.949
30.000	1,319.991	1,320.036	1,320.085	1,320.137	1,320.194
45.000	1,320.257	1,320.332	1,320.423	1,320.532	1,320.645
60.000	1,320.739	1,320.813	1,320.869	1,320.908	1,320.935
75.000	1,320.953	1,320.967	1,320.977	1,320.985	1,320.991
90.000	1,320.995	1,320.998	1,321.000	1,321.001	1,321.002
105.000	1,321.003	1,321.003	1,321.003	1,321.003	1,321.003
120.000	1,321.002	1,321.002	1,321.002	1,321.001	1,321.001
135.000	1,321.001	1,321.000	1,321.000	1,321.000	1,320.999
150.000	1,320.999	1,320.998	1,320.998	1,320.998	1,320.997
165.000	1,320.997	1,320.997	1,320.996	1,320.996	1,320.996
180.000	1,320.995	1,320.995	1,320.995	1,320.994	1,320.994
195.000	1,320.994	1,320.993	1,320.993	1,320.993	1,320.992
210.000	1,320.992	1,320.991	1,320.991	1,320.991	1,320.990
225.000	1,320.990	1,320.990	1,320.989	1,320.989	1,320.989
240.000	1,320.988	1,320.988	1,320.988	1,320.987	1,320.987
255.000	1,320.987	1,320.986	1,320.986	1,320.986	1,320.985
270.000	1,320.985	1,320.985	1,320.984	1,320.984	1,320.984
285.000	1,320.983	1,320.983	1,320.983	1,320.982	1,320.982
300.000	1,320.981	1,320.981	1,320.981	1,320.980	1,320.980
315.000	1,320.980	1,320.979	1,320.979	1,320.979	1,320.978
330.000	1,320.978	1,320.978	1,320.977	1,320.977	1,320.977
345.000	1,320.976	1,320.976	1,320.976	1,320.975	1,320.975
360.000	1,320.975	1,320.974	1,320.974	1,320.974	1,320.973
375.000	1,320.973	1,320.973	1,320.972	1,320.972	1,320.972
390.000	1,320.971	1,320.971	1,320.970	1,320.970	1,320.970
405.000	1,320.969	1,320.969	1,320.969	1,320.968	1,320.968
420.000	1,320.968	1,320.967	1,320.967	1,320.967	1,320.966
435.000	1,320.966	1,320.966	1,320.965	1,320.965	1,320.965
450.000	1,320.964	1,320.964	1,320.964	1,320.963	1,320.963
465.000	1,320.963	1,320.962	1,320.962	1,320.962	1,320.961
480.000	1,320.961	1,320.961	1,320.960	1,320.960	1,320.960
495.000	1,320.959	1,320.959	1,320.958	1,320.958	1,320.958
510.000	1,320.958	1,320.957	1,320.957	1,320.957	1,320.956
525.000	1,320.956	1,320.955	1,320.955	1,320.955	1,320.954
540.000	1,320.954	1,320.954	1,320.953	1,320.953	1,320.953
555.000	1,320.953	1,320.952	1,320.952	1,320.951	1,320.951
570.000	1,320.951	1,320.950	1,320.950	1,320.950	1,320.949
585.000	1,320.949	1,320.949	1,320.948	1,320.948	1,320.948
600.000	1,320.947	1,320.947	1,320.947	1,320.946	1,320.946
615.000	1,320.946	1,320.945	1,320.945	1,320.945	1,320.944
630.000	1,320.944	1,320.944	1,320.943	1,320.943	1,320.943

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
645.000	1,320.942	1,320.942	1,320.942	1,320.941	1,320.941
660.000	1,320.941	1,320.940	1,320.940	1,320.940	1,320.939
675.000	1,320.939	1,320.939	1,320.938	1,320.938	1,320.938
690.000	1,320.937	1,320.937	1,320.937	1,320.936	1,320.936
705.000	1,320.936	1,320.935	1,320.935	1,320.935	1,320.934
720.000	1,320.934	1,320.934	1,320.933	1,320.933	1,320.933
735.000	1,320.932	1,320.932	1,320.932	1,320.931	1,320.931
750.000	1,320.931	1,320.930	1,320.930	1,320.930	1,320.929
765.000	1,320.929	1,320.929	1,320.928	1,320.928	1,320.928
780.000	1,320.927	1,320.927	1,320.927	1,320.926	1,320.926
795.000	1,320.926	1,320.925	1,320.925	1,320.925	1,320.924
810.000	1,320.924	1,320.924	1,320.923	1,320.923	1,320.923
825.000	1,320.922	1,320.922	1,320.922	1,320.921	1,320.921
840.000	1,320.921	1,320.920	1,320.920	1,320.920	1,320.919
855.000	1,320.919	1,320.919	1,320.918	1,320.918	1,320.918
870.000	1,320.917	1,320.917	1,320.917	1,320.917	1,320.916
885.000	1,320.916	1,320.916	1,320.915	1,320.915	1,320.915
900.000	1,320.914	1,320.914	1,320.914	1,320.913	1,320.913
915.000	1,320.913	1,320.912	1,320.912	1,320.912	1,320.911
930.000	1,320.911	1,320.911	1,320.910	1,320.910	1,320.910
945.000	1,320.909	1,320.909	1,320.909	1,320.908	1,320.908
960.000	1,320.908	1,320.907	1,320.907	1,320.907	1,320.906
975.000	1,320.906	1,320.906	1,320.905	1,320.905	1,320.905
990.000	1,320.904	1,320.904	1,320.904	1,320.903	1,320.903
1,005.000	1,320.903	1,320.902	1,320.902	1,320.902	1,320.901
1,020.000	1,320.901	1,320.901	1,320.901	1,320.900	1,320.900
1,035.000	1,320.900	1,320.899	1,320.899	1,320.899	1,320.898
1,050.000	1,320.898	1,320.898	1,320.897	1,320.897	1,320.897
1,065.000	1,320.896	1,320.896	1,320.896	1,320.895	1,320.895
1,080.000	1,320.895	1,320.894	1,320.894	1,320.894	1,320.893
1,095.000	1,320.893	1,320.893	1,320.892	1,320.892	1,320.892
1,110.000	1,320.891	1,320.891	1,320.891	1,320.891	1,320.890
1,125.000	1,320.890	1,320.890	1,320.889	1,320.889	1,320.889
1,140.000	1,320.888	1,320.888	1,320.888	1,320.887	1,320.887
1,155.000	1,320.887	1,320.886	1,320.886	1,320.886	1,320.885
1,170.000	1,320.885	1,320.885	1,320.884	1,320.884	1,320.884
1,185.000	1,320.883	1,320.883	1,320.883	1,320.882	1,320.882
1,200.000	1,320.882	1,320.881	1,320.881	1,320.881	1,320.880
1,215.000	1,320.880	1,320.880	1,320.880	1,320.879	1,320.879
1,230.000	1,320.879	1,320.878	1,320.878	1,320.878	1,320.877
1,245.000	1,320.877	1,320.877	1,320.876	1,320.876	1,320.876
1,260.000	1,320.875	1,320.875	1,320.875	1,320.874	1,320.874
1,275.000	1,320.874	1,320.874	1,320.873	1,320.873	1,320.873

Subsection: Time vs. Elevation
 Label: Det-B3 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,290.000	1,320.872	1,320.872	1,320.872	1,320.871	1,320.871
1,305.000	1,320.871	1,320.870	1,320.870	1,320.870	1,320.869
1,320.000	1,320.869	1,320.869	1,320.868	1,320.868	1,320.868
1,335.000	1,320.867	1,320.867	1,320.867	1,320.866	1,320.866
1,350.000	1,320.866	1,320.866	1,320.865	1,320.865	1,320.865
1,365.000	1,320.864	1,320.864	1,320.864	1,320.863	1,320.863
1,380.000	1,320.863	1,320.862	1,320.862	1,320.862	1,320.861
1,395.000	1,320.861	1,320.861	1,320.860	1,320.860	1,320.860
1,410.000	1,320.860	1,320.859	1,320.859	1,320.859	1,320.858
1,425.000	1,320.858	1,320.858	1,320.857	1,320.857	1,320.857
1,440.000	1,320.856	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0.000	0.000	0.000	111.000	294.000
15.000	575.000	927.000	1,332.000	1,787.000	2,289.000
30.000	2,837.000	3,439.000	4,105.000	4,844.000	5,671.000
45.000	6,600.000	7,655.000	8,920.000	10,490.000	12,222.000
60.000	13,836.000	15,161.000	16,106.000	16,795.000	17,279.000
75.000	17,607.000	17,835.000	18,003.000	18,124.000	18,209.000
90.000	18,264.000	18,295.000	18,305.000	18,296.000	18,271.000
105.000	18,235.000	18,192.000	18,129.000	18,047.000	17,966.000
120.000	17,885.000	17,804.000	17,723.000	17,642.000	17,561.000
135.000	17,480.000	17,399.000	17,319.000	17,238.000	17,158.000
150.000	17,077.000	16,997.000	16,917.000	16,837.000	16,757.000
165.000	16,677.000	16,597.000	16,517.000	16,437.000	16,358.000
180.000	16,278.000	16,199.000	16,119.000	16,040.000	15,961.000
195.000	15,882.000	15,802.000	15,724.000	15,645.000	15,566.000
210.000	15,487.000	15,408.000	15,330.000	15,251.000	15,173.000
225.000	15,095.000	15,016.000	14,938.000	14,854.000	14,769.000
240.000	14,683.000	14,598.000	14,513.000	14,427.000	14,342.000
255.000	14,257.000	14,173.000	14,088.000	14,003.000	13,919.000
270.000	13,835.000	13,750.000	13,666.000	13,582.000	13,499.000
285.000	13,415.000	13,331.000	13,248.000	13,164.000	13,081.000
300.000	12,998.000	12,915.000	12,832.000	12,749.000	12,667.000
315.000	12,584.000	12,502.000	12,419.000	12,337.000	12,255.000
330.000	12,173.000	12,091.000	12,010.000	11,928.000	11,846.000
345.000	11,765.000	11,684.000	11,603.000	11,522.000	11,441.000
360.000	11,360.000	11,279.000	11,198.000	11,118.000	11,038.000
375.000	10,957.000	10,877.000	10,797.000	10,717.000	10,638.000
390.000	10,558.000	10,478.000	10,399.000	10,319.000	10,240.000
405.000	10,161.000	10,082.000	10,003.000	9,924.000	9,846.000
420.000	9,767.000	9,689.000	9,610.000	9,532.000	9,454.000
435.000	9,376.000	9,298.000	9,220.000	9,143.000	9,065.000
450.000	8,988.000	8,910.000	8,833.000	8,756.000	8,679.000
465.000	8,602.000	8,525.000	8,449.000	8,372.000	8,295.000
480.000	8,219.000	8,143.000	8,067.000	7,991.000	7,915.000
495.000	7,839.000	7,763.000	7,688.000	7,612.000	7,537.000
510.000	7,461.000	7,386.000	7,311.000	7,236.000	7,161.000
525.000	7,086.000	7,004.000	6,922.000	6,839.000	6,757.000
540.000	6,675.000	6,593.000	6,511.000	6,429.000	6,347.000
555.000	6,265.000	6,183.000	6,102.000	6,020.000	5,939.000
570.000	5,858.000	5,776.000	5,695.000	5,614.000	5,533.000
585.000	5,452.000	5,372.000	5,291.000	5,211.000	5,130.000
600.000	5,050.000	4,969.000	4,889.000	4,809.000	4,729.000
615.000	4,649.000	4,569.000	4,489.000	4,410.000	4,330.000
630.000	4,251.000	4,171.000	4,092.000	4,013.000	3,934.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
645.000	3,855.000	3,776.000	3,697.000	3,618.000	3,540.000
660.000	3,461.000	3,383.000	3,304.000	3,226.000	3,148.000
675.000	3,069.000	2,991.000	2,913.000	2,836.000	2,758.000
690.000	2,680.000	2,603.000	2,525.000	2,448.000	2,370.000
705.000	2,293.000	2,216.000	2,139.000	2,062.000	1,985.000
720.000	1,908.000	1,832.000	1,755.000	1,679.000	1,602.000
735.000	1,526.000	1,450.000	1,373.000	1,297.000	1,221.000
750.000	1,145.000	1,070.000	994.000	918.000	843.000
765.000	767.000	692.000	617.000	541.000	466.000
780.000	391.000	316.000	242.000	167.000	92.000
795.000	0.000	0.000	0.000	0.000	0.000
810.000	0.000	0.000	0.000	0.000	0.000
825.000	0.000	0.000	0.000	0.000	0.000
840.000	0.000	0.000	0.000	0.000	0.000
855.000	0.000	0.000	0.000	0.000	0.000
870.000	0.000	0.000	0.000	0.000	0.000
885.000	0.000	0.000	0.000	0.000	0.000
900.000	0.000	0.000	0.000	0.000	0.000
915.000	0.000	0.000	0.000	0.000	0.000
930.000	0.000	0.000	0.000	0.000	0.000
945.000	0.000	0.000	0.000	0.000	0.000
960.000	0.000	0.000	0.000	0.000	0.000
975.000	0.000	0.000	0.000	0.000	0.000
990.000	0.000	0.000	0.000	0.000	0.000
1,005.000	0.000	0.000	0.000	0.000	0.000
1,020.000	0.000	0.000	0.000	0.000	0.000
1,035.000	0.000	0.000	0.000	0.000	0.000
1,050.000	0.000	0.000	0.000	0.000	0.000
1,065.000	0.000	0.000	0.000	0.000	0.000
1,080.000	0.000	0.000	0.000	0.000	0.000
1,095.000	0.000	0.000	0.000	0.000	0.000
1,110.000	0.000	0.000	0.000	0.000	0.000
1,125.000	0.000	0.000	0.000	0.000	0.000
1,140.000	0.000	0.000	0.000	0.000	0.000
1,155.000	0.000	0.000	0.000	0.000	0.000
1,170.000	0.000	0.000	0.000	0.000	0.000
1,185.000	0.000	0.000	0.000	0.000	0.000
1,200.000	0.000	0.000	0.000	0.000	0.000
1,215.000	0.000	0.000	0.000	0.000	0.000
1,230.000	0.000	0.000	0.000	0.000	0.000
1,245.000	0.000	0.000	0.000	0.000	0.000
1,260.000	0.000	0.000	0.000	0.000	0.000
1,275.000	0.000	0.000	0.000	0.000	0.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1,290.000	0.000	0.000	0.000	0.000	0.000
1,305.000	0.000	0.000	0.000	0.000	0.000
1,320.000	0.000	0.000	0.000	0.000	0.000
1,335.000	0.000	0.000	0.000	0.000	0.000
1,350.000	0.000	0.000	0.000	0.000	0.000
1,365.000	0.000	0.000	0.000	0.000	0.000
1,380.000	0.000	0.000	0.000	0.000	0.000
1,395.000	0.000	0.000	0.000	0.000	0.000
1,410.000	0.000	0.000	0.000	0.000	0.000
1,425.000	0.000	0.000	0.000	0.000	0.000
1,440.000	0.000	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0.000	13.000	62.000	176.000	361.000
15.000	595.000	863.000	1,157.000	1,474.000	1,815.000
30.000	2,177.000	2,565.000	2,985.000	3,440.000	3,936.000
45.000	4,480.000	5,125.000	5,920.000	6,865.000	7,837.000
60.000	8,656.000	9,291.000	9,777.000	10,120.000	10,352.000
75.000	10,512.000	10,628.000	10,717.000	10,784.000	10,834.000
90.000	10,869.000	10,895.000	10,914.000	10,928.000	10,937.000
105.000	10,942.000	10,945.000	10,944.000	10,941.000	10,938.000
120.000	10,935.000	10,932.000	10,929.000	10,926.000	10,923.000
135.000	10,920.000	10,917.000	10,914.000	10,911.000	10,908.000
150.000	10,905.000	10,902.000	10,899.000	10,896.000	10,893.000
165.000	10,890.000	10,887.000	10,884.000	10,881.000	10,878.000
180.000	10,875.000	10,872.000	10,869.000	10,866.000	10,863.000
195.000	10,860.000	10,857.000	10,854.000	10,851.000	10,848.000
210.000	10,845.000	10,842.000	10,839.000	10,836.000	10,833.000
225.000	10,830.000	10,827.000	10,824.000	10,821.000	10,818.000
240.000	10,815.000	10,812.000	10,809.000	10,806.000	10,803.000
255.000	10,800.000	10,797.000	10,794.000	10,791.000	10,788.000
270.000	10,785.000	10,782.000	10,779.000	10,776.000	10,773.000
285.000	10,770.000	10,767.000	10,764.000	10,761.000	10,758.000
300.000	10,755.000	10,752.000	10,749.000	10,746.000	10,743.000
315.000	10,740.000	10,737.000	10,734.000	10,731.000	10,728.000
330.000	10,725.000	10,722.000	10,719.000	10,716.000	10,713.000
345.000	10,710.000	10,707.000	10,704.000	10,701.000	10,698.000
360.000	10,695.000	10,692.000	10,689.000	10,686.000	10,683.000
375.000	10,680.000	10,677.000	10,674.000	10,671.000	10,668.000
390.000	10,666.000	10,663.000	10,660.000	10,657.000	10,654.000
405.000	10,651.000	10,648.000	10,645.000	10,642.000	10,639.000
420.000	10,636.000	10,633.000	10,630.000	10,627.000	10,624.000
435.000	10,621.000	10,618.000	10,615.000	10,612.000	10,609.000
450.000	10,606.000	10,603.000	10,600.000	10,598.000	10,595.000
465.000	10,592.000	10,589.000	10,586.000	10,583.000	10,580.000
480.000	10,577.000	10,574.000	10,571.000	10,568.000	10,565.000
495.000	10,562.000	10,559.000	10,556.000	10,553.000	10,550.000
510.000	10,547.000	10,545.000	10,542.000	10,539.000	10,536.000
525.000	10,533.000	10,530.000	10,527.000	10,524.000	10,521.000
540.000	10,518.000	10,515.000	10,512.000	10,509.000	10,506.000
555.000	10,504.000	10,501.000	10,498.000	10,495.000	10,492.000
570.000	10,489.000	10,486.000	10,483.000	10,480.000	10,477.000
585.000	10,474.000	10,471.000	10,468.000	10,466.000	10,463.000
600.000	10,460.000	10,457.000	10,454.000	10,451.000	10,448.000
615.000	10,445.000	10,442.000	10,439.000	10,436.000	10,434.000
630.000	10,431.000	10,428.000	10,425.000	10,422.000	10,419.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
645.000	10,416.000	10,413.000	10,410.000	10,407.000	10,405.000
660.000	10,402.000	10,399.000	10,396.000	10,393.000	10,390.000
675.000	10,387.000	10,384.000	10,381.000	10,378.000	10,376.000
690.000	10,373.000	10,370.000	10,367.000	10,364.000	10,361.000
705.000	10,358.000	10,355.000	10,352.000	10,350.000	10,347.000
720.000	10,344.000	10,341.000	10,338.000	10,335.000	10,332.000
735.000	10,329.000	10,326.000	10,324.000	10,321.000	10,318.000
750.000	10,315.000	10,312.000	10,309.000	10,306.000	10,303.000
765.000	10,301.000	10,298.000	10,295.000	10,292.000	10,289.000
780.000	10,286.000	10,283.000	10,280.000	10,278.000	10,275.000
795.000	10,272.000	10,269.000	10,266.000	10,263.000	10,260.000
810.000	10,258.000	10,255.000	10,252.000	10,249.000	10,246.000
825.000	10,243.000	10,240.000	10,238.000	10,235.000	10,232.000
840.000	10,229.000	10,226.000	10,223.000	10,220.000	10,218.000
855.000	10,215.000	10,212.000	10,209.000	10,206.000	10,203.000
870.000	10,200.000	10,198.000	10,195.000	10,192.000	10,189.000
885.000	10,186.000	10,183.000	10,180.000	10,178.000	10,175.000
900.000	10,172.000	10,169.000	10,166.000	10,163.000	10,161.000
915.000	10,158.000	10,155.000	10,152.000	10,149.000	10,146.000
930.000	10,144.000	10,141.000	10,138.000	10,135.000	10,132.000
945.000	10,129.000	10,127.000	10,124.000	10,121.000	10,118.000
960.000	10,115.000	10,112.000	10,110.000	10,107.000	10,104.000
975.000	10,101.000	10,098.000	10,095.000	10,093.000	10,090.000
990.000	10,087.000	10,084.000	10,081.000	10,079.000	10,076.000
1,005.000	10,073.000	10,070.000	10,067.000	10,064.000	10,062.000
1,020.000	10,059.000	10,056.000	10,053.000	10,050.000	10,048.000
1,035.000	10,045.000	10,042.000	10,039.000	10,036.000	10,034.000
1,050.000	10,031.000	10,028.000	10,025.000	10,022.000	10,020.000
1,065.000	10,017.000	10,014.000	10,011.000	10,008.000	10,006.000
1,080.000	10,003.000	10,000.000	9,997.000	9,994.000	9,992.000
1,095.000	9,989.000	9,986.000	9,983.000	9,980.000	9,978.000
1,110.000	9,975.000	9,972.000	9,969.000	9,966.000	9,964.000
1,125.000	9,961.000	9,958.000	9,955.000	9,952.000	9,950.000
1,140.000	9,947.000	9,944.000	9,941.000	9,938.000	9,936.000
1,155.000	9,933.000	9,930.000	9,927.000	9,925.000	9,922.000
1,170.000	9,919.000	9,916.000	9,913.000	9,911.000	9,908.000
1,185.000	9,905.000	9,902.000	9,900.000	9,897.000	9,894.000
1,200.000	9,891.000	9,889.000	9,886.000	9,883.000	9,880.000
1,215.000	9,877.000	9,875.000	9,872.000	9,869.000	9,866.000
1,230.000	9,864.000	9,861.000	9,858.000	9,855.000	9,853.000
1,245.000	9,850.000	9,847.000	9,844.000	9,841.000	9,839.000
1,260.000	9,836.000	9,833.000	9,830.000	9,828.000	9,825.000
1,275.000	9,822.000	9,819.000	9,817.000	9,814.000	9,811.000

Subsection: Time vs. Volume
 Label: Det-B3

Scenario: Base

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1,290.000	9,808.000	9,806.000	9,803.000	9,800.000	9,797.000
1,305.000	9,795.000	9,792.000	9,789.000	9,786.000	9,784.000
1,320.000	9,781.000	9,778.000	9,775.000	9,773.000	9,770.000
1,335.000	9,767.000	9,764.000	9,762.000	9,759.000	9,756.000
1,350.000	9,754.000	9,751.000	9,748.000	9,745.000	9,743.000
1,365.000	9,740.000	9,737.000	9,734.000	9,732.000	9,729.000
1,380.000	9,726.000	9,723.000	9,721.000	9,718.000	9,715.000
1,395.000	9,713.000	9,710.000	9,707.000	9,704.000	9,702.000
1,410.000	9,699.000	9,696.000	9,693.000	9,691.000	9,688.000
1,425.000	9,685.000	9,683.000	9,680.000	9,677.000	9,674.000
1,440.000	9,672.000	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Area Volume Curve
 Label: Det-B2

Scenario: Base

Elevation (ft)	Planimeter (ft ²)	Area (ft ²)	A1+A2+sqr (A1*A2) (ft ²)	Volume (ft ³)	Volume (Total) (ft ³)
1,318.000	0.0	13,441	0	0.000	0.000
1,319.000	0.0	16,448	44,758	14,919.000	14,919.000
1,320.000	0.0	19,598	54,000	18,000.000	32,919.000
1,321.000	0.0	22,871	63,640	21,213.000	54,133.000
1,322.000	0.0	26,299	73,695	24,565.000	78,698.000
1,323.000	0.0	29,898	84,238	28,079.000	106,777.000
1,324.000	0.0	33,713	95,359	31,786.000	138,563.000

Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 Lower and upper elevations of the increment
 Area1, Area2 Areas computed for EL1, EL2, respectively
 Volume Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve
 Label: Det-B3

Scenario: Base

Elevation (ft)	Planimeter (ft ²)	Area (ft ²)	A1+A2+sqr (A1*A2) (ft ²)	Volume (ft ³)	Volume (Total) (ft ³)
1,319.740	0.0	8,663	0	0.000	0.000
1,325.000	0.0	8,663	25,989	45,567.000	45,567.000
1,326.740	0.0	8,663	25,989	15,074.000	60,641.000

Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 Lower and upper elevations of the increment
 Area1, Area2 Areas computed for EL1, EL2, respectively
 Volume Incremental volume between EL1 and EL2

Subsection: Outlet Input Data
 Label: B-2

Scenario: Base

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,318.000 ft
Increment (Headwater)	0.500 ft
Maximum (Headwater)	1,324.000 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	1,318.500	1,324.000
Vnotch Weir	Weir - 1	Forward	TW	1,322.000	1,324.000
Stand Pipe	Riser - 1	Forward	TW	1,323.000	1,324.000
User Defined Table	Treated runoff	Forward	TW	0.000	1,324.000
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Orifice - 1
 Structure Type: Orifice-Circular

Number of Openings	1
Elevation	1,318.500 ft
Orifice Diameter	1.0 in
Orifice Coefficient	0.600

Structure ID: Weir - 1
 Structure Type: Vnotch Weir

Number of Openings	1
Elevation	1,322.000 ft
V-Notch Angle	90.00 degrees
Coefficient of Discharge	0.576

Structure ID: Riser - 1
 Structure Type: Stand Pipe

Number of Openings	1
Elevation	1,323.000 ft
Diameter	54.0 in
Orifice Area	15.9 ft ²
Orifice Coefficient	0.600
Weir Length	14.14 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Key, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Treated runoff
 Structure Type: User Defined Table

Elevation (ft)	Flow (ft ³ /s)
1,318.000	0.43630
1,320.000	0.43630
1,324.000	0.43630

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall
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Convergence Tolerances

Maximum Iterations	30
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Subsection: Outlet Input Data
Label: B-2

Scenario: Base

Convergence Tolerances	
Tailwater Tolerance (Minimum)	0.010 ft
Tailwater Tolerance (Maximum)	0.500 ft
Headwater Tolerance (Minimum)	0.010 ft
Headwater Tolerance (Maximum)	0.500 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.01777	(N/A)	0.000
1,319.500	0.02570	(N/A)	0.000
1,320.000	0.03170	(N/A)	0.000
1,320.500	0.03674	(N/A)	0.000
1,321.000	0.04116	(N/A)	0.000
1,321.500	0.04515	(N/A)	0.000
1,322.000	0.04882	(N/A)	0.000
1,322.500	0.05223	(N/A)	0.000
1,323.000	0.05543	(N/A)	0.000
1,323.500	0.05845	(N/A)	0.000
1,324.000	0.06133	(N/A)	0.000

Computation Messages

HW & TW below invert
 Upstream HW &
 DNstream TW < Inv.El
 H =.46
 H =.96
 H =1.46
 H =1.96
 H =2.46
 H =2.96
 H =3.46
 H =3.96
 H =4.46
 H =4.96
 H =5.46

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Weir - 1 (Vnotch Weir)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.00000	(N/A)	0.000
1,319.500	0.00000	(N/A)	0.000
1,320.000	0.00000	(N/A)	0.000
1,320.500	0.00000	(N/A)	0.000
1,321.000	0.00000	(N/A)	0.000
1,321.500	0.00000	(N/A)	0.000
1,322.000	0.00000	(N/A)	0.000
1,322.500	0.43563	(N/A)	0.000
1,323.000	2.46427	(N/A)	0.000
1,323.500	6.79074	(N/A)	0.000
1,324.000	13.94003	(N/A)	0.000

Computation Messages

HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 H=.00; Htw=.00;
 Qfree=.00;
 H=.50; Htw=.00;
 Qfree=.44;
 H=1.00; Htw=.00;
 Qfree=2.46;
 H=1.50; Htw=.00;
 Qfree=6.79;
 H=2.00; Htw=.00;
 Qfree=13.94;

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Riser - 1 (Stand Pipe)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.00000	(N/A)	0.000
1,319.500	0.00000	(N/A)	0.000
1,320.000	0.00000	(N/A)	0.000
1,320.500	0.00000	(N/A)	0.000
1,321.000	0.00000	(N/A)	0.000
1,321.500	0.00000	(N/A)	0.000
1,322.000	0.00000	(N/A)	0.000
1,322.500	0.00000	(N/A)	0.000
1,323.000	0.00000	(N/A)	0.000
1,323.500	14.99473	(N/A)	0.000
1,324.000	42.41150	(N/A)	0.000

Computation Messages

HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 Weir: H =0ft
 Weir: H =0.5ft
 Weir: H =1ft

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Treated runoff (User Defined Table)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.43630	(N/A)	0.000
1,318.500	0.43630	(N/A)	0.000
1,319.000	0.43630	(N/A)	0.000
1,319.500	0.43630	(N/A)	0.000
1,320.000	0.43630	(N/A)	0.000
1,320.500	0.43630	(N/A)	0.000
1,321.000	0.43630	(N/A)	0.000
1,321.500	0.43630	(N/A)	0.000
1,322.000	0.43630	(N/A)	0.000
1,322.500	0.43630	(N/A)	0.000
1,323.000	0.43630	(N/A)	0.000
1,323.500	0.43630	(N/A)	0.000
1,324.000	0.43630	(N/A)	0.000

Computation Messages

Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.43630	(N/A)	0.000
1,318.500	0.43630	(N/A)	0.000
1,319.000	0.45407	(N/A)	0.000
1,319.500	0.46200	(N/A)	0.000
1,320.000	0.46800	(N/A)	0.000
1,320.500	0.47304	(N/A)	0.000
1,321.000	0.47746	(N/A)	0.000
1,321.500	0.48145	(N/A)	0.000
1,322.000	0.48512	(N/A)	0.000
1,322.500	0.92415	(N/A)	0.000
1,323.000	2.95600	(N/A)	0.000
1,323.500	22.28022	(N/A)	0.000
1,324.000	56.84916	(N/A)	0.000

Contributing Structures

Treated runoff
Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff

Subsection: Outlet Input Data
 Label: B-3

Scenario: Base

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,319.740 ft
Increment (Headwater)	0.500 ft
Maximum (Headwater)	1,326.740 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	TW	1,324.270	1,326.740
Stand Pipe	Riser - 1	Forward	TW	1,325.740	1,326.740
Orifice-Circular	Orifice - 1	Forward	TW	1,319.740	1,326.740
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Orifice - 1
 Structure Type: Orifice-Circular

Number of Openings	1
Elevation	1,319.740 ft
Orifice Diameter	1.0 in
Orifice Coefficient	0.600

Structure ID: Weir - 1
 Structure Type: Rectangular Weir

Number of Openings	1
Elevation	1,324.270 ft
Weir Length	1.71 ft
Weir Coefficient	3.00 (ft ^{0.5})/s

Structure ID: Riser - 1
 Structure Type: Stand Pipe

Number of Openings	1
Elevation	1,325.740 ft
Diameter	54.0 in
Orifice Area	15.9 ft ²
Orifice Coefficient	0.600
Weir Length	14.14 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall
----------------	--------------

Convergence Tolerances

Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.010 ft
Tailwater Tolerance (Maximum)	0.500 ft
Headwater Tolerance (Minimum)	0.010 ft
Headwater Tolerance (Maximum)	0.500 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Outlet Input Data
Label: B-3

Scenario: Base

Convergence Tolerances

Subsection: Individual Outlet Curves
 Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.01777	(N/A)	0.000
1,320.740	0.02570	(N/A)	0.000
1,321.240	0.03170	(N/A)	0.000
1,321.740	0.03674	(N/A)	0.000
1,322.240	0.04116	(N/A)	0.000
1,322.740	0.04515	(N/A)	0.000
1,323.240	0.04882	(N/A)	0.000
1,323.740	0.05223	(N/A)	0.000
1,324.240	0.05543	(N/A)	0.000
1,324.270	0.05561	(N/A)	0.000
1,324.740	0.05845	(N/A)	0.000
1,325.240	0.06133	(N/A)	0.000
1,325.740	0.06408	(N/A)	0.000
1,326.240	0.06671	(N/A)	0.000
1,326.740	0.06925	(N/A)	0.000

Computation Messages

Upstream HW &
 DNstream TW < Inv.El
 H =.46
 H =.96
 H =1.46
 H =1.96
 H =2.46
 H =2.96
 H =3.46
 H =3.96
 H =4.46
 H =4.49
 H =4.96
 H =5.46
 H =5.96
 H =6.46
 H =6.96

Subsection: Individual Outlet Curves
 Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Weir - 1 (Rectangular Weir)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.00000	(N/A)	0.000
1,320.740	0.00000	(N/A)	0.000
1,321.240	0.00000	(N/A)	0.000
1,321.740	0.00000	(N/A)	0.000
1,322.240	0.00000	(N/A)	0.000
1,322.740	0.00000	(N/A)	0.000
1,323.240	0.00000	(N/A)	0.000
1,323.740	0.00000	(N/A)	0.000
1,324.240	0.00000	(N/A)	0.000
1,324.270	0.00000	(N/A)	0.000
1,324.740	1.65297	(N/A)	0.000
1,325.240	4.90089	(N/A)	0.000
1,325.740	9.14310	(N/A)	0.000
1,326.240	14.18459	(N/A)	0.000
1,326.740	19.91420	(N/A)	0.000

Computation Messages

HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 H=.00; Htw=.00;
 Qfree=.00;

Subsection: Individual Outlet Curves
Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Weir - 1 (Rectangular Weir)

Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

Computation Messages

H=.47; Htw=.00; Qfree=1.65; H=.97; Htw=.00; Qfree=4.90; H=1.47; Htw=.00; Qfree=9.14; H=1.97; Htw=.00; Qfree=14.18; H=2.47; Htw=.00; Qfree=19.91;

Subsection: Individual Outlet Curves
 Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Riser - 1 (Stand Pipe)

 Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.00000	(N/A)	0.000
1,320.740	0.00000	(N/A)	0.000
1,321.240	0.00000	(N/A)	0.000
1,321.740	0.00000	(N/A)	0.000
1,322.240	0.00000	(N/A)	0.000
1,322.740	0.00000	(N/A)	0.000
1,323.240	0.00000	(N/A)	0.000
1,323.740	0.00000	(N/A)	0.000
1,324.240	0.00000	(N/A)	0.000
1,324.270	0.00000	(N/A)	0.000
1,324.740	0.00000	(N/A)	0.000
1,325.240	0.00000	(N/A)	0.000
1,325.740	0.00000	(N/A)	0.000
1,326.240	14.99473	(N/A)	0.000
1,326.740	42.41150	(N/A)	0.000

Computation Messages

```

HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
  
```


Subsection: Individual Outlet Curves
Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Riser - 1 (Stand Pipe)

Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

Computation Messages

HW & TW < Inv.El.=1325.740 HW & TW < Inv.El.=1325.740 Weir: H =0ft Weir: H =0.5ft Weir: H =1ft
--

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.01777	(N/A)	0.000
1,320.740	0.02570	(N/A)	0.000
1,321.240	0.03170	(N/A)	0.000
1,321.740	0.03674	(N/A)	0.000
1,322.240	0.04116	(N/A)	0.000
1,322.740	0.04515	(N/A)	0.000
1,323.240	0.04882	(N/A)	0.000
1,323.740	0.05223	(N/A)	0.000
1,324.240	0.05543	(N/A)	0.000
1,324.270	0.05561	(N/A)	0.000
1,324.740	1.71142	(N/A)	0.000
1,325.240	4.96222	(N/A)	0.000
1,325.740	9.20718	(N/A)	0.000
1,326.240	29.24603	(N/A)	0.000
1,326.740	62.39494	(N/A)	0.000

Contributing Structures

None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Weir - 1 + Orifice - 1
Weir - 1 + Orifice - 1
Weir - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: Det-B2

Scenario: Base

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,318.000 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.43630 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.43630 ft ³ /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (ft ²)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
1,318.000	0.43630	0.000	13,441	0.00000	0.43630	0.43630
1,318.500	0.43630	7,083.738	14,907	0.00000	0.43630	79.14450
1,319.000	0.45407	14,919.226	16,448	0.00000	0.45407	166.22325
1,319.500	0.46200	23,525.484	17,989	0.00000	0.46200	261.85627
1,320.000	0.46800	32,919.242	19,598	0.00000	0.46800	366.23736
1,320.500	0.47304	43,116.842	21,203	0.00000	0.47304	479.54905
1,321.000	0.47746	54,132.691	22,871	0.00000	0.47746	601.95180
1,321.500	0.48145	65,986.721	24,555	0.00000	0.48145	733.66724
1,322.000	0.48512	78,697.751	26,299	0.00000	0.48512	874.90457
1,322.500	0.92415	92,287.512	28,070	0.00000	0.92415	1,026.34095
1,323.000	2.95600	106,777.023	29,898	0.00000	2.95600	1,189.36737
1,323.500	22.28022	122,193.357	31,777	0.00000	22.28022	1,379.98418
1,324.000	56.84916	138,563.440	33,713	0.00000	56.84916	1,596.44294

Subsection: Level Pool Pond Routing Summary
 Label: Det-B2 (IN)

Scenario: Base

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,318.000 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.43630 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.43630 ft ³ /s
Time Increment	3.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	10.17200 ft ³ /s	Time to Peak (Flow, In)	54.000 min
Flow (Peak Outlet)	0.45728 ft ³ /s	Time to Peak (Flow, Outlet)	96.000 min

Elevation (Water Surface, Peak)	1,319.202 ft
Volume (Peak)	18,305.029 ft ³

Mass Balance (ft ³)	
Volume (Initial)	0.000 ft ³
Volume (Total Inflow)	21,073.000 ft ³
Volume (Total Infiltration)	0.000 ft ³
Volume (Total Outlet Outflow)	21,093.000 ft ³
Volume (Retained)	0.000 ft ³
Volume (Unrouted)	20.000 ft ³
Error (Mass Balance)	0.1 %

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B2 (OUT)

Scenario: Base

Peak Discharge	0.45728 ft ³ /s
Time to Peak	96.000 min
Hydrograph Volume	21,092.954 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.21815	0.08400	0.34100	0.43630	0.43630
15.000	0.43630	0.43630	0.43630	0.43630	0.43630
30.000	0.43630	0.43630	0.43630	0.43630	0.43630
45.000	0.43630	0.43766	0.44062	0.44424	0.44815
60.000	0.45172	0.45430	0.45521	0.45586	0.45632
75.000	0.45662	0.45684	0.45699	0.45711	0.45719
90.000	0.45724	0.45727	0.45728	0.45727	0.45724
105.000	0.45721	0.45717	0.45711	0.45704	0.45696
120.000	0.45688	0.45681	0.45673	0.45666	0.45658
135.000	0.45651	0.45643	0.45635	0.45628	0.45620
150.000	0.45613	0.45605	0.45598	0.45590	0.45582
165.000	0.45575	0.45567	0.45560	0.45552	0.45545
180.000	0.45537	0.45530	0.45522	0.45515	0.45507
195.000	0.45499	0.45492	0.45484	0.45477	0.45469
210.000	0.45462	0.45454	0.45447	0.45439	0.45432
225.000	0.45424	0.45417	0.45409	0.45393	0.45375
240.000	0.45356	0.45338	0.45319	0.45301	0.45282
255.000	0.45264	0.45245	0.45227	0.45208	0.45190
270.000	0.45171	0.45153	0.45134	0.45116	0.45098
285.000	0.45079	0.45061	0.45042	0.45024	0.45006
300.000	0.44987	0.44969	0.44951	0.44932	0.44914
315.000	0.44896	0.44877	0.44859	0.44841	0.44822
330.000	0.44804	0.44786	0.44767	0.44749	0.44731
345.000	0.44713	0.44694	0.44676	0.44658	0.44640
360.000	0.44621	0.44603	0.44585	0.44567	0.44549
375.000	0.44530	0.44512	0.44494	0.44476	0.44458
390.000	0.44440	0.44422	0.44403	0.44385	0.44367
405.000	0.44349	0.44331	0.44313	0.44295	0.44277
420.000	0.44259	0.44241	0.44222	0.44204	0.44186
435.000	0.44168	0.44150	0.44132	0.44114	0.44096
450.000	0.44078	0.44060	0.44042	0.44024	0.44006
465.000	0.43988	0.43970	0.43952	0.43935	0.43917
480.000	0.43899	0.43881	0.43863	0.43845	0.43827
495.000	0.43809	0.43791	0.43773	0.43756	0.43738
510.000	0.43720	0.43702	0.43684	0.43666	0.43648
525.000	0.43631	0.43630	0.43630	0.43630	0.43630
540.000	0.43630	0.43630	0.43630	0.43630	0.43630
555.000	0.43630	0.43630	0.43630	0.43630	0.43630
570.000	0.43630	0.43630	0.43630	0.43630	0.43630

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B2 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
585.000	0.43630	0.43630	0.43630	0.43630	0.43630
600.000	0.43630	0.43630	0.43630	0.43630	0.43630
615.000	0.43630	0.43630	0.43630	0.43630	0.43630
630.000	0.43630	0.43630	0.43630	0.43630	0.43630
645.000	0.43630	0.43630	0.43630	0.43630	0.43630
660.000	0.43630	0.43630	0.43630	0.43630	0.43630
675.000	0.43630	0.43630	0.43630	0.43630	0.43630
690.000	0.43630	0.43630	0.43630	0.43630	0.43630
705.000	0.43630	0.43630	0.43630	0.43630	0.43630
720.000	0.43630	0.43630	0.43630	0.43630	0.43630
735.000	0.43630	0.43630	0.43630	0.43630	0.43630
750.000	0.43630	0.43630	0.43630	0.43630	0.43630
765.000	0.43630	0.43630	0.43630	0.43630	0.43630
780.000	0.43630	0.43630	0.43630	0.43630	0.43630
795.000	0.32130	0.00000	(N/A)	(N/A)	(N/A)

Subsection: Pond Inflow Summary
Label: Det-B2 (IN)

Scenario: Base

Summary for Hydrograph Addition at 'Det-B2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	B-2

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	B-2	21,096.000	55.000	10.75000
Flow (In)	Det-B2	21,073.320	54.000	10.17200

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: Det-B3

Scenario: Base

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,319.740 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.00000 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.00000 ft ³ /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (ft ²)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
1,319.740	0.00000	0.000	8,663	0.00000	0.00000	0.00000
1,320.240	0.01777	4,331.500	8,663	0.00000	0.01777	48.14555
1,320.740	0.02570	8,663.000	8,663	0.00000	0.02570	96.28125
1,321.240	0.03170	12,994.500	8,663	0.00000	0.03170	144.41503
1,321.740	0.03674	17,326.000	8,663	0.00000	0.03674	192.54785
1,322.240	0.04116	21,657.500	8,663	0.00000	0.04116	240.68005
1,322.740	0.04515	25,989.000	8,663	0.00000	0.04515	288.81182
1,323.240	0.04882	30,320.500	8,663	0.00000	0.04882	336.94326
1,323.740	0.05223	34,652.000	8,663	0.00000	0.05223	385.07445
1,324.240	0.05543	38,983.500	8,663	0.00000	0.05543	433.20543
1,324.270	0.05562	39,243.390	8,663	0.00000	0.05562	436.09328
1,324.740	1.71142	43,315.000	8,663	0.00000	1.71142	482.98920
1,325.240	4.96222	47,646.500	8,663	0.00000	4.96222	534.36778
1,325.740	9.20718	51,978.000	8,663	0.00000	9.20718	586.74051
1,326.240	29.24603	56,309.500	8,663	0.00000	29.24603	654.90714
1,326.740	62.39494	60,641.000	8,663	0.00000	62.39494	736.18383

Subsection: Level Pool Pond Routing Summary
 Label: Det-B3 (IN)

Scenario: Base

Infiltration			
Infiltration Method (Computed)	No Infiltration		

Initial Conditions			
Elevation (Water Surface, Initial)	1,319.740 ft		
Volume (Initial)	0.000 ft ³		
Flow (Initial Outlet)	0.00000 ft ³ /s		
Flow (Initial Infiltration)	0.00000 ft ³ /s		
Flow (Initial, Total)	0.00000 ft ³ /s		
Time Increment	3.000 min		

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	5.68400 ft ³ /s	Time to Peak (Flow, In)	54.000 min
Flow (Peak Outlet)	0.02886 ft ³ /s	Time to Peak (Flow, Outlet)	108.000 min

Elevation (Water Surface, Peak)	1,321.003 ft		
Volume (Peak)	10,944.648 ft ³		

Mass Balance (ft ³)	
Volume (Initial)	0.000 ft ³
Volume (Total Inflow)	12,025.000 ft ³
Volume (Total Infiltration)	0.000 ft ³
Volume (Total Outlet Outflow)	2,353.000 ft ³
Volume (Retained)	9,667.000 ft ³
Volume (Unrouted)	-5.000 ft ³
Error (Mass Balance)	0.0 %

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B3 (OUT)

Scenario: Base

Peak Discharge	0.02886 ft ³ /s
Time to Peak	108.000 min
Hydrograph Volume	2,353.252 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
9.000	0.00072	0.00148	0.00244	0.00354	0.00475
24.000	0.00605	0.00745	0.00893	0.01052	0.01225
39.000	0.01411	0.01615	0.01804	0.01922	0.02068
54.000	0.02241	0.02419	0.02568	0.02657	0.02724
69.000	0.02772	0.02804	0.02826	0.02842	0.02854
84.000	0.02864	0.02871	0.02876	0.02879	0.02882
99.000	0.02884	0.02885	0.02886	0.02886	0.02886
114.000	0.02886	0.02885	0.02885	0.02884	0.02884
129.000	0.02883	0.02883	0.02883	0.02882	0.02882
144.000	0.02881	0.02881	0.02881	0.02880	0.02880
159.000	0.02879	0.02879	0.02878	0.02878	0.02878
174.000	0.02877	0.02877	0.02876	0.02876	0.02876
189.000	0.02875	0.02875	0.02874	0.02874	0.02873
204.000	0.02873	0.02873	0.02872	0.02872	0.02871
219.000	0.02871	0.02871	0.02870	0.02870	0.02869
234.000	0.02869	0.02868	0.02868	0.02868	0.02867
249.000	0.02867	0.02866	0.02866	0.02866	0.02865
264.000	0.02865	0.02864	0.02864	0.02863	0.02863
279.000	0.02863	0.02862	0.02862	0.02861	0.02861
294.000	0.02861	0.02860	0.02860	0.02859	0.02859
309.000	0.02858	0.02858	0.02858	0.02857	0.02857
324.000	0.02856	0.02856	0.02856	0.02855	0.02855
339.000	0.02854	0.02854	0.02854	0.02853	0.02853
354.000	0.02852	0.02852	0.02851	0.02851	0.02851
369.000	0.02850	0.02850	0.02849	0.02849	0.02849
384.000	0.02848	0.02848	0.02847	0.02847	0.02847
399.000	0.02846	0.02846	0.02845	0.02845	0.02844
414.000	0.02844	0.02844	0.02843	0.02843	0.02842
429.000	0.02842	0.02842	0.02841	0.02841	0.02840
444.000	0.02840	0.02840	0.02839	0.02839	0.02838
459.000	0.02838	0.02837	0.02837	0.02837	0.02836
474.000	0.02836	0.02835	0.02835	0.02835	0.02834
489.000	0.02834	0.02833	0.02833	0.02833	0.02832
504.000	0.02832	0.02831	0.02831	0.02831	0.02830
519.000	0.02830	0.02829	0.02829	0.02829	0.02828
534.000	0.02828	0.02827	0.02827	0.02827	0.02826
549.000	0.02826	0.02825	0.02825	0.02824	0.02824
564.000	0.02824	0.02823	0.02823	0.02822	0.02822
579.000	0.02822	0.02821	0.02821	0.02820	0.02820

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B3 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
594.000	0.02820	0.02819	0.02819	0.02818	0.02818
609.000	0.02818	0.02817	0.02817	0.02816	0.02816
624.000	0.02816	0.02815	0.02815	0.02814	0.02814
639.000	0.02814	0.02813	0.02813	0.02812	0.02812
654.000	0.02812	0.02811	0.02811	0.02810	0.02810
669.000	0.02810	0.02809	0.02809	0.02808	0.02808
684.000	0.02808	0.02807	0.02807	0.02806	0.02806
699.000	0.02806	0.02805	0.02805	0.02804	0.02804
714.000	0.02804	0.02803	0.02803	0.02802	0.02802
729.000	0.02802	0.02801	0.02801	0.02800	0.02800
744.000	0.02800	0.02799	0.02799	0.02798	0.02798
759.000	0.02798	0.02797	0.02797	0.02796	0.02796
774.000	0.02796	0.02795	0.02795	0.02794	0.02794
789.000	0.02794	0.02793	0.02793	0.02792	0.02792
804.000	0.02792	0.02791	0.02791	0.02790	0.02790
819.000	0.02790	0.02789	0.02789	0.02788	0.02788
834.000	0.02788	0.02787	0.02787	0.02786	0.02786
849.000	0.02786	0.02785	0.02785	0.02784	0.02784
864.000	0.02784	0.02783	0.02783	0.02782	0.02782
879.000	0.02782	0.02781	0.02781	0.02781	0.02780
894.000	0.02780	0.02779	0.02779	0.02779	0.02778
909.000	0.02778	0.02777	0.02777	0.02777	0.02776
924.000	0.02776	0.02775	0.02775	0.02775	0.02774
939.000	0.02774	0.02773	0.02773	0.02773	0.02772
954.000	0.02772	0.02771	0.02771	0.02771	0.02770
969.000	0.02770	0.02770	0.02769	0.02769	0.02768
984.000	0.02768	0.02768	0.02767	0.02767	0.02766
999.000	0.02766	0.02766	0.02765	0.02765	0.02764
1,014.000	0.02764	0.02764	0.02763	0.02763	0.02762
1,029.000	0.02762	0.02762	0.02761	0.02761	0.02761
1,044.000	0.02760	0.02760	0.02759	0.02759	0.02759
1,059.000	0.02758	0.02758	0.02757	0.02757	0.02757
1,074.000	0.02756	0.02756	0.02755	0.02755	0.02755
1,089.000	0.02754	0.02754	0.02754	0.02753	0.02753
1,104.000	0.02752	0.02752	0.02752	0.02751	0.02751
1,119.000	0.02750	0.02750	0.02750	0.02749	0.02749
1,134.000	0.02749	0.02748	0.02748	0.02747	0.02747
1,149.000	0.02747	0.02746	0.02746	0.02745	0.02745
1,164.000	0.02745	0.02744	0.02744	0.02743	0.02743
1,179.000	0.02743	0.02742	0.02742	0.02742	0.02741
1,194.000	0.02741	0.02740	0.02740	0.02740	0.02739
1,209.000	0.02739	0.02738	0.02738	0.02738	0.02737
1,224.000	0.02737	0.02737	0.02736	0.02736	0.02735
1,239.000	0.02735	0.02735	0.02734	0.02734	0.02734

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B3 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,254.000	0.02733	0.02733	0.02732	0.02732	0.02732
1,269.000	0.02731	0.02731	0.02730	0.02730	0.02730
1,284.000	0.02729	0.02729	0.02729	0.02728	0.02728
1,299.000	0.02727	0.02727	0.02727	0.02726	0.02726
1,314.000	0.02725	0.02725	0.02725	0.02724	0.02724
1,329.000	0.02724	0.02723	0.02723	0.02722	0.02722
1,344.000	0.02722	0.02721	0.02721	0.02721	0.02720
1,359.000	0.02720	0.02719	0.02719	0.02719	0.02718
1,374.000	0.02718	0.02718	0.02717	0.02717	0.02716
1,389.000	0.02716	0.02716	0.02715	0.02715	0.02714
1,404.000	0.02714	0.02714	0.02713	0.02713	0.02713
1,419.000	0.02712	0.02712	0.02711	0.02711	0.02711
1,434.000	0.02710	0.02710	0.02710	(N/A)	(N/A)

Subsection: Pond Inflow Summary
Label: Det-B3 (IN)

Scenario: Base

Summary for Hydrograph Addition at 'Det-B3'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	B-3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	B-3	11,095.500	55.000	5.96000
Flow (In)	Det-B3	12,025.080	54.000	5.68400

Subsection: Diverted Hydrograph
 Label: Outlet-2

Scenario: Base

Peak Discharge	0.45728 ft ³ /s
Time to Peak	96.000 min
Hydrograph Volume	21,092.954 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.21815	0.08400	0.34100	0.43630	0.43630
15.000	0.43630	0.43630	0.43630	0.43630	0.43630
30.000	0.43630	0.43630	0.43630	0.43630	0.43630
45.000	0.43630	0.43766	0.44062	0.44424	0.44815
60.000	0.45172	0.45430	0.45521	0.45586	0.45632
75.000	0.45662	0.45684	0.45699	0.45711	0.45719
90.000	0.45724	0.45727	0.45728	0.45727	0.45724
105.000	0.45721	0.45717	0.45711	0.45704	0.45696
120.000	0.45688	0.45681	0.45673	0.45666	0.45658
135.000	0.45651	0.45643	0.45635	0.45628	0.45620
150.000	0.45613	0.45605	0.45598	0.45590	0.45582
165.000	0.45575	0.45567	0.45560	0.45552	0.45545
180.000	0.45537	0.45530	0.45522	0.45515	0.45507
195.000	0.45499	0.45492	0.45484	0.45477	0.45469
210.000	0.45462	0.45454	0.45447	0.45439	0.45432
225.000	0.45424	0.45417	0.45409	0.45393	0.45375
240.000	0.45356	0.45338	0.45319	0.45301	0.45282
255.000	0.45264	0.45245	0.45227	0.45208	0.45190
270.000	0.45171	0.45153	0.45134	0.45116	0.45098
285.000	0.45079	0.45061	0.45042	0.45024	0.45006
300.000	0.44987	0.44969	0.44951	0.44932	0.44914
315.000	0.44896	0.44877	0.44859	0.44841	0.44822
330.000	0.44804	0.44786	0.44767	0.44749	0.44731
345.000	0.44713	0.44694	0.44676	0.44658	0.44640
360.000	0.44621	0.44603	0.44585	0.44567	0.44549
375.000	0.44530	0.44512	0.44494	0.44476	0.44458
390.000	0.44440	0.44422	0.44403	0.44385	0.44367
405.000	0.44349	0.44331	0.44313	0.44295	0.44277
420.000	0.44259	0.44241	0.44222	0.44204	0.44186
435.000	0.44168	0.44150	0.44132	0.44114	0.44096
450.000	0.44078	0.44060	0.44042	0.44024	0.44006
465.000	0.43988	0.43970	0.43952	0.43935	0.43917
480.000	0.43899	0.43881	0.43863	0.43845	0.43827
495.000	0.43809	0.43791	0.43773	0.43756	0.43738
510.000	0.43720	0.43702	0.43684	0.43666	0.43648
525.000	0.43631	0.43630	0.43630	0.43630	0.43630
540.000	0.43630	0.43630	0.43630	0.43630	0.43630
555.000	0.43630	0.43630	0.43630	0.43630	0.43630
570.000	0.43630	0.43630	0.43630	0.43630	0.43630

Subsection: Diverted Hydrograph
 Label: Outlet-2

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
585.000	0.43630	0.43630	0.43630	0.43630	0.43630
600.000	0.43630	0.43630	0.43630	0.43630	0.43630
615.000	0.43630	0.43630	0.43630	0.43630	0.43630
630.000	0.43630	0.43630	0.43630	0.43630	0.43630
645.000	0.43630	0.43630	0.43630	0.43630	0.43630
660.000	0.43630	0.43630	0.43630	0.43630	0.43630
675.000	0.43630	0.43630	0.43630	0.43630	0.43630
690.000	0.43630	0.43630	0.43630	0.43630	0.43630
705.000	0.43630	0.43630	0.43630	0.43630	0.43630
720.000	0.43630	0.43630	0.43630	0.43630	0.43630
735.000	0.43630	0.43630	0.43630	0.43630	0.43630
750.000	0.43630	0.43630	0.43630	0.43630	0.43630
765.000	0.43630	0.43630	0.43630	0.43630	0.43630
780.000	0.43630	0.43630	0.43630	0.43630	0.43630
795.000	0.32130	0.00000	(N/A)	(N/A)	(N/A)

Peak Discharge	0.02886 ft ³ /s
Time to Peak	108.000 min
Hydrograph Volume	2,353.252 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
9.000	0.00072	0.00148	0.00244	0.00354	0.00475
24.000	0.00605	0.00745	0.00893	0.01052	0.01225
39.000	0.01411	0.01615	0.01804	0.01922	0.02068
54.000	0.02241	0.02419	0.02568	0.02657	0.02724
69.000	0.02772	0.02804	0.02826	0.02842	0.02854
84.000	0.02864	0.02871	0.02876	0.02879	0.02882
99.000	0.02884	0.02885	0.02886	0.02886	0.02886
114.000	0.02886	0.02885	0.02885	0.02884	0.02884
129.000	0.02883	0.02883	0.02883	0.02882	0.02882
144.000	0.02881	0.02881	0.02881	0.02880	0.02880
159.000	0.02879	0.02879	0.02878	0.02878	0.02878
174.000	0.02877	0.02877	0.02876	0.02876	0.02876
189.000	0.02875	0.02875	0.02874	0.02874	0.02873
204.000	0.02873	0.02873	0.02872	0.02872	0.02871
219.000	0.02871	0.02871	0.02870	0.02870	0.02869
234.000	0.02869	0.02868	0.02868	0.02868	0.02867
249.000	0.02867	0.02866	0.02866	0.02866	0.02865
264.000	0.02865	0.02864	0.02864	0.02863	0.02863
279.000	0.02863	0.02862	0.02862	0.02861	0.02861
294.000	0.02861	0.02860	0.02860	0.02859	0.02859
309.000	0.02858	0.02858	0.02858	0.02857	0.02857
324.000	0.02856	0.02856	0.02856	0.02855	0.02855
339.000	0.02854	0.02854	0.02854	0.02853	0.02853
354.000	0.02852	0.02852	0.02851	0.02851	0.02851
369.000	0.02850	0.02850	0.02849	0.02849	0.02849
384.000	0.02848	0.02848	0.02847	0.02847	0.02847
399.000	0.02846	0.02846	0.02845	0.02845	0.02844
414.000	0.02844	0.02844	0.02843	0.02843	0.02842
429.000	0.02842	0.02842	0.02841	0.02841	0.02840
444.000	0.02840	0.02840	0.02839	0.02839	0.02838
459.000	0.02838	0.02837	0.02837	0.02837	0.02836
474.000	0.02836	0.02835	0.02835	0.02835	0.02834
489.000	0.02834	0.02833	0.02833	0.02833	0.02832
504.000	0.02832	0.02831	0.02831	0.02831	0.02830
519.000	0.02830	0.02829	0.02829	0.02829	0.02828
534.000	0.02828	0.02827	0.02827	0.02827	0.02826
549.000	0.02826	0.02825	0.02825	0.02824	0.02824
564.000	0.02824	0.02823	0.02823	0.02822	0.02822
579.000	0.02822	0.02821	0.02821	0.02820	0.02820

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
594.000	0.02820	0.02819	0.02819	0.02818	0.02818
609.000	0.02818	0.02817	0.02817	0.02816	0.02816
624.000	0.02816	0.02815	0.02815	0.02814	0.02814
639.000	0.02814	0.02813	0.02813	0.02812	0.02812
654.000	0.02812	0.02811	0.02811	0.02810	0.02810
669.000	0.02810	0.02809	0.02809	0.02808	0.02808
684.000	0.02808	0.02807	0.02807	0.02806	0.02806
699.000	0.02806	0.02805	0.02805	0.02804	0.02804
714.000	0.02804	0.02803	0.02803	0.02802	0.02802
729.000	0.02802	0.02801	0.02801	0.02800	0.02800
744.000	0.02800	0.02799	0.02799	0.02798	0.02798
759.000	0.02798	0.02797	0.02797	0.02796	0.02796
774.000	0.02796	0.02795	0.02795	0.02794	0.02794
789.000	0.02794	0.02793	0.02793	0.02792	0.02792
804.000	0.02792	0.02791	0.02791	0.02790	0.02790
819.000	0.02790	0.02789	0.02789	0.02788	0.02788
834.000	0.02788	0.02787	0.02787	0.02786	0.02786
849.000	0.02786	0.02785	0.02785	0.02784	0.02784
864.000	0.02784	0.02783	0.02783	0.02782	0.02782
879.000	0.02782	0.02781	0.02781	0.02781	0.02780
894.000	0.02780	0.02779	0.02779	0.02779	0.02778
909.000	0.02778	0.02777	0.02777	0.02777	0.02776
924.000	0.02776	0.02775	0.02775	0.02775	0.02774
939.000	0.02774	0.02773	0.02773	0.02773	0.02772
954.000	0.02772	0.02771	0.02771	0.02771	0.02770
969.000	0.02770	0.02770	0.02769	0.02769	0.02768
984.000	0.02768	0.02768	0.02767	0.02767	0.02766
999.000	0.02766	0.02766	0.02765	0.02765	0.02764
1,014.000	0.02764	0.02764	0.02763	0.02763	0.02762
1,029.000	0.02762	0.02762	0.02761	0.02761	0.02761
1,044.000	0.02760	0.02760	0.02759	0.02759	0.02759
1,059.000	0.02758	0.02758	0.02757	0.02757	0.02757
1,074.000	0.02756	0.02756	0.02755	0.02755	0.02755
1,089.000	0.02754	0.02754	0.02754	0.02753	0.02753
1,104.000	0.02752	0.02752	0.02752	0.02751	0.02751
1,119.000	0.02750	0.02750	0.02750	0.02749	0.02749
1,134.000	0.02749	0.02748	0.02748	0.02747	0.02747
1,149.000	0.02747	0.02746	0.02746	0.02745	0.02745
1,164.000	0.02745	0.02744	0.02744	0.02743	0.02743
1,179.000	0.02743	0.02742	0.02742	0.02742	0.02741
1,194.000	0.02741	0.02740	0.02740	0.02740	0.02739
1,209.000	0.02739	0.02738	0.02738	0.02738	0.02737
1,224.000	0.02737	0.02737	0.02736	0.02736	0.02735
1,239.000	0.02735	0.02735	0.02734	0.02734	0.02734

Subsection: Diverted Hydrograph
 Label: Outlet-4

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,254.000	0.02733	0.02733	0.02732	0.02732	0.02732
1,269.000	0.02731	0.02731	0.02730	0.02730	0.02730
1,284.000	0.02729	0.02729	0.02729	0.02728	0.02728
1,299.000	0.02727	0.02727	0.02727	0.02726	0.02726
1,314.000	0.02725	0.02725	0.02725	0.02724	0.02724
1,329.000	0.02724	0.02723	0.02723	0.02722	0.02722
1,344.000	0.02722	0.02721	0.02721	0.02721	0.02720
1,359.000	0.02720	0.02719	0.02719	0.02719	0.02718
1,374.000	0.02718	0.02718	0.02717	0.02717	0.02716
1,389.000	0.02716	0.02716	0.02715	0.02715	0.02714
1,404.000	0.02714	0.02714	0.02713	0.02713	0.02713
1,419.000	0.02712	0.02712	0.02711	0.02711	0.02711
1,434.000	0.02710	0.02710	0.02710	(N/A)	(N/A)

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Project Summary

Title	UHS Inland Valley - 10yr, 24-hr
Engineer	
Company	Kimley-Horn and Associates, Inc.
Date	12/10/2020

Notes	<ol style="list-style-type: none">1. Inflow hydrographs calculated based on Synthetic Unit Hydrograph Method from Riverside County Flood Control and Water Conservation District Hydrology Manual (April 1978) using AES software.2. Flow-through basin analysis completed using modified Pul's (storage indication routing).
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User Notifications

Message Id	43
Scenario	Base
Element Type	Pond
Element Id	35
Label	Det-B2
Time	(N/A)
Message	Outflow > 0 for first rating table elevation.
Source	Warning

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)
B-2	Base	0	66,348.000	800.000	3.16000
B-3	Base	0	36,663.000	795.000	1.73000

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)
Outfall B-2	Base	0	35,855.000	981.000	0.47054
Outfall B-3	Base	0	2,715.000	1,437.000	0.05165

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft ³)
Det-B2 (IN)	Base	0	66,347.000	801.000	3.16000	(N/A)	(N/A)
Det-B2 (OUT)	Base	0	35,855.000	981.000	0.47054	1,320.252	37,958.000
Det-B3 (IN)	Base	0	36,630.000	795.000	1.73000	(N/A)	(N/A)
Det-B3 (OUT)	Base	0	2,715.000	1,437.000	0.05165	1,323.655	33,917.000

Subsection: Read Hydrograph
 Label: B-2

Scenario: Base

Peak Discharge	3.16000 ft ³ /s
Time to Peak	805.000 min
Hydrograph Volume	66,348.000 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 5.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.00000	0.05000	0.05000	0.05000	0.13000
25.000	0.13000	0.13000	0.17000	0.17000	0.17000
50.000	0.21000	0.21000	0.21000	0.21000	0.21000
75.000	0.21000	0.19000	0.19000	0.19000	0.19000
100.000	0.19000	0.19000	0.21000	0.21000	0.21000
125.000	0.24000	0.24000	0.24000	0.25000	0.25000
150.000	0.25000	0.27000	0.27000	0.27000	0.30000
175.000	0.30000	0.30000	0.31000	0.31000	0.31000
200.000	0.31000	0.31000	0.31000	0.31000	0.31000
225.000	0.31000	0.34000	0.34000	0.34000	0.36000
250.000	0.36000	0.36000	0.40000	0.40000	0.40000
275.000	0.42000	0.42000	0.42000	0.46000	0.46000
300.000	0.46000	0.43000	0.43000	0.43000	0.41000
325.000	0.41000	0.41000	0.46000	0.46000	0.46000
350.000	0.49000	0.49000	0.49000	0.52000	0.52000
375.000	0.52000	0.55000	0.55000	0.55000	0.58000
400.000	0.58000	0.58000	0.61000	0.61000	0.61000
425.000	0.62000	0.62000	0.62000	0.65000	0.65000
450.000	0.65000	0.70000	0.70000	0.70000	0.76000
475.000	0.76000	0.76000	0.85000	0.85000	0.85000
500.000	0.91000	0.91000	0.91000	0.95000	0.95000
525.000	0.95000	1.01000	1.01000	1.01000	1.09000
550.000	1.09000	1.09000	1.20000	1.20000	1.20000
575.000	1.32000	1.32000	1.32000	1.45000	1.45000
600.000	1.45000	1.27000	1.27000	1.27000	1.01000
625.000	1.01000	1.01000	1.14000	1.14000	1.14000
650.000	1.32000	1.32000	1.32000	1.31000	1.31000
675.000	1.31000	1.29000	1.29000	1.29000	1.19000
700.000	1.19000	1.19000	1.15000	1.15000	1.15000
725.000	1.56000	1.56000	1.56000	2.01000	2.01000
750.000	2.01000	2.27000	2.27000	2.27000	2.48000
775.000	2.48000	2.48000	2.85000	2.85000	2.85000
800.000	3.16000	3.16000	3.16000	2.67000	2.67000
825.000	2.67000	2.10000	2.10000	2.10000	2.21000
850.000	2.21000	2.21000	2.35000	2.35000	2.35000
875.000	2.34000	2.34000	2.34000	2.30000	2.30000
900.000	2.30000	2.21000	2.21000	2.21000	2.10000
925.000	2.10000	2.10000	1.84000	1.84000	1.84000
950.000	1.61000	1.61000	1.61000	1.03000	1.03000

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 5.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
975.000	1.03000	0.44000	0.44000	0.44000	0.29000
1,000.000	0.29000	0.29000	0.22000	0.22000	0.22000
1,025.000	0.25000	0.25000	0.25000	0.30000	0.30000
1,050.000	0.30000	0.30000	0.30000	0.30000	0.28000
1,075.000	0.28000	0.28000	0.26000	0.26000	0.26000
1,100.000	0.25000	0.25000	0.25000	0.22000	0.22000
1,125.000	0.22000	0.17000	0.17000	0.17000	0.16000
1,150.000	0.16000	0.16000	0.21000	0.21000	0.21000
1,175.000	0.21000	0.21000	0.21000	0.17000	0.17000
1,200.000	0.17000	0.16000	0.16000	0.16000	0.18000
1,225.000	0.18000	0.18000	0.18000	0.18000	0.18000
1,250.000	0.16000	0.16000	0.16000	0.16000	0.16000
1,275.000	0.16000	0.15000	0.15000	0.15000	0.16000
1,300.000	0.16000	0.16000	0.15000	0.15000	0.15000
1,325.000	0.16000	0.16000	0.16000	0.15000	0.15000
1,350.000	0.15000	0.13000	0.13000	0.13000	0.13000
1,375.000	0.13000	0.13000	0.12000	0.12000	0.12000
1,400.000	0.12000	0.12000	0.12000	0.12000	0.12000
1,425.000	0.12000	0.12000	0.12000	0.12000	(N/A)

Subsection: Read Hydrograph
 Label: B-3

Scenario: Base

Peak Discharge	1.73000 ft ³ /s
Time to Peak	795.000 min
Hydrograph Volume	36,663.000 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 5.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.03000	0.03000	0.03000	0.07000	0.07000
25.000	0.07000	0.09000	0.09000	0.09000	0.11000
50.000	0.11000	0.11000	0.11000	0.11000	0.11000
75.000	0.09000	0.09000	0.09000	0.09000	0.09000
100.000	0.09000	0.11000	0.11000	0.11000	0.12000
125.000	0.12000	0.12000	0.12000	0.12000	0.12000
150.000	0.14000	0.14000	0.14000	0.15000	0.15000
175.000	0.15000	0.15000	0.15000	0.15000	0.15000
200.000	0.15000	0.15000	0.15000	0.15000	0.15000
225.000	0.17000	0.17000	0.17000	0.18000	0.18000
250.000	0.18000	0.20000	0.20000	0.20000	0.21000
275.000	0.21000	0.21000	0.23000	0.23000	0.23000
300.000	0.21000	0.21000	0.21000	0.21000	0.21000
325.000	0.21000	0.23000	0.23000	0.23000	0.24000
350.000	0.24000	0.24000	0.26000	0.26000	0.26000
375.000	0.28000	0.28000	0.28000	0.29000	0.29000
400.000	0.29000	0.31000	0.31000	0.31000	0.31000
425.000	0.31000	0.31000	0.33000	0.33000	0.33000
450.000	0.35000	0.35000	0.35000	0.38000	0.38000
475.000	0.38000	0.43000	0.43000	0.43000	0.47000
500.000	0.47000	0.47000	0.51000	0.51000	0.51000
525.000	0.57000	0.57000	0.57000	0.67000	0.67000
550.000	0.67000	0.76000	0.76000	0.76000	0.84000
575.000	0.84000	0.84000	0.90000	0.90000	0.90000
600.000	0.72000	0.72000	0.72000	0.56000	0.56000
625.000	0.56000	0.69000	0.69000	0.69000	0.82000
650.000	0.82000	0.82000	0.81000	0.81000	0.81000
675.000	0.80000	0.80000	0.80000	0.74000	0.74000
700.000	0.74000	0.72000	0.72000	0.72000	0.97000
725.000	0.97000	0.97000	1.18000	1.18000	1.18000
750.000	1.30000	1.30000	1.30000	1.40000	1.40000
775.000	1.40000	1.60000	1.60000	1.60000	1.73000
800.000	1.73000	1.73000	1.42000	1.42000	1.42000
825.000	1.15000	1.15000	1.15000	1.24000	1.24000
850.000	1.24000	1.30000	1.30000	1.30000	1.30000
875.000	1.30000	1.30000	1.27000	1.27000	1.27000
900.000	1.22000	1.22000	1.22000	1.16000	1.16000
925.000	1.16000	1.01000	1.01000	1.01000	0.91000
950.000	0.91000	0.91000	0.50000	0.50000	0.50000

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 5.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
975.000	0.19000	0.19000	0.19000	0.13000	0.13000
1,000.000	0.13000	0.10000	0.10000	0.10000	0.13000
1,025.000	0.13000	0.13000	0.15000	0.15000	0.15000
1,050.000	0.15000	0.15000	0.15000	0.14000	0.14000
1,075.000	0.14000	0.13000	0.13000	0.13000	0.12000
1,100.000	0.12000	0.12000	0.11000	0.11000	0.11000
1,125.000	0.08000	0.08000	0.08000	0.08000	0.08000
1,150.000	0.08000	0.11000	0.11000	0.11000	0.10000
1,175.000	0.10000	0.10000	0.08000	0.08000	0.08000
1,200.000	0.08000	0.08000	0.08000	0.09000	0.09000
1,225.000	0.09000	0.09000	0.09000	0.09000	0.08000
1,250.000	0.08000	0.08000	0.08000	0.08000	0.08000
1,275.000	0.08000	0.08000	0.08000	0.08000	0.08000
1,300.000	0.08000	0.07000	0.07000	0.07000	0.08000
1,325.000	0.08000	0.08000	0.07000	0.07000	0.07000
1,350.000	0.06000	0.06000	0.06000	0.06000	0.06000
1,375.000	0.06000	0.06000	0.06000	0.06000	0.06000
1,400.000	0.06000	0.06000	0.06000	0.06000	0.06000
1,425.000	0.06000	0.06000	0.06000	0.03000	0.03000
1,450.000	0.03000	0.01000	0.01000	0.01000	0.01000

Subsection: Addition Summary
Label: Outfall B-2

Scenario: Base

Summary for Hydrograph Addition at 'Outfall B-2'

Upstream Link	Upstream Node
Outlet-2	Det-B2

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	Outlet-2	35,855.158	981.000	0.47054
Flow (In)	Outfall B-2	35,855.158	981.000	0.47054

Subsection: Addition Summary
Label: Outfall B-3

Scenario: Base

Summary for Hydrograph Addition at 'Outfall B-3'

Upstream Link	Upstream Node
Outlet-4	Det-B3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	Outlet-4	2,715.434	1,437.000	0.05165
Flow (In)	Outfall B-3	2,715.434	1,437.000	0.05165

Subsection: Time vs. Elevation
 Label: Det-B2 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
15.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
30.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
45.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
60.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
75.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
90.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
105.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
120.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
135.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
150.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
165.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
180.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
195.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
210.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
225.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
240.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
255.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
270.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
285.000	1,318.000	1,318.000	1,318.003	1,318.003	1,318.004
300.000	1,318.004	1,318.004	1,318.004	1,318.004	1,318.004
315.000	1,318.004	1,318.004	1,318.003	1,318.003	1,318.000
330.000	1,318.000	1,318.000	1,318.003	1,318.003	1,318.004
345.000	1,318.004	1,318.004	1,318.005	1,318.005	1,318.006
360.000	1,318.007	1,318.008	1,318.009	1,318.010	1,318.011
375.000	1,318.012	1,318.013	1,318.014	1,318.016	1,318.017
390.000	1,318.019	1,318.020	1,318.022	1,318.024	1,318.026
405.000	1,318.028	1,318.030	1,318.032	1,318.034	1,318.036
420.000	1,318.038	1,318.041	1,318.043	1,318.045	1,318.047
435.000	1,318.050	1,318.052	1,318.055	1,318.058	1,318.060
450.000	1,318.063	1,318.066	1,318.069	1,318.073	1,318.076
465.000	1,318.079	1,318.083	1,318.087	1,318.091	1,318.095
480.000	1,318.099	1,318.104	1,318.109	1,318.114	1,318.119
495.000	1,318.124	1,318.130	1,318.136	1,318.142	1,318.148
510.000	1,318.154	1,318.160	1,318.166	1,318.173	1,318.179
525.000	1,318.186	1,318.193	1,318.200	1,318.207	1,318.214
540.000	1,318.222	1,318.229	1,318.237	1,318.246	1,318.254
555.000	1,318.262	1,318.271	1,318.280	1,318.290	1,318.300
570.000	1,318.310	1,318.320	1,318.331	1,318.342	1,318.353
585.000	1,318.364	1,318.376	1,318.389	1,318.401	1,318.414
600.000	1,318.427	1,318.439	1,318.450	1,318.461	1,318.472
615.000	1,318.482	1,318.492	1,318.500	1,318.506	1,318.513
630.000	1,318.520	1,318.527	1,318.534	1,318.542	1,318.551

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
645.000	1,318.559	1,318.567	1,318.577	1,318.587	1,318.597
660.000	1,318.607	1,318.617	1,318.627	1,318.637	1,318.647
675.000	1,318.657	1,318.667	1,318.677	1,318.687	1,318.696
690.000	1,318.706	1,318.716	1,318.724	1,318.733	1,318.741
705.000	1,318.750	1,318.758	1,318.767	1,318.775	1,318.783
720.000	1,318.791	1,318.800	1,318.812	1,318.825	1,318.838
735.000	1,318.850	1,318.865	1,318.882	1,318.900	1,318.917
750.000	1,318.935	1,318.954	1,318.974	1,318.995	1,319.015
765.000	1,319.034	1,319.053	1,319.074	1,319.095	1,319.116
780.000	1,319.138	1,319.160	1,319.184	1,319.209	1,319.234
795.000	1,319.259	1,319.285	1,319.313	1,319.341	1,319.369
810.000	1,319.398	1,319.424	1,319.448	1,319.471	1,319.495
825.000	1,319.516	1,319.536	1,319.552	1,319.568	1,319.584
840.000	1,319.599	1,319.615	1,319.632	1,319.649	1,319.666
855.000	1,319.682	1,319.699	1,319.717	1,319.735	1,319.753
870.000	1,319.771	1,319.789	1,319.807	1,319.825	1,319.843
885.000	1,319.861	1,319.879	1,319.897	1,319.914	1,319.932
900.000	1,319.949	1,319.967	1,319.984	1,320.000	1,320.016
915.000	1,320.031	1,320.046	1,320.061	1,320.075	1,320.089
930.000	1,320.104	1,320.118	1,320.130	1,320.142	1,320.154
945.000	1,320.166	1,320.178	1,320.188	1,320.198	1,320.208
960.000	1,320.219	1,320.227	1,320.233	1,320.238	1,320.243
975.000	1,320.248	1,320.251	1,320.252	1,320.252	1,320.251
990.000	1,320.251	1,320.250	1,320.249	1,320.248	1,320.246
1,005.000	1,320.244	1,320.243	1,320.240	1,320.238	1,320.236
1,020.000	1,320.234	1,320.232	1,320.230	1,320.228	1,320.226
1,035.000	1,320.224	1,320.222	1,320.220	1,320.219	1,320.218
1,050.000	1,320.216	1,320.214	1,320.213	1,320.212	1,320.210
1,065.000	1,320.208	1,320.207	1,320.205	1,320.204	1,320.202
1,080.000	1,320.200	1,320.198	1,320.197	1,320.195	1,320.193
1,095.000	1,320.191	1,320.189	1,320.187	1,320.185	1,320.183
1,110.000	1,320.182	1,320.180	1,320.177	1,320.175	1,320.173
1,125.000	1,320.171	1,320.168	1,320.166	1,320.163	1,320.161
1,140.000	1,320.158	1,320.155	1,320.153	1,320.150	1,320.147
1,155.000	1,320.144	1,320.142	1,320.139	1,320.137	1,320.135
1,170.000	1,320.133	1,320.130	1,320.128	1,320.126	1,320.123
1,185.000	1,320.121	1,320.119	1,320.116	1,320.114	1,320.111
1,200.000	1,320.108	1,320.105	1,320.103	1,320.100	1,320.097
1,215.000	1,320.095	1,320.092	1,320.089	1,320.087	1,320.084
1,230.000	1,320.082	1,320.079	1,320.077	1,320.074	1,320.072
1,245.000	1,320.069	1,320.066	1,320.064	1,320.061	1,320.058
1,260.000	1,320.056	1,320.053	1,320.050	1,320.047	1,320.045
1,275.000	1,320.042	1,320.039	1,320.036	1,320.034	1,320.031

Subsection: Time vs. Elevation
 Label: Det-B2 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,290.000	1,320.028	1,320.025	1,320.022	1,320.020	1,320.017
1,305.000	1,320.014	1,320.011	1,320.009	1,320.006	1,320.003
1,320.000	1,320.000	1,319.997	1,319.994	1,319.991	1,319.988
1,335.000	1,319.985	1,319.983	1,319.979	1,319.976	1,319.973
1,350.000	1,319.970	1,319.967	1,319.964	1,319.961	1,319.958
1,365.000	1,319.954	1,319.951	1,319.948	1,319.945	1,319.941
1,380.000	1,319.938	1,319.935	1,319.932	1,319.928	1,319.925
1,395.000	1,319.922	1,319.918	1,319.915	1,319.912	1,319.908
1,410.000	1,319.905	1,319.902	1,319.898	1,319.895	1,319.892
1,425.000	1,319.888	1,319.885	1,319.882	1,319.878	1,319.875
1,440.000	1,319.872	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation
 Label: Det-B3 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,319.740	1,319.741	1,319.741	1,319.742	1,319.743
15.000	1,319.744	1,319.745	1,319.747	1,319.748	1,319.750
30.000	1,319.751	1,319.753	1,319.755	1,319.757	1,319.759
45.000	1,319.761	1,319.763	1,319.766	1,319.768	1,319.770
60.000	1,319.772	1,319.775	1,319.777	1,319.779	1,319.781
75.000	1,319.783	1,319.785	1,319.787	1,319.789	1,319.791
90.000	1,319.793	1,319.794	1,319.796	1,319.798	1,319.800
105.000	1,319.802	1,319.804	1,319.807	1,319.809	1,319.811
120.000	1,319.813	1,319.816	1,319.818	1,319.821	1,319.823
135.000	1,319.826	1,319.828	1,319.830	1,319.833	1,319.835
150.000	1,319.838	1,319.841	1,319.844	1,319.847	1,319.849
165.000	1,319.852	1,319.855	1,319.859	1,319.862	1,319.865
180.000	1,319.868	1,319.871	1,319.874	1,319.877	1,319.880
195.000	1,319.883	1,319.886	1,319.889	1,319.892	1,319.895
210.000	1,319.898	1,319.901	1,319.904	1,319.907	1,319.910
225.000	1,319.913	1,319.917	1,319.920	1,319.923	1,319.927
240.000	1,319.930	1,319.934	1,319.937	1,319.941	1,319.945
255.000	1,319.949	1,319.953	1,319.957	1,319.961	1,319.965
270.000	1,319.969	1,319.973	1,319.977	1,319.981	1,319.986
285.000	1,319.990	1,319.995	1,319.999	1,320.004	1,320.008
300.000	1,320.013	1,320.017	1,320.021	1,320.025	1,320.029
315.000	1,320.033	1,320.037	1,320.042	1,320.046	1,320.050
330.000	1,320.054	1,320.059	1,320.063	1,320.068	1,320.073
345.000	1,320.077	1,320.082	1,320.087	1,320.092	1,320.096
360.000	1,320.101	1,320.106	1,320.112	1,320.117	1,320.122
375.000	1,320.127	1,320.133	1,320.138	1,320.144	1,320.149
390.000	1,320.155	1,320.161	1,320.167	1,320.172	1,320.178
405.000	1,320.184	1,320.190	1,320.196	1,320.202	1,320.208
420.000	1,320.215	1,320.221	1,320.227	1,320.233	1,320.239
435.000	1,320.245	1,320.252	1,320.258	1,320.265	1,320.271
450.000	1,320.278	1,320.285	1,320.292	1,320.299	1,320.306
465.000	1,320.313	1,320.321	1,320.328	1,320.336	1,320.343
480.000	1,320.352	1,320.360	1,320.369	1,320.377	1,320.386
495.000	1,320.395	1,320.404	1,320.414	1,320.423	1,320.432
510.000	1,320.442	1,320.452	1,320.463	1,320.473	1,320.483
525.000	1,320.494	1,320.506	1,320.517	1,320.528	1,320.540
540.000	1,320.553	1,320.566	1,320.580	1,320.593	1,320.607
555.000	1,320.622	1,320.637	1,320.652	1,320.668	1,320.683
570.000	1,320.700	1,320.717	1,320.734	1,320.750	1,320.768
585.000	1,320.785	1,320.804	1,320.822	1,320.840	1,320.857
600.000	1,320.873	1,320.887	1,320.902	1,320.916	1,320.930
615.000	1,320.942	1,320.953	1,320.964	1,320.975	1,320.986
630.000	1,320.999	1,321.013	1,321.027	1,321.041	1,321.055

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
645.000	1,321.070	1,321.087	1,321.103	1,321.120	1,321.136
660.000	1,321.152	1,321.169	1,321.185	1,321.201	1,321.217
675.000	1,321.233	1,321.249	1,321.265	1,321.281	1,321.297
690.000	1,321.312	1,321.326	1,321.341	1,321.356	1,321.370
705.000	1,321.385	1,321.399	1,321.413	1,321.428	1,321.443
720.000	1,321.461	1,321.480	1,321.500	1,321.519	1,321.539
735.000	1,321.562	1,321.586	1,321.609	1,321.633	1,321.658
750.000	1,321.683	1,321.709	1,321.736	1,321.762	1,321.788
765.000	1,321.816	1,321.844	1,321.873	1,321.901	1,321.930
780.000	1,321.961	1,321.994	1,322.026	1,322.059	1,322.092
795.000	1,322.126	1,322.161	1,322.196	1,322.231	1,322.265
810.000	1,322.296	1,322.324	1,322.353	1,322.382	1,322.409
825.000	1,322.434	1,322.457	1,322.480	1,322.503	1,322.526
840.000	1,322.550	1,322.575	1,322.600	1,322.625	1,322.650
855.000	1,322.676	1,322.702	1,322.728	1,322.754	1,322.780
870.000	1,322.806	1,322.832	1,322.858	1,322.884	1,322.910
885.000	1,322.936	1,322.961	1,322.987	1,323.012	1,323.037
900.000	1,323.062	1,323.086	1,323.111	1,323.135	1,323.159
915.000	1,323.183	1,323.206	1,323.229	1,323.252	1,323.274
930.000	1,323.295	1,323.315	1,323.335	1,323.355	1,323.375
945.000	1,323.393	1,323.411	1,323.429	1,323.447	1,323.463
960.000	1,323.475	1,323.484	1,323.494	1,323.503	1,323.511
975.000	1,323.516	1,323.519	1,323.521	1,323.524	1,323.527
990.000	1,323.529	1,323.531	1,323.532	1,323.534	1,323.536
1,005.000	1,323.537	1,323.538	1,323.539	1,323.540	1,323.541
1,020.000	1,323.542	1,323.544	1,323.546	1,323.547	1,323.549
1,035.000	1,323.551	1,323.553	1,323.555	1,323.557	1,323.559
1,050.000	1,323.561	1,323.563	1,323.565	1,323.568	1,323.569
1,065.000	1,323.571	1,323.573	1,323.575	1,323.577	1,323.579
1,080.000	1,323.580	1,323.582	1,323.584	1,323.585	1,323.587
1,095.000	1,323.588	1,323.590	1,323.591	1,323.593	1,323.594
1,110.000	1,323.595	1,323.597	1,323.598	1,323.599	1,323.600
1,125.000	1,323.601	1,323.602	1,323.602	1,323.603	1,323.603
1,140.000	1,323.604	1,323.604	1,323.605	1,323.606	1,323.606
1,155.000	1,323.607	1,323.609	1,323.610	1,323.611	1,323.612
1,170.000	1,323.613	1,323.614	1,323.615	1,323.616	1,323.617
1,185.000	1,323.618	1,323.619	1,323.619	1,323.620	1,323.620
1,200.000	1,323.621	1,323.622	1,323.622	1,323.623	1,323.623
1,215.000	1,323.624	1,323.625	1,323.626	1,323.627	1,323.627
1,230.000	1,323.628	1,323.629	1,323.630	1,323.631	1,323.631
1,245.000	1,323.632	1,323.633	1,323.633	1,323.634	1,323.634
1,260.000	1,323.635	1,323.635	1,323.636	1,323.637	1,323.637
1,275.000	1,323.638	1,323.639	1,323.639	1,323.640	1,323.640

Subsection: Time vs. Elevation
 Label: Det-B3 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,290.000	1,323.641	1,323.641	1,323.642	1,323.643	1,323.643
1,305.000	1,323.644	1,323.644	1,323.644	1,323.645	1,323.645
1,320.000	1,323.646	1,323.646	1,323.647	1,323.647	1,323.648
1,335.000	1,323.648	1,323.649	1,323.649	1,323.650	1,323.650
1,350.000	1,323.650	1,323.650	1,323.651	1,323.651	1,323.651
1,365.000	1,323.651	1,323.651	1,323.651	1,323.652	1,323.652
1,380.000	1,323.652	1,323.652	1,323.652	1,323.652	1,323.653
1,395.000	1,323.653	1,323.653	1,323.653	1,323.653	1,323.654
1,410.000	1,323.654	1,323.654	1,323.654	1,323.654	1,323.654
1,425.000	1,323.655	1,323.655	1,323.655	1,323.655	1,323.655
1,440.000	1,323.655	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.000	0.000	0.000
195.000	0.000	0.000	0.000	0.000	0.000
210.000	0.000	0.000	0.000	0.000	0.000
225.000	0.000	0.000	0.000	0.000	0.000
240.000	0.000	0.000	0.000	0.000	0.000
255.000	0.000	0.000	0.000	0.000	0.000
270.000	0.000	0.000	0.000	0.000	0.000
285.000	0.000	0.000	40.000	44.000	48.000
300.000	52.000	55.000	55.000	53.000	52.000
315.000	51.000	49.000	45.000	41.000	0.000
330.000	0.000	0.000	40.000	44.000	48.000
345.000	52.000	57.000	65.000	75.000	84.000
360.000	93.000	104.000	117.000	131.000	146.000
375.000	160.000	176.000	194.000	214.000	233.000
390.000	253.000	274.000	297.000	322.000	347.000
405.000	371.000	398.000	427.000	456.000	486.000
420.000	516.000	547.000	578.000	610.000	641.000
435.000	673.000	706.000	742.000	779.000	816.000
450.000	853.000	893.000	936.000	982.000	1,028.000
465.000	1,074.000	1,123.000	1,177.000	1,233.000	1,290.000
480.000	1,346.000	1,407.000	1,476.000	1,549.000	1,621.000
495.000	1,693.000	1,769.000	1,850.000	1,934.000	2,017.000
510.000	2,100.000	2,186.000	2,276.000	2,367.000	2,458.000
525.000	2,549.000	2,643.000	2,743.000	2,845.000	2,948.000
540.000	3,050.000	3,157.000	3,272.000	3,389.000	3,507.000
555.000	3,625.000	3,749.000	3,883.000	4,021.000	4,160.000
570.000	4,299.000	4,445.000	4,602.000	4,764.000	4,926.000
585.000	5,089.000	5,259.000	5,442.000	5,630.000	5,818.000
600.000	6,007.000	6,186.000	6,349.000	6,506.000	6,662.000
615.000	6,820.000	6,962.000	7,081.000	7,179.000	7,278.000
630.000	7,376.000	7,481.000	7,598.000	7,719.000	7,840.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
645.000	7,962.000	8,093.000	8,240.000	8,393.000	8,547.000
660.000	8,700.000	8,854.000	9,007.000	9,160.000	9,313.000
675.000	9,466.000	9,618.000	9,769.000	9,920.000	10,070.000
690.000	10,221.000	10,367.000	10,504.000	10,638.000	10,771.000
705.000	10,905.000	11,037.000	11,166.000	11,293.000	11,421.000
720.000	11,548.000	11,698.000	11,886.000	12,089.000	12,292.000
735.000	12,496.000	12,725.000	12,996.000	13,284.000	13,574.000
750.000	13,864.000	14,170.000	14,501.000	14,843.000	15,163.000
765.000	15,476.000	15,802.000	16,147.000	16,501.000	16,856.000
780.000	17,212.000	17,589.000	18,001.000	18,427.000	18,856.000
795.000	19,286.000	19,735.000	20,214.000	20,707.000	21,202.000
810.000	21,699.000	22,172.000	22,601.000	23,014.000	23,428.000
825.000	23,817.000	24,170.000	24,474.000	24,759.000	25,045.000
840.000	25,332.000	25,625.000	25,929.000	26,237.000	26,546.000
855.000	26,856.000	27,175.000	27,507.000	27,845.000	28,184.000
870.000	28,524.000	28,864.000	29,204.000	29,546.000	29,888.000
885.000	30,231.000	30,573.000	30,912.000	31,251.000	31,591.000
900.000	31,931.000	32,268.000	32,597.000	32,923.000	33,225.000
915.000	33,528.000	33,825.000	34,113.000	34,399.000	34,684.000
930.000	34,971.000	35,244.000	35,495.000	35,738.000	35,980.000
945.000	36,223.000	36,455.000	36,666.000	36,869.000	37,073.000
960.000	37,277.000	37,450.000	37,571.000	37,672.000	37,772.000
975.000	37,873.000	37,942.000	37,958.000	37,952.000	37,947.000
990.000	37,941.000	37,928.000	37,900.000	37,868.000	37,835.000
1,005.000	37,803.000	37,767.000	37,724.000	37,679.000	37,634.000
1,020.000	37,589.000	37,546.000	37,505.000	37,466.000	37,426.000
1,035.000	37,387.000	37,350.000	37,318.000	37,287.000	37,257.000
1,050.000	37,226.000	37,196.000	37,166.000	37,135.000	37,105.000
1,065.000	37,074.000	37,043.000	37,010.000	36,976.000	36,942.000
1,080.000	36,908.000	36,873.000	36,836.000	36,798.000	36,761.000
1,095.000	36,724.000	36,686.000	36,647.000	36,608.000	36,568.000
1,110.000	36,529.000	36,489.000	36,445.000	36,401.000	36,356.000
1,125.000	36,312.000	36,265.000	36,213.000	36,160.000	36,107.000
1,140.000	36,054.000	36,000.000	35,946.000	35,891.000	35,836.000
1,155.000	35,781.000	35,729.000	35,681.000	35,636.000	35,590.000
1,170.000	35,544.000	35,498.000	35,452.000	35,407.000	35,361.000
1,185.000	35,315.000	35,267.000	35,216.000	35,163.000	35,111.000
1,200.000	35,058.000	35,005.000	34,951.000	34,896.000	34,842.000
1,215.000	34,788.000	34,735.000	34,683.000	34,633.000	34,582.000
1,230.000	34,531.000	34,481.000	34,430.000	34,380.000	34,329.000
1,245.000	34,279.000	34,227.000	34,174.000	34,120.000	34,066.000
1,260.000	34,012.000	33,958.000	33,905.000	33,851.000	33,797.000
1,275.000	33,743.000	33,689.000	33,634.000	33,579.000	33,523.000

Subsection: Time vs. Volume
 Label: Det-B2

Scenario: Base

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1,290.000	33,468.000	33,413.000	33,359.000	33,306.000	33,252.000
1,305.000	33,199.000	33,145.000	33,090.000	33,035.000	32,980.000
1,320.000	32,925.000	32,867.000	32,808.000	32,751.000	32,693.000
1,335.000	32,635.000	32,577.000	32,518.000	32,458.000	32,399.000
1,350.000	32,340.000	32,279.000	32,217.000	32,154.000	32,091.000
1,365.000	32,028.000	31,965.000	31,902.000	31,840.000	31,777.000
1,380.000	31,714.000	31,651.000	31,587.000	31,523.000	31,458.000
1,395.000	31,394.000	31,330.000	31,265.000	31,201.000	31,137.000
1,410.000	31,073.000	31,009.000	30,945.000	30,881.000	30,817.000
1,425.000	30,753.000	30,689.000	30,625.000	30,561.000	30,498.000
1,440.000	30,434.000	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0.000	5.000	11.000	16.000	23.000
15.000	33.000	46.000	59.000	71.000	84.000
30.000	99.000	116.000	132.000	148.000	165.000
45.000	183.000	203.000	222.000	242.000	262.000
60.000	281.000	301.000	320.000	340.000	359.000
75.000	376.000	392.000	408.000	424.000	439.000
90.000	455.000	471.000	487.000	503.000	519.000
105.000	538.000	557.000	576.000	596.000	616.000
120.000	636.000	657.000	678.000	699.000	721.000
135.000	742.000	763.000	784.000	805.000	826.000
150.000	850.000	874.000	899.000	924.000	948.000
165.000	974.000	1,000.000	1,027.000	1,053.000	1,079.000
180.000	1,105.000	1,132.000	1,158.000	1,184.000	1,210.000
195.000	1,236.000	1,262.000	1,288.000	1,314.000	1,340.000
210.000	1,366.000	1,392.000	1,418.000	1,444.000	1,471.000
225.000	1,499.000	1,529.000	1,558.000	1,588.000	1,617.000
240.000	1,648.000	1,679.000	1,710.000	1,741.000	1,773.000
255.000	1,807.000	1,841.000	1,876.000	1,911.000	1,946.000
270.000	1,981.000	2,018.000	2,054.000	2,090.000	2,127.000
285.000	2,166.000	2,206.000	2,246.000	2,285.000	2,324.000
300.000	2,361.000	2,397.000	2,434.000	2,470.000	2,505.000
315.000	2,541.000	2,577.000	2,613.000	2,649.000	2,686.000
330.000	2,724.000	2,763.000	2,803.000	2,842.000	2,882.000
345.000	2,922.000	2,963.000	3,004.000	3,045.000	3,087.000
360.000	3,130.000	3,175.000	3,219.000	3,264.000	3,309.000
375.000	3,355.000	3,403.000	3,451.000	3,499.000	3,547.000
390.000	3,596.000	3,646.000	3,695.000	3,745.000	3,795.000
405.000	3,847.000	3,900.000	3,953.000	4,005.000	4,058.000
420.000	4,111.000	4,164.000	4,217.000	4,269.000	4,323.000
435.000	4,378.000	4,434.000	4,490.000	4,546.000	4,603.000
450.000	4,662.000	4,721.000	4,781.000	4,841.000	4,901.000
465.000	4,965.000	5,030.000	5,095.000	5,160.000	5,226.000
480.000	5,297.000	5,371.000	5,445.000	5,519.000	5,594.000
495.000	5,673.000	5,754.000	5,835.000	5,916.000	5,998.000
510.000	6,084.000	6,172.000	6,260.000	6,348.000	6,438.000
525.000	6,533.000	6,632.000	6,731.000	6,829.000	6,931.000
540.000	7,043.000	7,159.000	7,276.000	7,392.000	7,512.000
555.000	7,639.000	7,772.000	7,904.000	8,037.000	8,172.000
570.000	8,314.000	8,461.000	8,608.000	8,754.000	8,903.000
585.000	9,057.000	9,214.000	9,371.000	9,528.000	9,679.000
600.000	9,814.000	9,938.000	10,063.000	10,187.000	10,306.000
615.000	10,411.000	10,506.000	10,602.000	10,698.000	10,798.000
630.000	10,910.000	11,029.000	11,148.000	11,267.000	11,391.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
645.000	11,526.000	11,668.000	11,810.000	11,953.000	12,094.000
660.000	12,235.000	12,375.000	12,516.000	12,656.000	12,796.000
675.000	12,934.000	13,073.000	13,211.000	13,349.000	13,485.000
690.000	13,616.000	13,743.000	13,871.000	13,998.000	14,124.000
705.000	14,249.000	14,373.000	14,496.000	14,620.000	14,753.000
720.000	14,908.000	15,076.000	15,244.000	15,413.000	15,589.000
735.000	15,784.000	15,990.000	16,196.000	16,402.000	16,612.000
750.000	16,833.000	17,060.000	17,288.000	17,515.000	17,746.000
765.000	17,986.000	18,231.000	18,477.000	18,722.000	18,974.000
780.000	19,244.000	19,525.000	19,806.000	20,087.000	20,373.000
795.000	20,670.000	20,974.000	21,278.000	21,582.000	21,875.000
810.000	22,140.000	22,388.000	22,636.000	22,884.000	23,122.000
825.000	23,336.000	23,535.000	23,735.000	23,934.000	24,136.000
840.000	24,347.000	24,562.000	24,777.000	24,993.000	25,210.000
855.000	25,433.000	25,659.000	25,885.000	26,111.000	26,336.000
870.000	26,562.000	26,788.000	27,014.000	27,239.000	27,464.000
885.000	27,686.000	27,906.000	28,126.000	28,346.000	28,565.000
900.000	28,778.000	28,989.000	29,200.000	29,411.000	29,620.000
915.000	29,824.000	30,024.000	30,224.000	30,424.000	30,618.000
930.000	30,799.000	30,972.000	31,145.000	31,318.000	31,487.000
945.000	31,648.000	31,802.000	31,957.000	32,112.000	32,252.000
960.000	32,355.000	32,436.000	32,517.000	32,598.000	32,667.000
975.000	32,709.000	32,734.000	32,759.000	32,784.000	32,807.000
990.000	32,825.000	32,839.000	32,853.000	32,868.000	32,881.000
1,005.000	32,891.000	32,900.000	32,909.000	32,918.000	32,928.000
1,020.000	32,940.000	32,955.000	32,969.000	32,983.000	32,998.000
1,035.000	33,015.000	33,033.000	33,050.000	33,068.000	33,086.000
1,050.000	33,104.000	33,122.000	33,139.000	33,157.000	33,175.000
1,065.000	33,191.000	33,207.000	33,223.000	33,239.000	33,255.000
1,080.000	33,270.000	33,284.000	33,298.000	33,312.000	33,326.000
1,095.000	33,339.000	33,351.000	33,364.000	33,376.000	33,388.000
1,110.000	33,399.000	33,410.000	33,420.000	33,431.000	33,440.000
1,125.000	33,447.000	33,452.000	33,458.000	33,463.000	33,468.000
1,140.000	33,473.000	33,478.000	33,483.000	33,489.000	33,495.000
1,155.000	33,504.000	33,514.000	33,525.000	33,535.000	33,546.000
1,170.000	33,555.000	33,564.000	33,572.000	33,581.000	33,589.000
1,185.000	33,595.000	33,601.000	33,606.000	33,611.000	33,616.000
1,200.000	33,621.000	33,626.000	33,632.000	33,637.000	33,642.000
1,215.000	33,649.000	33,656.000	33,662.000	33,669.000	33,676.000
1,230.000	33,683.000	33,690.000	33,697.000	33,704.000	33,711.000
1,245.000	33,716.000	33,721.000	33,727.000	33,732.000	33,737.000
1,260.000	33,742.000	33,747.000	33,752.000	33,757.000	33,762.000
1,275.000	33,768.000	33,773.000	33,778.000	33,783.000	33,788.000

Subsection: Time vs. Volume
 Label: Det-B3

Scenario: Base

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1,290.000	33,793.000	33,798.000	33,803.000	33,809.000	33,813.000
1,305.000	33,817.000	33,820.000	33,824.000	33,827.000	33,831.000
1,320.000	33,835.000	33,840.000	33,846.000	33,851.000	33,855.000
1,335.000	33,859.000	33,863.000	33,866.000	33,869.000	33,872.000
1,350.000	33,874.000	33,876.000	33,877.000	33,879.000	33,880.000
1,365.000	33,882.000	33,883.000	33,885.000	33,886.000	33,888.000
1,380.000	33,889.000	33,891.000	33,892.000	33,894.000	33,895.000
1,395.000	33,897.000	33,898.000	33,900.000	33,901.000	33,903.000
1,410.000	33,904.000	33,906.000	33,907.000	33,909.000	33,910.000
1,425.000	33,912.000	33,913.000	33,915.000	33,916.000	33,917.000
1,440.000	33,915.000	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Area Volume Curve
 Label: Det-B2

Scenario: Base

Elevation (ft)	Planimeter (ft ²)	Area (ft ²)	A1+A2+sqr (A1*A2) (ft ²)	Volume (ft ³)	Volume (Total) (ft ³)
1,318.000	0.0	13,441	0	0.000	0.000
1,319.000	0.0	16,448	44,758	14,919.000	14,919.000
1,320.000	0.0	19,598	54,000	18,000.000	32,919.000
1,321.000	0.0	22,871	63,640	21,213.000	54,133.000
1,322.000	0.0	26,299	73,695	24,565.000	78,698.000
1,323.000	0.0	29,898	84,238	28,079.000	106,777.000
1,324.000	0.0	33,713	95,359	31,786.000	138,563.000

Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 Lower and upper elevations of the increment
 Area1, Area2 Areas computed for EL1, EL2, respectively
 Volume Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve
Label: Det-B3

Scenario: Base

Elevation (ft)	Planimeter (ft ²)	Area (ft ²)	A1+A2+sqr (A1*A2) (ft ²)	Volume (ft ³)	Volume (Total) (ft ³)
1,319.740	0.0	8,663	0	0.000	0.000
1,325.000	0.0	8,663	25,989	45,567.000	45,567.000
1,326.740	0.0	8,663	25,989	15,074.000	60,641.000

Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 Lower and upper elevations of the increment
 Area1, Area2 Areas computed for EL1, EL2, respectively
 Volume Incremental volume between EL1 and EL2

Subsection: Outlet Input Data
 Label: B-2

Scenario: Base

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,318.000 ft
Increment (Headwater)	0.500 ft
Maximum (Headwater)	1,324.000 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	1,318.500	1,324.000
Vnotch Weir	Weir - 1	Forward	TW	1,322.000	1,324.000
Stand Pipe	Riser - 1	Forward	TW	1,323.000	1,324.000
User Defined Table	Treated runoff	Forward	TW	0.000	1,324.000
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Orifice - 1
 Structure Type: Orifice-Circular

Number of Openings	1
Elevation	1,318.500 ft
Orifice Diameter	1.0 in
Orifice Coefficient	0.600

Structure ID: Weir - 1
 Structure Type: Vnotch Weir

Number of Openings	1
Elevation	1,322.000 ft
V-Notch Angle	90.00 degrees
Coefficient of Discharge	0.576

Structure ID: Riser - 1
 Structure Type: Stand Pipe

Number of Openings	1
Elevation	1,323.000 ft
Diameter	54.0 in
Orifice Area	15.9 ft ²
Orifice Coefficient	0.600
Weir Length	14.14 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Key, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Treated runoff
 Structure Type: User Defined Table

Elevation (ft)	Flow (ft ³ /s)
1,318.000	0.43630
1,320.000	0.43630
1,324.000	0.43630

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall
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Convergence Tolerances

Maximum Iterations	30
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Subsection: Outlet Input Data
Label: B-2

Scenario: Base

Convergence Tolerances	
Tailwater Tolerance (Minimum)	0.010 ft
Tailwater Tolerance (Maximum)	0.500 ft
Headwater Tolerance (Minimum)	0.010 ft
Headwater Tolerance (Maximum)	0.500 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.01777	(N/A)	0.000
1,319.500	0.02570	(N/A)	0.000
1,320.000	0.03170	(N/A)	0.000
1,320.500	0.03674	(N/A)	0.000
1,321.000	0.04116	(N/A)	0.000
1,321.500	0.04515	(N/A)	0.000
1,322.000	0.04882	(N/A)	0.000
1,322.500	0.05223	(N/A)	0.000
1,323.000	0.05543	(N/A)	0.000
1,323.500	0.05845	(N/A)	0.000
1,324.000	0.06133	(N/A)	0.000

Computation Messages

HW & TW below invert
 Upstream HW &
 DNstream TW < Inv.El
 H =.46
 H =.96
 H =1.46
 H =1.96
 H =2.46
 H =2.96
 H =3.46
 H =3.96
 H =4.46
 H =4.96
 H =5.46

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Weir - 1 (Vnotch Weir)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.00000	(N/A)	0.000
1,319.500	0.00000	(N/A)	0.000
1,320.000	0.00000	(N/A)	0.000
1,320.500	0.00000	(N/A)	0.000
1,321.000	0.00000	(N/A)	0.000
1,321.500	0.00000	(N/A)	0.000
1,322.000	0.00000	(N/A)	0.000
1,322.500	0.43563	(N/A)	0.000
1,323.000	2.46427	(N/A)	0.000
1,323.500	6.79074	(N/A)	0.000
1,324.000	13.94003	(N/A)	0.000

Computation Messages

HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 H=.00; Htw=.00;
 Qfree=.00;
 H=.50; Htw=.00;
 Qfree=.44;
 H=1.00; Htw=.00;
 Qfree=2.46;
 H=1.50; Htw=.00;
 Qfree=6.79;
 H=2.00; Htw=.00;
 Qfree=13.94;

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Riser - 1 (Stand Pipe)

 Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.00000	(N/A)	0.000
1,319.500	0.00000	(N/A)	0.000
1,320.000	0.00000	(N/A)	0.000
1,320.500	0.00000	(N/A)	0.000
1,321.000	0.00000	(N/A)	0.000
1,321.500	0.00000	(N/A)	0.000
1,322.000	0.00000	(N/A)	0.000
1,322.500	0.00000	(N/A)	0.000
1,323.000	0.00000	(N/A)	0.000
1,323.500	14.99473	(N/A)	0.000
1,324.000	42.41150	(N/A)	0.000

Computation Messages

HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 Weir: H =0ft
 Weir: H =0.5ft
 Weir: H =1ft

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Treated runoff (User Defined Table)

 Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.43630	(N/A)	0.000
1,318.500	0.43630	(N/A)	0.000
1,319.000	0.43630	(N/A)	0.000
1,319.500	0.43630	(N/A)	0.000
1,320.000	0.43630	(N/A)	0.000
1,320.500	0.43630	(N/A)	0.000
1,321.000	0.43630	(N/A)	0.000
1,321.500	0.43630	(N/A)	0.000
1,322.000	0.43630	(N/A)	0.000
1,322.500	0.43630	(N/A)	0.000
1,323.000	0.43630	(N/A)	0.000
1,323.500	0.43630	(N/A)	0.000
1,324.000	0.43630	(N/A)	0.000

Computation Messages

Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table

Subsection: Composite Rating Curve
 Label: B-2

Scenario: Base

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.43630	(N/A)	0.000
1,318.500	0.43630	(N/A)	0.000
1,319.000	0.45407	(N/A)	0.000
1,319.500	0.46200	(N/A)	0.000
1,320.000	0.46800	(N/A)	0.000
1,320.500	0.47304	(N/A)	0.000
1,321.000	0.47746	(N/A)	0.000
1,321.500	0.48145	(N/A)	0.000
1,322.000	0.48512	(N/A)	0.000
1,322.500	0.92415	(N/A)	0.000
1,323.000	2.95600	(N/A)	0.000
1,323.500	22.28022	(N/A)	0.000
1,324.000	56.84916	(N/A)	0.000

Contributing Structures

Treated runoff
Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff

Subsection: Outlet Input Data
 Label: B-3

Scenario: Base

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,319.740 ft
Increment (Headwater)	0.500 ft
Maximum (Headwater)	1,326.740 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	TW	1,324.270	1,326.740
Stand Pipe	Riser - 1	Forward	TW	1,325.740	1,326.740
Orifice-Circular	Orifice - 1	Forward	TW	1,319.740	1,326.740
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Orifice - 1	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	1,319.740 ft
Orifice Diameter	1.0 in
Orifice Coefficient	0.600

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	1,324.270 ft
Weir Length	1.71 ft
Weir Coefficient	3.00 (ft ^{0.5})/s

Structure ID: Riser - 1	
Structure Type: Stand Pipe	
Number of Openings	1
Elevation	1,325.740 ft
Diameter	54.0 in
Orifice Area	15.9 ft ²
Orifice Coefficient	0.600
Weir Length	14.14 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.010 ft
Tailwater Tolerance (Maximum)	0.500 ft
Headwater Tolerance (Minimum)	0.010 ft
Headwater Tolerance (Maximum)	0.500 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Outlet Input Data
Label: B-3

Scenario: Base

Convergence Tolerances

Subsection: Individual Outlet Curves
 Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.01777	(N/A)	0.000
1,320.740	0.02570	(N/A)	0.000
1,321.240	0.03170	(N/A)	0.000
1,321.740	0.03674	(N/A)	0.000
1,322.240	0.04116	(N/A)	0.000
1,322.740	0.04515	(N/A)	0.000
1,323.240	0.04882	(N/A)	0.000
1,323.740	0.05223	(N/A)	0.000
1,324.240	0.05543	(N/A)	0.000
1,324.270	0.05561	(N/A)	0.000
1,324.740	0.05845	(N/A)	0.000
1,325.240	0.06133	(N/A)	0.000
1,325.740	0.06408	(N/A)	0.000
1,326.240	0.06671	(N/A)	0.000
1,326.740	0.06925	(N/A)	0.000

Computation Messages

Upstream HW &
 DNstream TW < Inv.El
 H =.46
 H =.96
 H =1.46
 H =1.96
 H =2.46
 H =2.96
 H =3.46
 H =3.96
 H =4.46
 H =4.49
 H =4.96
 H =5.46
 H =5.96
 H =6.46
 H =6.96

Subsection: Individual Outlet Curves
 Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Weir - 1 (Rectangular Weir)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.00000	(N/A)	0.000
1,320.740	0.00000	(N/A)	0.000
1,321.240	0.00000	(N/A)	0.000
1,321.740	0.00000	(N/A)	0.000
1,322.240	0.00000	(N/A)	0.000
1,322.740	0.00000	(N/A)	0.000
1,323.240	0.00000	(N/A)	0.000
1,323.740	0.00000	(N/A)	0.000
1,324.240	0.00000	(N/A)	0.000
1,324.270	0.00000	(N/A)	0.000
1,324.740	1.65297	(N/A)	0.000
1,325.240	4.90089	(N/A)	0.000
1,325.740	9.14310	(N/A)	0.000
1,326.240	14.18459	(N/A)	0.000
1,326.740	19.91420	(N/A)	0.000

Computation Messages

HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 H=.00; Htw=.00;
 Qfree=.00;

Subsection: Individual Outlet Curves
Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Weir - 1 (Rectangular Weir)

Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

Computation Messages

H=.47; Htw=.00; Qfree=1.65; H=.97; Htw=.00; Qfree=4.90; H=1.47; Htw=.00; Qfree=9.14; H=1.97; Htw=.00; Qfree=14.18; H=2.47; Htw=.00; Qfree=19.91;

Subsection: Individual Outlet Curves
 Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Riser - 1 (Stand Pipe)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.00000	(N/A)	0.000
1,320.740	0.00000	(N/A)	0.000
1,321.240	0.00000	(N/A)	0.000
1,321.740	0.00000	(N/A)	0.000
1,322.240	0.00000	(N/A)	0.000
1,322.740	0.00000	(N/A)	0.000
1,323.240	0.00000	(N/A)	0.000
1,323.740	0.00000	(N/A)	0.000
1,324.240	0.00000	(N/A)	0.000
1,324.270	0.00000	(N/A)	0.000
1,324.740	0.00000	(N/A)	0.000
1,325.240	0.00000	(N/A)	0.000
1,325.740	0.00000	(N/A)	0.000
1,326.240	14.99473	(N/A)	0.000
1,326.740	42.41150	(N/A)	0.000

Computation Messages

```

HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
  
```

Subsection: Individual Outlet Curves
Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Riser - 1 (Stand Pipe)

Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

Computation Messages

HW & TW < Inv.El.=1325.740 HW & TW < Inv.El.=1325.740 Weir: H =0ft Weir: H =0.5ft Weir: H =1ft
--

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.01777	(N/A)	0.000
1,320.740	0.02570	(N/A)	0.000
1,321.240	0.03170	(N/A)	0.000
1,321.740	0.03674	(N/A)	0.000
1,322.240	0.04116	(N/A)	0.000
1,322.740	0.04515	(N/A)	0.000
1,323.240	0.04882	(N/A)	0.000
1,323.740	0.05223	(N/A)	0.000
1,324.240	0.05543	(N/A)	0.000
1,324.270	0.05561	(N/A)	0.000
1,324.740	1.71142	(N/A)	0.000
1,325.240	4.96222	(N/A)	0.000
1,325.740	9.20718	(N/A)	0.000
1,326.240	29.24603	(N/A)	0.000
1,326.740	62.39494	(N/A)	0.000

Contributing Structures

None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Weir - 1 + Orifice - 1
Weir - 1 + Orifice - 1
Weir - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: Det-B2

Scenario: Base

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,318.000 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.43630 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.43630 ft ³ /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (ft ²)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
1,318.000	0.43630	0.000	13,441	0.00000	0.43630	0.43630
1,318.500	0.43630	7,083.738	14,907	0.00000	0.43630	79.14450
1,319.000	0.45407	14,919.226	16,448	0.00000	0.45407	166.22325
1,319.500	0.46200	23,525.484	17,989	0.00000	0.46200	261.85627
1,320.000	0.46800	32,919.242	19,598	0.00000	0.46800	366.23736
1,320.500	0.47304	43,116.842	21,203	0.00000	0.47304	479.54905
1,321.000	0.47746	54,132.691	22,871	0.00000	0.47746	601.95180
1,321.500	0.48145	65,986.721	24,555	0.00000	0.48145	733.66724
1,322.000	0.48512	78,697.751	26,299	0.00000	0.48512	874.90457
1,322.500	0.92415	92,287.512	28,070	0.00000	0.92415	1,026.34095
1,323.000	2.95600	106,777.023	29,898	0.00000	2.95600	1,189.36737
1,323.500	22.28022	122,193.357	31,777	0.00000	22.28022	1,379.98418
1,324.000	56.84916	138,563.440	33,713	0.00000	56.84916	1,596.44294

Subsection: Level Pool Pond Routing Summary
 Label: Det-B2 (IN)

Scenario: Base

Infiltration			
Infiltration Method (Computed)	No Infiltration		

Initial Conditions			
Elevation (Water Surface, Initial)	1,318.000 ft		
Volume (Initial)	0.000 ft ³		
Flow (Initial Outlet)	0.43630 ft ³ /s		
Flow (Initial Infiltration)	0.00000 ft ³ /s		
Flow (Initial, Total)	0.43630 ft ³ /s		
Time Increment	3.000 min		

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	3.16000 ft ³ /s	Time to Peak (Flow, In)	801.000 min
Flow (Peak Outlet)	0.47054 ft ³ /s	Time to Peak (Flow, Outlet)	981.000 min

Elevation (Water Surface, Peak)	1,320.252 ft		
Volume (Peak)	37,957.603 ft ³		

Mass Balance (ft ³)			
Volume (Initial)	0.000 ft ³		
Volume (Total Inflow)	66,347.000 ft ³		
Volume (Total Infiltration)	0.000 ft ³		
Volume (Total Outlet Outflow)	35,855.000 ft ³		
Volume (Retained)	30,348.000 ft ³		
Volume (Unrouted)	-143.000 ft ³		
Error (Mass Balance)	0.2 %		

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B2 (OUT)

Scenario: Base

Peak Discharge	0.47054 ft ³ /s
Time to Peak	981.000 min
Hydrograph Volume	35,855.158 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.21815	0.01500	0.04000	0.05000	0.05000
15.000	0.05000	0.07400	0.11400	0.13000	0.13000
30.000	0.13000	0.14200	0.16200	0.17000	0.17000
45.000	0.17000	0.18200	0.20200	0.21000	0.21000
60.000	0.21000	0.21000	0.21000	0.21000	0.21000
75.000	0.21000	0.20400	0.19400	0.19000	0.19000
90.000	0.19000	0.19000	0.19000	0.19000	0.19000
105.000	0.19000	0.19600	0.20600	0.21000	0.21000
120.000	0.21000	0.21900	0.23400	0.24000	0.24000
135.000	0.24000	0.24300	0.24800	0.25000	0.25000
150.000	0.25000	0.25600	0.26600	0.27000	0.27000
165.000	0.27000	0.27900	0.29400	0.30000	0.30000
180.000	0.30000	0.30300	0.30800	0.31000	0.31000
195.000	0.31000	0.31000	0.31000	0.31000	0.31000
210.000	0.31000	0.31000	0.31000	0.31000	0.31000
225.000	0.31000	0.31900	0.33400	0.34000	0.34000
240.000	0.34000	0.34600	0.35600	0.36000	0.36000
255.000	0.36000	0.37200	0.39200	0.40000	0.40000
270.000	0.40000	0.40600	0.41600	0.42000	0.42000
285.000	0.42000	0.43200	0.43630	0.43630	0.43630
300.000	0.43630	0.43630	0.43630	0.43630	0.43630
315.000	0.43630	0.43630	0.43630	0.43630	0.43140
330.000	0.41000	0.42500	0.43630	0.43630	0.43630
345.000	0.43630	0.43630	0.43630	0.43630	0.43630
360.000	0.43630	0.43630	0.43630	0.43630	0.43630
375.000	0.43630	0.43630	0.43630	0.43630	0.43630
390.000	0.43630	0.43630	0.43630	0.43630	0.43630
405.000	0.43630	0.43630	0.43630	0.43630	0.43630
420.000	0.43630	0.43630	0.43630	0.43630	0.43630
435.000	0.43630	0.43630	0.43630	0.43630	0.43630
450.000	0.43630	0.43630	0.43630	0.43630	0.43630
465.000	0.43630	0.43630	0.43630	0.43630	0.43630
480.000	0.43630	0.43630	0.43630	0.43630	0.43630
495.000	0.43630	0.43630	0.43630	0.43630	0.43630
510.000	0.43630	0.43630	0.43630	0.43630	0.43630
525.000	0.43630	0.43630	0.43630	0.43630	0.43630
540.000	0.43630	0.43630	0.43630	0.43630	0.43630
555.000	0.43630	0.43630	0.43630	0.43630	0.43630
570.000	0.43630	0.43630	0.43630	0.43630	0.43630

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B2 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
585.000	0.43630	0.43630	0.43630	0.43630	0.43630
600.000	0.43630	0.43630	0.43630	0.43630	0.43630
615.000	0.43630	0.43630	0.43630	0.43653	0.43676
630.000	0.43700	0.43725	0.43752	0.43781	0.43810
645.000	0.43838	0.43869	0.43904	0.43939	0.43975
660.000	0.44011	0.44047	0.44083	0.44118	0.44154
675.000	0.44189	0.44224	0.44259	0.44294	0.44328
690.000	0.44363	0.44396	0.44427	0.44458	0.44488
705.000	0.44519	0.44549	0.44578	0.44606	0.44635
720.000	0.44664	0.44698	0.44740	0.44785	0.44830
735.000	0.44876	0.44927	0.44987	0.45050	0.45114
750.000	0.45178	0.45245	0.45317	0.45391	0.45431
765.000	0.45461	0.45492	0.45525	0.45558	0.45592
780.000	0.45625	0.45661	0.45699	0.45739	0.45779
795.000	0.45818	0.45859	0.45903	0.45948	0.45993
810.000	0.46037	0.46080	0.46118	0.46155	0.46191
825.000	0.46219	0.46243	0.46263	0.46282	0.46300
840.000	0.46319	0.46339	0.46358	0.46378	0.46399
855.000	0.46419	0.46439	0.46461	0.46482	0.46504
870.000	0.46526	0.46547	0.46569	0.46590	0.46612
885.000	0.46633	0.46655	0.46676	0.46697	0.46718
900.000	0.46739	0.46760	0.46780	0.46800	0.46816
915.000	0.46831	0.46846	0.46861	0.46876	0.46890
930.000	0.46905	0.46918	0.46931	0.46943	0.46955
945.000	0.46968	0.46979	0.46990	0.47000	0.47010
960.000	0.47020	0.47029	0.47035	0.47040	0.47045
975.000	0.47050	0.47053	0.47054	0.47054	0.47053
990.000	0.47053	0.47052	0.47051	0.47049	0.47048
1,005.000	0.47046	0.47044	0.47042	0.47040	0.47038
1,020.000	0.47036	0.47033	0.47031	0.47030	0.47028
1,035.000	0.47026	0.47024	0.47022	0.47021	0.47019
1,050.000	0.47018	0.47016	0.47015	0.47013	0.47012
1,065.000	0.47010	0.47008	0.47007	0.47005	0.47003
1,080.000	0.47002	0.47000	0.46998	0.46996	0.46994
1,095.000	0.46993	0.46991	0.46989	0.46987	0.46985
1,110.000	0.46983	0.46981	0.46979	0.46976	0.46974
1,125.000	0.46972	0.46970	0.46967	0.46964	0.46962
1,140.000	0.46959	0.46956	0.46954	0.46951	0.46948
1,155.000	0.46945	0.46943	0.46940	0.46938	0.46936
1,170.000	0.46934	0.46931	0.46929	0.46927	0.46924
1,185.000	0.46922	0.46920	0.46917	0.46914	0.46912
1,200.000	0.46909	0.46906	0.46904	0.46901	0.46898
1,215.000	0.46895	0.46893	0.46890	0.46888	0.46885
1,230.000	0.46882	0.46880	0.46877	0.46875	0.46872

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B2 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,245.000	0.46870	0.46867	0.46864	0.46861	0.46859
1,260.000	0.46856	0.46853	0.46851	0.46848	0.46845
1,275.000	0.46842	0.46840	0.46837	0.46834	0.46831
1,290.000	0.46828	0.46825	0.46823	0.46820	0.46817
1,305.000	0.46814	0.46812	0.46809	0.46806	0.46803
1,320.000	0.46800	0.46797	0.46793	0.46790	0.46786
1,335.000	0.46783	0.46779	0.46775	0.46772	0.46768
1,350.000	0.46765	0.46761	0.46757	0.46753	0.46749
1,365.000	0.46745	0.46741	0.46738	0.46734	0.46730
1,380.000	0.46726	0.46722	0.46718	0.46714	0.46710
1,395.000	0.46706	0.46702	0.46698	0.46694	0.46690
1,410.000	0.46686	0.46682	0.46678	0.46674	0.46670
1,425.000	0.46666	0.46662	0.46658	0.46654	0.46650
1,440.000	0.46646	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Pond Inflow Summary
Label: Det-B2 (IN)

Scenario: Base

Summary for Hydrograph Addition at 'Det-B2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	B-2

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	B-2	66,348.000	800.000	3.16000
Flow (In)	Det-B2	66,346.560	801.000	3.16000

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: Det-B3

Scenario: Base

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,319.740 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.00000 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.00000 ft ³ /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (ft ²)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
1,319.740	0.00000	0.000	8,663	0.00000	0.00000	0.00000
1,320.240	0.01777	4,331.500	8,663	0.00000	0.01777	48.14555
1,320.740	0.02570	8,663.000	8,663	0.00000	0.02570	96.28125
1,321.240	0.03170	12,994.500	8,663	0.00000	0.03170	144.41503
1,321.740	0.03674	17,326.000	8,663	0.00000	0.03674	192.54785
1,322.240	0.04116	21,657.500	8,663	0.00000	0.04116	240.68005
1,322.740	0.04515	25,989.000	8,663	0.00000	0.04515	288.81182
1,323.240	0.04882	30,320.500	8,663	0.00000	0.04882	336.94326
1,323.740	0.05223	34,652.000	8,663	0.00000	0.05223	385.07445
1,324.240	0.05543	38,983.500	8,663	0.00000	0.05543	433.20543
1,324.270	0.05562	39,243.390	8,663	0.00000	0.05562	436.09328
1,324.740	1.71142	43,315.000	8,663	0.00000	1.71142	482.98920
1,325.240	4.96222	47,646.500	8,663	0.00000	4.96222	534.36778
1,325.740	9.20718	51,978.000	8,663	0.00000	9.20718	586.74051
1,326.240	29.24603	56,309.500	8,663	0.00000	29.24603	654.90714
1,326.740	62.39494	60,641.000	8,663	0.00000	62.39494	736.18383

Subsection: Level Pool Pond Routing Summary
 Label: Det-B3 (IN)

Scenario: Base

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,319.740 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.00000 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.00000 ft ³ /s
Time Increment	3.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	1.73000 ft ³ /s	Time to Peak (Flow, In)	795.000 min
Flow (Peak Outlet)	0.05165 ft ³ /s	Time to Peak (Flow, Outlet)	1,437.000 min

Elevation (Water Surface, Peak)	1,323.655 ft
Volume (Peak)	33,916.843 ft ³

Mass Balance (ft ³)	
Volume (Initial)	0.000 ft ³
Volume (Total Inflow)	36,630.000 ft ³
Volume (Total Infiltration)	0.000 ft ³
Volume (Total Outlet Outflow)	2,715.000 ft ³
Volume (Retained)	33,905.000 ft ³
Volume (Unrouted)	-9.000 ft ³
Error (Mass Balance)	0.0 %

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B3 (OUT)

Scenario: Base

Peak Discharge	0.05165 ft ³ /s
Time to Peak	1,437.000 min
Hydrograph Volume	2,714.151 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
54.000	0.00099	0.00107	0.00115	0.00123	0.00131
69.000	0.00140	0.00147	0.00154	0.00161	0.00167
84.000	0.00174	0.00180	0.00187	0.00193	0.00200
99.000	0.00206	0.00213	0.00221	0.00229	0.00237
114.000	0.00244	0.00253	0.00261	0.00270	0.00278
129.000	0.00287	0.00296	0.00304	0.00313	0.00322
144.000	0.00330	0.00339	0.00349	0.00359	0.00369
159.000	0.00379	0.00389	0.00400	0.00410	0.00421
174.000	0.00432	0.00443	0.00454	0.00464	0.00475
189.000	0.00486	0.00496	0.00507	0.00518	0.00529
204.000	0.00539	0.00550	0.00561	0.00571	0.00582
219.000	0.00593	0.00603	0.00615	0.00627	0.00639
234.000	0.00651	0.00664	0.00676	0.00689	0.00702
249.000	0.00714	0.00728	0.00741	0.00756	0.00770
264.000	0.00784	0.00798	0.00813	0.00828	0.00843
279.000	0.00858	0.00873	0.00889	0.00905	0.00921
294.000	0.00938	0.00954	0.00969	0.00984	0.00998
309.000	0.01013	0.01028	0.01043	0.01057	0.01072
324.000	0.01087	0.01102	0.01118	0.01134	0.01150
339.000	0.01166	0.01182	0.01199	0.01216	0.01233
354.000	0.01249	0.01266	0.01284	0.01303	0.01321
369.000	0.01339	0.01358	0.01377	0.01396	0.01416
384.000	0.01436	0.01455	0.01476	0.01496	0.01516
399.000	0.01536	0.01557	0.01578	0.01600	0.01622
414.000	0.01643	0.01665	0.01687	0.01708	0.01730
429.000	0.01752	0.01774	0.01786	0.01796	0.01806
444.000	0.01816	0.01827	0.01838	0.01849	0.01859
459.000	0.01870	0.01881	0.01893	0.01905	0.01917
474.000	0.01929	0.01941	0.01954	0.01967	0.01981
489.000	0.01994	0.02008	0.02023	0.02037	0.02052
504.000	0.02067	0.02082	0.02098	0.02114	0.02130
519.000	0.02146	0.02163	0.02180	0.02198	0.02216
534.000	0.02234	0.02253	0.02273	0.02295	0.02316
549.000	0.02337	0.02359	0.02382	0.02407	0.02431
564.000	0.02455	0.02480	0.02506	0.02533	0.02560
579.000	0.02582	0.02603	0.02624	0.02646	0.02668
594.000	0.02690	0.02711	0.02729	0.02747	0.02764
609.000	0.02781	0.02798	0.02812	0.02825	0.02839
624.000	0.02852	0.02866	0.02881	0.02898	0.02914

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B3 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
639.000	0.02931	0.02948	0.02967	0.02986	0.03006
654.000	0.03026	0.03045	0.03065	0.03084	0.03104
669.000	0.03123	0.03143	0.03162	0.03179	0.03195
684.000	0.03211	0.03227	0.03242	0.03257	0.03272
699.000	0.03287	0.03301	0.03316	0.03330	0.03345
714.000	0.03359	0.03374	0.03392	0.03412	0.03432
729.000	0.03451	0.03472	0.03494	0.03518	0.03542
744.000	0.03566	0.03591	0.03616	0.03643	0.03669
759.000	0.03693	0.03717	0.03741	0.03766	0.03791
774.000	0.03816	0.03842	0.03869	0.03898	0.03927
789.000	0.03956	0.03985	0.04015	0.04046	0.04077
804.000	0.04108	0.04136	0.04160	0.04183	0.04206
819.000	0.04229	0.04251	0.04271	0.04289	0.04307
834.000	0.04326	0.04344	0.04364	0.04384	0.04403
849.000	0.04423	0.04443	0.04464	0.04485	0.04505
864.000	0.04525	0.04545	0.04564	0.04583	0.04602
879.000	0.04621	0.04640	0.04659	0.04677	0.04696
894.000	0.04715	0.04733	0.04751	0.04769	0.04787
909.000	0.04805	0.04823	0.04840	0.04857	0.04874
924.000	0.04890	0.04905	0.04919	0.04933	0.04947
939.000	0.04960	0.04974	0.04986	0.04998	0.05011
954.000	0.05023	0.05034	0.05042	0.05048	0.05055
969.000	0.05061	0.05067	0.05070	0.05072	0.05074
984.000	0.05076	0.05078	0.05079	0.05080	0.05081
999.000	0.05082	0.05083	0.05084	0.05085	0.05086
1,014.000	0.05086	0.05087	0.05088	0.05089	0.05090
1,029.000	0.05091	0.05093	0.05094	0.05095	0.05097
1,044.000	0.05098	0.05100	0.05101	0.05102	0.05104
1,059.000	0.05105	0.05107	0.05108	0.05109	0.05110
1,074.000	0.05112	0.05113	0.05114	0.05115	0.05116
1,089.000	0.05117	0.05118	0.05119	0.05120	0.05121
1,104.000	0.05122	0.05123	0.05124	0.05125	0.05126
1,119.000	0.05127	0.05127	0.05128	0.05128	0.05129
1,134.000	0.05129	0.05130	0.05130	0.05130	0.05131
1,149.000	0.05131	0.05132	0.05132	0.05133	0.05134
1,164.000	0.05135	0.05136	0.05136	0.05137	0.05138
1,179.000	0.05139	0.05139	0.05140	0.05140	0.05140
1,194.000	0.05141	0.05141	0.05142	0.05142	0.05142
1,209.000	0.05143	0.05143	0.05144	0.05144	0.05145
1,224.000	0.05145	0.05146	0.05147	0.05147	0.05148
1,239.000	0.05148	0.05149	0.05149	0.05150	0.05150
1,254.000	0.05150	0.05151	0.05151	0.05152	0.05152
1,269.000	0.05152	0.05153	0.05153	0.05154	0.05154
1,284.000	0.05154	0.05155	0.05155	0.05156	0.05156

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B3 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,299.000	0.05156	0.05157	0.05157	0.05157	0.05158
1,314.000	0.05158	0.05158	0.05159	0.05159	0.05159
1,329.000	0.05160	0.05160	0.05160	0.05161	0.05161
1,344.000	0.05161	0.05161	0.05162	0.05162	0.05162
1,359.000	0.05162	0.05162	0.05162	0.05162	0.05162
1,374.000	0.05163	0.05163	0.05163	0.05163	0.05163
1,389.000	0.05163	0.05163	0.05163	0.05163	0.05164
1,404.000	0.05164	0.05164	0.05164	0.05164	0.05164
1,419.000	0.05164	0.05164	0.05165	0.05165	0.05165
1,434.000	0.05165	0.05165	0.05165	(N/A)	(N/A)

Subsection: Pond Inflow Summary
Label: Det-B3 (IN)

Scenario: Base

Summary for Hydrograph Addition at 'Det-B3'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	B-3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	B-3	36,663.000	795.000	1.73000
Flow (In)	Det-B3	36,630.000	795.000	1.73000

Subsection: Diverted Hydrograph
 Label: Outlet-2

Scenario: Base

Peak Discharge	0.47054 ft ³ /s
Time to Peak	981.000 min
Hydrograph Volume	35,855.158 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.21815	0.01500	0.04000	0.05000	0.05000
15.000	0.05000	0.07400	0.11400	0.13000	0.13000
30.000	0.13000	0.14200	0.16200	0.17000	0.17000
45.000	0.17000	0.18200	0.20200	0.21000	0.21000
60.000	0.21000	0.21000	0.21000	0.21000	0.21000
75.000	0.21000	0.20400	0.19400	0.19000	0.19000
90.000	0.19000	0.19000	0.19000	0.19000	0.19000
105.000	0.19000	0.19600	0.20600	0.21000	0.21000
120.000	0.21000	0.21900	0.23400	0.24000	0.24000
135.000	0.24000	0.24300	0.24800	0.25000	0.25000
150.000	0.25000	0.25600	0.26600	0.27000	0.27000
165.000	0.27000	0.27900	0.29400	0.30000	0.30000
180.000	0.30000	0.30300	0.30800	0.31000	0.31000
195.000	0.31000	0.31000	0.31000	0.31000	0.31000
210.000	0.31000	0.31000	0.31000	0.31000	0.31000
225.000	0.31000	0.31900	0.33400	0.34000	0.34000
240.000	0.34000	0.34600	0.35600	0.36000	0.36000
255.000	0.36000	0.37200	0.39200	0.40000	0.40000
270.000	0.40000	0.40600	0.41600	0.42000	0.42000
285.000	0.42000	0.43200	0.43630	0.43630	0.43630
300.000	0.43630	0.43630	0.43630	0.43630	0.43630
315.000	0.43630	0.43630	0.43630	0.43630	0.43140
330.000	0.41000	0.42500	0.43630	0.43630	0.43630
345.000	0.43630	0.43630	0.43630	0.43630	0.43630
360.000	0.43630	0.43630	0.43630	0.43630	0.43630
375.000	0.43630	0.43630	0.43630	0.43630	0.43630
390.000	0.43630	0.43630	0.43630	0.43630	0.43630
405.000	0.43630	0.43630	0.43630	0.43630	0.43630
420.000	0.43630	0.43630	0.43630	0.43630	0.43630
435.000	0.43630	0.43630	0.43630	0.43630	0.43630
450.000	0.43630	0.43630	0.43630	0.43630	0.43630
465.000	0.43630	0.43630	0.43630	0.43630	0.43630
480.000	0.43630	0.43630	0.43630	0.43630	0.43630
495.000	0.43630	0.43630	0.43630	0.43630	0.43630
510.000	0.43630	0.43630	0.43630	0.43630	0.43630
525.000	0.43630	0.43630	0.43630	0.43630	0.43630
540.000	0.43630	0.43630	0.43630	0.43630	0.43630
555.000	0.43630	0.43630	0.43630	0.43630	0.43630
570.000	0.43630	0.43630	0.43630	0.43630	0.43630

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
585.000	0.43630	0.43630	0.43630	0.43630	0.43630
600.000	0.43630	0.43630	0.43630	0.43630	0.43630
615.000	0.43630	0.43630	0.43630	0.43653	0.43676
630.000	0.43700	0.43725	0.43752	0.43781	0.43810
645.000	0.43838	0.43869	0.43904	0.43939	0.43975
660.000	0.44011	0.44047	0.44083	0.44118	0.44154
675.000	0.44189	0.44224	0.44259	0.44294	0.44328
690.000	0.44363	0.44396	0.44427	0.44458	0.44488
705.000	0.44519	0.44549	0.44578	0.44606	0.44635
720.000	0.44664	0.44698	0.44740	0.44785	0.44830
735.000	0.44876	0.44927	0.44987	0.45050	0.45114
750.000	0.45178	0.45245	0.45317	0.45391	0.45431
765.000	0.45461	0.45492	0.45525	0.45558	0.45592
780.000	0.45625	0.45661	0.45699	0.45739	0.45779
795.000	0.45818	0.45859	0.45903	0.45948	0.45993
810.000	0.46037	0.46080	0.46118	0.46155	0.46191
825.000	0.46219	0.46243	0.46263	0.46282	0.46300
840.000	0.46319	0.46339	0.46358	0.46378	0.46399
855.000	0.46419	0.46439	0.46461	0.46482	0.46504
870.000	0.46526	0.46547	0.46569	0.46590	0.46612
885.000	0.46633	0.46655	0.46676	0.46697	0.46718
900.000	0.46739	0.46760	0.46780	0.46800	0.46816
915.000	0.46831	0.46846	0.46861	0.46876	0.46890
930.000	0.46905	0.46918	0.46931	0.46943	0.46955
945.000	0.46968	0.46979	0.46990	0.47000	0.47010
960.000	0.47020	0.47029	0.47035	0.47040	0.47045
975.000	0.47050	0.47053	0.47054	0.47054	0.47053
990.000	0.47053	0.47052	0.47051	0.47049	0.47048
1,005.000	0.47046	0.47044	0.47042	0.47040	0.47038
1,020.000	0.47036	0.47033	0.47031	0.47030	0.47028
1,035.000	0.47026	0.47024	0.47022	0.47021	0.47019
1,050.000	0.47018	0.47016	0.47015	0.47013	0.47012
1,065.000	0.47010	0.47008	0.47007	0.47005	0.47003
1,080.000	0.47002	0.47000	0.46998	0.46996	0.46994
1,095.000	0.46993	0.46991	0.46989	0.46987	0.46985
1,110.000	0.46983	0.46981	0.46979	0.46976	0.46974
1,125.000	0.46972	0.46970	0.46967	0.46964	0.46962
1,140.000	0.46959	0.46956	0.46954	0.46951	0.46948
1,155.000	0.46945	0.46943	0.46940	0.46938	0.46936
1,170.000	0.46934	0.46931	0.46929	0.46927	0.46924
1,185.000	0.46922	0.46920	0.46917	0.46914	0.46912
1,200.000	0.46909	0.46906	0.46904	0.46901	0.46898
1,215.000	0.46895	0.46893	0.46890	0.46888	0.46885
1,230.000	0.46882	0.46880	0.46877	0.46875	0.46872

Subsection: Diverted Hydrograph
 Label: Outlet-2

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,245.000	0.46870	0.46867	0.46864	0.46861	0.46859
1,260.000	0.46856	0.46853	0.46851	0.46848	0.46845
1,275.000	0.46842	0.46840	0.46837	0.46834	0.46831
1,290.000	0.46828	0.46825	0.46823	0.46820	0.46817
1,305.000	0.46814	0.46812	0.46809	0.46806	0.46803
1,320.000	0.46800	0.46797	0.46793	0.46790	0.46786
1,335.000	0.46783	0.46779	0.46775	0.46772	0.46768
1,350.000	0.46765	0.46761	0.46757	0.46753	0.46749
1,365.000	0.46745	0.46741	0.46738	0.46734	0.46730
1,380.000	0.46726	0.46722	0.46718	0.46714	0.46710
1,395.000	0.46706	0.46702	0.46698	0.46694	0.46690
1,410.000	0.46686	0.46682	0.46678	0.46674	0.46670
1,425.000	0.46666	0.46662	0.46658	0.46654	0.46650
1,440.000	0.46646	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Diverted Hydrograph
 Label: Outlet-4

Scenario: Base

Peak Discharge	0.05165 ft ³ /s
Time to Peak	1,437.000 min
Hydrograph Volume	2,714.151 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
54.000	0.00099	0.00107	0.00115	0.00123	0.00131
69.000	0.00140	0.00147	0.00154	0.00161	0.00167
84.000	0.00174	0.00180	0.00187	0.00193	0.00200
99.000	0.00206	0.00213	0.00221	0.00229	0.00237
114.000	0.00244	0.00253	0.00261	0.00270	0.00278
129.000	0.00287	0.00296	0.00304	0.00313	0.00322
144.000	0.00330	0.00339	0.00349	0.00359	0.00369
159.000	0.00379	0.00389	0.00400	0.00410	0.00421
174.000	0.00432	0.00443	0.00454	0.00464	0.00475
189.000	0.00486	0.00496	0.00507	0.00518	0.00529
204.000	0.00539	0.00550	0.00561	0.00571	0.00582
219.000	0.00593	0.00603	0.00615	0.00627	0.00639
234.000	0.00651	0.00664	0.00676	0.00689	0.00702
249.000	0.00714	0.00728	0.00741	0.00756	0.00770
264.000	0.00784	0.00798	0.00813	0.00828	0.00843
279.000	0.00858	0.00873	0.00889	0.00905	0.00921
294.000	0.00938	0.00954	0.00969	0.00984	0.00998
309.000	0.01013	0.01028	0.01043	0.01057	0.01072
324.000	0.01087	0.01102	0.01118	0.01134	0.01150
339.000	0.01166	0.01182	0.01199	0.01216	0.01233
354.000	0.01249	0.01266	0.01284	0.01303	0.01321
369.000	0.01339	0.01358	0.01377	0.01396	0.01416
384.000	0.01436	0.01455	0.01476	0.01496	0.01516
399.000	0.01536	0.01557	0.01578	0.01600	0.01622
414.000	0.01643	0.01665	0.01687	0.01708	0.01730
429.000	0.01752	0.01774	0.01786	0.01796	0.01806
444.000	0.01816	0.01827	0.01838	0.01849	0.01859
459.000	0.01870	0.01881	0.01893	0.01905	0.01917
474.000	0.01929	0.01941	0.01954	0.01967	0.01981
489.000	0.01994	0.02008	0.02023	0.02037	0.02052
504.000	0.02067	0.02082	0.02098	0.02114	0.02130
519.000	0.02146	0.02163	0.02180	0.02198	0.02216
534.000	0.02234	0.02253	0.02273	0.02295	0.02316
549.000	0.02337	0.02359	0.02382	0.02407	0.02431
564.000	0.02455	0.02480	0.02506	0.02533	0.02560
579.000	0.02582	0.02603	0.02624	0.02646	0.02668
594.000	0.02690	0.02711	0.02729	0.02747	0.02764
609.000	0.02781	0.02798	0.02812	0.02825	0.02839
624.000	0.02852	0.02866	0.02881	0.02898	0.02914

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
639.000	0.02931	0.02948	0.02967	0.02986	0.03006
654.000	0.03026	0.03045	0.03065	0.03084	0.03104
669.000	0.03123	0.03143	0.03162	0.03179	0.03195
684.000	0.03211	0.03227	0.03242	0.03257	0.03272
699.000	0.03287	0.03301	0.03316	0.03330	0.03345
714.000	0.03359	0.03374	0.03392	0.03412	0.03432
729.000	0.03451	0.03472	0.03494	0.03518	0.03542
744.000	0.03566	0.03591	0.03616	0.03643	0.03669
759.000	0.03693	0.03717	0.03741	0.03766	0.03791
774.000	0.03816	0.03842	0.03869	0.03898	0.03927
789.000	0.03956	0.03985	0.04015	0.04046	0.04077
804.000	0.04108	0.04136	0.04160	0.04183	0.04206
819.000	0.04229	0.04251	0.04271	0.04289	0.04307
834.000	0.04326	0.04344	0.04364	0.04384	0.04403
849.000	0.04423	0.04443	0.04464	0.04485	0.04505
864.000	0.04525	0.04545	0.04564	0.04583	0.04602
879.000	0.04621	0.04640	0.04659	0.04677	0.04696
894.000	0.04715	0.04733	0.04751	0.04769	0.04787
909.000	0.04805	0.04823	0.04840	0.04857	0.04874
924.000	0.04890	0.04905	0.04919	0.04933	0.04947
939.000	0.04960	0.04974	0.04986	0.04998	0.05011
954.000	0.05023	0.05034	0.05042	0.05048	0.05055
969.000	0.05061	0.05067	0.05070	0.05072	0.05074
984.000	0.05076	0.05078	0.05079	0.05080	0.05081
999.000	0.05082	0.05083	0.05084	0.05085	0.05086
1,014.000	0.05086	0.05087	0.05088	0.05089	0.05090
1,029.000	0.05091	0.05093	0.05094	0.05095	0.05097
1,044.000	0.05098	0.05100	0.05101	0.05102	0.05104
1,059.000	0.05105	0.05107	0.05108	0.05109	0.05110
1,074.000	0.05112	0.05113	0.05114	0.05115	0.05116
1,089.000	0.05117	0.05118	0.05119	0.05120	0.05121
1,104.000	0.05122	0.05123	0.05124	0.05125	0.05126
1,119.000	0.05127	0.05127	0.05128	0.05128	0.05129
1,134.000	0.05129	0.05130	0.05130	0.05130	0.05131
1,149.000	0.05131	0.05132	0.05132	0.05133	0.05134
1,164.000	0.05135	0.05136	0.05136	0.05137	0.05138
1,179.000	0.05139	0.05139	0.05140	0.05140	0.05140
1,194.000	0.05141	0.05141	0.05142	0.05142	0.05142
1,209.000	0.05143	0.05143	0.05144	0.05144	0.05145
1,224.000	0.05145	0.05146	0.05147	0.05147	0.05148
1,239.000	0.05148	0.05149	0.05149	0.05150	0.05150
1,254.000	0.05150	0.05151	0.05151	0.05152	0.05152
1,269.000	0.05152	0.05153	0.05153	0.05154	0.05154
1,284.000	0.05154	0.05155	0.05155	0.05156	0.05156

Subsection: Diverted Hydrograph
 Label: Outlet-4

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,299.000	0.05156	0.05157	0.05157	0.05157	0.05158
1,314.000	0.05158	0.05158	0.05159	0.05159	0.05159
1,329.000	0.05160	0.05160	0.05160	0.05161	0.05161
1,344.000	0.05161	0.05161	0.05162	0.05162	0.05162
1,359.000	0.05162	0.05162	0.05162	0.05162	0.05162
1,374.000	0.05163	0.05163	0.05163	0.05163	0.05163
1,389.000	0.05163	0.05163	0.05163	0.05163	0.05164
1,404.000	0.05164	0.05164	0.05164	0.05164	0.05164
1,419.000	0.05164	0.05164	0.05165	0.05165	0.05165
1,434.000	0.05165	0.05165	0.05165	(N/A)	(N/A)

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Project Summary

Title UHS Inland Valley
- 100yr, 1-hr
Engineer
Company Kimley-Horn and
Associates, Inc.
Date 12/10/2020

Notes

1. Inflow hydrographs calculated based on Synthetic Unit Hydrograph Method from Riverside County Flood Control and Water Conservation District Hydrology Manual (April 1978) using AES software.
2. Flow-through basin analysis completed using modified Pul's (storage indication routing).

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User Notifications

Message Id	43
Scenario	Base
Element Type	Pond
Element Id	35
Label	Det-B2
Time	(N/A)
Message	Outflow > 0 for first rating table elevation.
Source	Warning

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)
B-2	Base	0	37,972.000	55.000	18.73000
B-3	Base	0	19,470.000	55.000	10.21000

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)
Outfall B-2	Base	0	37,954.000	102.000	0.46906
Outfall B-3	Base	0	3,134.000	111.000	0.03870

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft ³)
Det-B2 (IN)	Base	0	37,934.000	54.000	17.76000	(N/A)	(N/A)
Det-B2 (OUT)	Base	0	37,954.000	102.000	0.46906	1,320.105	35,001.000
Det-B3 (IN)	Base	0	19,430.000	54.000	9.75000	(N/A)	(N/A)
Det-B3 (OUT)	Base	0	3,134.000	111.000	0.03870	1,321.962	19,251.000

Subsection: Read Hydrograph
 Label: B-2

Scenario: Base

Peak Discharge	18.73000 ft ³ /s
Time to Peak	55.000 min
Hydrograph Volume	37,972.500 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 5.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.00000	0.53000	2.77000	4.43000	5.31000
25.000	6.08000	6.77000	7.65000	8.75000	10.18000
50.000	13.88000	18.73000	14.99000	9.95000	5.83000
75.000	3.43000	2.36000	1.69000	1.23000	0.88000
100.000	0.57000	0.41000	0.31000	(N/A)	(N/A)

Subsection: Read Hydrograph
 Label: B-3

Scenario: Base

Peak Discharge	10.21000 ft ³ /s
Time to Peak	55.000 min
Hydrograph Volume	19,470.000 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 5.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.00000	0.44000	1.88000	2.58000	3.00000
25.000	3.38000	3.72000	4.20000	4.78000	5.58000
50.000	7.91000	10.21000	6.91000	4.51000	2.28000
75.000	1.31000	0.85000	0.54000	0.33000	0.22000
100.000	0.14000	0.08000	0.04000	0.01000	0.00000

Subsection: Addition Summary
Label: Outfall B-2

Scenario: Base

Summary for Hydrograph Addition at 'Outfall B-2'

Upstream Link	Upstream Node
Outlet-2	Det-B2

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	Outlet-2	37,953.914	102.000	0.46906
Flow (In)	Outfall B-2	37,953.914	102.000	0.46906

Subsection: Addition Summary
Label: Outfall B-3

Scenario: Base

Summary for Hydrograph Addition at 'Outfall B-3'

Upstream Link	Upstream Node
Outlet-4	Det-B3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	Outlet-4	3,133.501	111.000	0.03870
Flow (In)	Outfall B-3	3,133.501	111.000	0.03870

Subsection: Time vs. Elevation
 Label: Det-B2 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,318.000	1,318.000	1,318.005	1,318.021	1,318.052
15.000	1,318.096	1,318.150	1,318.211	1,318.278	1,318.350
30.000	1,318.428	1,318.511	1,318.593	1,318.682	1,318.780
45.000	1,318.886	1,319.010	1,319.148	1,319.313	1,319.491
60.000	1,319.642	1,319.767	1,319.863	1,319.934	1,319.985
75.000	1,320.019	1,320.042	1,320.060	1,320.074	1,320.084
90.000	1,320.092	1,320.098	1,320.102	1,320.104	1,320.105
105.000	1,320.105	1,320.104	1,320.102	1,320.098	1,320.094
120.000	1,320.089	1,320.085	1,320.081	1,320.077	1,320.073
135.000	1,320.069	1,320.065	1,320.060	1,320.056	1,320.052
150.000	1,320.048	1,320.044	1,320.040	1,320.036	1,320.031
165.000	1,320.027	1,320.023	1,320.019	1,320.015	1,320.011
180.000	1,320.007	1,320.003	1,319.998	1,319.994	1,319.989
195.000	1,319.985	1,319.980	1,319.976	1,319.971	1,319.967
210.000	1,319.963	1,319.958	1,319.953	1,319.949	1,319.945
225.000	1,319.940	1,319.936	1,319.931	1,319.927	1,319.922
240.000	1,319.918	1,319.913	1,319.909	1,319.904	1,319.900
255.000	1,319.895	1,319.891	1,319.886	1,319.882	1,319.877
270.000	1,319.873	1,319.869	1,319.864	1,319.860	1,319.855
285.000	1,319.851	1,319.846	1,319.842	1,319.837	1,319.833
300.000	1,319.828	1,319.824	1,319.819	1,319.815	1,319.810
315.000	1,319.806	1,319.802	1,319.797	1,319.793	1,319.788
330.000	1,319.784	1,319.779	1,319.775	1,319.770	1,319.766
345.000	1,319.761	1,319.757	1,319.753	1,319.748	1,319.744
360.000	1,319.739	1,319.735	1,319.730	1,319.726	1,319.721
375.000	1,319.717	1,319.712	1,319.708	1,319.703	1,319.699
390.000	1,319.695	1,319.690	1,319.686	1,319.681	1,319.677
405.000	1,319.672	1,319.668	1,319.663	1,319.659	1,319.655
420.000	1,319.650	1,319.646	1,319.641	1,319.637	1,319.632
435.000	1,319.628	1,319.624	1,319.619	1,319.615	1,319.610
450.000	1,319.606	1,319.601	1,319.597	1,319.592	1,319.588
465.000	1,319.584	1,319.579	1,319.575	1,319.570	1,319.566
480.000	1,319.561	1,319.557	1,319.552	1,319.548	1,319.544
495.000	1,319.539	1,319.535	1,319.530	1,319.526	1,319.521
510.000	1,319.517	1,319.513	1,319.508	1,319.504	1,319.499
525.000	1,319.495	1,319.490	1,319.485	1,319.480	1,319.475
540.000	1,319.470	1,319.466	1,319.461	1,319.456	1,319.451
555.000	1,319.446	1,319.441	1,319.437	1,319.432	1,319.427
570.000	1,319.422	1,319.417	1,319.412	1,319.408	1,319.403
585.000	1,319.398	1,319.393	1,319.388	1,319.384	1,319.379
600.000	1,319.374	1,319.369	1,319.364	1,319.359	1,319.355
615.000	1,319.350	1,319.345	1,319.340	1,319.336	1,319.331
630.000	1,319.326	1,319.321	1,319.316	1,319.312	1,319.307

Subsection: Time vs. Elevation
 Label: Det-B2 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
645.000	1,319.302	1,319.297	1,319.292	1,319.287	1,319.283
660.000	1,319.278	1,319.273	1,319.268	1,319.264	1,319.259
675.000	1,319.254	1,319.249	1,319.244	1,319.240	1,319.235
690.000	1,319.230	1,319.225	1,319.220	1,319.216	1,319.211
705.000	1,319.206	1,319.201	1,319.197	1,319.192	1,319.187
720.000	1,319.182	1,319.177	1,319.173	1,319.168	1,319.163
735.000	1,319.158	1,319.154	1,319.149	1,319.144	1,319.139
750.000	1,319.134	1,319.130	1,319.125	1,319.120	1,319.115
765.000	1,319.111	1,319.106	1,319.101	1,319.096	1,319.092
780.000	1,319.087	1,319.082	1,319.077	1,319.073	1,319.068
795.000	1,319.063	1,319.058	1,319.053	1,319.049	1,319.044
810.000	1,319.039	1,319.034	1,319.030	1,319.025	1,319.020
825.000	1,319.015	1,319.011	1,319.006	1,319.001	1,318.996
840.000	1,318.991	1,318.986	1,318.980	1,318.975	1,318.970
855.000	1,318.965	1,318.960	1,318.954	1,318.949	1,318.944
870.000	1,318.939	1,318.934	1,318.928	1,318.923	1,318.918
885.000	1,318.913	1,318.908	1,318.903	1,318.897	1,318.892
900.000	1,318.887	1,318.882	1,318.877	1,318.872	1,318.866
915.000	1,318.861	1,318.856	1,318.851	1,318.846	1,318.841
930.000	1,318.835	1,318.830	1,318.825	1,318.820	1,318.815
945.000	1,318.810	1,318.805	1,318.799	1,318.794	1,318.789
960.000	1,318.784	1,318.779	1,318.774	1,318.769	1,318.764
975.000	1,318.758	1,318.753	1,318.748	1,318.743	1,318.738
990.000	1,318.733	1,318.728	1,318.723	1,318.718	1,318.713
1,005.000	1,318.707	1,318.702	1,318.697	1,318.692	1,318.687
1,020.000	1,318.682	1,318.677	1,318.672	1,318.667	1,318.662
1,035.000	1,318.656	1,318.651	1,318.646	1,318.641	1,318.636
1,050.000	1,318.631	1,318.626	1,318.621	1,318.616	1,318.611
1,065.000	1,318.606	1,318.601	1,318.596	1,318.591	1,318.586
1,080.000	1,318.581	1,318.576	1,318.571	1,318.566	1,318.561
1,095.000	1,318.555	1,318.550	1,318.545	1,318.540	1,318.535
1,110.000	1,318.530	1,318.525	1,318.520	1,318.515	1,318.510
1,125.000	1,318.505	1,318.500	1,318.495	1,318.489	1,318.484
1,140.000	1,318.478	1,318.473	1,318.467	1,318.461	1,318.456
1,155.000	1,318.450	1,318.445	1,318.439	1,318.434	1,318.428
1,170.000	1,318.423	1,318.417	1,318.411	1,318.406	1,318.401
1,185.000	1,318.395	1,318.389	1,318.384	1,318.378	1,318.373
1,200.000	1,318.367	1,318.362	1,318.356	1,318.351	1,318.345
1,215.000	1,318.339	1,318.334	1,318.328	1,318.323	1,318.317
1,230.000	1,318.312	1,318.306	1,318.301	1,318.295	1,318.290
1,245.000	1,318.284	1,318.278	1,318.273	1,318.267	1,318.262
1,260.000	1,318.256	1,318.251	1,318.245	1,318.240	1,318.234
1,275.000	1,318.229	1,318.223	1,318.218	1,318.212	1,318.206

Subsection: Time vs. Elevation
 Label: Det-B2 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,290.000	1,318.201	1,318.195	1,318.190	1,318.184	1,318.179
1,305.000	1,318.173	1,318.168	1,318.162	1,318.156	1,318.151
1,320.000	1,318.146	1,318.140	1,318.134	1,318.129	1,318.123
1,335.000	1,318.118	1,318.112	1,318.107	1,318.101	1,318.096
1,350.000	1,318.090	1,318.084	1,318.079	1,318.073	1,318.068
1,365.000	1,318.062	1,318.057	1,318.051	1,318.046	1,318.040
1,380.000	1,318.035	1,318.029	1,318.024	1,318.018	1,318.012
1,395.000	1,318.007	1,318.000	1,318.000	1,318.000	1,318.000
1,410.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,425.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
1,440.000	1,318.000	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,319.740	1,319.743	1,319.753	1,319.777	1,319.816
15.000	1,319.865	1,319.921	1,319.983	1,320.049	1,320.119
30.000	1,320.194	1,320.274	1,320.360	1,320.453	1,320.554
45.000	1,320.664	1,320.794	1,320.953	1,321.141	1,321.334
60.000	1,321.497	1,321.625	1,321.724	1,321.793	1,321.840
75.000	1,321.873	1,321.897	1,321.915	1,321.928	1,321.938
90.000	1,321.946	1,321.951	1,321.955	1,321.958	1,321.960
105.000	1,321.962	1,321.962	1,321.962	1,321.962	1,321.961
120.000	1,321.961	1,321.960	1,321.959	1,321.958	1,321.957
135.000	1,321.957	1,321.956	1,321.955	1,321.954	1,321.953
150.000	1,321.953	1,321.952	1,321.951	1,321.950	1,321.949
165.000	1,321.949	1,321.948	1,321.947	1,321.946	1,321.945
180.000	1,321.945	1,321.944	1,321.943	1,321.942	1,321.941
195.000	1,321.941	1,321.940	1,321.939	1,321.938	1,321.937
210.000	1,321.937	1,321.936	1,321.935	1,321.934	1,321.933
225.000	1,321.933	1,321.932	1,321.931	1,321.930	1,321.929
240.000	1,321.929	1,321.928	1,321.927	1,321.926	1,321.925
255.000	1,321.925	1,321.924	1,321.923	1,321.922	1,321.921
270.000	1,321.921	1,321.920	1,321.919	1,321.918	1,321.917
285.000	1,321.917	1,321.916	1,321.915	1,321.914	1,321.913
300.000	1,321.913	1,321.912	1,321.911	1,321.910	1,321.910
315.000	1,321.909	1,321.908	1,321.907	1,321.906	1,321.906
330.000	1,321.905	1,321.904	1,321.903	1,321.902	1,321.902
345.000	1,321.901	1,321.900	1,321.899	1,321.898	1,321.898
360.000	1,321.897	1,321.896	1,321.895	1,321.894	1,321.894
375.000	1,321.893	1,321.892	1,321.891	1,321.891	1,321.890
390.000	1,321.889	1,321.888	1,321.887	1,321.886	1,321.886
405.000	1,321.885	1,321.884	1,321.883	1,321.883	1,321.882
420.000	1,321.881	1,321.880	1,321.879	1,321.879	1,321.878
435.000	1,321.877	1,321.876	1,321.875	1,321.875	1,321.874
450.000	1,321.873	1,321.872	1,321.872	1,321.871	1,321.870
465.000	1,321.869	1,321.868	1,321.868	1,321.867	1,321.866
480.000	1,321.865	1,321.865	1,321.864	1,321.863	1,321.862
495.000	1,321.861	1,321.860	1,321.860	1,321.859	1,321.858
510.000	1,321.857	1,321.857	1,321.856	1,321.855	1,321.854
525.000	1,321.854	1,321.853	1,321.852	1,321.851	1,321.850
540.000	1,321.849	1,321.849	1,321.848	1,321.847	1,321.846
555.000	1,321.846	1,321.845	1,321.844	1,321.843	1,321.843
570.000	1,321.842	1,321.841	1,321.840	1,321.839	1,321.839
585.000	1,321.838	1,321.837	1,321.836	1,321.835	1,321.835
600.000	1,321.834	1,321.833	1,321.832	1,321.832	1,321.831
615.000	1,321.830	1,321.829	1,321.828	1,321.828	1,321.827
630.000	1,321.826	1,321.825	1,321.825	1,321.824	1,321.823

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
645.000	1,321.822	1,321.821	1,321.821	1,321.820	1,321.819
660.000	1,321.818	1,321.818	1,321.817	1,321.816	1,321.815
675.000	1,321.814	1,321.814	1,321.813	1,321.812	1,321.811
690.000	1,321.811	1,321.810	1,321.809	1,321.808	1,321.807
705.000	1,321.807	1,321.806	1,321.805	1,321.804	1,321.804
720.000	1,321.803	1,321.802	1,321.801	1,321.800	1,321.800
735.000	1,321.799	1,321.798	1,321.797	1,321.797	1,321.796
750.000	1,321.795	1,321.794	1,321.793	1,321.793	1,321.792
765.000	1,321.791	1,321.790	1,321.790	1,321.789	1,321.788
780.000	1,321.787	1,321.786	1,321.786	1,321.785	1,321.784
795.000	1,321.783	1,321.783	1,321.782	1,321.781	1,321.780
810.000	1,321.780	1,321.779	1,321.778	1,321.777	1,321.776
825.000	1,321.776	1,321.775	1,321.774	1,321.773	1,321.773
840.000	1,321.772	1,321.771	1,321.770	1,321.770	1,321.769
855.000	1,321.768	1,321.767	1,321.766	1,321.766	1,321.765
870.000	1,321.764	1,321.763	1,321.763	1,321.762	1,321.761
885.000	1,321.760	1,321.760	1,321.759	1,321.758	1,321.757
900.000	1,321.757	1,321.756	1,321.755	1,321.754	1,321.754
915.000	1,321.753	1,321.752	1,321.751	1,321.750	1,321.750
930.000	1,321.749	1,321.748	1,321.747	1,321.747	1,321.746
945.000	1,321.745	1,321.744	1,321.744	1,321.743	1,321.742
960.000	1,321.741	1,321.740	1,321.740	1,321.739	1,321.738
975.000	1,321.737	1,321.737	1,321.736	1,321.735	1,321.734
990.000	1,321.734	1,321.733	1,321.732	1,321.731	1,321.731
1,005.000	1,321.730	1,321.729	1,321.728	1,321.728	1,321.727
1,020.000	1,321.726	1,321.725	1,321.724	1,321.724	1,321.723
1,035.000	1,321.722	1,321.721	1,321.721	1,321.720	1,321.719
1,050.000	1,321.718	1,321.718	1,321.717	1,321.716	1,321.715
1,065.000	1,321.715	1,321.714	1,321.713	1,321.712	1,321.712
1,080.000	1,321.711	1,321.710	1,321.709	1,321.709	1,321.708
1,095.000	1,321.707	1,321.706	1,321.706	1,321.705	1,321.704
1,110.000	1,321.703	1,321.703	1,321.702	1,321.701	1,321.700
1,125.000	1,321.699	1,321.699	1,321.698	1,321.697	1,321.697
1,140.000	1,321.696	1,321.695	1,321.694	1,321.693	1,321.693
1,155.000	1,321.692	1,321.691	1,321.690	1,321.690	1,321.689
1,170.000	1,321.688	1,321.688	1,321.687	1,321.686	1,321.685
1,185.000	1,321.684	1,321.684	1,321.683	1,321.682	1,321.681
1,200.000	1,321.681	1,321.680	1,321.679	1,321.678	1,321.678
1,215.000	1,321.677	1,321.676	1,321.675	1,321.675	1,321.674
1,230.000	1,321.673	1,321.672	1,321.672	1,321.671	1,321.670
1,245.000	1,321.669	1,321.669	1,321.668	1,321.667	1,321.667
1,260.000	1,321.666	1,321.665	1,321.664	1,321.663	1,321.663
1,275.000	1,321.662	1,321.661	1,321.661	1,321.660	1,321.659

Subsection: Time vs. Elevation
 Label: Det-B3 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,290.000	1,321.658	1,321.657	1,321.657	1,321.656	1,321.655
1,305.000	1,321.655	1,321.654	1,321.653	1,321.652	1,321.651
1,320.000	1,321.651	1,321.650	1,321.649	1,321.649	1,321.648
1,335.000	1,321.647	1,321.646	1,321.646	1,321.645	1,321.644
1,350.000	1,321.643	1,321.643	1,321.642	1,321.641	1,321.640
1,365.000	1,321.640	1,321.639	1,321.638	1,321.637	1,321.637
1,380.000	1,321.636	1,321.635	1,321.634	1,321.634	1,321.633
1,395.000	1,321.632	1,321.631	1,321.631	1,321.630	1,321.629
1,410.000	1,321.629	1,321.628	1,321.627	1,321.626	1,321.625
1,425.000	1,321.625	1,321.624	1,321.623	1,321.623	1,321.622
1,440.000	1,321.621	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0.000	0.000	73.000	281.000	701.000
15.000	1,308.000	2,054.000	2,901.000	3,846.000	4,887.000
30.000	6,021.000	7,246.000	8,482.000	9,848.000	11,369.000
45.000	13,070.000	15,082.000	17,380.000	20,222.000	23,372.000
60.000	26,114.000	28,438.000	30,272.000	31,643.000	32,630.000
75.000	33,290.000	33,749.000	34,104.000	34,376.000	34,586.000
90.000	34,744.000	34,859.000	34,938.000	34,983.000	35,001.000
105.000	34,999.000	34,983.000	34,931.000	34,849.000	34,766.000
120.000	34,684.000	34,602.000	34,520.000	34,438.000	34,356.000
135.000	34,274.000	34,192.000	34,110.000	34,028.000	33,946.000
150.000	33,865.000	33,783.000	33,701.000	33,620.000	33,538.000
165.000	33,457.000	33,376.000	33,294.000	33,213.000	33,132.000
180.000	33,051.000	32,970.000	32,886.000	32,799.000	32,711.000
195.000	32,623.000	32,536.000	32,448.000	32,361.000	32,273.000
210.000	32,186.000	32,099.000	32,012.000	31,925.000	31,838.000
225.000	31,751.000	31,664.000	31,577.000	31,491.000	31,404.000
240.000	31,318.000	31,231.000	31,145.000	31,058.000	30,972.000
255.000	30,886.000	30,800.000	30,714.000	30,628.000	30,542.000
270.000	30,456.000	30,371.000	30,285.000	30,200.000	30,114.000
285.000	30,029.000	29,943.000	29,858.000	29,773.000	29,688.000
300.000	29,603.000	29,518.000	29,433.000	29,348.000	29,264.000
315.000	29,179.000	29,094.000	29,010.000	28,925.000	28,841.000
330.000	28,757.000	28,673.000	28,588.000	28,504.000	28,420.000
345.000	28,336.000	28,253.000	28,169.000	28,085.000	28,002.000
360.000	27,918.000	27,834.000	27,751.000	27,668.000	27,585.000
375.000	27,501.000	27,418.000	27,335.000	27,252.000	27,169.000
390.000	27,087.000	27,004.000	26,921.000	26,839.000	26,756.000
405.000	26,674.000	26,591.000	26,509.000	26,427.000	26,345.000
420.000	26,262.000	26,180.000	26,098.000	26,017.000	25,935.000
435.000	25,853.000	25,771.000	25,690.000	25,608.000	25,527.000
450.000	25,446.000	25,364.000	25,283.000	25,202.000	25,121.000
465.000	25,040.000	24,959.000	24,878.000	24,797.000	24,717.000
480.000	24,636.000	24,555.000	24,475.000	24,394.000	24,314.000
495.000	24,234.000	24,153.000	24,073.000	23,993.000	23,913.000
510.000	23,833.000	23,753.000	23,674.000	23,594.000	23,513.000
525.000	23,426.000	23,340.000	23,253.000	23,166.000	23,080.000
540.000	22,993.000	22,907.000	22,821.000	22,735.000	22,649.000
555.000	22,563.000	22,477.000	22,391.000	22,305.000	22,220.000
570.000	22,134.000	22,049.000	21,963.000	21,878.000	21,793.000
585.000	21,708.000	21,623.000	21,538.000	21,453.000	21,368.000
600.000	21,283.000	21,199.000	21,114.000	21,030.000	20,946.000
615.000	20,861.000	20,777.000	20,693.000	20,609.000	20,525.000
630.000	20,441.000	20,358.000	20,274.000	20,191.000	20,107.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
645.000	20,024.000	19,940.000	19,857.000	19,774.000	19,691.000
660.000	19,608.000	19,525.000	19,442.000	19,360.000	19,277.000
675.000	19,194.000	19,112.000	19,030.000	18,947.000	18,865.000
690.000	18,783.000	18,701.000	18,619.000	18,537.000	18,455.000
705.000	18,374.000	18,292.000	18,210.000	18,129.000	18,048.000
720.000	17,966.000	17,885.000	17,804.000	17,723.000	17,642.000
735.000	17,561.000	17,480.000	17,400.000	17,319.000	17,238.000
750.000	17,158.000	17,078.000	16,997.000	16,917.000	16,837.000
765.000	16,757.000	16,677.000	16,597.000	16,517.000	16,438.000
780.000	16,358.000	16,278.000	16,199.000	16,120.000	16,040.000
795.000	15,961.000	15,882.000	15,803.000	15,724.000	15,645.000
810.000	15,566.000	15,487.000	15,409.000	15,330.000	15,252.000
825.000	15,173.000	15,095.000	15,017.000	14,939.000	14,855.000
840.000	14,769.000	14,684.000	14,598.000	14,513.000	14,428.000
855.000	14,343.000	14,258.000	14,173.000	14,088.000	14,004.000
870.000	13,919.000	13,835.000	13,751.000	13,667.000	13,583.000
885.000	13,499.000	13,415.000	13,332.000	13,248.000	13,165.000
900.000	13,082.000	12,998.000	12,915.000	12,833.000	12,750.000
915.000	12,667.000	12,585.000	12,502.000	12,420.000	12,338.000
930.000	12,256.000	12,174.000	12,092.000	12,010.000	11,928.000
945.000	11,847.000	11,765.000	11,684.000	11,603.000	11,522.000
960.000	11,441.000	11,360.000	11,279.000	11,199.000	11,118.000
975.000	11,038.000	10,958.000	10,878.000	10,798.000	10,718.000
990.000	10,638.000	10,558.000	10,479.000	10,399.000	10,320.000
1,005.000	10,241.000	10,162.000	10,083.000	10,004.000	9,925.000
1,020.000	9,846.000	9,768.000	9,689.000	9,611.000	9,533.000
1,035.000	9,454.000	9,376.000	9,299.000	9,221.000	9,143.000
1,050.000	9,066.000	8,988.000	8,911.000	8,833.000	8,756.000
1,065.000	8,679.000	8,602.000	8,526.000	8,449.000	8,372.000
1,080.000	8,296.000	8,219.000	8,143.000	8,067.000	7,991.000
1,095.000	7,915.000	7,839.000	7,764.000	7,688.000	7,612.000
1,110.000	7,537.000	7,462.000	7,387.000	7,311.000	7,236.000
1,125.000	7,162.000	7,087.000	7,005.000	6,922.000	6,840.000
1,140.000	6,757.000	6,675.000	6,593.000	6,511.000	6,429.000
1,155.000	6,347.000	6,265.000	6,184.000	6,102.000	6,021.000
1,170.000	5,939.000	5,858.000	5,777.000	5,696.000	5,615.000
1,185.000	5,534.000	5,453.000	5,372.000	5,292.000	5,211.000
1,200.000	5,130.000	5,050.000	4,970.000	4,890.000	4,809.000
1,215.000	4,729.000	4,650.000	4,570.000	4,490.000	4,410.000
1,230.000	4,331.000	4,251.000	4,172.000	4,093.000	4,013.000
1,245.000	3,934.000	3,855.000	3,776.000	3,697.000	3,619.000
1,260.000	3,540.000	3,461.000	3,383.000	3,305.000	3,226.000
1,275.000	3,148.000	3,070.000	2,992.000	2,914.000	2,836.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1,290.000	2,758.000	2,681.000	2,603.000	2,526.000	2,448.000
1,305.000	2,371.000	2,294.000	2,216.000	2,139.000	2,062.000
1,320.000	1,986.000	1,909.000	1,832.000	1,755.000	1,679.000
1,335.000	1,603.000	1,526.000	1,450.000	1,374.000	1,298.000
1,350.000	1,222.000	1,146.000	1,070.000	994.000	919.000
1,365.000	843.000	768.000	692.000	617.000	542.000
1,380.000	467.000	392.000	317.000	242.000	167.000
1,395.000	93.000	0.000	0.000	0.000	0.000
1,410.000	0.000	0.000	0.000	0.000	0.000
1,425.000	0.000	0.000	0.000	0.000	0.000
1,440.000	0.000	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0.000	24.000	113.000	322.000	659.000
15.000	1,085.000	1,571.000	2,101.000	2,674.000	3,285.000
30.000	3,934.000	4,626.000	5,372.000	6,177.000	7,051.000
45.000	8,008.000	9,134.000	10,510.000	12,136.000	13,808.000
60.000	15,224.000	16,332.000	17,183.000	17,788.000	18,197.000
75.000	18,478.000	18,682.000	18,839.000	18,957.000	19,046.000
90.000	19,110.000	19,156.000	19,191.000	19,217.000	19,234.000
105.000	19,245.000	19,250.000	19,251.000	19,249.000	19,244.000
120.000	19,237.000	19,230.000	19,224.000	19,217.000	19,210.000
135.000	19,203.000	19,196.000	19,189.000	19,182.000	19,175.000
150.000	19,168.000	19,161.000	19,154.000	19,147.000	19,140.000
165.000	19,133.000	19,126.000	19,119.000	19,112.000	19,105.000
180.000	19,098.000	19,091.000	19,085.000	19,078.000	19,071.000
195.000	19,064.000	19,057.000	19,050.000	19,043.000	19,036.000
210.000	19,029.000	19,022.000	19,015.000	19,008.000	19,001.000
225.000	18,994.000	18,988.000	18,981.000	18,974.000	18,967.000
240.000	18,960.000	18,953.000	18,946.000	18,939.000	18,932.000
255.000	18,925.000	18,918.000	18,912.000	18,905.000	18,898.000
270.000	18,891.000	18,884.000	18,877.000	18,870.000	18,863.000
285.000	18,856.000	18,849.000	18,843.000	18,836.000	18,829.000
300.000	18,822.000	18,815.000	18,808.000	18,801.000	18,794.000
315.000	18,787.000	18,781.000	18,774.000	18,767.000	18,760.000
330.000	18,753.000	18,746.000	18,739.000	18,732.000	18,726.000
345.000	18,719.000	18,712.000	18,705.000	18,698.000	18,691.000
360.000	18,684.000	18,678.000	18,671.000	18,664.000	18,657.000
375.000	18,650.000	18,643.000	18,636.000	18,630.000	18,623.000
390.000	18,616.000	18,609.000	18,602.000	18,595.000	18,588.000
405.000	18,582.000	18,575.000	18,568.000	18,561.000	18,554.000
420.000	18,547.000	18,541.000	18,534.000	18,527.000	18,520.000
435.000	18,513.000	18,506.000	18,500.000	18,493.000	18,486.000
450.000	18,479.000	18,472.000	18,465.000	18,459.000	18,452.000
465.000	18,445.000	18,438.000	18,431.000	18,425.000	18,418.000
480.000	18,411.000	18,404.000	18,397.000	18,391.000	18,384.000
495.000	18,377.000	18,370.000	18,363.000	18,356.000	18,350.000
510.000	18,343.000	18,336.000	18,329.000	18,322.000	18,316.000
525.000	18,309.000	18,302.000	18,295.000	18,289.000	18,282.000
540.000	18,275.000	18,268.000	18,261.000	18,255.000	18,248.000
555.000	18,241.000	18,234.000	18,227.000	18,221.000	18,214.000
570.000	18,207.000	18,200.000	18,194.000	18,187.000	18,180.000
585.000	18,173.000	18,167.000	18,160.000	18,153.000	18,146.000
600.000	18,139.000	18,133.000	18,126.000	18,119.000	18,112.000
615.000	18,106.000	18,099.000	18,092.000	18,085.000	18,079.000
630.000	18,072.000	18,065.000	18,058.000	18,052.000	18,045.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
645.000	18,038.000	18,031.000	18,025.000	18,018.000	18,011.000
660.000	18,004.000	17,998.000	17,991.000	17,984.000	17,978.000
675.000	17,971.000	17,964.000	17,957.000	17,951.000	17,944.000
690.000	17,937.000	17,930.000	17,924.000	17,917.000	17,910.000
705.000	17,904.000	17,897.000	17,890.000	17,883.000	17,877.000
720.000	17,870.000	17,863.000	17,857.000	17,850.000	17,843.000
735.000	17,836.000	17,830.000	17,823.000	17,816.000	17,810.000
750.000	17,803.000	17,796.000	17,790.000	17,783.000	17,776.000
765.000	17,769.000	17,763.000	17,756.000	17,749.000	17,743.000
780.000	17,736.000	17,729.000	17,723.000	17,716.000	17,709.000
795.000	17,703.000	17,696.000	17,689.000	17,683.000	17,676.000
810.000	17,669.000	17,662.000	17,656.000	17,649.000	17,642.000
825.000	17,636.000	17,629.000	17,622.000	17,616.000	17,609.000
840.000	17,602.000	17,596.000	17,589.000	17,582.000	17,576.000
855.000	17,569.000	17,562.000	17,556.000	17,549.000	17,543.000
870.000	17,536.000	17,529.000	17,523.000	17,516.000	17,509.000
885.000	17,503.000	17,496.000	17,489.000	17,483.000	17,476.000
900.000	17,469.000	17,463.000	17,456.000	17,450.000	17,443.000
915.000	17,436.000	17,430.000	17,423.000	17,416.000	17,410.000
930.000	17,403.000	17,396.000	17,390.000	17,383.000	17,377.000
945.000	17,370.000	17,363.000	17,357.000	17,350.000	17,344.000
960.000	17,337.000	17,330.000	17,324.000	17,317.000	17,310.000
975.000	17,304.000	17,297.000	17,291.000	17,284.000	17,277.000
990.000	17,271.000	17,264.000	17,258.000	17,251.000	17,244.000
1,005.000	17,238.000	17,231.000	17,225.000	17,218.000	17,211.000
1,020.000	17,205.000	17,198.000	17,192.000	17,185.000	17,179.000
1,035.000	17,172.000	17,165.000	17,159.000	17,152.000	17,146.000
1,050.000	17,139.000	17,133.000	17,126.000	17,119.000	17,113.000
1,065.000	17,106.000	17,100.000	17,093.000	17,087.000	17,080.000
1,080.000	17,073.000	17,067.000	17,060.000	17,054.000	17,047.000
1,095.000	17,041.000	17,034.000	17,028.000	17,021.000	17,014.000
1,110.000	17,008.000	17,001.000	16,995.000	16,988.000	16,982.000
1,125.000	16,975.000	16,969.000	16,962.000	16,956.000	16,949.000
1,140.000	16,942.000	16,936.000	16,929.000	16,923.000	16,916.000
1,155.000	16,910.000	16,903.000	16,897.000	16,890.000	16,884.000
1,170.000	16,877.000	16,871.000	16,864.000	16,858.000	16,851.000
1,185.000	16,845.000	16,838.000	16,832.000	16,825.000	16,819.000
1,200.000	16,812.000	16,806.000	16,799.000	16,793.000	16,786.000
1,215.000	16,780.000	16,773.000	16,767.000	16,760.000	16,754.000
1,230.000	16,747.000	16,741.000	16,734.000	16,728.000	16,721.000
1,245.000	16,715.000	16,708.000	16,702.000	16,695.000	16,689.000
1,260.000	16,682.000	16,676.000	16,669.000	16,663.000	16,656.000
1,275.000	16,650.000	16,643.000	16,637.000	16,631.000	16,624.000

Subsection: Time vs. Volume
 Label: Det-B3

Scenario: Base

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1,290.000	16,618.000	16,611.000	16,605.000	16,598.000	16,592.000
1,305.000	16,585.000	16,579.000	16,572.000	16,566.000	16,559.000
1,320.000	16,553.000	16,547.000	16,540.000	16,534.000	16,527.000
1,335.000	16,521.000	16,514.000	16,508.000	16,501.000	16,495.000
1,350.000	16,489.000	16,482.000	16,476.000	16,469.000	16,463.000
1,365.000	16,456.000	16,450.000	16,444.000	16,437.000	16,431.000
1,380.000	16,424.000	16,418.000	16,411.000	16,405.000	16,399.000
1,395.000	16,392.000	16,386.000	16,379.000	16,373.000	16,367.000
1,410.000	16,360.000	16,354.000	16,347.000	16,341.000	16,334.000
1,425.000	16,328.000	16,322.000	16,315.000	16,309.000	16,302.000
1,440.000	16,296.000	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Area Volume Curve
 Label: Det-B2

Scenario: Base

Elevation (ft)	Planimeter (ft ²)	Area (ft ²)	A1+A2+sqr (A1*A2) (ft ²)	Volume (ft ³)	Volume (Total) (ft ³)
1,318.000	0.0	13,441	0	0.000	0.000
1,319.000	0.0	16,448	44,758	14,919.000	14,919.000
1,320.000	0.0	19,598	54,000	18,000.000	32,919.000
1,321.000	0.0	22,871	63,640	21,213.000	54,133.000
1,322.000	0.0	26,299	73,695	24,565.000	78,698.000
1,323.000	0.0	29,898	84,238	28,079.000	106,777.000
1,324.000	0.0	33,713	95,359	31,786.000	138,563.000

Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 Lower and upper elevations of the increment
 Area1, Area2 Areas computed for EL1, EL2, respectively
 Volume Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve
 Label: Det-B3

Scenario: Base

Elevation (ft)	Planimeter (ft ²)	Area (ft ²)	A1+A2+sqr (A1*A2) (ft ²)	Volume (ft ³)	Volume (Total) (ft ³)
1,319.740	0.0	8,663	0	0.000	0.000
1,325.000	0.0	8,663	25,989	45,567.000	45,567.000
1,326.740	0.0	8,663	25,989	15,074.000	60,641.000

Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 Lower and upper elevations of the increment
 Area1, Area2 Areas computed for EL1, EL2, respectively
 Volume Incremental volume between EL1 and EL2

Subsection: Outlet Input Data
 Label: B-2

Scenario: Base

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,318.000 ft
Increment (Headwater)	0.500 ft
Maximum (Headwater)	1,324.000 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	1,318.500	1,324.000
Vnotch Weir	Weir - 1	Forward	TW	1,322.000	1,324.000
Stand Pipe	Riser - 1	Forward	TW	1,323.000	1,324.000
User Defined Table	Treated runoff	Forward	TW	0.000	1,324.000
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Orifice - 1
 Structure Type: Orifice-Circular

Number of Openings	1
Elevation	1,318.500 ft
Orifice Diameter	1.0 in
Orifice Coefficient	0.600

Structure ID: Weir - 1
 Structure Type: Vnotch Weir

Number of Openings	1
Elevation	1,322.000 ft
V-Notch Angle	90.00 degrees
Coefficient of Discharge	0.576

Structure ID: Riser - 1
 Structure Type: Stand Pipe

Number of Openings	1
Elevation	1,323.000 ft
Diameter	54.0 in
Orifice Area	15.9 ft ²
Orifice Coefficient	0.600
Weir Length	14.14 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Key, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: Treated runoff
 Structure Type: User Defined Table

Elevation (ft)	Flow (ft ³ /s)
1,318.000	0.43630
1,320.000	0.43630
1,324.000	0.43630

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall
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Convergence Tolerances

Maximum Iterations	30
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Subsection: Outlet Input Data
Label: B-2

Scenario: Base

Convergence Tolerances	
Tailwater Tolerance (Minimum)	0.010 ft
Tailwater Tolerance (Maximum)	0.500 ft
Headwater Tolerance (Minimum)	0.010 ft
Headwater Tolerance (Maximum)	0.500 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.01777	(N/A)	0.000
1,319.500	0.02570	(N/A)	0.000
1,320.000	0.03170	(N/A)	0.000
1,320.500	0.03674	(N/A)	0.000
1,321.000	0.04116	(N/A)	0.000
1,321.500	0.04515	(N/A)	0.000
1,322.000	0.04882	(N/A)	0.000
1,322.500	0.05223	(N/A)	0.000
1,323.000	0.05543	(N/A)	0.000
1,323.500	0.05845	(N/A)	0.000
1,324.000	0.06133	(N/A)	0.000

Computation Messages

HW & TW below invert
 Upstream HW &
 DNstream TW < Inv.El
 H =.46
 H =.96
 H =1.46
 H =1.96
 H =2.46
 H =2.96
 H =3.46
 H =3.96
 H =4.46
 H =4.96
 H =5.46

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Weir - 1 (Vnotch Weir)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.00000	(N/A)	0.000
1,319.500	0.00000	(N/A)	0.000
1,320.000	0.00000	(N/A)	0.000
1,320.500	0.00000	(N/A)	0.000
1,321.000	0.00000	(N/A)	0.000
1,321.500	0.00000	(N/A)	0.000
1,322.000	0.00000	(N/A)	0.000
1,322.500	0.43563	(N/A)	0.000
1,323.000	2.46427	(N/A)	0.000
1,323.500	6.79074	(N/A)	0.000
1,324.000	13.94003	(N/A)	0.000

Computation Messages

HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 H=.00; Htw=.00;
 Qfree=.00;
 H=.50; Htw=.00;
 Qfree=.44;
 H=1.00; Htw=.00;
 Qfree=2.46;
 H=1.50; Htw=.00;
 Qfree=6.79;
 H=2.00; Htw=.00;
 Qfree=13.94;

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Riser - 1 (Stand Pipe)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.00000	(N/A)	0.000
1,319.500	0.00000	(N/A)	0.000
1,320.000	0.00000	(N/A)	0.000
1,320.500	0.00000	(N/A)	0.000
1,321.000	0.00000	(N/A)	0.000
1,321.500	0.00000	(N/A)	0.000
1,322.000	0.00000	(N/A)	0.000
1,322.500	0.00000	(N/A)	0.000
1,323.000	0.00000	(N/A)	0.000
1,323.500	14.99473	(N/A)	0.000
1,324.000	42.41150	(N/A)	0.000

Computation Messages

HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 Weir: H =0ft
 Weir: H =0.5ft
 Weir: H =1ft

Subsection: Individual Outlet Curves
 Label: B-2

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Treated runoff (User Defined Table)

 Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.43630	(N/A)	0.000
1,318.500	0.43630	(N/A)	0.000
1,319.000	0.43630	(N/A)	0.000
1,319.500	0.43630	(N/A)	0.000
1,320.000	0.43630	(N/A)	0.000
1,320.500	0.43630	(N/A)	0.000
1,321.000	0.43630	(N/A)	0.000
1,321.500	0.43630	(N/A)	0.000
1,322.000	0.43630	(N/A)	0.000
1,322.500	0.43630	(N/A)	0.000
1,323.000	0.43630	(N/A)	0.000
1,323.500	0.43630	(N/A)	0.000
1,324.000	0.43630	(N/A)	0.000

Computation Messages

Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table

Subsection: Composite Rating Curve
 Label: B-2

Scenario: Base

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.43630	(N/A)	0.000
1,318.500	0.43630	(N/A)	0.000
1,319.000	0.45407	(N/A)	0.000
1,319.500	0.46200	(N/A)	0.000
1,320.000	0.46800	(N/A)	0.000
1,320.500	0.47304	(N/A)	0.000
1,321.000	0.47746	(N/A)	0.000
1,321.500	0.48145	(N/A)	0.000
1,322.000	0.48512	(N/A)	0.000
1,322.500	0.92415	(N/A)	0.000
1,323.000	2.95600	(N/A)	0.000
1,323.500	22.28022	(N/A)	0.000
1,324.000	56.84916	(N/A)	0.000

Contributing Structures

Treated runoff
Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff

Subsection: Outlet Input Data
 Label: B-3

Scenario: Base

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,319.740 ft
Increment (Headwater)	0.500 ft
Maximum (Headwater)	1,326.740 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - 1	Forward	TW	1,324.270	1,326.740
Stand Pipe	Riser - 1	Forward	TW	1,325.740	1,326.740
Orifice-Circular	Orifice - 1	Forward	TW	1,319.740	1,326.740
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Orifice - 1
 Structure Type: Orifice-Circular

Number of Openings	1
Elevation	1,319.740 ft
Orifice Diameter	1.0 in
Orifice Coefficient	0.600

Structure ID: Weir - 1
 Structure Type: Rectangular Weir

Number of Openings	1
Elevation	1,324.270 ft
Weir Length	1.71 ft
Weir Coefficient	3.00 (ft ^{0.5})/s

Structure ID: Riser - 1
 Structure Type: Stand Pipe

Number of Openings	1
Elevation	1,325.740 ft
Diameter	54.0 in
Orifice Area	15.9 ft ²
Orifice Coefficient	0.600
Weir Length	14.14 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall
----------------	--------------

Convergence Tolerances

Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.010 ft
Tailwater Tolerance (Maximum)	0.500 ft
Headwater Tolerance (Minimum)	0.010 ft
Headwater Tolerance (Maximum)	0.500 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Outlet Input Data
Label: B-3

Scenario: Base

Convergence Tolerances

Subsection: Individual Outlet Curves
 Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.01777	(N/A)	0.000
1,320.740	0.02570	(N/A)	0.000
1,321.240	0.03170	(N/A)	0.000
1,321.740	0.03674	(N/A)	0.000
1,322.240	0.04116	(N/A)	0.000
1,322.740	0.04515	(N/A)	0.000
1,323.240	0.04882	(N/A)	0.000
1,323.740	0.05223	(N/A)	0.000
1,324.240	0.05543	(N/A)	0.000
1,324.270	0.05561	(N/A)	0.000
1,324.740	0.05845	(N/A)	0.000
1,325.240	0.06133	(N/A)	0.000
1,325.740	0.06408	(N/A)	0.000
1,326.240	0.06671	(N/A)	0.000
1,326.740	0.06925	(N/A)	0.000

Computation Messages

Upstream HW &
 DNstream TW < Inv.El
 H =.46
 H =.96
 H =1.46
 H =1.96
 H =2.46
 H =2.96
 H =3.46
 H =3.96
 H =4.46
 H =4.49
 H =4.96
 H =5.46
 H =5.96
 H =6.46
 H =6.96

Subsection: Individual Outlet Curves
 Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Weir - 1 (Rectangular Weir)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.00000	(N/A)	0.000
1,320.740	0.00000	(N/A)	0.000
1,321.240	0.00000	(N/A)	0.000
1,321.740	0.00000	(N/A)	0.000
1,322.240	0.00000	(N/A)	0.000
1,322.740	0.00000	(N/A)	0.000
1,323.240	0.00000	(N/A)	0.000
1,323.740	0.00000	(N/A)	0.000
1,324.240	0.00000	(N/A)	0.000
1,324.270	0.00000	(N/A)	0.000
1,324.740	1.65297	(N/A)	0.000
1,325.240	4.90089	(N/A)	0.000
1,325.740	9.14310	(N/A)	0.000
1,326.240	14.18459	(N/A)	0.000
1,326.740	19.91420	(N/A)	0.000

Computation Messages

HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 HW & TW below
 Inv.El.=1324.270
 H=.00; Htw=.00;
 Qfree=.00;

Subsection: Individual Outlet Curves
Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Weir - 1 (Rectangular Weir)

Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

Computation Messages

H=.47; Htw=.00; Qfree=1.65; H=.97; Htw=.00; Qfree=4.90; H=1.47; Htw=.00; Qfree=9.14; H=1.97; Htw=.00; Qfree=14.18; H=2.47; Htw=.00; Qfree=19.91;

Subsection: Individual Outlet Curves
 Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Riser - 1 (Stand Pipe)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.00000	(N/A)	0.000
1,320.740	0.00000	(N/A)	0.000
1,321.240	0.00000	(N/A)	0.000
1,321.740	0.00000	(N/A)	0.000
1,322.240	0.00000	(N/A)	0.000
1,322.740	0.00000	(N/A)	0.000
1,323.240	0.00000	(N/A)	0.000
1,323.740	0.00000	(N/A)	0.000
1,324.240	0.00000	(N/A)	0.000
1,324.270	0.00000	(N/A)	0.000
1,324.740	0.00000	(N/A)	0.000
1,325.240	0.00000	(N/A)	0.000
1,325.740	0.00000	(N/A)	0.000
1,326.240	14.99473	(N/A)	0.000
1,326.740	42.41150	(N/A)	0.000

Computation Messages

```

HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
HW & TW <
Inv.El.=1325.740
  
```

Subsection: Individual Outlet Curves
Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
Structure ID = Riser - 1 (Stand Pipe)

Upstream ID = (Pond Water Surface)
Downstream ID = Tailwater (Pond Outfall)

Computation Messages

HW & TW < Inv.El.=1325.740 HW & TW < Inv.El.=1325.740 Weir: H =0ft Weir: H =0.5ft Weir: H =1ft
--

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.01777	(N/A)	0.000
1,320.740	0.02570	(N/A)	0.000
1,321.240	0.03170	(N/A)	0.000
1,321.740	0.03674	(N/A)	0.000
1,322.240	0.04116	(N/A)	0.000
1,322.740	0.04515	(N/A)	0.000
1,323.240	0.04882	(N/A)	0.000
1,323.740	0.05223	(N/A)	0.000
1,324.240	0.05543	(N/A)	0.000
1,324.270	0.05561	(N/A)	0.000
1,324.740	1.71142	(N/A)	0.000
1,325.240	4.96222	(N/A)	0.000
1,325.740	9.20718	(N/A)	0.000
1,326.240	29.24603	(N/A)	0.000
1,326.740	62.39494	(N/A)	0.000

Contributing Structures

None Contributing
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Orifice - 1
Weir - 1 + Orifice - 1
Weir - 1 + Orifice - 1
Weir - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1
Weir - 1 + Riser - 1 + Orifice - 1

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: Det-B2

Scenario: Base

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,318.000 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.43630 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.43630 ft ³ /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (ft ²)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
1,318.000	0.43630	0.000	13,441	0.00000	0.43630	0.43630
1,318.500	0.43630	7,083.738	14,907	0.00000	0.43630	79.14450
1,319.000	0.45407	14,919.226	16,448	0.00000	0.45407	166.22325
1,319.500	0.46200	23,525.484	17,989	0.00000	0.46200	261.85627
1,320.000	0.46800	32,919.242	19,598	0.00000	0.46800	366.23736
1,320.500	0.47304	43,116.842	21,203	0.00000	0.47304	479.54905
1,321.000	0.47746	54,132.691	22,871	0.00000	0.47746	601.95180
1,321.500	0.48145	65,986.721	24,555	0.00000	0.48145	733.66724
1,322.000	0.48512	78,697.751	26,299	0.00000	0.48512	874.90457
1,322.500	0.92415	92,287.512	28,070	0.00000	0.92415	1,026.34095
1,323.000	2.95600	106,777.023	29,898	0.00000	2.95600	1,189.36737
1,323.500	22.28022	122,193.357	31,777	0.00000	22.28022	1,379.98418
1,324.000	56.84916	138,563.440	33,713	0.00000	56.84916	1,596.44294

Subsection: Level Pool Pond Routing Summary
 Label: Det-B2 (IN)

Scenario: Base

Infiltration			
Infiltration Method (Computed)	No Infiltration		

Initial Conditions			
Elevation (Water Surface, Initial)	1,318.000 ft		
Volume (Initial)	0.000 ft ³		
Flow (Initial Outlet)	0.43630 ft ³ /s		
Flow (Initial Infiltration)	0.00000 ft ³ /s		
Flow (Initial, Total)	0.43630 ft ³ /s		
Time Increment	3.000 min		

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	17.76000 ft ³ /s	Time to Peak (Flow, In)	54.000 min
Flow (Peak Outlet)	0.46906 ft ³ /s	Time to Peak (Flow, Outlet)	102.000 min

Elevation (Water Surface, Peak)	1,320.105 ft		
Volume (Peak)	35,000.565 ft ³		

Mass Balance (ft ³)			
Volume (Initial)	0.000 ft ³		
Volume (Total Inflow)	37,934.000 ft ³		
Volume (Total Infiltration)	0.000 ft ³		
Volume (Total Outlet Outflow)	37,954.000 ft ³		
Volume (Retained)	0.000 ft ³		
Volume (Unrouted)	20.000 ft ³		
Error (Mass Balance)	0.1 %		

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B2 (OUT)

Scenario: Base

Peak Discharge	0.46906 ft ³ /s
Time to Peak	102.000 min
Hydrograph Volume	37,953.914 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.21815	0.15900	0.43630	0.43630	0.43630
15.000	0.43630	0.43630	0.43630	0.43630	0.43630
30.000	0.43630	0.43669	0.43960	0.44277	0.44623
45.000	0.45003	0.45423	0.45641	0.45904	0.46186
60.000	0.46370	0.46520	0.46636	0.46721	0.46782
75.000	0.46819	0.46843	0.46861	0.46875	0.46885
90.000	0.46893	0.46899	0.46903	0.46905	0.46906
105.000	0.46906	0.46905	0.46903	0.46898	0.46894
120.000	0.46890	0.46886	0.46882	0.46878	0.46873
135.000	0.46869	0.46865	0.46861	0.46857	0.46853
150.000	0.46848	0.46844	0.46840	0.46836	0.46832
165.000	0.46828	0.46824	0.46819	0.46815	0.46811
180.000	0.46807	0.46803	0.46798	0.46793	0.46787
195.000	0.46782	0.46777	0.46771	0.46766	0.46760
210.000	0.46755	0.46750	0.46744	0.46739	0.46734
225.000	0.46728	0.46723	0.46717	0.46712	0.46707
240.000	0.46701	0.46696	0.46691	0.46685	0.46680
255.000	0.46674	0.46669	0.46664	0.46658	0.46653
270.000	0.46648	0.46642	0.46637	0.46632	0.46626
285.000	0.46621	0.46615	0.46610	0.46605	0.46599
300.000	0.46594	0.46589	0.46583	0.46578	0.46573
315.000	0.46567	0.46562	0.46556	0.46551	0.46546
330.000	0.46540	0.46535	0.46530	0.46524	0.46519
345.000	0.46514	0.46508	0.46503	0.46498	0.46492
360.000	0.46487	0.46482	0.46476	0.46471	0.46466
375.000	0.46460	0.46455	0.46449	0.46444	0.46439
390.000	0.46433	0.46428	0.46423	0.46417	0.46412
405.000	0.46407	0.46401	0.46396	0.46391	0.46385
420.000	0.46380	0.46375	0.46369	0.46364	0.46359
435.000	0.46353	0.46348	0.46343	0.46337	0.46332
450.000	0.46327	0.46321	0.46316	0.46311	0.46305
465.000	0.46300	0.46295	0.46289	0.46284	0.46279
480.000	0.46274	0.46268	0.46263	0.46258	0.46252
495.000	0.46247	0.46242	0.46236	0.46231	0.46226
510.000	0.46220	0.46215	0.46210	0.46204	0.46199
525.000	0.46191	0.46183	0.46176	0.46168	0.46160
540.000	0.46153	0.46145	0.46137	0.46130	0.46122
555.000	0.46115	0.46107	0.46099	0.46092	0.46084
570.000	0.46076	0.46069	0.46061	0.46053	0.46046

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B2 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
585.000	0.46038	0.46031	0.46023	0.46015	0.46008
600.000	0.46000	0.45992	0.45985	0.45977	0.45970
615.000	0.45962	0.45954	0.45947	0.45939	0.45931
630.000	0.45924	0.45916	0.45909	0.45901	0.45893
645.000	0.45886	0.45878	0.45871	0.45863	0.45855
660.000	0.45848	0.45840	0.45833	0.45825	0.45817
675.000	0.45810	0.45802	0.45795	0.45787	0.45779
690.000	0.45772	0.45764	0.45757	0.45749	0.45741
705.000	0.45734	0.45726	0.45719	0.45711	0.45704
720.000	0.45696	0.45688	0.45681	0.45673	0.45666
735.000	0.45658	0.45651	0.45643	0.45635	0.45628
750.000	0.45620	0.45613	0.45605	0.45598	0.45590
765.000	0.45583	0.45575	0.45567	0.45560	0.45552
780.000	0.45545	0.45537	0.45530	0.45522	0.45515
795.000	0.45507	0.45499	0.45492	0.45484	0.45477
810.000	0.45469	0.45462	0.45454	0.45447	0.45439
825.000	0.45432	0.45424	0.45417	0.45409	0.45393
840.000	0.45375	0.45356	0.45338	0.45319	0.45301
855.000	0.45282	0.45264	0.45245	0.45227	0.45208
870.000	0.45190	0.45171	0.45153	0.45135	0.45116
885.000	0.45098	0.45079	0.45061	0.45043	0.45024
900.000	0.45006	0.44987	0.44969	0.44951	0.44932
915.000	0.44914	0.44896	0.44877	0.44859	0.44841
930.000	0.44822	0.44804	0.44786	0.44768	0.44749
945.000	0.44731	0.44713	0.44694	0.44676	0.44658
960.000	0.44640	0.44622	0.44603	0.44585	0.44567
975.000	0.44549	0.44531	0.44512	0.44494	0.44476
990.000	0.44458	0.44440	0.44422	0.44403	0.44385
1,005.000	0.44367	0.44349	0.44331	0.44313	0.44295
1,020.000	0.44277	0.44259	0.44241	0.44223	0.44205
1,035.000	0.44186	0.44168	0.44150	0.44132	0.44114
1,050.000	0.44096	0.44078	0.44060	0.44042	0.44024
1,065.000	0.44006	0.43988	0.43971	0.43953	0.43935
1,080.000	0.43917	0.43899	0.43881	0.43863	0.43845
1,095.000	0.43827	0.43809	0.43791	0.43773	0.43756
1,110.000	0.43738	0.43720	0.43702	0.43684	0.43666
1,125.000	0.43649	0.43631	0.43630	0.43630	0.43630
1,140.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,155.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,170.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,185.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,200.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,215.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,230.000	0.43630	0.43630	0.43630	0.43630	0.43630

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B2 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,245.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,260.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,275.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,290.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,305.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,320.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,335.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,350.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,365.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,380.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,395.000	0.43630	0.32355	0.00000	(N/A)	(N/A)

Subsection: Pond Inflow Summary
Label: Det-B2 (IN)

Scenario: Base

Summary for Hydrograph Addition at 'Det-B2'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	B-2

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	B-2	37,972.500	55.000	18.73000
Flow (In)	Det-B2	37,934.280	54.000	17.76000

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: Det-B3

Scenario: Base

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,319.740 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.00000 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.00000 ft ³ /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (ft ²)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
1,319.740	0.00000	0.000	8,663	0.00000	0.00000	0.00000
1,320.240	0.01777	4,331.500	8,663	0.00000	0.01777	48.14555
1,320.740	0.02570	8,663.000	8,663	0.00000	0.02570	96.28125
1,321.240	0.03170	12,994.500	8,663	0.00000	0.03170	144.41503
1,321.740	0.03674	17,326.000	8,663	0.00000	0.03674	192.54785
1,322.240	0.04116	21,657.500	8,663	0.00000	0.04116	240.68005
1,322.740	0.04515	25,989.000	8,663	0.00000	0.04515	288.81182
1,323.240	0.04882	30,320.500	8,663	0.00000	0.04882	336.94326
1,323.740	0.05223	34,652.000	8,663	0.00000	0.05223	385.07445
1,324.240	0.05543	38,983.500	8,663	0.00000	0.05543	433.20543
1,324.270	0.05562	39,243.390	8,663	0.00000	0.05562	436.09328
1,324.740	1.71142	43,315.000	8,663	0.00000	1.71142	482.98920
1,325.240	4.96222	47,646.500	8,663	0.00000	4.96222	534.36778
1,325.740	9.20718	51,978.000	8,663	0.00000	9.20718	586.74051
1,326.240	29.24603	56,309.500	8,663	0.00000	29.24603	654.90714
1,326.740	62.39494	60,641.000	8,663	0.00000	62.39494	736.18383

Subsection: Level Pool Pond Routing Summary
 Label: Det-B3 (IN)

Scenario: Base

Infiltration			
Infiltration Method (Computed)	No Infiltration		

Initial Conditions			
Elevation (Water Surface, Initial)	1,319.740 ft		
Volume (Initial)	0.000 ft ³		
Flow (Initial Outlet)	0.00000 ft ³ /s		
Flow (Initial Infiltration)	0.00000 ft ³ /s		
Flow (Initial, Total)	0.00000 ft ³ /s		
Time Increment	3.000 min		

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	9.75000 ft ³ /s	Time to Peak (Flow, In)	54.000 min
Flow (Peak Outlet)	0.03870 ft ³ /s	Time to Peak (Flow, Outlet)	111.000 min

Elevation (Water Surface, Peak)	1,321.962 ft		
Volume (Peak)	19,251.318 ft ³		

Mass Balance (ft ³)			
Volume (Initial)	0.000 ft ³		
Volume (Total Inflow)	19,430.000 ft ³		
Volume (Total Infiltration)	0.000 ft ³		
Volume (Total Outlet Outflow)	3,134.000 ft ³		
Volume (Retained)	16,290.000 ft ³		
Volume (Unrouted)	-6.000 ft ³		
Error (Mass Balance)	0.0 %		

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B3 (OUT)

Scenario: Base

Peak Discharge	0.03870 ft ³ /s
Time to Peak	111.000 min
Hydrograph Volume	3,133.442 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
6.000	0.00046	0.00132	0.00270	0.00445	0.00645
21.000	0.00862	0.01097	0.01348	0.01614	0.01831
36.000	0.01968	0.02115	0.02275	0.02450	0.02635
51.000	0.02826	0.03051	0.03265	0.03429	0.03558
66.000	0.03657	0.03721	0.03763	0.03791	0.03812
81.000	0.03828	0.03840	0.03849	0.03856	0.03860
96.000	0.03864	0.03867	0.03868	0.03870	0.03870
111.000	0.03870	0.03870	0.03869	0.03869	0.03868
126.000	0.03867	0.03867	0.03866	0.03865	0.03865
141.000	0.03864	0.03863	0.03862	0.03862	0.03861
156.000	0.03860	0.03860	0.03859	0.03858	0.03857
171.000	0.03857	0.03856	0.03855	0.03855	0.03854
186.000	0.03853	0.03852	0.03852	0.03851	0.03850
201.000	0.03850	0.03849	0.03848	0.03848	0.03847
216.000	0.03846	0.03845	0.03845	0.03844	0.03843
231.000	0.03843	0.03842	0.03841	0.03840	0.03840
246.000	0.03839	0.03838	0.03838	0.03837	0.03836
261.000	0.03836	0.03835	0.03834	0.03833	0.03833
276.000	0.03832	0.03831	0.03831	0.03830	0.03829
291.000	0.03828	0.03828	0.03827	0.03826	0.03826
306.000	0.03825	0.03824	0.03824	0.03823	0.03822
321.000	0.03821	0.03821	0.03820	0.03819	0.03819
336.000	0.03818	0.03817	0.03817	0.03816	0.03815
351.000	0.03814	0.03814	0.03813	0.03812	0.03812
366.000	0.03811	0.03810	0.03810	0.03809	0.03808
381.000	0.03807	0.03807	0.03806	0.03805	0.03805
396.000	0.03804	0.03803	0.03803	0.03802	0.03801
411.000	0.03800	0.03800	0.03799	0.03798	0.03798
426.000	0.03797	0.03796	0.03796	0.03795	0.03794
441.000	0.03793	0.03793	0.03792	0.03791	0.03791
456.000	0.03790	0.03789	0.03789	0.03788	0.03787
471.000	0.03786	0.03786	0.03785	0.03784	0.03784
486.000	0.03783	0.03782	0.03782	0.03781	0.03780
501.000	0.03780	0.03779	0.03778	0.03777	0.03777
516.000	0.03776	0.03775	0.03775	0.03774	0.03773
531.000	0.03773	0.03772	0.03771	0.03770	0.03770
546.000	0.03769	0.03768	0.03768	0.03767	0.03766
561.000	0.03766	0.03765	0.03764	0.03764	0.03763
576.000	0.03762	0.03762	0.03761	0.03760	0.03759

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
591.000	0.03759	0.03758	0.03757	0.03757	0.03756
606.000	0.03755	0.03755	0.03754	0.03753	0.03753
621.000	0.03752	0.03751	0.03750	0.03750	0.03749
636.000	0.03748	0.03748	0.03747	0.03746	0.03746
651.000	0.03745	0.03744	0.03744	0.03743	0.03742
666.000	0.03742	0.03741	0.03740	0.03739	0.03739
681.000	0.03738	0.03737	0.03737	0.03736	0.03735
696.000	0.03735	0.03734	0.03733	0.03733	0.03732
711.000	0.03731	0.03731	0.03730	0.03729	0.03728
726.000	0.03728	0.03727	0.03726	0.03726	0.03725
741.000	0.03724	0.03724	0.03723	0.03722	0.03722
756.000	0.03721	0.03720	0.03720	0.03719	0.03718
771.000	0.03718	0.03717	0.03716	0.03715	0.03715
786.000	0.03714	0.03713	0.03713	0.03712	0.03711
801.000	0.03711	0.03710	0.03709	0.03709	0.03708
816.000	0.03707	0.03707	0.03706	0.03705	0.03705
831.000	0.03704	0.03703	0.03703	0.03702	0.03701
846.000	0.03700	0.03700	0.03699	0.03698	0.03698
861.000	0.03697	0.03696	0.03696	0.03695	0.03694
876.000	0.03694	0.03693	0.03692	0.03692	0.03691
891.000	0.03690	0.03690	0.03689	0.03688	0.03688
906.000	0.03687	0.03686	0.03686	0.03685	0.03684
921.000	0.03684	0.03683	0.03682	0.03681	0.03681
936.000	0.03680	0.03679	0.03679	0.03678	0.03677
951.000	0.03677	0.03676	0.03675	0.03675	0.03674
966.000	0.03673	0.03673	0.03672	0.03671	0.03670
981.000	0.03669	0.03669	0.03668	0.03667	0.03666
996.000	0.03666	0.03665	0.03664	0.03663	0.03663
1,011.000	0.03662	0.03661	0.03660	0.03660	0.03659
1,026.000	0.03658	0.03657	0.03656	0.03656	0.03655
1,041.000	0.03654	0.03653	0.03653	0.03652	0.03651
1,056.000	0.03650	0.03650	0.03649	0.03648	0.03647
1,071.000	0.03647	0.03646	0.03645	0.03644	0.03643
1,086.000	0.03643	0.03642	0.03641	0.03640	0.03640
1,101.000	0.03639	0.03638	0.03637	0.03637	0.03636
1,116.000	0.03635	0.03634	0.03634	0.03633	0.03632
1,131.000	0.03631	0.03631	0.03630	0.03629	0.03628
1,146.000	0.03628	0.03627	0.03626	0.03625	0.03624
1,161.000	0.03624	0.03623	0.03622	0.03621	0.03621
1,176.000	0.03620	0.03619	0.03618	0.03618	0.03617
1,191.000	0.03616	0.03615	0.03615	0.03614	0.03613
1,206.000	0.03612	0.03612	0.03611	0.03610	0.03609
1,221.000	0.03609	0.03608	0.03607	0.03606	0.03606
1,236.000	0.03605	0.03604	0.03603	0.03603	0.03602

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B3 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,251.000	0.03601	0.03600	0.03600	0.03599	0.03598
1,266.000	0.03597	0.03597	0.03596	0.03595	0.03594
1,281.000	0.03594	0.03593	0.03592	0.03591	0.03591
1,296.000	0.03590	0.03589	0.03588	0.03587	0.03587
1,311.000	0.03586	0.03585	0.03584	0.03584	0.03583
1,326.000	0.03582	0.03581	0.03581	0.03580	0.03579
1,341.000	0.03579	0.03578	0.03577	0.03576	0.03576
1,356.000	0.03575	0.03574	0.03573	0.03573	0.03572
1,371.000	0.03571	0.03570	0.03570	0.03569	0.03568
1,386.000	0.03567	0.03567	0.03566	0.03565	0.03564
1,401.000	0.03564	0.03563	0.03562	0.03561	0.03561
1,416.000	0.03560	0.03559	0.03558	0.03558	0.03557
1,431.000	0.03556	0.03555	0.03555	0.03554	(N/A)

Subsection: Pond Inflow Summary
Label: Det-B3 (IN)

Scenario: Base

Summary for Hydrograph Addition at 'Det-B3'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	B-3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	B-3	19,470.000	55.000	10.21000
Flow (In)	Det-B3	19,429.560	54.000	9.75000

Subsection: Diverted Hydrograph
 Label: Outlet-2

Scenario: Base

Peak Discharge	0.46906 ft ³ /s
Time to Peak	102.000 min
Hydrograph Volume	37,953.914 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.21815	0.15900	0.43630	0.43630	0.43630
15.000	0.43630	0.43630	0.43630	0.43630	0.43630
30.000	0.43630	0.43669	0.43960	0.44277	0.44623
45.000	0.45003	0.45423	0.45641	0.45904	0.46186
60.000	0.46370	0.46520	0.46636	0.46721	0.46782
75.000	0.46819	0.46843	0.46861	0.46875	0.46885
90.000	0.46893	0.46899	0.46903	0.46905	0.46906
105.000	0.46906	0.46905	0.46903	0.46898	0.46894
120.000	0.46890	0.46886	0.46882	0.46878	0.46873
135.000	0.46869	0.46865	0.46861	0.46857	0.46853
150.000	0.46848	0.46844	0.46840	0.46836	0.46832
165.000	0.46828	0.46824	0.46819	0.46815	0.46811
180.000	0.46807	0.46803	0.46798	0.46793	0.46787
195.000	0.46782	0.46777	0.46771	0.46766	0.46760
210.000	0.46755	0.46750	0.46744	0.46739	0.46734
225.000	0.46728	0.46723	0.46717	0.46712	0.46707
240.000	0.46701	0.46696	0.46691	0.46685	0.46680
255.000	0.46674	0.46669	0.46664	0.46658	0.46653
270.000	0.46648	0.46642	0.46637	0.46632	0.46626
285.000	0.46621	0.46615	0.46610	0.46605	0.46599
300.000	0.46594	0.46589	0.46583	0.46578	0.46573
315.000	0.46567	0.46562	0.46556	0.46551	0.46546
330.000	0.46540	0.46535	0.46530	0.46524	0.46519
345.000	0.46514	0.46508	0.46503	0.46498	0.46492
360.000	0.46487	0.46482	0.46476	0.46471	0.46466
375.000	0.46460	0.46455	0.46449	0.46444	0.46439
390.000	0.46433	0.46428	0.46423	0.46417	0.46412
405.000	0.46407	0.46401	0.46396	0.46391	0.46385
420.000	0.46380	0.46375	0.46369	0.46364	0.46359
435.000	0.46353	0.46348	0.46343	0.46337	0.46332
450.000	0.46327	0.46321	0.46316	0.46311	0.46305
465.000	0.46300	0.46295	0.46289	0.46284	0.46279
480.000	0.46274	0.46268	0.46263	0.46258	0.46252
495.000	0.46247	0.46242	0.46236	0.46231	0.46226
510.000	0.46220	0.46215	0.46210	0.46204	0.46199
525.000	0.46191	0.46183	0.46176	0.46168	0.46160
540.000	0.46153	0.46145	0.46137	0.46130	0.46122
555.000	0.46115	0.46107	0.46099	0.46092	0.46084
570.000	0.46076	0.46069	0.46061	0.46053	0.46046

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
585.000	0.46038	0.46031	0.46023	0.46015	0.46008
600.000	0.46000	0.45992	0.45985	0.45977	0.45970
615.000	0.45962	0.45954	0.45947	0.45939	0.45931
630.000	0.45924	0.45916	0.45909	0.45901	0.45893
645.000	0.45886	0.45878	0.45871	0.45863	0.45855
660.000	0.45848	0.45840	0.45833	0.45825	0.45817
675.000	0.45810	0.45802	0.45795	0.45787	0.45779
690.000	0.45772	0.45764	0.45757	0.45749	0.45741
705.000	0.45734	0.45726	0.45719	0.45711	0.45704
720.000	0.45696	0.45688	0.45681	0.45673	0.45666
735.000	0.45658	0.45651	0.45643	0.45635	0.45628
750.000	0.45620	0.45613	0.45605	0.45598	0.45590
765.000	0.45583	0.45575	0.45567	0.45560	0.45552
780.000	0.45545	0.45537	0.45530	0.45522	0.45515
795.000	0.45507	0.45499	0.45492	0.45484	0.45477
810.000	0.45469	0.45462	0.45454	0.45447	0.45439
825.000	0.45432	0.45424	0.45417	0.45409	0.45393
840.000	0.45375	0.45356	0.45338	0.45319	0.45301
855.000	0.45282	0.45264	0.45245	0.45227	0.45208
870.000	0.45190	0.45171	0.45153	0.45135	0.45116
885.000	0.45098	0.45079	0.45061	0.45043	0.45024
900.000	0.45006	0.44987	0.44969	0.44951	0.44932
915.000	0.44914	0.44896	0.44877	0.44859	0.44841
930.000	0.44822	0.44804	0.44786	0.44768	0.44749
945.000	0.44731	0.44713	0.44694	0.44676	0.44658
960.000	0.44640	0.44622	0.44603	0.44585	0.44567
975.000	0.44549	0.44531	0.44512	0.44494	0.44476
990.000	0.44458	0.44440	0.44422	0.44403	0.44385
1,005.000	0.44367	0.44349	0.44331	0.44313	0.44295
1,020.000	0.44277	0.44259	0.44241	0.44223	0.44205
1,035.000	0.44186	0.44168	0.44150	0.44132	0.44114
1,050.000	0.44096	0.44078	0.44060	0.44042	0.44024
1,065.000	0.44006	0.43988	0.43971	0.43953	0.43935
1,080.000	0.43917	0.43899	0.43881	0.43863	0.43845
1,095.000	0.43827	0.43809	0.43791	0.43773	0.43756
1,110.000	0.43738	0.43720	0.43702	0.43684	0.43666
1,125.000	0.43649	0.43631	0.43630	0.43630	0.43630
1,140.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,155.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,170.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,185.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,200.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,215.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,230.000	0.43630	0.43630	0.43630	0.43630	0.43630

Subsection: Diverted Hydrograph
 Label: Outlet-2

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,245.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,260.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,275.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,290.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,305.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,320.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,335.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,350.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,365.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,380.000	0.43630	0.43630	0.43630	0.43630	0.43630
1,395.000	0.43630	0.32355	0.00000	(N/A)	(N/A)

Subsection: Diverted Hydrograph
 Label: Outlet-4

Scenario: Base

Peak Discharge	0.03870 ft ³ /s
Time to Peak	111.000 min
Hydrograph Volume	3,133.442 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
6.000	0.00046	0.00132	0.00270	0.00445	0.00645
21.000	0.00862	0.01097	0.01348	0.01614	0.01831
36.000	0.01968	0.02115	0.02275	0.02450	0.02635
51.000	0.02826	0.03051	0.03265	0.03429	0.03558
66.000	0.03657	0.03721	0.03763	0.03791	0.03812
81.000	0.03828	0.03840	0.03849	0.03856	0.03860
96.000	0.03864	0.03867	0.03868	0.03870	0.03870
111.000	0.03870	0.03870	0.03869	0.03869	0.03868
126.000	0.03867	0.03867	0.03866	0.03865	0.03865
141.000	0.03864	0.03863	0.03862	0.03862	0.03861
156.000	0.03860	0.03860	0.03859	0.03858	0.03857
171.000	0.03857	0.03856	0.03855	0.03855	0.03854
186.000	0.03853	0.03852	0.03852	0.03851	0.03850
201.000	0.03850	0.03849	0.03848	0.03848	0.03847
216.000	0.03846	0.03845	0.03845	0.03844	0.03843
231.000	0.03843	0.03842	0.03841	0.03840	0.03840
246.000	0.03839	0.03838	0.03838	0.03837	0.03836
261.000	0.03836	0.03835	0.03834	0.03833	0.03833
276.000	0.03832	0.03831	0.03831	0.03830	0.03829
291.000	0.03828	0.03828	0.03827	0.03826	0.03826
306.000	0.03825	0.03824	0.03824	0.03823	0.03822
321.000	0.03821	0.03821	0.03820	0.03819	0.03819
336.000	0.03818	0.03817	0.03817	0.03816	0.03815
351.000	0.03814	0.03814	0.03813	0.03812	0.03812
366.000	0.03811	0.03810	0.03810	0.03809	0.03808
381.000	0.03807	0.03807	0.03806	0.03805	0.03805
396.000	0.03804	0.03803	0.03803	0.03802	0.03801
411.000	0.03800	0.03800	0.03799	0.03798	0.03798
426.000	0.03797	0.03796	0.03796	0.03795	0.03794
441.000	0.03793	0.03793	0.03792	0.03791	0.03791
456.000	0.03790	0.03789	0.03789	0.03788	0.03787
471.000	0.03786	0.03786	0.03785	0.03784	0.03784
486.000	0.03783	0.03782	0.03782	0.03781	0.03780
501.000	0.03780	0.03779	0.03778	0.03777	0.03777
516.000	0.03776	0.03775	0.03775	0.03774	0.03773
531.000	0.03773	0.03772	0.03771	0.03770	0.03770
546.000	0.03769	0.03768	0.03768	0.03767	0.03766
561.000	0.03766	0.03765	0.03764	0.03764	0.03763
576.000	0.03762	0.03762	0.03761	0.03760	0.03759

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
591.000	0.03759	0.03758	0.03757	0.03757	0.03756
606.000	0.03755	0.03755	0.03754	0.03753	0.03753
621.000	0.03752	0.03751	0.03750	0.03750	0.03749
636.000	0.03748	0.03748	0.03747	0.03746	0.03746
651.000	0.03745	0.03744	0.03744	0.03743	0.03742
666.000	0.03742	0.03741	0.03740	0.03739	0.03739
681.000	0.03738	0.03737	0.03737	0.03736	0.03735
696.000	0.03735	0.03734	0.03733	0.03733	0.03732
711.000	0.03731	0.03731	0.03730	0.03729	0.03728
726.000	0.03728	0.03727	0.03726	0.03726	0.03725
741.000	0.03724	0.03724	0.03723	0.03722	0.03722
756.000	0.03721	0.03720	0.03720	0.03719	0.03718
771.000	0.03718	0.03717	0.03716	0.03715	0.03715
786.000	0.03714	0.03713	0.03713	0.03712	0.03711
801.000	0.03711	0.03710	0.03709	0.03709	0.03708
816.000	0.03707	0.03707	0.03706	0.03705	0.03705
831.000	0.03704	0.03703	0.03703	0.03702	0.03701
846.000	0.03700	0.03700	0.03699	0.03698	0.03698
861.000	0.03697	0.03696	0.03696	0.03695	0.03694
876.000	0.03694	0.03693	0.03692	0.03692	0.03691
891.000	0.03690	0.03690	0.03689	0.03688	0.03688
906.000	0.03687	0.03686	0.03686	0.03685	0.03684
921.000	0.03684	0.03683	0.03682	0.03681	0.03681
936.000	0.03680	0.03679	0.03679	0.03678	0.03677
951.000	0.03677	0.03676	0.03675	0.03675	0.03674
966.000	0.03673	0.03673	0.03672	0.03671	0.03670
981.000	0.03669	0.03669	0.03668	0.03667	0.03666
996.000	0.03666	0.03665	0.03664	0.03663	0.03663
1,011.000	0.03662	0.03661	0.03660	0.03660	0.03659
1,026.000	0.03658	0.03657	0.03656	0.03656	0.03655
1,041.000	0.03654	0.03653	0.03653	0.03652	0.03651
1,056.000	0.03650	0.03650	0.03649	0.03648	0.03647
1,071.000	0.03647	0.03646	0.03645	0.03644	0.03643
1,086.000	0.03643	0.03642	0.03641	0.03640	0.03640
1,101.000	0.03639	0.03638	0.03637	0.03637	0.03636
1,116.000	0.03635	0.03634	0.03634	0.03633	0.03632
1,131.000	0.03631	0.03631	0.03630	0.03629	0.03628
1,146.000	0.03628	0.03627	0.03626	0.03625	0.03624
1,161.000	0.03624	0.03623	0.03622	0.03621	0.03621
1,176.000	0.03620	0.03619	0.03618	0.03618	0.03617
1,191.000	0.03616	0.03615	0.03615	0.03614	0.03613
1,206.000	0.03612	0.03612	0.03611	0.03610	0.03609
1,221.000	0.03609	0.03608	0.03607	0.03606	0.03606
1,236.000	0.03605	0.03604	0.03603	0.03603	0.03602

Subsection: Diverted Hydrograph
 Label: Outlet-4

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,251.000	0.03601	0.03600	0.03600	0.03599	0.03598
1,266.000	0.03597	0.03597	0.03596	0.03595	0.03594
1,281.000	0.03594	0.03593	0.03592	0.03591	0.03591
1,296.000	0.03590	0.03589	0.03588	0.03587	0.03587
1,311.000	0.03586	0.03585	0.03584	0.03584	0.03583
1,326.000	0.03582	0.03581	0.03581	0.03580	0.03579
1,341.000	0.03579	0.03578	0.03577	0.03576	0.03576
1,356.000	0.03575	0.03574	0.03573	0.03573	0.03572
1,371.000	0.03571	0.03570	0.03570	0.03569	0.03568
1,386.000	0.03567	0.03567	0.03566	0.03565	0.03564
1,401.000	0.03564	0.03563	0.03562	0.03561	0.03561
1,416.000	0.03560	0.03559	0.03558	0.03558	0.03557
1,431.000	0.03556	0.03555	0.03555	0.03554	(N/A)

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Det-B2 (IN) (Pond Inflow Summary)...

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Project Summary

Title	UHS Inland Valley - 100yr, 24-hr
Engineer	
Company	Kimley-Horn and Associates, Inc.
Date	12/10/2020

Notes

1. Inflow hydrographs calculated based on Synthetic Unit Hydrograph Method from Riverside County Flood Control and Water Conservation District Hydrology Manual (April 1978) using AES software.
 2. Flow-through basin analysis completed using modified Pul's (storage indication routing).
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Subsection: User Notifications

User Notifications

Message Id	67
Scenario	Base
Element Type	Composite Outlet Structure
Element Id	43
Label	B-1
Time	(N/A)
Message	Flow direction set to reverse for one ore more structures in composite outlet structure B-1. To eliminate this warning, edit outlet data and select forward only. If reverse flow analysis is required, then the tailwater conditions must be set to interconnected pond.
Source	Warning

Message Id	43
Scenario	Base
Element Type	Pond
Element Id	35
Label	Det-B1
Time	(N/A)
Message	Outflow > 0 for first rating table elevation.
Source	Warning

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)
A-1	Base	0	107,028.000	800.000	4.92000
B-1	Base	0	121,918.000	800.000	5.63000
B-3	Base	0	65,438.000	800.000	2.98000

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)
Outfall A-1	Base	0	96,321.000	810.000	4.91930
Outfall B-1	Base	0	42,944.000	990.000	0.75551
Outfall B-3	Base	0	26,275.000	906.000	2.13934

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft ³)	Time to Peak (min)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft ³)
Det-A1 (IN)	Base	0	106,945.000	801.000	4.92000	(N/A)	(N/A)
Det-A1 (OUT)	Base	0	96,321.000	810.000	4.91930	3.642	10,994.000
Det-B1 (IN)	Base	0	121,756.000	801.000	5.63000	(N/A)	(N/A)
Det-B1 (OUT)	Base	0	42,944.000	990.000	0.75551	1,322.308	86,962.000
Det-B3 (IN)	Base	0	65,369.000	801.000	2.98000	(N/A)	(N/A)
Det-B3 (OUT)	Base	0	26,275.000	906.000	2.13934	1,324.773	43,605.000

Subsection: Read Hydrograph
 Label: A-1

Scenario: Base

Peak Discharge	4.92000 ft ³ /s
Time to Peak	810.000 min
Hydrograph Volume	107,028.000 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 5.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.00000	0.06000	0.06000	0.06000	0.18000
25.000	0.18000	0.18000	0.24000	0.24000	0.24000
50.000	0.30000	0.30000	0.30000	0.30000	0.30000
75.000	0.30000	0.24000	0.24000	0.24000	0.24000
100.000	0.24000	0.24000	0.30000	0.30000	0.30000
125.000	0.30000	0.30000	0.30000	0.36000	0.36000
150.000	0.36000	0.36000	0.36000	0.36000	0.42000
175.000	0.42000	0.42000	0.42000	0.42000	0.42000
200.000	0.42000	0.42000	0.42000	0.42000	0.42000
225.000	0.42000	0.48000	0.48000	0.48000	0.48000
250.000	0.48000	0.48000	0.54000	0.54000	0.54000
275.000	0.60000	0.60000	0.60000	0.60000	0.60000
300.000	0.60000	0.60000	0.60000	0.60000	0.54000
325.000	0.54000	0.54000	0.60000	0.60000	0.60000
350.000	0.66000	0.66000	0.66000	0.72000	0.72000
375.000	0.72000	0.72000	0.72000	0.72000	0.78000
400.000	0.78000	0.78000	0.84000	0.84000	0.84000
425.000	0.84000	0.84000	0.84000	0.90000	0.90000
450.000	0.90000	0.96000	0.96000	0.96000	1.14000
475.000	1.14000	1.14000	1.38000	1.38000	1.38000
500.000	1.56000	1.56000	1.56000	1.68000	1.68000
525.000	1.68000	1.86000	1.86000	1.86000	2.10000
550.000	2.10000	2.10000	2.34000	2.34000	2.34000
575.000	2.58000	2.58000	2.58000	2.76000	2.76000
600.000	2.76000	2.22000	2.22000	2.22000	1.80000
625.000	1.80000	1.80000	2.16000	2.16000	2.16000
650.000	2.46000	2.46000	2.46000	2.46000	2.46000
675.000	2.46000	2.40000	2.40000	2.40000	2.28000
700.000	2.28000	2.28000	2.22000	2.22000	2.22000
725.000	2.88000	2.88000	2.88000	3.42000	3.42000
750.000	3.42000	3.78000	3.78000	3.78000	4.02000
775.000	4.02000	4.02000	4.56000	4.56000	4.56000
800.000	4.92000	4.92000	4.92000	4.08000	4.08000
825.000	4.08000	3.36000	3.36000	3.36000	3.60000
850.000	3.60000	3.60000	3.78000	3.78000	3.78000
875.000	3.72000	3.72000	3.72000	3.66000	3.66000
900.000	3.66000	3.54000	3.54000	3.54000	3.36000
925.000	3.36000	3.36000	2.94000	2.94000	2.94000
950.000	2.64000	2.64000	2.64000	1.44000	1.44000

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 5.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
975.000	1.44000	0.54000	0.54000	0.54000	0.36000
1,000.000	0.36000	0.36000	0.30000	0.30000	0.30000
1,025.000	0.36000	0.36000	0.36000	0.42000	0.42000
1,050.000	0.42000	0.42000	0.42000	0.42000	0.36000
1,075.000	0.36000	0.36000	0.36000	0.36000	0.36000
1,100.000	0.36000	0.36000	0.36000	0.30000	0.30000
1,125.000	0.30000	0.24000	0.24000	0.24000	0.24000
1,150.000	0.24000	0.24000	0.30000	0.30000	0.30000
1,175.000	0.30000	0.30000	0.30000	0.24000	0.24000
1,200.000	0.24000	0.24000	0.24000	0.24000	0.24000
1,225.000	0.24000	0.24000	0.24000	0.24000	0.24000
1,250.000	0.18000	0.18000	0.18000	0.24000	0.24000
1,275.000	0.24000	0.18000	0.18000	0.18000	0.24000
1,300.000	0.24000	0.24000	0.18000	0.18000	0.18000
1,325.000	0.24000	0.24000	0.24000	0.18000	0.18000
1,350.000	0.18000	0.18000	0.18000	0.18000	0.18000
1,375.000	0.18000	0.18000	0.18000	0.18000	0.18000
1,400.000	0.18000	0.18000	0.18000	0.18000	0.18000
1,425.000	0.18000	0.18000	0.18000	0.18000	0.06000
1,450.000	0.06000	0.06000	0.00000	0.00000	0.00000

Subsection: Read Hydrograph
 Label: B-1

Scenario: Base

Peak Discharge	5.63000 ft ³ /s
Time to Peak	810.000 min
Hydrograph Volume	121,918.500 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 5.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.00000	0.08000	0.08000	0.08000	0.21000
25.000	0.21000	0.21000	0.27000	0.27000	0.27000
50.000	0.33000	0.33000	0.33000	0.34000	0.34000
75.000	0.34000	0.31000	0.31000	0.31000	0.30000
100.000	0.30000	0.30000	0.34000	0.34000	0.34000
125.000	0.38000	0.38000	0.38000	0.39000	0.39000
150.000	0.39000	0.44000	0.44000	0.44000	0.48000
175.000	0.48000	0.48000	0.49000	0.49000	0.49000
200.000	0.49000	0.49000	0.49000	0.50000	0.50000
225.000	0.50000	0.54000	0.54000	0.54000	0.58000
250.000	0.58000	0.58000	0.63000	0.63000	0.63000
275.000	0.68000	0.68000	0.68000	0.73000	0.73000
300.000	0.73000	0.69000	0.69000	0.69000	0.66000
325.000	0.66000	0.66000	0.73000	0.73000	0.73000
350.000	0.78000	0.78000	0.78000	0.83000	0.83000
375.000	0.83000	0.88000	0.88000	0.88000	0.93000
400.000	0.93000	0.93000	0.98000	0.98000	0.98000
425.000	0.99000	0.99000	0.99000	1.03000	1.03000
450.000	1.03000	1.12000	1.12000	1.12000	1.21000
475.000	1.21000	1.21000	1.44000	1.44000	1.44000
500.000	1.63000	1.63000	1.63000	1.77000	1.77000
525.000	1.77000	1.97000	1.97000	1.97000	2.27000
550.000	2.27000	2.27000	2.57000	2.57000	2.57000
575.000	2.80000	2.80000	2.80000	3.03000	3.03000
600.000	3.03000	2.58000	2.58000	2.58000	2.01000
625.000	2.01000	2.01000	2.33000	2.33000	2.33000
650.000	2.74000	2.74000	2.74000	2.75000	2.75000
675.000	2.75000	2.71000	2.71000	2.71000	2.55000
700.000	2.55000	2.55000	2.47000	2.47000	2.47000
725.000	3.11000	3.11000	3.11000	3.83000	3.83000
750.000	3.83000	4.23000	4.23000	4.23000	4.56000
775.000	4.56000	4.56000	5.14000	5.14000	5.14000
800.000	5.63000	5.63000	5.63000	4.83000	4.83000
825.000	4.83000	3.92000	3.92000	3.92000	4.09000
850.000	4.09000	4.09000	4.30000	4.30000	4.30000
875.000	4.27000	4.27000	4.27000	4.21000	4.21000
900.000	4.21000	4.05000	4.05000	4.05000	3.87000
925.000	3.87000	3.87000	3.44000	3.44000	3.44000
950.000	3.08000	3.08000	3.08000	1.93000	1.93000

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 5.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
975.000	1.93000	0.77000	0.77000	0.77000	0.49000
1,000.000	0.49000	0.49000	0.35000	0.35000	0.35000
1,025.000	0.40000	0.40000	0.40000	0.48000	0.48000
1,050.000	0.48000	0.49000	0.49000	0.49000	0.45000
1,075.000	0.45000	0.45000	0.41000	0.41000	0.41000
1,100.000	0.40000	0.40000	0.40000	0.36000	0.36000
1,125.000	0.36000	0.27000	0.27000	0.27000	0.26000
1,150.000	0.26000	0.26000	0.33000	0.33000	0.33000
1,175.000	0.34000	0.34000	0.34000	0.26000	0.26000
1,200.000	0.26000	0.26000	0.26000	0.26000	0.29000
1,225.000	0.29000	0.29000	0.29000	0.29000	0.29000
1,250.000	0.26000	0.26000	0.26000	0.25000	0.25000
1,275.000	0.25000	0.25000	0.25000	0.25000	0.25000
1,300.000	0.25000	0.25000	0.25000	0.25000	0.25000
1,325.000	0.25000	0.25000	0.25000	0.25000	0.25000
1,350.000	0.25000	0.21000	0.21000	0.21000	0.20000
1,375.000	0.20000	0.20000	0.20000	0.20000	0.20000
1,400.000	0.20000	0.20000	0.20000	0.20000	0.20000
1,425.000	0.20000	0.20000	0.20000	0.20000	0.12000
1,450.000	0.12000	0.12000	0.03000	0.03000	0.03000

Subsection: Read Hydrograph
 Label: B-3

Scenario: Base

Peak Discharge	2.98000 ft ³ /s
Time to Peak	810.000 min
Hydrograph Volume	65,437.500 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 5.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.00000	0.05000	0.05000	0.05000	0.12000
25.000	0.12000	0.12000	0.14000	0.14000	0.14000
50.000	0.17000	0.17000	0.17000	0.17000	0.17000
75.000	0.17000	0.15000	0.15000	0.15000	0.15000
100.000	0.15000	0.15000	0.17000	0.17000	0.17000
125.000	0.19000	0.19000	0.19000	0.20000	0.20000
150.000	0.20000	0.22000	0.22000	0.22000	0.24000
175.000	0.24000	0.24000	0.25000	0.25000	0.25000
200.000	0.25000	0.25000	0.25000	0.25000	0.25000
225.000	0.25000	0.27000	0.27000	0.27000	0.29000
250.000	0.29000	0.29000	0.32000	0.32000	0.32000
275.000	0.34000	0.34000	0.34000	0.37000	0.37000
300.000	0.37000	0.34000	0.34000	0.34000	0.33000
325.000	0.33000	0.33000	0.37000	0.37000	0.37000
350.000	0.39000	0.39000	0.39000	0.42000	0.42000
375.000	0.42000	0.44000	0.44000	0.44000	0.47000
400.000	0.47000	0.47000	0.49000	0.49000	0.49000
425.000	0.50000	0.50000	0.50000	0.56000	0.56000
450.000	0.56000	0.65000	0.65000	0.65000	0.76000
475.000	0.76000	0.76000	0.91000	0.91000	0.91000
500.000	1.01000	1.01000	1.01000	1.08000	1.08000
525.000	1.08000	1.18000	1.18000	1.18000	1.34000
550.000	1.34000	1.34000	1.48000	1.48000	1.48000
575.000	1.59000	1.59000	1.59000	1.70000	1.70000
600.000	1.70000	1.40000	1.40000	1.40000	1.14000
625.000	1.14000	1.14000	1.35000	1.35000	1.35000
650.000	1.54000	1.54000	1.54000	1.53000	1.53000
675.000	1.53000	1.51000	1.51000	1.51000	1.40000
700.000	1.40000	1.40000	1.38000	1.38000	1.38000
725.000	1.76000	1.76000	1.76000	2.10000	2.10000
750.000	2.10000	2.30000	2.30000	2.30000	2.45000
775.000	2.45000	2.45000	2.76000	2.76000	2.76000
800.000	2.98000	2.98000	2.98000	2.47000	2.47000
825.000	2.47000	2.05000	2.05000	2.05000	2.18000
850.000	2.18000	2.18000	2.27000	2.27000	2.27000
875.000	2.26000	2.26000	2.26000	2.22000	2.22000
900.000	2.22000	2.13000	2.13000	2.13000	2.04000
925.000	2.04000	2.04000	1.79000	1.79000	1.79000
950.000	1.63000	1.63000	1.63000	0.89000	0.89000

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 5.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
975.000	0.89000	0.33000	0.33000	0.33000	0.20000
1,000.000	0.20000	0.20000	0.16000	0.16000	0.16000
1,025.000	0.20000	0.20000	0.20000	0.24000	0.24000
1,050.000	0.24000	0.25000	0.25000	0.25000	0.22000
1,075.000	0.22000	0.22000	0.20000	0.20000	0.20000
1,100.000	0.20000	0.20000	0.20000	0.17000	0.17000
1,125.000	0.17000	0.13000	0.13000	0.13000	0.13000
1,150.000	0.13000	0.13000	0.17000	0.17000	0.17000
1,175.000	0.17000	0.17000	0.17000	0.13000	0.13000
1,200.000	0.13000	0.13000	0.13000	0.13000	0.15000
1,225.000	0.15000	0.15000	0.15000	0.15000	0.15000
1,250.000	0.12000	0.12000	0.12000	0.13000	0.13000
1,275.000	0.13000	0.12000	0.12000	0.12000	0.13000
1,300.000	0.13000	0.13000	0.12000	0.12000	0.12000
1,325.000	0.13000	0.13000	0.13000	0.12000	0.12000
1,350.000	0.12000	0.10000	0.10000	0.10000	0.10000
1,375.000	0.10000	0.10000	0.10000	0.10000	0.10000
1,400.000	0.10000	0.10000	0.10000	0.10000	0.10000
1,425.000	0.10000	0.10000	0.10000	0.10000	0.05000
1,450.000	0.05000	0.05000	0.01000	0.01000	0.01000

Subsection: Addition Summary
Label: Outfall A-1

Scenario: Base

Summary for Hydrograph Addition at 'Outfall A-1'

Upstream Link	Upstream Node
Outlet-5	Det-A1

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	Outlet-5	96,321.279	810.000	4.91930
Flow (In)	Outfall A-1	96,321.279	810.000	4.91930

Subsection: Addition Summary
Label: Outfall B-1

Scenario: Base

Summary for Hydrograph Addition at 'Outfall B-1'

Upstream Link	Upstream Node
Outlet-2	Det-B1

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	Outlet-2	42,944.251	990.000	0.75551
Flow (In)	Outfall B-1	42,944.251	990.000	0.75551

Subsection: Addition Summary
Label: Outfall B-3

Scenario: Base

Summary for Hydrograph Addition at 'Outfall B-3'

Upstream Link	Upstream Node
Outlet-4	Det-B3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	Outlet-4	26,275.478	906.000	2.13934
Flow (In)	Outfall B-3	26,275.478	906.000	2.13934

Subsection: Time vs. Elevation
 Label: Det-A1 (IN)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	0.000	0.001	0.004	0.008	0.011
15.000	0.015	0.020	0.030	0.040	0.051
30.000	0.062	0.074	0.087	0.101	0.116
45.000	0.130	0.145	0.162	0.180	0.198
60.000	0.215	0.233	0.251	0.269	0.286
75.000	0.304	0.321	0.335	0.350	0.364
90.000	0.378	0.392	0.406	0.420	0.434
105.000	0.448	0.463	0.480	0.497	0.515
120.000	0.533	0.550	0.568	0.585	0.603
135.000	0.620	0.639	0.659	0.680	0.701
150.000	0.722	0.744	0.765	0.786	0.807
165.000	0.828	0.850	0.874	0.899	0.923
180.000	0.948	0.972	0.997	1.022	1.046
195.000	1.071	1.095	1.120	1.144	1.169
210.000	1.194	1.218	1.243	1.267	1.292
225.000	1.316	1.342	1.369	1.397	1.426
240.000	1.454	1.482	1.510	1.538	1.566
255.000	1.594	1.623	1.654	1.686	1.717
270.000	1.749	1.782	1.816	1.851	1.887
285.000	1.922	1.957	1.992	2.027	2.062
300.000	2.098	2.133	2.168	2.203	2.238
315.000	2.273	2.307	2.340	2.371	2.403
330.000	2.434	2.467	2.501	2.536	2.571
345.000	2.606	2.643	2.680	2.719	2.758
360.000	2.796	2.836	2.878	2.920	2.962
375.000	3.004	3.046	3.087	3.127	3.166
390.000	3.205	3.244	3.284	3.323	3.362
405.000	3.401	3.439	3.479	3.509	3.520
420.000	3.520	3.520	3.520	3.520	3.520
435.000	3.520	3.520	3.521	3.522	3.522
450.000	3.522	3.522	3.523	3.523	3.523
465.000	3.523	3.525	3.528	3.529	3.529
480.000	3.529	3.531	3.535	3.536	3.536
495.000	3.536	3.538	3.540	3.541	3.541
510.000	3.541	3.542	3.544	3.545	3.545
525.000	3.545	3.547	3.549	3.550	3.550
540.000	3.550	3.553	3.556	3.558	3.558
555.000	3.558	3.560	3.563	3.565	3.565
570.000	3.565	3.567	3.570	3.572	3.572
585.000	3.572	3.574	3.576	3.577	3.577
600.000	3.577	3.572	3.564	3.561	3.561
615.000	3.561	3.557	3.551	3.549	3.549
630.000	3.549	3.552	3.557	3.559	3.559

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
645.000	3.559	3.562	3.567	3.568	3.568
660.000	3.568	3.568	3.568	3.568	3.568
675.000	3.568	3.568	3.567	3.567	3.567
690.000	3.567	3.565	3.564	3.563	3.563
705.000	3.563	3.562	3.561	3.561	3.561
720.000	3.561	3.567	3.577	3.581	3.581
735.000	3.581	3.586	3.594	3.597	3.597
750.000	3.597	3.600	3.606	3.608	3.608
765.000	3.608	3.610	3.614	3.615	3.615
780.000	3.615	3.620	3.628	3.631	3.631
795.000	3.631	3.634	3.640	3.642	3.642
810.000	3.642	3.634	3.622	3.617	3.617
825.000	3.617	3.610	3.600	3.595	3.595
840.000	3.595	3.597	3.601	3.602	3.602
855.000	3.602	3.604	3.607	3.608	3.608
870.000	3.608	3.607	3.606	3.606	3.606
885.000	3.606	3.605	3.605	3.604	3.604
900.000	3.604	3.603	3.601	3.601	3.601
915.000	3.601	3.599	3.596	3.595	3.595
930.000	3.595	3.591	3.585	3.583	3.583
945.000	3.583	3.580	3.576	3.574	3.574
960.000	3.574	3.563	3.545	3.538	3.538
975.000	3.538	3.530	3.516	3.511	3.511
990.000	3.511	3.509	3.507	3.505	3.505
1,005.000	3.505	3.505	3.504	3.504	3.504
1,020.000	3.504	3.504	3.505	3.505	3.505
1,035.000	3.505	3.506	3.507	3.507	3.507
1,050.000	3.507	3.507	3.507	3.507	3.507
1,065.000	3.507	3.507	3.506	3.505	3.505
1,080.000	3.505	3.505	3.505	3.505	3.505
1,095.000	3.505	3.505	3.505	3.505	3.505
1,110.000	3.505	3.505	3.504	3.504	3.504
1,125.000	3.504	3.503	3.502	3.502	3.502
1,140.000	3.502	3.502	3.502	3.502	3.502
1,155.000	3.502	3.502	3.503	3.504	3.504
1,170.000	3.504	3.504	3.504	3.504	3.504
1,185.000	3.504	3.503	3.502	3.502	3.502
1,200.000	3.502	3.502	3.502	3.502	3.502
1,215.000	3.502	3.502	3.502	3.502	3.502
1,230.000	3.502	3.502	3.502	3.502	3.502
1,245.000	3.502	3.501	3.500	3.500	3.500
1,260.000	3.500	3.501	3.502	3.502	3.502
1,275.000	3.502	3.501	3.500	3.500	3.500

Subsection: Time vs. Elevation
Label: Det-A1 (IN)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,290.000	3.500	3.501	3.502	3.502	3.502
1,305.000	3.502	3.501	3.500	3.500	3.500
1,320.000	3.500	3.501	3.502	3.502	3.502
1,335.000	3.502	3.501	3.500	3.500	3.500
1,350.000	3.500	3.500	3.500	3.500	3.500
1,365.000	3.500	3.500	3.500	3.500	3.500
1,380.000	3.500	3.500	3.500	3.500	3.500
1,395.000	3.500	3.500	3.500	3.500	3.500
1,410.000	3.500	3.500	3.500	3.500	3.500
1,425.000	3.500	3.500	3.500	3.500	3.500
1,440.000	3.500	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
15.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
30.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
45.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
60.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
75.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
90.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
105.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
120.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
135.000	1,318.000	1,318.000	1,318.000	1,318.000	1,318.000
150.000	1,318.000	1,318.000	1,318.000	1,318.003	1,318.003
165.000	1,318.003	1,318.003	1,318.004	1,318.004	1,318.005
180.000	1,318.005	1,318.006	1,318.006	1,318.007	1,318.008
195.000	1,318.009	1,318.009	1,318.010	1,318.011	1,318.011
210.000	1,318.012	1,318.013	1,318.013	1,318.014	1,318.015
225.000	1,318.016	1,318.017	1,318.018	1,318.019	1,318.021
240.000	1,318.022	1,318.023	1,318.025	1,318.027	1,318.029
255.000	1,318.031	1,318.033	1,318.035	1,318.037	1,318.040
270.000	1,318.042	1,318.045	1,318.048	1,318.051	1,318.054
285.000	1,318.057	1,318.061	1,318.064	1,318.068	1,318.072
300.000	1,318.075	1,318.079	1,318.082	1,318.085	1,318.089
315.000	1,318.092	1,318.095	1,318.098	1,318.101	1,318.104
330.000	1,318.106	1,318.109	1,318.113	1,318.117	1,318.120
345.000	1,318.124	1,318.128	1,318.132	1,318.137	1,318.141
360.000	1,318.145	1,318.150	1,318.155	1,318.160	1,318.165
375.000	1,318.170	1,318.175	1,318.180	1,318.186	1,318.192
390.000	1,318.197	1,318.203	1,318.209	1,318.215	1,318.222
405.000	1,318.228	1,318.234	1,318.241	1,318.248	1,318.255
420.000	1,318.262	1,318.269	1,318.276	1,318.283	1,318.290
435.000	1,318.297	1,318.304	1,318.311	1,318.319	1,318.326
450.000	1,318.334	1,318.342	1,318.350	1,318.359	1,318.367
465.000	1,318.376	1,318.385	1,318.395	1,318.405	1,318.414
480.000	1,318.424	1,318.435	1,318.447	1,318.460	1,318.472
495.000	1,318.485	1,318.498	1,318.512	1,318.526	1,318.539
510.000	1,318.553	1,318.567	1,318.582	1,318.597	1,318.612
525.000	1,318.628	1,318.643	1,318.661	1,318.678	1,318.696
540.000	1,318.713	1,318.732	1,318.752	1,318.773	1,318.794
555.000	1,318.814	1,318.836	1,318.860	1,318.884	1,318.909
570.000	1,318.933	1,318.958	1,318.984	1,319.010	1,319.035
585.000	1,319.059	1,319.084	1,319.111	1,319.138	1,319.165
600.000	1,319.192	1,319.217	1,319.240	1,319.262	1,319.284
615.000	1,319.307	1,319.327	1,319.344	1,319.360	1,319.376
630.000	1,319.393	1,319.410	1,319.429	1,319.448	1,319.468

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
645.000	1,319.487	1,319.507	1,319.528	1,319.550	1,319.572
660.000	1,319.594	1,319.615	1,319.637	1,319.659	1,319.681
675.000	1,319.703	1,319.725	1,319.746	1,319.768	1,319.789
690.000	1,319.811	1,319.832	1,319.852	1,319.872	1,319.892
705.000	1,319.911	1,319.931	1,319.950	1,319.970	1,319.989
720.000	1,320.007	1,320.027	1,320.049	1,320.072	1,320.095
735.000	1,320.119	1,320.144	1,320.172	1,320.202	1,320.231
750.000	1,320.261	1,320.292	1,320.324	1,320.357	1,320.390
765.000	1,320.423	1,320.457	1,320.493	1,320.527	1,320.560
780.000	1,320.593	1,320.628	1,320.665	1,320.703	1,320.741
795.000	1,320.780	1,320.819	1,320.860	1,320.902	1,320.944
810.000	1,320.986	1,321.024	1,321.059	1,321.092	1,321.125
825.000	1,321.158	1,321.189	1,321.216	1,321.242	1,321.268
840.000	1,321.294	1,321.321	1,321.348	1,321.375	1,321.403
855.000	1,321.430	1,321.458	1,321.486	1,321.514	1,321.541
870.000	1,321.568	1,321.595	1,321.622	1,321.649	1,321.676
885.000	1,321.702	1,321.729	1,321.755	1,321.782	1,321.808
900.000	1,321.834	1,321.860	1,321.886	1,321.911	1,321.936
915.000	1,321.962	1,321.986	1,322.010	1,322.032	1,322.054
930.000	1,322.076	1,322.097	1,322.117	1,322.135	1,322.154
945.000	1,322.173	1,322.191	1,322.207	1,322.223	1,322.239
960.000	1,322.254	1,322.268	1,322.277	1,322.285	1,322.293
975.000	1,322.301	1,322.306	1,322.308	1,322.308	1,322.308
990.000	1,322.308	1,322.307	1,322.306	1,322.304	1,322.302
1,005.000	1,322.301	1,322.299	1,322.296	1,322.294	1,322.291
1,020.000	1,322.288	1,322.286	1,322.283	1,322.281	1,322.279
1,035.000	1,322.277	1,322.275	1,322.273	1,322.271	1,322.270
1,050.000	1,322.268	1,322.266	1,322.265	1,322.263	1,322.262
1,065.000	1,322.260	1,322.259	1,322.257	1,322.255	1,322.253
1,080.000	1,322.252	1,322.250	1,322.248	1,322.246	1,322.244
1,095.000	1,322.242	1,322.240	1,322.238	1,322.236	1,322.234
1,110.000	1,322.232	1,322.230	1,322.228	1,322.226	1,322.224
1,125.000	1,322.221	1,322.219	1,322.216	1,322.214	1,322.211
1,140.000	1,322.208	1,322.206	1,322.203	1,322.200	1,322.198
1,155.000	1,322.195	1,322.192	1,322.190	1,322.188	1,322.186
1,170.000	1,322.184	1,322.182	1,322.179	1,322.177	1,322.175
1,185.000	1,322.173	1,322.171	1,322.169	1,322.166	1,322.164
1,200.000	1,322.161	1,322.159	1,322.156	1,322.154	1,322.152
1,215.000	1,322.149	1,322.147	1,322.145	1,322.142	1,322.140
1,230.000	1,322.138	1,322.136	1,322.134	1,322.132	1,322.130
1,245.000	1,322.128	1,322.125	1,322.123	1,322.121	1,322.119
1,260.000	1,322.117	1,322.114	1,322.112	1,322.110	1,322.108
1,275.000	1,322.105	1,322.103	1,322.101	1,322.099	1,322.097

Subsection: Time vs. Elevation
 Label: Det-B1 (IN)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,290.000	1,322.094	1,322.092	1,322.090	1,322.088	1,322.086
1,305.000	1,322.084	1,322.082	1,322.080	1,322.078	1,322.076
1,320.000	1,322.074	1,322.072	1,322.070	1,322.068	1,322.066
1,335.000	1,322.064	1,322.062	1,322.060	1,322.058	1,322.056
1,350.000	1,322.054	1,322.052	1,322.050	1,322.048	1,322.046
1,365.000	1,322.043	1,322.041	1,322.039	1,322.037	1,322.035
1,380.000	1,322.033	1,322.031	1,322.029	1,322.026	1,322.024
1,395.000	1,322.022	1,322.020	1,322.018	1,322.016	1,322.014
1,410.000	1,322.012	1,322.010	1,322.008	1,322.006	1,322.004
1,425.000	1,322.002	1,322.000	1,321.998	1,321.996	1,321.994
1,440.000	1,321.992	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	1,319.740	1,319.740	1,319.741	1,319.742	1,319.743
15.000	1,319.744	1,319.746	1,319.748	1,319.750	1,319.753
30.000	1,319.755	1,319.758	1,319.761	1,319.764	1,319.767
45.000	1,319.769	1,319.773	1,319.776	1,319.779	1,319.783
60.000	1,319.786	1,319.790	1,319.793	1,319.797	1,319.800
75.000	1,319.804	1,319.807	1,319.810	1,319.813	1,319.817
90.000	1,319.820	1,319.823	1,319.826	1,319.829	1,319.832
105.000	1,319.835	1,319.838	1,319.841	1,319.845	1,319.848
120.000	1,319.852	1,319.855	1,319.859	1,319.863	1,319.867
135.000	1,319.871	1,319.875	1,319.879	1,319.883	1,319.887
150.000	1,319.891	1,319.895	1,319.899	1,319.904	1,319.908
165.000	1,319.912	1,319.917	1,319.922	1,319.927	1,319.932
180.000	1,319.936	1,319.941	1,319.946	1,319.951	1,319.956
195.000	1,319.961	1,319.966	1,319.971	1,319.976	1,319.981
210.000	1,319.986	1,319.991	1,319.996	1,320.001	1,320.006
225.000	1,320.011	1,320.016	1,320.022	1,320.027	1,320.032
240.000	1,320.038	1,320.043	1,320.049	1,320.055	1,320.061
255.000	1,320.066	1,320.072	1,320.079	1,320.085	1,320.091
270.000	1,320.098	1,320.104	1,320.111	1,320.118	1,320.125
285.000	1,320.131	1,320.138	1,320.146	1,320.153	1,320.160
300.000	1,320.168	1,320.175	1,320.182	1,320.188	1,320.195
315.000	1,320.202	1,320.208	1,320.215	1,320.221	1,320.228
330.000	1,320.234	1,320.241	1,320.248	1,320.255	1,320.263
345.000	1,320.270	1,320.277	1,320.285	1,320.293	1,320.301
360.000	1,320.308	1,320.316	1,320.324	1,320.333	1,320.341
375.000	1,320.349	1,320.358	1,320.366	1,320.375	1,320.384
390.000	1,320.392	1,320.401	1,320.411	1,320.420	1,320.429
405.000	1,320.438	1,320.448	1,320.458	1,320.467	1,320.477
420.000	1,320.487	1,320.496	1,320.506	1,320.516	1,320.526
435.000	1,320.536	1,320.546	1,320.557	1,320.568	1,320.579
450.000	1,320.591	1,320.602	1,320.615	1,320.628	1,320.641
465.000	1,320.654	1,320.668	1,320.682	1,320.698	1,320.713
480.000	1,320.728	1,320.744	1,320.762	1,320.780	1,320.799
495.000	1,320.817	1,320.836	1,320.856	1,320.876	1,320.897
510.000	1,320.917	1,320.938	1,320.960	1,320.981	1,321.003
525.000	1,321.025	1,321.048	1,321.071	1,321.095	1,321.119
540.000	1,321.143	1,321.167	1,321.194	1,321.221	1,321.248
555.000	1,321.276	1,321.304	1,321.333	1,321.363	1,321.393
570.000	1,321.423	1,321.454	1,321.486	1,321.518	1,321.550
585.000	1,321.583	1,321.616	1,321.650	1,321.684	1,321.719
600.000	1,321.753	1,321.786	1,321.816	1,321.844	1,321.872
615.000	1,321.901	1,321.927	1,321.951	1,321.974	1,321.997
630.000	1,322.020	1,322.044	1,322.070	1,322.098	1,322.125

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
645.000	1,322.152	1,322.180	1,322.211	1,322.242	1,322.273
660.000	1,322.304	1,322.335	1,322.366	1,322.397	1,322.428
675.000	1,322.459	1,322.490	1,322.520	1,322.550	1,322.581
690.000	1,322.611	1,322.641	1,322.670	1,322.698	1,322.726
705.000	1,322.754	1,322.782	1,322.810	1,322.838	1,322.865
720.000	1,322.893	1,322.923	1,322.957	1,322.993	1,323.028
735.000	1,323.064	1,323.102	1,323.143	1,323.185	1,323.228
750.000	1,323.271	1,323.314	1,323.360	1,323.407	1,323.454
765.000	1,323.501	1,323.548	1,323.597	1,323.647	1,323.697
780.000	1,323.747	1,323.799	1,323.854	1,323.910	1,323.966
795.000	1,324.022	1,324.080	1,324.140	1,324.200	1,324.260
810.000	1,324.317	1,324.367	1,324.408	1,324.444	1,324.477
825.000	1,324.508	1,324.534	1,324.554	1,324.571	1,324.586
840.000	1,324.601	1,324.615	1,324.629	1,324.643	1,324.656
855.000	1,324.668	1,324.679	1,324.691	1,324.702	1,324.712
870.000	1,324.722	1,324.730	1,324.738	1,324.745	1,324.752
885.000	1,324.757	1,324.761	1,324.765	1,324.768	1,324.770
900.000	1,324.772	1,324.773	1,324.773	1,324.773	1,324.773
915.000	1,324.773	1,324.772	1,324.771	1,324.769	1,324.768
930.000	1,324.767	1,324.764	1,324.760	1,324.755	1,324.751
945.000	1,324.747	1,324.743	1,324.738	1,324.733	1,324.728
960.000	1,324.724	1,324.715	1,324.700	1,324.682	1,324.667
975.000	1,324.652	1,324.635	1,324.613	1,324.591	1,324.571
990.000	1,324.552	1,324.534	1,324.516	1,324.498	1,324.482
1,005.000	1,324.467	1,324.453	1,324.439	1,324.427	1,324.415
1,020.000	1,324.404	1,324.395	1,324.386	1,324.378	1,324.371
1,035.000	1,324.364	1,324.358	1,324.353	1,324.348	1,324.344
1,050.000	1,324.340	1,324.336	1,324.333	1,324.330	1,324.327
1,065.000	1,324.325	1,324.322	1,324.319	1,324.317	1,324.315
1,080.000	1,324.312	1,324.310	1,324.308	1,324.306	1,324.304
1,095.000	1,324.302	1,324.300	1,324.299	1,324.297	1,324.296
1,110.000	1,324.295	1,324.293	1,324.292	1,324.290	1,324.289
1,125.000	1,324.288	1,324.286	1,324.284	1,324.283	1,324.281
1,140.000	1,324.279	1,324.278	1,324.277	1,324.275	1,324.274
1,155.000	1,324.273	1,324.272	1,324.272	1,324.272	1,324.272
1,170.000	1,324.272	1,324.272	1,324.272	1,324.272	1,324.272
1,185.000	1,324.272	1,324.271	1,324.271	1,324.270	1,324.269
1,200.000	1,324.268	1,324.268	1,324.267	1,324.267	1,324.266
1,215.000	1,324.266	1,324.266	1,324.265	1,324.265	1,324.265
1,230.000	1,324.266	1,324.266	1,324.266	1,324.266	1,324.266
1,245.000	1,324.266	1,324.265	1,324.265	1,324.264	1,324.264
1,260.000	1,324.263	1,324.263	1,324.263	1,324.262	1,324.262
1,275.000	1,324.262	1,324.262	1,324.262	1,324.261	1,324.261

Subsection: Time vs. Elevation
 Label: Det-B3 (OUT)

Scenario: Base

Time vs. Elevation (ft)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,290.000	1,324.261	1,324.260	1,324.260	1,324.260	1,324.260
1,305.000	1,324.260	1,324.260	1,324.260	1,324.260	1,324.260
1,320.000	1,324.260	1,324.259	1,324.260	1,324.260	1,324.260
1,335.000	1,324.260	1,324.260	1,324.259	1,324.259	1,324.259
1,350.000	1,324.259	1,324.259	1,324.258	1,324.258	1,324.257
1,365.000	1,324.257	1,324.257	1,324.256	1,324.256	1,324.256
1,380.000	1,324.255	1,324.255	1,324.255	1,324.255	1,324.255
1,395.000	1,324.254	1,324.254	1,324.254	1,324.254	1,324.254
1,410.000	1,324.254	1,324.253	1,324.253	1,324.253	1,324.253
1,425.000	1,324.253	1,324.253	1,324.253	1,324.253	1,324.253
1,440.000	1,324.253	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0.000	3.000	12.000	23.000	33.000
15.000	44.000	61.000	89.000	122.000	154.000
30.000	186.000	222.000	263.000	306.000	349.000
45.000	392.000	438.000	489.000	543.000	597.000
60.000	650.000	704.000	757.000	811.000	864.000
75.000	918.000	968.000	1,013.000	1,055.000	1,098.000
90.000	1,140.000	1,183.000	1,225.000	1,267.000	1,310.000
105.000	1,352.000	1,398.000	1,448.000	1,502.000	1,555.000
120.000	1,608.000	1,661.000	1,713.000	1,766.000	1,819.000
135.000	1,872.000	1,928.000	1,990.000	2,054.000	2,117.000
150.000	2,181.000	2,245.000	2,308.000	2,372.000	2,436.000
165.000	2,499.000	2,566.000	2,638.000	2,712.000	2,787.000
180.000	2,861.000	2,935.000	3,010.000	3,084.000	3,158.000
195.000	3,232.000	3,307.000	3,381.000	3,455.000	3,529.000
210.000	3,603.000	3,677.000	3,751.000	3,826.000	3,900.000
225.000	3,974.000	4,051.000	4,134.000	4,219.000	4,303.000
240.000	4,388.000	4,473.000	4,558.000	4,643.000	4,727.000
255.000	4,812.000	4,900.000	4,993.000	5,089.000	5,184.000
270.000	5,280.000	5,379.000	5,483.000	5,589.000	5,695.000
285.000	5,801.000	5,907.000	6,014.000	6,120.000	6,226.000
300.000	6,332.000	6,438.000	6,544.000	6,650.000	6,756.000
315.000	6,862.000	6,965.000	7,063.000	7,158.000	7,253.000
330.000	7,348.000	7,446.000	7,550.000	7,656.000	7,762.000
345.000	7,868.000	7,977.000	8,092.000	8,208.000	8,325.000
360.000	8,442.000	8,562.000	8,687.000	8,814.000	8,942.000
375.000	9,069.000	9,195.000	9,318.000	9,439.000	9,558.000
390.000	9,674.000	9,792.000	9,912.000	10,032.000	10,150.000
405.000	10,266.000	10,383.000	10,502.000	10,594.000	10,625.000
420.000	10,626.000	10,626.000	10,626.000	10,626.000	10,626.000
435.000	10,626.000	10,627.000	10,630.000	10,631.000	10,631.000
450.000	10,631.000	10,633.000	10,635.000	10,636.000	10,636.000
465.000	10,636.000	10,641.000	10,649.000	10,653.000	10,653.000
480.000	10,653.000	10,659.000	10,670.000	10,674.000	10,674.000
495.000	10,674.000	10,679.000	10,687.000	10,691.000	10,691.000
510.000	10,691.000	10,694.000	10,699.000	10,701.000	10,701.000
525.000	10,701.000	10,706.000	10,714.000	10,718.000	10,718.000
540.000	10,718.000	10,724.000	10,735.000	10,739.000	10,739.000
555.000	10,739.000	10,746.000	10,757.000	10,761.000	10,761.000
570.000	10,761.000	10,768.000	10,778.000	10,783.000	10,783.000
585.000	10,783.000	10,788.000	10,796.000	10,799.000	10,799.000
600.000	10,799.000	10,784.000	10,760.000	10,750.000	10,750.000
615.000	10,750.000	10,739.000	10,720.000	10,712.000	10,712.000
630.000	10,712.000	10,722.000	10,738.000	10,745.000	10,745.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
645.000	10,745.000	10,753.000	10,766.000	10,772.000	10,772.000
660.000	10,772.000	10,772.000	10,772.000	10,772.000	10,772.000
675.000	10,772.000	10,770.000	10,768.000	10,766.000	10,766.000
690.000	10,766.000	10,763.000	10,758.000	10,756.000	10,756.000
705.000	10,756.000	10,754.000	10,751.000	10,750.000	10,750.000
720.000	10,750.000	10,768.000	10,798.000	10,810.000	10,810.000
735.000	10,810.000	10,824.000	10,849.000	10,859.000	10,859.000
750.000	10,859.000	10,868.000	10,885.000	10,891.000	10,891.000
765.000	10,891.000	10,898.000	10,908.000	10,913.000	10,913.000
780.000	10,913.000	10,927.000	10,952.000	10,961.000	10,962.000
795.000	10,962.000	10,971.000	10,987.000	10,994.000	10,994.000
810.000	10,994.000	10,971.000	10,933.000	10,918.000	10,918.000
825.000	10,918.000	10,899.000	10,866.000	10,853.000	10,853.000
840.000	10,853.000	10,860.000	10,870.000	10,875.000	10,875.000
855.000	10,875.000	10,880.000	10,888.000	10,891.000	10,891.000
870.000	10,891.000	10,889.000	10,887.000	10,886.000	10,886.000
885.000	10,886.000	10,884.000	10,881.000	10,880.000	10,880.000
900.000	10,880.000	10,877.000	10,872.000	10,869.000	10,869.000
915.000	10,869.000	10,865.000	10,856.000	10,853.000	10,853.000
930.000	10,853.000	10,842.000	10,823.000	10,815.000	10,815.000
945.000	10,815.000	10,807.000	10,794.000	10,788.000	10,788.000
960.000	10,788.000	10,756.000	10,702.000	10,680.000	10,680.000
975.000	10,680.000	10,655.000	10,615.000	10,598.000	10,598.000
990.000	10,598.000	10,594.000	10,585.000	10,582.000	10,582.000
1,005.000	10,582.000	10,581.000	10,578.000	10,577.000	10,577.000
1,020.000	10,577.000	10,578.000	10,581.000	10,582.000	10,582.000
1,035.000	10,582.000	10,584.000	10,587.000	10,588.000	10,588.000
1,050.000	10,588.000	10,588.000	10,588.000	10,588.000	10,588.000
1,065.000	10,588.000	10,586.000	10,583.000	10,582.000	10,582.000
1,080.000	10,582.000	10,582.000	10,582.000	10,582.000	10,582.000
1,095.000	10,582.000	10,582.000	10,582.000	10,582.000	10,582.000
1,110.000	10,582.000	10,581.000	10,578.000	10,577.000	10,577.000
1,125.000	10,577.000	10,575.000	10,572.000	10,571.000	10,571.000
1,140.000	10,571.000	10,571.000	10,571.000	10,571.000	10,571.000
1,155.000	10,571.000	10,573.000	10,576.000	10,577.000	10,577.000
1,170.000	10,577.000	10,577.000	10,577.000	10,577.000	10,577.000
1,185.000	10,577.000	10,575.000	10,572.000	10,571.000	10,571.000
1,200.000	10,571.000	10,571.000	10,571.000	10,571.000	10,571.000
1,215.000	10,571.000	10,571.000	10,571.000	10,571.000	10,571.000
1,230.000	10,571.000	10,571.000	10,571.000	10,571.000	10,571.000
1,245.000	10,571.000	10,570.000	10,567.000	10,566.000	10,566.000
1,260.000	10,566.000	10,568.000	10,570.000	10,571.000	10,571.000
1,275.000	10,571.000	10,570.000	10,567.000	10,566.000	10,566.000

Subsection: Time vs. Volume
 Label: Det-A1

Scenario: Base

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1,290.000	10,566.000	10,568.000	10,570.000	10,571.000	10,571.000
1,305.000	10,571.000	10,570.000	10,567.000	10,566.000	10,566.000
1,320.000	10,566.000	10,568.000	10,570.000	10,571.000	10,571.000
1,335.000	10,571.000	10,570.000	10,567.000	10,566.000	10,566.000
1,350.000	10,566.000	10,566.000	10,566.000	10,566.000	10,566.000
1,365.000	10,566.000	10,566.000	10,566.000	10,566.000	10,566.000
1,380.000	10,566.000	10,566.000	10,566.000	10,566.000	10,566.000
1,395.000	10,566.000	10,566.000	10,566.000	10,566.000	10,566.000
1,410.000	10,566.000	10,566.000	10,566.000	10,566.000	10,566.000
1,425.000	10,566.000	10,566.000	10,566.000	10,566.000	10,566.000
1,440.000	10,566.000	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	38.000	39.000
165.000	39.000	42.000	48.000	55.000	63.000
180.000	70.000	78.000	87.000	96.000	105.000
195.000	115.000	124.000	133.000	142.000	151.000
210.000	161.000	170.000	181.000	192.000	203.000
225.000	213.000	226.000	243.000	261.000	278.000
240.000	296.000	316.000	339.000	364.000	388.000
255.000	413.000	440.000	472.000	505.000	539.000
270.000	572.000	608.000	648.000	690.000	732.000
285.000	774.000	819.000	868.000	919.000	969.000
300.000	1,020.000	1,069.000	1,114.000	1,158.000	1,202.000
315.000	1,246.000	1,289.000	1,329.000	1,368.000	1,407.000
330.000	1,446.000	1,488.000	1,537.000	1,588.000	1,640.000
345.000	1,691.000	1,745.000	1,803.000	1,863.000	1,924.000
360.000	1,984.000	2,047.000	2,115.000	2,184.000	2,253.000
375.000	2,323.000	2,395.000	2,471.000	2,550.000	2,629.000
390.000	2,707.000	2,789.000	2,875.000	2,963.000	3,051.000
405.000	3,139.000	3,230.000	3,325.000	3,423.000	3,520.000
420.000	3,618.000	3,716.000	3,816.000	3,916.000	4,016.000
435.000	4,116.000	4,218.000	4,325.000	4,432.000	4,540.000
450.000	4,649.000	4,762.000	4,884.000	5,009.000	5,134.000
465.000	5,260.000	5,391.000	5,530.000	5,674.000	5,817.000
480.000	5,961.000	6,117.000	6,296.000	6,484.000	6,672.000
495.000	6,860.000	7,060.000	7,260.000	7,465.000	7,669.000
510.000	7,875.000	8,088.000	8,314.000	8,545.000	8,777.000
525.000	9,010.000	9,253.000	9,516.000	9,785.000	10,056.000
540.000	10,328.000	10,616.000	10,933.000	11,261.000	11,591.000
555.000	11,922.000	12,270.000	12,648.000	13,038.000	13,430.000
570.000	13,823.000	14,232.000	14,663.000	15,089.000	15,493.000
585.000	15,899.000	16,319.000	16,761.000	17,214.000	17,668.000
600.000	18,124.000	18,559.000	18,955.000	19,336.000	19,719.000
615.000	20,103.000	20,457.000	20,761.000	21,044.000	21,328.000
630.000	21,613.000	21,917.000	22,251.000	22,598.000	22,946.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
645.000	23,295.000	23,657.000	24,036.000	24,430.000	24,826.000
660.000	25,223.000	25,623.000	26,025.000	26,428.000	26,833.000
675.000	27,240.000	27,646.000	28,049.000	28,453.000	28,858.000
690.000	29,265.000	29,664.000	30,050.000	30,431.000	30,814.000
705.000	31,198.000	31,579.000	31,953.000	32,326.000	32,700.000
720.000	33,062.000	33,442.000	33,879.000	34,339.000	34,801.000
735.000	35,265.000	35,769.000	36,338.000	36,936.000	37,537.000
750.000	38,140.000	38,768.000	39,436.000	40,121.000	40,810.000
765.000	41,502.000	42,216.000	42,965.000	43,684.000	44,396.000
780.000	45,111.000	45,861.000	46,666.000	47,497.000	48,332.000
795.000	49,172.000	50,043.000	50,965.000	51,910.000	52,861.000
810.000	53,818.000	54,693.000	55,480.000	56,243.000	57,010.000
825.000	57,780.000	58,505.000	59,152.000	59,768.000	60,387.000
840.000	61,008.000	61,640.000	62,290.000	62,949.000	63,611.000
855.000	64,275.000	64,953.000	65,653.000	66,339.000	67,004.000
870.000	67,672.000	68,341.000	69,010.000	69,680.000	70,352.000
885.000	71,027.000	71,701.000	72,372.000	73,044.000	73,717.000
900.000	74,393.000	75,063.000	75,721.000	76,374.000	77,030.000
915.000	77,689.000	78,339.000	78,956.000	79,543.000	80,128.000
930.000	80,712.000	81,271.000	81,790.000	82,293.000	82,794.000
945.000	83,293.000	83,771.000	84,216.000	84,646.000	85,074.000
960.000	85,501.000	85,864.000	86,122.000	86,337.000	86,552.000
975.000	86,765.000	86,914.000	86,958.000	86,959.000	86,961.000
990.000	86,962.000	86,949.000	86,910.000	86,861.000	86,812.000
1,005.000	86,764.000	86,709.000	86,641.000	86,568.000	86,496.000
1,020.000	86,425.000	86,356.000	86,293.000	86,231.000	86,170.000
1,035.000	86,110.000	86,054.000	86,006.000	85,960.000	85,915.000
1,050.000	85,871.000	85,827.000	85,784.000	85,742.000	85,700.000
1,065.000	85,659.000	85,615.000	85,569.000	85,521.000	85,473.000
1,080.000	85,426.000	85,376.000	85,324.000	85,270.000	85,217.000
1,095.000	85,164.000	85,111.000	85,057.000	85,003.000	84,950.000
1,110.000	84,896.000	84,841.000	84,783.000	84,724.000	84,665.000
1,125.000	84,606.000	84,543.000	84,473.000	84,399.000	84,326.000
1,140.000	84,253.000	84,181.000	84,108.000	84,034.000	83,962.000
1,155.000	83,890.000	83,822.000	83,760.000	83,702.000	83,644.000
1,170.000	83,586.000	83,529.000	83,474.000	83,419.000	83,364.000
1,185.000	83,310.000	83,252.000	83,187.000	83,119.000	83,052.000
1,200.000	82,986.000	82,920.000	82,854.000	82,789.000	82,724.000
1,215.000	82,659.000	82,597.000	82,537.000	82,479.000	82,421.000
1,230.000	82,364.000	82,307.000	82,250.000	82,194.000	82,138.000
1,245.000	82,082.000	82,025.000	81,966.000	81,906.000	81,846.000
1,260.000	81,787.000	81,728.000	81,668.000	81,608.000	81,549.000
1,275.000	81,489.000	81,431.000	81,372.000	81,314.000	81,256.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1,290.000	81,199.000	81,142.000	81,085.000	81,029.000	80,973.000
1,305.000	80,917.000	80,862.000	80,807.000	80,753.000	80,698.000
1,320.000	80,644.000	80,591.000	80,537.000	80,484.000	80,432.000
1,335.000	80,379.000	80,327.000	80,276.000	80,224.000	80,173.000
1,350.000	80,122.000	80,070.000	80,014.000	79,957.000	79,901.000
1,365.000	79,845.000	79,788.000	79,731.000	79,675.000	79,618.000
1,380.000	79,562.000	79,506.000	79,451.000	79,395.000	79,341.000
1,395.000	79,286.000	79,232.000	79,178.000	79,125.000	79,072.000
1,410.000	79,019.000	78,966.000	78,914.000	78,862.000	78,811.000
1,425.000	78,759.000	78,708.000	78,655.000	78,601.000	78,547.000
1,440.000	78,492.000	(N/A)	(N/A)	(N/A)	(N/A)

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
0.000	0.000	3.000	10.000	19.000	28.000
15.000	37.000	50.000	69.000	90.000	112.000
30.000	133.000	156.000	180.000	205.000	230.000
45.000	255.000	282.000	311.000	341.000	372.000
60.000	402.000	432.000	463.000	493.000	523.000
75.000	553.000	582.000	610.000	636.000	663.000
90.000	689.000	715.000	742.000	768.000	795.000
105.000	821.000	849.000	878.000	908.000	938.000
120.000	967.000	998.000	1,031.000	1,064.000	1,098.000
135.000	1,131.000	1,165.000	1,200.000	1,235.000	1,270.000
150.000	1,305.000	1,341.000	1,379.000	1,417.000	1,456.000
165.000	1,494.000	1,534.000	1,575.000	1,617.000	1,659.000
180.000	1,701.000	1,743.000	1,786.000	1,830.000	1,873.000
195.000	1,917.000	1,961.000	2,004.000	2,047.000	2,091.000
210.000	2,134.000	2,177.000	2,221.000	2,264.000	2,307.000
225.000	2,350.000	2,395.000	2,441.000	2,487.000	2,534.000
240.000	2,581.000	2,628.000	2,678.000	2,728.000	2,778.000
255.000	2,828.000	2,880.000	2,934.000	2,989.000	3,044.000
270.000	3,100.000	3,156.000	3,214.000	3,272.000	3,331.000
285.000	3,390.000	3,450.000	3,513.000	3,577.000	3,640.000
300.000	3,704.000	3,766.000	3,826.000	3,884.000	3,942.000
315.000	4,000.000	4,058.000	4,114.000	4,170.000	4,226.000
330.000	4,283.000	4,341.000	4,403.000	4,466.000	4,529.000
345.000	4,592.000	4,656.000	4,722.000	4,789.000	4,856.000
360.000	4,922.000	4,991.000	5,062.000	5,134.000	5,206.000
375.000	5,277.000	5,350.000	5,425.000	5,501.000	5,576.000
390.000	5,652.000	5,729.000	5,808.000	5,889.000	5,970.000
405.000	6,050.000	6,132.000	6,216.000	6,300.000	6,384.000
420.000	6,468.000	6,553.000	6,639.000	6,724.000	6,810.000
435.000	6,896.000	6,985.000	7,080.000	7,176.000	7,273.000
450.000	7,369.000	7,470.000	7,580.000	7,692.000	7,805.000
465.000	7,917.000	8,036.000	8,164.000	8,296.000	8,428.000
480.000	8,560.000	8,701.000	8,854.000	9,013.000	9,172.000
495.000	9,331.000	9,495.000	9,668.000	9,845.000	10,022.000
510.000	10,199.000	10,379.000	10,566.000	10,755.000	10,944.000
525.000	11,133.000	11,327.000	11,531.000	11,738.000	11,945.000
540.000	12,151.000	12,367.000	12,597.000	12,832.000	13,067.000
555.000	13,303.000	13,546.000	13,801.000	14,061.000	14,322.000
570.000	14,582.000	14,848.000	15,124.000	15,404.000	15,684.000
585.000	15,964.000	16,249.000	16,545.000	16,844.000	17,143.000
600.000	17,443.000	17,726.000	17,982.000	18,227.000	18,472.000
615.000	18,717.000	18,948.000	19,155.000	19,354.000	19,552.000
630.000	19,750.000	19,959.000	20,187.000	20,423.000	20,659.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
645.000	20,894.000	21,140.000	21,403.000	21,673.000	21,942.000
660.000	22,212.000	22,481.000	22,749.000	23,017.000	23,284.000
675.000	23,552.000	23,818.000	24,083.000	24,347.000	24,611.000
690.000	24,875.000	25,132.000	25,380.000	25,624.000	25,868.000
705.000	26,112.000	26,354.000	26,595.000	26,835.000	27,075.000
720.000	27,315.000	27,575.000	27,870.000	28,178.000	28,487.000
735.000	28,795.000	29,121.000	29,478.000	29,847.000	30,217.000
750.000	30,586.000	30,965.000	31,363.000	31,768.000	32,173.000
765.000	32,578.000	32,991.000	33,417.000	33,849.000	34,280.000
780.000	34,712.000	35,160.000	35,636.000	36,123.000	36,610.000
795.000	37,097.000	37,596.000	38,114.000	38,641.000	39,160.000
810.000	39,654.000	40,085.000	40,440.000	40,751.000	41,039.000
825.000	41,306.000	41,532.000	41,704.000	41,849.000	41,984.000
840.000	42,108.000	42,230.000	42,355.000	42,475.000	42,585.000
855.000	42,688.000	42,788.000	42,888.000	42,984.000	43,073.000
870.000	43,156.000	43,231.000	43,301.000	43,363.000	43,417.000
885.000	43,463.000	43,501.000	43,531.000	43,554.000	43,575.000
900.000	43,593.000	43,603.000	43,605.000	43,604.000	43,602.000
915.000	43,601.000	43,596.000	43,583.000	43,570.000	43,558.000
930.000	43,548.000	43,527.000	43,488.000	43,445.000	43,409.000
945.000	43,378.000	43,343.000	43,299.000	43,254.000	43,212.000
960.000	43,173.000	43,099.000	42,966.000	42,817.000	42,679.000
975.000	42,551.000	42,403.000	42,218.000	42,027.000	41,850.000
990.000	41,687.000	41,528.000	41,370.000	41,219.000	41,079.000
1,005.000	40,950.000	40,828.000	40,711.000	40,602.000	40,501.000
1,020.000	40,407.000	40,322.000	40,247.000	40,179.000	40,115.000
1,035.000	40,057.000	40,005.000	39,960.000	39,920.000	39,883.000
1,050.000	39,848.000	39,817.000	39,789.000	39,763.000	39,739.000
1,065.000	39,717.000	39,695.000	39,672.000	39,650.000	39,629.000
1,080.000	39,610.000	39,591.000	39,572.000	39,554.000	39,537.000
1,095.000	39,521.000	39,506.000	39,493.000	39,480.000	39,468.000
1,110.000	39,458.000	39,446.000	39,433.000	39,419.000	39,407.000
1,125.000	39,395.000	39,383.000	39,368.000	39,352.000	39,338.000
1,140.000	39,324.000	39,312.000	39,301.000	39,290.000	39,280.000
1,155.000	39,271.000	39,265.000	39,263.000	39,262.000	39,261.000
1,170.000	39,260.000	39,260.000	39,259.000	39,258.000	39,258.000
1,185.000	39,257.000	39,255.000	39,249.000	39,242.000	39,236.000
1,200.000	39,230.000	39,225.000	39,220.000	39,215.000	39,211.000
1,215.000	39,207.000	39,204.000	39,204.000	39,204.000	39,204.000
1,230.000	39,204.000	39,204.000	39,204.000	39,204.000	39,204.000
1,245.000	39,204.000	39,203.000	39,199.000	39,194.000	39,189.000
1,260.000	39,185.000	39,182.000	39,180.000	39,178.000	39,177.000
1,275.000	39,175.000	39,173.000	39,171.000	39,168.000	39,166.000

Time vs. Volume (ft³)

Output Time increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)	Volume (ft ³)
1,290.000	39,163.000	39,162.000	39,161.000	39,161.000	39,160.000
1,305.000	39,160.000	39,159.000	39,158.000	39,156.000	39,154.000
1,320.000	39,153.000	39,152.000	39,152.000	39,153.000	39,153.000
1,335.000	39,153.000	39,153.000	39,152.000	39,151.000	39,149.000
1,350.000	39,148.000	39,146.000	39,142.000	39,138.000	39,135.000
1,365.000	39,131.000	39,128.000	39,125.000	39,122.000	39,119.000
1,380.000	39,117.000	39,115.000	39,113.000	39,111.000	39,109.000
1,395.000	39,107.000	39,106.000	39,104.000	39,103.000	39,102.000
1,410.000	39,101.000	39,100.000	39,099.000	39,098.000	39,097.000
1,425.000	39,096.000	39,096.000	39,095.000	39,094.000	39,094.000
1,440.000	39,093.000	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Area Volume Curve
Label: Det-A1

Scenario: Base

Elevation (ft)	Planimeter (ft ²)	Area (ft ²)	A1+A2+sqr (A1*A2) (ft ²)	Volume (ft ³)	Volume (Total) (ft ³)
0.000	0.0	3,019	0	0.000	0.000
1.000	0.0	3,019	9,056	3,019.000	3,019.000
4.000	0.0	3,019	9,056	9,056.000	12,075.000

Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 Lower and upper elevations of the increment
 Area1, Area2 Areas computed for EL1, EL2, respectively
 Volume Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve
 Label: Det-B1

Scenario: Base

Elevation (ft)	Planimeter (ft ²)	Area (ft ²)	A1+A2+sqr (A1*A2) (ft ²)	Volume (ft ³)	Volume (Total) (ft ³)
1,318.000	0.0	13,441	0	0.000	0.000
1,319.000	0.0	16,448	44,758	14,919.000	14,919.000
1,320.000	0.0	19,598	54,000	18,000.000	32,919.000
1,321.000	0.0	22,871	63,640	21,213.000	54,133.000
1,322.000	0.0	26,299	73,695	24,565.000	78,698.000
1,323.000	0.0	29,898	84,238	28,079.000	106,777.000
1,324.000	0.0	33,713	95,359	31,786.000	138,563.000

Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 Lower and upper elevations of the increment
 Area1, Area2 Areas computed for EL1, EL2, respectively
 Volume Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve
Label: Det-B3

Scenario: Base

Elevation (ft)	Planimeter (ft ²)	Area (ft ²)	A1+A2+sqr (A1*A2) (ft ²)	Volume (ft ³)	Volume (Total) (ft ³)
1,319.740	0.0	8,663	0	0.000	0.000
1,325.000	0.0	8,663	25,989	45,567.000	45,567.000
1,326.740	0.0	8,663	25,989	15,074.000	60,641.000

Pond Volume Equations

*** Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where: EL1, EL2 Lower and upper elevations of the increment
 Area1, Area2 Areas computed for EL1, EL2, respectively
 Volume Incremental volume between EL1 and EL2

Subsection: Outlet Input Data
Label: A-1

Scenario: Base

Requested Pond Water Surface Elevations	
Minimum (Headwater)	0.000 ft
Increment (Headwater)	0.500 ft
Maximum (Headwater)	4.000 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
User Defined Table	Treated runoff	Forward	TW	0.000	4.000
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: A-1

Scenario: Base

Structure ID: Treated runoff
 Structure Type: User Defined Table

Elevation (ft)	Flow (ft ³ /s)
0.000	0.00000
0.044	0.00143
0.089	0.00202
0.133	0.00248
0.178	0.00286
0.222	0.00320
0.267	0.00350
0.311	0.00378
0.356	0.00405
0.400	0.00429
0.444	0.00452
0.489	0.00474
0.533	0.00495
0.578	0.00516
0.622	0.00535
0.667	0.00554
0.711	0.00572
0.756	0.00590
0.800	0.00607
0.844	0.00623
0.889	0.00640
0.933	0.00655
0.978	0.00671
1.022	0.00686
1.067	0.00701
1.111	0.00715
1.156	0.00729
1.200	0.00743
1.244	0.00757
1.289	0.00770
1.333	0.00783
1.378	0.00796
1.422	0.00809
1.467	0.00822
1.511	0.00834
1.556	0.00846
1.600	0.00858
1.644	0.00870
1.689	0.00882
1.733	0.00893
1.778	0.00905
1.822	0.00916
1.867	0.00927
1.911	0.00938

Subsection: Outlet Input Data
 Label: A-1

Scenario: Base

Elevation (ft)	Flow (ft ³ /s)
1.956	0.00949
2.000	0.00959
2.044	0.00970
2.089	0.00981
2.133	0.00991
2.178	0.01001
2.222	0.01011
2.267	0.01021
2.311	0.01031
2.356	0.01041
2.400	0.01051
2.444	0.01061
2.489	0.01070
2.533	0.01080
2.578	0.01089
2.622	0.01099
2.667	0.01108
2.711	0.01117
2.756	0.01126
2.800	0.01135
2.844	0.01144
2.889	0.01153
2.933	0.01162
2.978	0.01171
3.022	0.01179
3.067	0.01188
3.111	0.01197
3.156	0.01205
3.200	0.01214
3.244	0.01333
3.289	0.01854
3.333	0.02954
3.378	0.04761
3.422	0.07381
3.467	0.10907
3.511	0.19796
3.556	0.76753
3.600	1.65193
3.644	2.76219
3.689	4.05866
3.733	5.51690
3.778	7.11954
3.822	8.85306
3.867	10.70621
3.911	12.66915
3.956	14.73290
4.000	16.88905

Subsection: Outlet Input Data
Label: A-1

Scenario: Base

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.010 ft
Tailwater Tolerance (Maximum)	0.500 ft
Headwater Tolerance (Minimum)	0.010 ft
Headwater Tolerance (Maximum)	0.500 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Individual Outlet Curves
 Label: A-1

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Treated runoff (User Defined Table)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
0.000	0.00000	(N/A)	0.000
0.500	0.00480	(N/A)	0.000
1.000	0.00678	(N/A)	0.000
1.500	0.00831	(N/A)	0.000
2.000	0.00959	(N/A)	0.000
2.500	0.01073	(N/A)	0.000
3.000	0.01175	(N/A)	0.000
3.500	0.17574	(N/A)	0.000
4.000	16.88905	(N/A)	0.000

Computation Messages

Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table

Subsection: Composite Rating Curve
 Label: A-1

Scenario: Base

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
0.000	0.00000	(N/A)	0.000
0.500	0.00480	(N/A)	0.000
1.000	0.00678	(N/A)	0.000
1.500	0.00831	(N/A)	0.000
2.000	0.00959	(N/A)	0.000
2.500	0.01073	(N/A)	0.000
3.000	0.01175	(N/A)	0.000
3.500	0.17574	(N/A)	0.000
4.000	16.88905	(N/A)	0.000

Contributing Structures

Treated runoff
Treated runoff
Treated runoff
Treated runoff
Treated runoff
Treated runoff
Treated runoff
Treated runoff
Treated runoff

Subsection: Outlet Input Data
 Label: B-1

Scenario: Base

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,318.000 ft
Increment (Headwater)	0.500 ft
Maximum (Headwater)	1,324.000 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Orifice-Circular	Orifice - 1	Forward	TW	1,318.500	1,324.000
Vnotch Weir	Weir - 1	Forward	TW	1,322.000	1,324.000
Stand Pipe	Riser - 1	Forward	TW	1,323.000	1,324.000
User Defined Table	Treated runoff	Forward	TW	0.000	1,324.000
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: B-1

Scenario: Base

Structure ID: Treated runoff
 Structure Type: User Defined Table

Elevation (ft)	Flow (ft ³ /s)
1,318.000	0.43630
1,320.000	0.43630
1,324.000	0.43630

Structure ID: Orifice - 1
 Structure Type: Orifice-Circular

Number of Openings	1
Elevation	1,318.500 ft
Orifice Diameter	1.0 in
Orifice Coefficient	0.600

Structure ID: Weir - 1
 Structure Type: Vnotch Weir

Number of Openings	1
Elevation	1,322.000 ft
V-Notch Angle	90.00 degrees
Coefficient of Discharge	0.576

Structure ID: Riser - 1
 Structure Type: Stand Pipe

Number of Openings	1
Elevation	1,323.000 ft
Diameter	54.0 in
Orifice Area	15.9 ft ²
Orifice Coefficient	0.600
Weir Length	14.14 ft
Weir Coefficient	3.00 (ft ^{0.5})/s
K Reverse	1.000
Manning's n	0.000
Key, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

Structure ID: TW
 Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall
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Convergence Tolerances

Maximum Iterations	30
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Subsection: Outlet Input Data
Label: B-1

Scenario: Base

Convergence Tolerances	
Tailwater Tolerance (Minimum)	0.010 ft
Tailwater Tolerance (Maximum)	0.500 ft
Headwater Tolerance (Minimum)	0.010 ft
Headwater Tolerance (Maximum)	0.500 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Individual Outlet Curves
 Label: B-1

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Treated runoff (User Defined Table)

 Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.43630	(N/A)	0.000
1,318.500	0.43630	(N/A)	0.000
1,319.000	0.43630	(N/A)	0.000
1,319.500	0.43630	(N/A)	0.000
1,320.000	0.43630	(N/A)	0.000
1,320.500	0.43630	(N/A)	0.000
1,321.000	0.43630	(N/A)	0.000
1,321.500	0.43630	(N/A)	0.000
1,322.000	0.43630	(N/A)	0.000
1,322.500	0.43630	(N/A)	0.000
1,323.000	0.43630	(N/A)	0.000
1,323.500	0.43630	(N/A)	0.000
1,324.000	0.43630	(N/A)	0.000

Computation Messages

Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table

Subsection: Individual Outlet Curves
 Label: B-1

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Orifice - 1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.01777	(N/A)	0.000
1,319.500	0.02570	(N/A)	0.000
1,320.000	0.03170	(N/A)	0.000
1,320.500	0.03674	(N/A)	0.000
1,321.000	0.04116	(N/A)	0.000
1,321.500	0.04515	(N/A)	0.000
1,322.000	0.04882	(N/A)	0.000
1,322.500	0.05223	(N/A)	0.000
1,323.000	0.05543	(N/A)	0.000
1,323.500	0.05845	(N/A)	0.000
1,324.000	0.06133	(N/A)	0.000

Computation Messages

HW & TW below invert
 Upstream HW &
 DNstream TW < Inv.El
 H =.46
 H =.96
 H =1.46
 H =1.96
 H =2.46
 H =2.96
 H =3.46
 H =3.96
 H =4.46
 H =4.96
 H =5.46

Subsection: Individual Outlet Curves
 Label: B-1

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Weir - 1 (Vnotch Weir)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.00000	(N/A)	0.000
1,319.500	0.00000	(N/A)	0.000
1,320.000	0.00000	(N/A)	0.000
1,320.500	0.00000	(N/A)	0.000
1,321.000	0.00000	(N/A)	0.000
1,321.500	0.00000	(N/A)	0.000
1,322.000	0.00000	(N/A)	0.000
1,322.500	0.43563	(N/A)	0.000
1,323.000	2.46427	(N/A)	0.000
1,323.500	6.79074	(N/A)	0.000
1,324.000	13.94003	(N/A)	0.000

Computation Messages

HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 HW & TW below
 Inv.El.=1322.000
 H=.00; Htw=.00;
 Qfree=.00;
 H=.50; Htw=.00;
 Qfree=.44;
 H=1.00; Htw=.00;
 Qfree=2.46;
 H=1.50; Htw=.00;
 Qfree=6.79;
 H=2.00; Htw=.00;
 Qfree=13.94;

Subsection: Individual Outlet Curves
 Label: B-1

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE
 Structure ID = Riser - 1 (Stand Pipe)

Upstream ID = (Pond Water Surface)
 Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.00000	(N/A)	0.000
1,318.500	0.00000	(N/A)	0.000
1,319.000	0.00000	(N/A)	0.000
1,319.500	0.00000	(N/A)	0.000
1,320.000	0.00000	(N/A)	0.000
1,320.500	0.00000	(N/A)	0.000
1,321.000	0.00000	(N/A)	0.000
1,321.500	0.00000	(N/A)	0.000
1,322.000	0.00000	(N/A)	0.000
1,322.500	0.00000	(N/A)	0.000
1,323.000	0.00000	(N/A)	0.000
1,323.500	14.99473	(N/A)	0.000
1,324.000	42.41150	(N/A)	0.000

Computation Messages

HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 HW & TW <
 Inv.El.=1323.000
 Weir: H =0ft
 Weir: H =0.5ft
 Weir: H =1ft

Subsection: Composite Rating Curve
 Label: B-1

Scenario: Base

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,318.000	0.43630	(N/A)	0.000
1,318.500	0.43630	(N/A)	0.000
1,319.000	0.45407	(N/A)	0.000
1,319.500	0.46200	(N/A)	0.000
1,320.000	0.46800	(N/A)	0.000
1,320.500	0.47304	(N/A)	0.000
1,321.000	0.47746	(N/A)	0.000
1,321.500	0.48145	(N/A)	0.000
1,322.000	0.48512	(N/A)	0.000
1,322.500	0.92415	(N/A)	0.000
1,323.000	2.95600	(N/A)	0.000
1,323.500	22.28022	(N/A)	0.000
1,324.000	56.84916	(N/A)	0.000

Contributing Structures

Treated runoff
Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff
Orifice - 1 + Weir - 1 + Riser - 1 + Treated runoff

Subsection: Outlet Input Data
 Label: B-3

Scenario: Base

Requested Pond Water Surface Elevations	
Minimum (Headwater)	1,319.740 ft
Increment (Headwater)	0.500 ft
Maximum (Headwater)	1,326.740 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
User Defined Table	User Defined Rating Table - 1	Forward	TW	0.000	1,326.740
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data
 Label: B-3

Scenario: Base

Structure ID: User Defined Rating Table - 1
 Structure Type: User Defined Table

Elevation (ft)	Flow (ft ³ /s)
1,319.740	0.00000
1,319.818	0.00737
1,319.896	0.01043
1,319.973	0.01277
1,320.051	0.01475
1,320.129	0.01649
1,320.207	0.01806
1,320.284	0.01951
1,320.362	0.02085
1,320.440	0.02212
1,320.518	0.02331
1,320.596	0.02445
1,320.673	0.02554
1,320.751	0.02658
1,320.829	0.02759
1,320.907	0.02855
1,320.984	0.02949
1,321.062	0.03040
1,321.140	0.03128
1,321.218	0.03214
1,321.296	0.03297
1,321.373	0.03379
1,321.451	0.03458
1,321.529	0.03536
1,321.607	0.03612
1,321.684	0.03686
1,321.762	0.03759
1,321.840	0.03831
1,321.918	0.03901
1,321.996	0.03970
1,322.073	0.04038
1,322.151	0.04105
1,322.229	0.04171
1,322.307	0.04235
1,322.384	0.04299
1,322.462	0.04362
1,322.540	0.04424
1,322.618	0.04485
1,322.696	0.04545
1,322.773	0.04604
1,322.851	0.04663
1,322.929	0.04721
1,323.007	0.04778
1,323.084	0.04835

Subsection: Outlet Input Data
 Label: B-3

Scenario: Base

Elevation (ft)	Flow (ft ³ /s)
1,323.162	0.04890
1,323.240	0.04946
1,323.318	0.05000
1,323.396	0.05054
1,323.473	0.05108
1,323.551	0.05161
1,323.629	0.05213
1,323.707	0.05265
1,323.784	0.05317
1,323.862	0.05367
1,323.940	0.05418
1,324.018	0.05468
1,324.096	0.05517
1,324.173	0.05566
1,324.251	0.05615
1,324.329	0.13801
1,324.407	0.34480
1,324.484	0.62306
1,324.562	0.95757
1,324.640	1.34009
1,324.718	1.76520
1,324.796	2.22898
1,324.873	2.72845
1,324.951	3.26121
1,325.029	3.82530
1,325.107	4.41906
1,325.184	5.04108
1,325.262	5.69012
1,325.340	6.36510
1,325.418	7.06507
1,325.496	7.78916
1,325.573	8.53658
1,325.651	9.30664
1,325.729	10.09868
1,325.807	11.03604
1,325.884	12.83433
1,325.962	15.21062
1,326.040	18.04337
1,326.118	21.25998
1,326.196	24.80614
1,326.273	28.63541
1,326.351	32.70457
1,326.429	36.97130
1,326.507	41.39308
1,326.584	45.92668
1,326.662	50.52811
1,326.740	55.15281

Subsection: Outlet Input Data
Label: B-3

Scenario: Base

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.010 ft
Tailwater Tolerance (Maximum)	0.500 ft
Headwater Tolerance (Minimum)	0.010 ft
Headwater Tolerance (Maximum)	0.500 ft
Flow Tolerance (Minimum)	0.001 ft ³ /s
Flow Tolerance (Maximum)	10.000 ft ³ /s

Subsection: Individual Outlet Curves
 Label: B-3

Scenario: Base

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = User Defined Rating Table - 1 (User Defined Table)

Upstream ID = (Pond Water Surface)

Downstream ID = Tailwater (Pond Outfall)

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.01868	(N/A)	0.000
1,320.740	0.02643	(N/A)	0.000
1,321.240	0.03237	(N/A)	0.000
1,321.740	0.03738	(N/A)	0.000
1,322.240	0.04180	(N/A)	0.000
1,322.740	0.04579	(N/A)	0.000
1,323.240	0.04946	(N/A)	0.000
1,323.740	0.05287	(N/A)	0.000
1,324.240	0.05608	(N/A)	0.000
1,324.740	1.89771	(N/A)	0.000
1,325.240	5.50468	(N/A)	0.000
1,325.740	10.23259	(N/A)	0.000
1,326.240	26.99429	(N/A)	0.000
1,326.740	55.15281	(N/A)	0.000

Computation Messages

Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table
 Interpolated from input table

Subsection: Composite Rating Curve
 Label: B-3

Scenario: Base

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft ³ /s)	Tailwater Elevation (ft)	Convergence Error (ft)
1,319.740	0.00000	(N/A)	0.000
1,320.240	0.01868	(N/A)	0.000
1,320.740	0.02643	(N/A)	0.000
1,321.240	0.03237	(N/A)	0.000
1,321.740	0.03738	(N/A)	0.000
1,322.240	0.04180	(N/A)	0.000
1,322.740	0.04579	(N/A)	0.000
1,323.240	0.04946	(N/A)	0.000
1,323.740	0.05287	(N/A)	0.000
1,324.240	0.05608	(N/A)	0.000
1,324.740	1.89771	(N/A)	0.000
1,325.240	5.50468	(N/A)	0.000
1,325.740	10.23259	(N/A)	0.000
1,326.240	26.99429	(N/A)	0.000
1,326.740	55.15281	(N/A)	0.000

Contributing Structures

User Defined Rating Table - 1
User Defined Rating Table - 1
User Defined Rating Table - 1
User Defined Rating Table - 1
User Defined Rating Table - 1
User Defined Rating Table - 1
User Defined Rating Table - 1
User Defined Rating Table - 1
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User Defined Rating Table - 1
User Defined Rating Table - 1
User Defined Rating Table - 1
User Defined Rating Table - 1
User Defined Rating Table - 1
User Defined Rating Table - 1

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: Det-A1

Scenario: Base

Infiltration	
Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	0.0100 in/h

Initial Conditions	
Elevation (Water Surface, Initial)	0.000 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.00000 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.00000 ft ³ /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (ft ²)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
0.000	0.00000	0.000	3,019	0.00000	0.00000	0.00000
0.500	0.00480	1,509.375	3,019	0.00070	0.00549	16.77633
1.000	0.00678	3,018.750	3,019	0.00070	0.00748	33.54915
1.500	0.00831	4,528.125	3,019	0.00070	0.00901	50.32151
2.000	0.00959	6,037.500	3,019	0.00070	0.01029	67.09363
2.500	0.01073	7,546.875	3,019	0.00070	0.01143	83.86559
3.000	0.01175	9,056.250	3,019	0.00070	0.01245	100.63745
3.500	0.17574	10,565.625	3,019	0.00070	0.17644	117.57227
4.000	16.88905	12,075.000	3,019	0.00070	16.88975	151.05642

Subsection: Pond Infiltration Calculations
Label: Det-A1 (IN)

Scenario: Base

Average Infiltration Rating Table

Elevation (Water Surface) (ft)	Area (Total) (ft ²)	Flow (Infiltration) (ft ³ /s)
0.000	3,018.8	0.00000
0.500	3,018.8	0.00070
1.000	3,018.8	0.00070
1.500	3,018.8	0.00070
2.000	3,018.8	0.00070
2.500	3,018.8	0.00070
3.000	3,018.8	0.00070
3.500	3,018.8	0.00070
4.000	3,018.8	0.00070

Subsection: Level Pool Pond Routing Summary
 Label: Det-A1 (IN)

Scenario: Base

Infiltration	
Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	0.0100 in/h

Initial Conditions	
Elevation (Water Surface, Initial)	0.000 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.00000 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.00000 ft ³ /s
Time Increment	3.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	4.92000 ft ³ /s	Time to Peak (Flow, In)	801.000 min
Infiltration (Peak)	0.00070 ft ³ /s	Time to Peak (Infiltration)	156.000 min
Flow (Peak Outlet)	4.91930 ft ³ /s	Time to Peak (Flow, Outlet)	810.000 min

Elevation (Water Surface, Peak)	3.642 ft
Volume (Peak)	10,994.015 ft ³

Mass Balance (ft ³)	
Volume (Initial)	0.000 ft ³
Volume (Total Inflow)	106,945.000 ft ³
Volume (Total Infiltration)	58.000 ft ³
Volume (Total Outlet Outflow)	96,321.000 ft ³
Volume (Retained)	10,534.000 ft ³
Volume (Unrouted)	-32.000 ft ³
Error (Mass Balance)	0.0 %

Subsection: Pond Infiltration Hydrograph
 Label: Det-A1 (INF)

Scenario: Base

Peak Discharge	0.00070 ft ³ /s
Time to Peak	561.000 min
Hydrograph Volume	0.000 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.00000	0.00000	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-A1 (OUT)

Scenario: Base

Peak Discharge	4.91930 ft ³ /s
Time to Peak	810.000 min
Hydrograph Volume	96,320.497 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
39.000	0.00097	0.00111	0.00124	0.00139	0.00156
54.000	0.00173	0.00190	0.00207	0.00224	0.00241
69.000	0.00258	0.00275	0.00292	0.00308	0.00322
84.000	0.00335	0.00349	0.00362	0.00376	0.00389
99.000	0.00403	0.00416	0.00430	0.00444	0.00460
114.000	0.00477	0.00486	0.00493	0.00500	0.00506
129.000	0.00513	0.00520	0.00527	0.00535	0.00543
144.000	0.00551	0.00560	0.00568	0.00576	0.00585
159.000	0.00593	0.00602	0.00610	0.00619	0.00628
174.000	0.00638	0.00648	0.00658	0.00667	0.00677
189.000	0.00685	0.00692	0.00700	0.00707	0.00715
204.000	0.00722	0.00730	0.00737	0.00745	0.00752
219.000	0.00760	0.00767	0.00775	0.00783	0.00791
234.000	0.00800	0.00808	0.00817	0.00825	0.00833
249.000	0.00841	0.00848	0.00855	0.00863	0.00871
264.000	0.00879	0.00887	0.00895	0.00903	0.00912
279.000	0.00921	0.00930	0.00939	0.00948	0.00957
294.000	0.00966	0.00974	0.00982	0.00989	0.00997
309.000	0.01005	0.01013	0.01021	0.01029	0.01036
324.000	0.01043	0.01051	0.01058	0.01065	0.01073
339.000	0.01080	0.01087	0.01094	0.01102	0.01110
354.000	0.01118	0.01125	0.01133	0.01141	0.01150
369.000	0.01159	0.01167	0.01312	0.02679	0.04020
384.000	0.05336	0.06625	0.07890	0.09165	0.10474
399.000	0.11780	0.13062	0.14318	0.15585	0.16885
414.000	0.48991	0.83870	0.83930	0.83930	0.83930
429.000	0.83930	0.83930	0.83930	0.85727	0.88725
444.000	0.89928	0.89930	0.89930	0.91727	0.94725
459.000	0.95928	0.95930	0.95930	1.01321	1.10315
474.000	1.13924	1.13930	1.13930	1.21118	1.33109
489.000	1.37922	1.37930	1.37930	1.43321	1.52315
504.000	1.55924	1.55930	1.55930	1.59524	1.65520
519.000	1.67926	1.67930	1.67930	1.73321	1.82315
534.000	1.85924	1.85930	1.85930	1.93118	2.05109
549.000	2.09922	2.09930	2.09930	2.17118	2.29109
564.000	2.33922	2.33930	2.33930	2.41118	2.53109
579.000	2.57922	2.57930	2.57930	2.63321	2.72315
594.000	2.75924	2.75930	2.75930	2.59758	2.32777
609.000	2.21949	2.21930	2.21930	2.09352	1.88366

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-A1 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
624.000	1.79945	1.79930	1.79930	1.90712	2.08699
639.000	2.15918	2.15930	2.15930	2.24915	2.39904
654.000	2.45920	2.45930	2.45930	2.45930	2.45930
669.000	2.45930	2.45930	2.45930	2.44133	2.41135
684.000	2.39932	2.39930	2.39930	2.36336	2.30340
699.000	2.27934	2.27930	2.27930	2.26133	2.23135
714.000	2.21932	2.21930	2.21930	2.41696	2.74673
729.000	2.87907	2.87930	2.87930	3.04102	3.31084
744.000	3.41911	3.41930	3.41930	3.52712	3.70699
759.000	3.77918	3.77930	3.77930	3.85118	3.97109
774.000	4.01922	4.01930	4.01930	4.18102	4.45084
789.000	4.55911	4.55930	4.55930	4.66712	4.84699
804.000	4.91918	4.91930	4.91930	4.66773	4.24802
819.000	4.07959	4.07930	4.07930	3.86367	3.50392
834.000	3.35955	3.35930	3.35930	3.43118	3.55109
849.000	3.59922	3.59930	3.59930	3.65321	3.74315
864.000	3.77924	3.77930	3.77930	3.76133	3.73135
879.000	3.71932	3.71930	3.71930	3.70133	3.67135
894.000	3.65932	3.65930	3.65930	3.62336	3.56340
909.000	3.53934	3.53930	3.53930	3.48539	3.39546
924.000	3.35936	3.35930	3.35930	3.23352	3.02366
939.000	2.93945	2.93930	2.93930	2.84946	2.69956
954.000	2.63940	2.63930	2.63930	2.27992	1.68033
969.000	1.43972	1.43930	1.43930	1.16977	0.72008
984.000	0.53961	0.53930	0.53930	0.48539	0.39546
999.000	0.35936	0.35930	0.35930	0.34133	0.31135
1,014.000	0.29932	0.29930	0.29930	0.31727	0.34725
1,029.000	0.35928	0.35930	0.35930	0.37727	0.40725
1,044.000	0.41928	0.41930	0.41930	0.41930	0.41930
1,059.000	0.41930	0.41930	0.41930	0.40133	0.37135
1,074.000	0.35932	0.35930	0.35930	0.35930	0.35930
1,089.000	0.35930	0.35930	0.35930	0.35930	0.35930
1,104.000	0.35930	0.35930	0.35930	0.34133	0.31135
1,119.000	0.29932	0.29930	0.29930	0.28133	0.25135
1,134.000	0.23932	0.23930	0.23930	0.23930	0.23930
1,149.000	0.23930	0.23930	0.23930	0.25727	0.28725
1,164.000	0.29928	0.29930	0.29930	0.29930	0.29930
1,179.000	0.29930	0.29930	0.29930	0.28133	0.25135
1,194.000	0.23932	0.23930	0.23930	0.23930	0.23930
1,209.000	0.23930	0.23930	0.23930	0.23930	0.23930
1,224.000	0.23930	0.23930	0.23930	0.23930	0.23930
1,239.000	0.23930	0.23930	0.23930	0.22133	0.19135
1,254.000	0.17932	0.17930	0.17930	0.19727	0.22725
1,269.000	0.23928	0.23930	0.23930	0.22133	0.19135

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-A1 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,284.000	0.17932	0.17930	0.17930	0.19727	0.22725
1,299.000	0.23928	0.23930	0.23930	0.22133	0.19135
1,314.000	0.17932	0.17930	0.17930	0.19727	0.22725
1,329.000	0.23928	0.23930	0.23930	0.22133	0.19135
1,344.000	0.17932	0.17930	0.17930	0.17930	0.17930
1,359.000	0.17930	0.17930	0.17930	0.17930	0.17930
1,374.000	0.17930	0.17930	0.17930	0.17930	0.17930
1,389.000	0.17930	0.17930	0.17930	0.17930	0.17930
1,404.000	0.17930	0.17930	0.17930	0.17930	0.17930
1,419.000	0.17930	0.17930	0.17930	0.17930	0.17930
1,434.000	0.17930	0.17930	0.17930	(N/A)	(N/A)

Subsection: Pond Inflow Summary
Label: Det-A1 (IN)

Scenario: Base

Summary for Hydrograph Addition at 'Det-A1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	A-1

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	A-1	107,028.000	800.000	4.92000
Flow (In)	Det-A1	106,944.840	801.000	4.92000

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: Det-B1

Scenario: Base

Infiltration	
Infiltration Method (Computed)	Average Infiltration Rate
Infiltration Rate (Average)	0.0100 in/h

Initial Conditions	
Elevation (Water Surface, Initial)	1,318.000 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.43630 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.43630 ft ³ /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (ft ²)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
1,318.000	0.43630	0.000	13,441	0.00000	0.43630	0.43630
1,318.500	0.43630	7,083.738	14,907	0.00345	0.43975	79.14795
1,319.000	0.45407	14,919.226	16,448	0.00381	0.45788	166.22706
1,319.500	0.46200	23,525.484	17,989	0.00416	0.46616	261.86043
1,320.000	0.46800	32,919.242	19,598	0.00454	0.47254	366.24190
1,320.500	0.47304	43,116.842	21,203	0.00491	0.47794	479.55396
1,321.000	0.47746	54,132.691	22,871	0.00529	0.48275	601.95710
1,321.500	0.48145	65,986.721	24,555	0.00568	0.48714	733.67292
1,322.000	0.48512	78,697.751	26,299	0.00609	0.49121	874.91066
1,322.500	0.92415	92,287.512	28,070	0.00650	0.93065	1,026.34745
1,323.000	2.95600	106,777.023	29,898	0.00692	2.96292	1,189.37429
1,323.500	22.28022	122,193.357	31,777	0.00736	22.28758	1,379.99154
1,324.000	56.84916	138,563.440	33,713	0.00780	56.85697	1,596.45074

Subsection: Pond Infiltration Calculations
Label: Det-B1 (IN)

Scenario: Base

Average Infiltration Rating Table

Elevation (Water Surface) (ft)	Area (Total) (ft ²)	Flow (Infiltration) (ft ³ /s)
1,318.000	13,441.0	0.00000
1,318.500	14,906.6	0.00345
1,319.000	16,448.0	0.00381
1,319.500	17,988.5	0.00416
1,320.000	19,598.0	0.00454
1,320.500	21,202.9	0.00491
1,321.000	22,871.0	0.00529
1,321.500	24,555.1	0.00568
1,322.000	26,299.0	0.00609
1,322.500	28,069.7	0.00650
1,323.000	29,898.0	0.00692
1,323.500	31,776.9	0.00736
1,324.000	33,713.0	0.00780

Subsection: Level Pool Pond Routing Summary
 Label: Det-B1 (IN)

Scenario: Base

Infiltration			
Infiltration Method (Computed)	Average Infiltration Rate		
Infiltration Rate (Average)	0.0100 in/h		
Initial Conditions			
Elevation (Water Surface, Initial)	1,318.000 ft		
Volume (Initial)	0.000 ft ³		
Flow (Initial Outlet)	0.43630 ft ³ /s		
Flow (Initial Infiltration)	0.00000 ft ³ /s		
Flow (Initial, Total)	0.43630 ft ³ /s		
Time Increment	3.000 min		
Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	5.63000 ft ³ /s	Time to Peak (Flow, In)	801.000 min
Infiltration (Peak)	0.00634 ft ³ /s	Time to Peak (Infiltration)	990.000 min
Flow (Peak Outlet)	0.75551 ft ³ /s	Time to Peak (Flow, Outlet)	990.000 min
Elevation (Water Surface, Peak)	1,322.308 ft		
Volume (Peak)	86,962.399 ft ³		
Mass Balance (ft ³)			
Volume (Initial)	0.000 ft ³		
Volume (Total Inflow)	121,756.000 ft ³		
Volume (Total Infiltration)	333.000 ft ³		
Volume (Total Outlet Outflow)	42,944.000 ft ³		
Volume (Retained)	78,401.000 ft ³		
Volume (Unrouted)	-77.000 ft ³		
Error (Mass Balance)	0.1 %		

Subsection: Pond Infiltration Hydrograph
 Label: Det-B1 (INF)

Scenario: Base

Peak Discharge	0.00634 ft ³ /s
Time to Peak	990.000 min
Hydrograph Volume	327.445 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
363.000	0.00103	0.00107	0.00110	0.00114	0.00117
378.000	0.00121	0.00124	0.00128	0.00132	0.00136
393.000	0.00140	0.00144	0.00149	0.00153	0.00157
408.000	0.00162	0.00166	0.00171	0.00176	0.00181
423.000	0.00185	0.00190	0.00195	0.00200	0.00205
438.000	0.00210	0.00215	0.00220	0.00225	0.00230
453.000	0.00236	0.00242	0.00248	0.00254	0.00260
468.000	0.00266	0.00272	0.00279	0.00286	0.00293
483.000	0.00300	0.00308	0.00317	0.00326	0.00335
498.000	0.00344	0.00346	0.00347	0.00348	0.00349
513.000	0.00350	0.00351	0.00352	0.00353	0.00354
528.000	0.00355	0.00357	0.00358	0.00359	0.00360
543.000	0.00362	0.00363	0.00365	0.00366	0.00368
558.000	0.00369	0.00371	0.00372	0.00374	0.00376
573.000	0.00378	0.00380	0.00381	0.00383	0.00385
588.000	0.00387	0.00389	0.00391	0.00392	0.00394
603.000	0.00396	0.00398	0.00399	0.00401	0.00403
618.000	0.00404	0.00405	0.00406	0.00408	0.00409
633.000	0.00410	0.00411	0.00413	0.00414	0.00415
648.000	0.00417	0.00419	0.00420	0.00422	0.00423
663.000	0.00425	0.00427	0.00428	0.00430	0.00432
678.000	0.00433	0.00435	0.00436	0.00438	0.00440
693.000	0.00441	0.00443	0.00444	0.00446	0.00447
708.000	0.00449	0.00450	0.00451	0.00453	0.00454
723.000	0.00456	0.00457	0.00459	0.00461	0.00462
738.000	0.00464	0.00466	0.00469	0.00471	0.00473
753.000	0.00475	0.00478	0.00480	0.00483	0.00485
768.000	0.00488	0.00490	0.00493	0.00495	0.00498
783.000	0.00501	0.00504	0.00507	0.00509	0.00512
798.000	0.00515	0.00519	0.00522	0.00525	0.00528
813.000	0.00531	0.00534	0.00537	0.00539	0.00542
828.000	0.00544	0.00546	0.00548	0.00550	0.00552
843.000	0.00554	0.00557	0.00559	0.00561	0.00563
858.000	0.00565	0.00567	0.00570	0.00572	0.00574
873.000	0.00576	0.00578	0.00580	0.00583	0.00585
888.000	0.00587	0.00589	0.00591	0.00593	0.00595
903.000	0.00598	0.00600	0.00602	0.00604	0.00606
918.000	0.00608	0.00610	0.00611	0.00613	0.00615
933.000	0.00617	0.00618	0.00620	0.00621	0.00623

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
948.000	0.00624	0.00626	0.00627	0.00628	0.00630
963.000	0.00631	0.00631	0.00632	0.00633	0.00633
978.000	0.00634	0.00634	0.00634	0.00634	0.00634
993.000	0.00634	0.00634	0.00634	0.00634	0.00633
1,008.000	0.00633	0.00633	0.00633	0.00633	0.00632
1,023.000	0.00632	0.00632	0.00632	0.00632	0.00631
1,038.000	0.00631	0.00631	0.00631	0.00631	0.00631
1,053.000	0.00631	0.00630	0.00630	0.00630	0.00630
1,068.000	0.00630	0.00630	0.00630	0.00630	0.00629
1,083.000	0.00629	0.00629	0.00629	0.00629	0.00629
1,098.000	0.00628	0.00628	0.00628	0.00628	0.00628
1,113.000	0.00628	0.00627	0.00627	0.00627	0.00627
1,128.000	0.00627	0.00627	0.00626	0.00626	0.00626
1,143.000	0.00626	0.00625	0.00625	0.00625	0.00625
1,158.000	0.00625	0.00624	0.00624	0.00624	0.00624
1,173.000	0.00624	0.00623	0.00623	0.00623	0.00623
1,188.000	0.00623	0.00623	0.00622	0.00622	0.00622
1,203.000	0.00622	0.00622	0.00621	0.00621	0.00621
1,218.000	0.00621	0.00621	0.00620	0.00620	0.00620
1,233.000	0.00620	0.00620	0.00620	0.00619	0.00619
1,248.000	0.00619	0.00619	0.00619	0.00619	0.00618
1,263.000	0.00618	0.00618	0.00618	0.00618	0.00617
1,278.000	0.00617	0.00617	0.00617	0.00617	0.00617
1,293.000	0.00616	0.00616	0.00616	0.00616	0.00616
1,308.000	0.00615	0.00615	0.00615	0.00615	0.00615
1,323.000	0.00615	0.00614	0.00614	0.00614	0.00614
1,338.000	0.00614	0.00614	0.00614	0.00613	0.00613
1,353.000	0.00613	0.00613	0.00613	0.00613	0.00612
1,368.000	0.00612	0.00612	0.00612	0.00612	0.00611
1,383.000	0.00611	0.00611	0.00611	0.00611	0.00611
1,398.000	0.00610	0.00610	0.00610	0.00610	0.00610
1,413.000	0.00610	0.00609	0.00609	0.00609	0.00609
1,428.000	0.00609	0.00609	0.00608	0.00608	0.00608

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B1 (OUT)

Scenario: Base

Peak Discharge	0.75551 ft ³ /s
Time to Peak	990.000 min
Hydrograph Volume	42,944.251 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.21815	0.02400	0.06400	0.08000	0.08000
15.000	0.08000	0.11900	0.18400	0.21000	0.21000
30.000	0.21000	0.22800	0.25800	0.27000	0.27000
45.000	0.27000	0.28799	0.31799	0.32999	0.32999
60.000	0.32999	0.33299	0.33799	0.33999	0.33999
75.000	0.33999	0.33099	0.31599	0.30999	0.30999
90.000	0.30999	0.30699	0.30199	0.29999	0.29999
105.000	0.29999	0.31199	0.33199	0.33999	0.33999
120.000	0.33999	0.35199	0.37199	0.37999	0.37999
135.000	0.37999	0.38299	0.38799	0.38998	0.38998
150.000	0.38998	0.40498	0.42998	0.43630	0.43630
165.000	0.43630	0.43630	0.43630	0.43630	0.43630
180.000	0.43630	0.43630	0.43630	0.43630	0.43630
195.000	0.43630	0.43630	0.43630	0.43630	0.43630
210.000	0.43630	0.43630	0.43630	0.43630	0.43630
225.000	0.43630	0.43630	0.43630	0.43630	0.43630
240.000	0.43630	0.43630	0.43630	0.43630	0.43630
255.000	0.43630	0.43630	0.43630	0.43630	0.43630
270.000	0.43630	0.43630	0.43630	0.43630	0.43630
285.000	0.43630	0.43630	0.43630	0.43630	0.43630
300.000	0.43630	0.43630	0.43630	0.43630	0.43630
315.000	0.43630	0.43630	0.43630	0.43630	0.43630
330.000	0.43630	0.43630	0.43630	0.43630	0.43630
345.000	0.43630	0.43630	0.43630	0.43630	0.43630
360.000	0.43630	0.43630	0.43630	0.43630	0.43630
375.000	0.43630	0.43630	0.43630	0.43630	0.43630
390.000	0.43630	0.43630	0.43630	0.43630	0.43630
405.000	0.43630	0.43630	0.43630	0.43630	0.43630
420.000	0.43630	0.43630	0.43630	0.43630	0.43630
435.000	0.43630	0.43630	0.43630	0.43630	0.43630
450.000	0.43630	0.43630	0.43630	0.43630	0.43630
465.000	0.43630	0.43630	0.43630	0.43630	0.43630
480.000	0.43630	0.43630	0.43630	0.43630	0.43630
495.000	0.43630	0.43630	0.43672	0.43721	0.43769
510.000	0.43818	0.43868	0.43921	0.43975	0.44029
525.000	0.44083	0.44140	0.44201	0.44263	0.44325
540.000	0.44387	0.44453	0.44525	0.44599	0.44674
555.000	0.44748	0.44826	0.44910	0.44996	0.45083
570.000	0.45169	0.45258	0.45352	0.45424	0.45462

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B1 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
585.000	0.45501	0.45541	0.45583	0.45626	0.45668
600.000	0.45711	0.45751	0.45788	0.45823	0.45858
615.000	0.45893	0.45925	0.45953	0.45978	0.46004
630.000	0.46030	0.46057	0.46087	0.46118	0.46149
645.000	0.46179	0.46209	0.46234	0.46260	0.46286
660.000	0.46312	0.46338	0.46365	0.46391	0.46417
675.000	0.46443	0.46469	0.46495	0.46521	0.46547
690.000	0.46573	0.46598	0.46622	0.46646	0.46670
705.000	0.46694	0.46717	0.46741	0.46764	0.46787
720.000	0.46807	0.46827	0.46849	0.46873	0.46896
735.000	0.46919	0.46945	0.46973	0.47003	0.47033
750.000	0.47063	0.47094	0.47126	0.47160	0.47193
765.000	0.47226	0.47261	0.47296	0.47327	0.47357
780.000	0.47386	0.47417	0.47450	0.47483	0.47517
795.000	0.47551	0.47586	0.47622	0.47659	0.47697
810.000	0.47734	0.47765	0.47793	0.47819	0.47845
825.000	0.47872	0.47896	0.47918	0.47939	0.47960
840.000	0.47981	0.48002	0.48024	0.48045	0.48067
855.000	0.48089	0.48111	0.48134	0.48156	0.48175
870.000	0.48195	0.48215	0.48235	0.48254	0.48274
885.000	0.48294	0.48313	0.48332	0.48352	0.48371
900.000	0.48390	0.48409	0.48428	0.48447	0.48465
915.000	0.48484	0.48502	0.49374	0.51328	0.53271
930.000	0.55202	0.57048	0.58758	0.60408	0.62049
945.000	0.63680	0.65239	0.66685	0.68080	0.69468
960.000	0.70847	0.72019	0.72850	0.73543	0.74232
975.000	0.74917	0.75396	0.75536	0.75541	0.75546
990.000	0.75551	0.75507	0.75382	0.75225	0.75069
1,005.000	0.74915	0.74736	0.74518	0.74286	0.74054
1,020.000	0.73824	0.73604	0.73400	0.73202	0.73006
1,035.000	0.72811	0.72631	0.72475	0.72330	0.72185
1,050.000	0.72041	0.71900	0.71762	0.71627	0.71492
1,065.000	0.71358	0.71217	0.71066	0.70912	0.70758
1,080.000	0.70605	0.70446	0.70276	0.70103	0.69930
1,095.000	0.69759	0.69587	0.69413	0.69238	0.69065
1,110.000	0.68893	0.68715	0.68526	0.68334	0.68143
1,125.000	0.67953	0.67748	0.67519	0.67280	0.67043
1,140.000	0.66807	0.66571	0.66333	0.66096	0.65860
1,155.000	0.65625	0.65404	0.65204	0.65014	0.64825
1,170.000	0.64636	0.64451	0.64270	0.64091	0.63913
1,185.000	0.63736	0.63546	0.63334	0.63113	0.62895
1,200.000	0.62677	0.62461	0.62246	0.62032	0.61820
1,215.000	0.61608	0.61403	0.61208	0.61018	0.60829
1,230.000	0.60641	0.60454	0.60268	0.60083	0.59899

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B1 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,245.000	0.59716	0.59529	0.59335	0.59138	0.58942
1,260.000	0.58748	0.58552	0.58355	0.58158	0.57963
1,275.000	0.57768	0.57574	0.57382	0.57191	0.57000
1,290.000	0.56811	0.56623	0.56436	0.56250	0.56066
1,305.000	0.55882	0.55699	0.55518	0.55337	0.55158
1,320.000	0.54979	0.54802	0.54626	0.54450	0.54276
1,335.000	0.54103	0.53930	0.53759	0.53589	0.53419
1,350.000	0.53251	0.53077	0.52892	0.52703	0.52516
1,365.000	0.52330	0.52143	0.51954	0.51765	0.51577
1,380.000	0.51391	0.51205	0.51021	0.50837	0.50655
1,395.000	0.50474	0.50293	0.50114	0.49936	0.49759
1,410.000	0.49583	0.49408	0.49234	0.49061	0.48889
1,425.000	0.48718	0.48548	0.48511	0.48509	0.48508
1,440.000	0.48506	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Pond Inflow Summary
Label: Det-B1 (IN)

Scenario: Base

Summary for Hydrograph Addition at 'Det-B1'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	B-1

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	B-1	121,918.500	800.000	5.63000
Flow (In)	Det-B1	121,755.600	801.000	5.63000

Subsection: Elevation-Volume-Flow Table (Pond)
 Label: Det-B3

Scenario: Base

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	1,319.740 ft
Volume (Initial)	0.000 ft ³
Flow (Initial Outlet)	0.00000 ft ³ /s
Flow (Initial Infiltration)	0.00000 ft ³ /s
Flow (Initial, Total)	0.00000 ft ³ /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft ³ /s)	Storage (ft ³)	Area (ft ²)	Infiltration (ft ³ /s)	Flow (Total) (ft ³ /s)	2S/t + O (ft ³ /s)
1,319.740	0.00000	0.000	8,663	0.00000	0.00000	0.00000
1,320.240	0.01868	4,331.500	8,663	0.00000	0.01868	48.14646
1,320.740	0.02643	8,663.000	8,663	0.00000	0.02643	96.28199
1,321.240	0.03238	12,994.500	8,663	0.00000	0.03238	144.41571
1,321.740	0.03738	17,326.000	8,663	0.00000	0.03738	192.54850
1,322.240	0.04180	21,657.500	8,663	0.00000	0.04180	240.68069
1,322.740	0.04579	25,989.000	8,663	0.00000	0.04579	288.81245
1,323.240	0.04946	30,320.500	8,663	0.00000	0.04946	336.94390
1,323.740	0.05287	34,652.000	8,663	0.00000	0.05287	385.07509
1,324.240	0.05608	38,983.500	8,663	0.00000	0.05608	433.20608
1,324.740	1.89771	43,315.000	8,663	0.00000	1.89771	483.17548
1,325.240	5.50468	47,646.500	8,663	0.00000	5.50468	534.91024
1,325.740	10.23259	51,978.000	8,663	0.00000	10.23259	587.76592
1,326.240	26.99429	56,309.500	8,663	0.00000	26.99429	652.65541
1,326.740	55.15281	60,641.000	8,663	0.00000	55.15281	728.94170

Subsection: Level Pool Pond Routing Summary
 Label: Det-B3 (IN)

Scenario: Base

Infiltration			
Infiltration Method (Computed)	No Infiltration		

Initial Conditions			
Elevation (Water Surface, Initial)	1,319.740 ft		
Volume (Initial)	0.000 ft ³		
Flow (Initial Outlet)	0.00000 ft ³ /s		
Flow (Initial Infiltration)	0.00000 ft ³ /s		
Flow (Initial, Total)	0.00000 ft ³ /s		
Time Increment	3.000 min		

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	2.98000 ft ³ /s	Time to Peak (Flow, In)	801.000 min
Flow (Peak Outlet)	2.13934 ft ³ /s	Time to Peak (Flow, Outlet)	906.000 min

Elevation (Water Surface, Peak)	1,324.773 ft		
Volume (Peak)	43,605.172 ft ³		

Mass Balance (ft ³)			
Volume (Initial)	0.000 ft ³		
Volume (Total Inflow)	65,369.000 ft ³		
Volume (Total Infiltration)	0.000 ft ³		
Volume (Total Outlet Outflow)	26,275.000 ft ³		
Volume (Retained)	39,076.000 ft ³		
Volume (Unrouted)	-18.000 ft ³		
Error (Mass Balance)	0.0 %		

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B3 (OUT)

Scenario: Base

Peak Discharge	2.13934 ft ³ /s
Time to Peak	906.000 min
Hydrograph Volume	26,274.542 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
42.000	0.00099	0.00110	0.00122	0.00134	0.00147
57.000	0.00160	0.00173	0.00186	0.00199	0.00213
72.000	0.00226	0.00239	0.00251	0.00263	0.00274
87.000	0.00286	0.00297	0.00309	0.00320	0.00331
102.000	0.00343	0.00354	0.00366	0.00379	0.00391
117.000	0.00404	0.00417	0.00431	0.00445	0.00459
132.000	0.00473	0.00488	0.00502	0.00517	0.00532
147.000	0.00548	0.00563	0.00578	0.00595	0.00611
162.000	0.00628	0.00644	0.00661	0.00679	0.00697
177.000	0.00715	0.00733	0.00752	0.00770	0.00789
192.000	0.00808	0.00827	0.00845	0.00864	0.00883
207.000	0.00902	0.00920	0.00939	0.00958	0.00976
222.000	0.00995	0.01014	0.01033	0.01053	0.01073
237.000	0.01093	0.01113	0.01133	0.01155	0.01176
252.000	0.01198	0.01219	0.01242	0.01265	0.01289
267.000	0.01313	0.01337	0.01361	0.01386	0.01411
282.000	0.01437	0.01462	0.01488	0.01515	0.01542
297.000	0.01570	0.01597	0.01624	0.01650	0.01675
312.000	0.01700	0.01725	0.01750	0.01774	0.01798
327.000	0.01823	0.01847	0.01870	0.01881	0.01892
342.000	0.01903	0.01915	0.01926	0.01938	0.01950
357.000	0.01962	0.01974	0.01986	0.01999	0.02011
372.000	0.02024	0.02037	0.02050	0.02064	0.02077
387.000	0.02091	0.02104	0.02118	0.02132	0.02147
402.000	0.02161	0.02176	0.02190	0.02205	0.02220
417.000	0.02235	0.02250	0.02266	0.02281	0.02296
432.000	0.02312	0.02327	0.02343	0.02360	0.02377
447.000	0.02394	0.02412	0.02430	0.02449	0.02470
462.000	0.02490	0.02510	0.02531	0.02554	0.02578
477.000	0.02601	0.02625	0.02648	0.02670	0.02691
492.000	0.02713	0.02735	0.02757	0.02781	0.02805
507.000	0.02830	0.02854	0.02879	0.02904	0.02930
522.000	0.02956	0.02982	0.03009	0.03037	0.03065
537.000	0.03093	0.03122	0.03151	0.03183	0.03215
552.000	0.03246	0.03273	0.03301	0.03331	0.03361
567.000	0.03391	0.03421	0.03452	0.03484	0.03516
582.000	0.03548	0.03581	0.03614	0.03648	0.03683
597.000	0.03717	0.03750	0.03779	0.03805	0.03830
612.000	0.03855	0.03880	0.03904	0.03925	0.03945

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
627.000	0.03965	0.03985	0.04007	0.04030	0.04054
642.000	0.04078	0.04102	0.04127	0.04154	0.04181
657.000	0.04206	0.04231	0.04256	0.04280	0.04305
672.000	0.04330	0.04354	0.04379	0.04403	0.04427
687.000	0.04452	0.04476	0.04500	0.04523	0.04545
702.000	0.04568	0.04589	0.04610	0.04630	0.04650
717.000	0.04671	0.04691	0.04713	0.04738	0.04764
732.000	0.04790	0.04816	0.04844	0.04874	0.04906
747.000	0.04937	0.04967	0.04997	0.05028	0.05060
762.000	0.05092	0.05124	0.05156	0.05190	0.05224
777.000	0.05258	0.05292	0.05325	0.05360	0.05396
792.000	0.05432	0.05468	0.05505	0.05544	0.05583
807.000	0.13125	0.34123	0.52446	0.67538	0.80766
822.000	0.93020	1.04369	1.13954	1.21284	1.27455
837.000	1.33171	1.38465	1.43657	1.48945	1.54035
852.000	1.58750	1.63117	1.67362	1.71625	1.75707
867.000	1.79488	1.82990	1.86212	1.89159	1.93751
882.000	1.98248	2.02118	2.05281	2.07724	2.09714
897.000	2.11427	2.12902	2.13794	2.13934	2.13804
912.000	2.13692	2.13595	2.13136	2.12113	2.10982
927.000	2.10008	2.09170	2.07404	2.04140	2.00635
942.000	1.97618	1.95022	1.92118	1.89101	1.87177
957.000	1.85395	1.83744	1.80579	1.74920	1.68586
972.000	1.62720	1.57286	1.51014	1.43141	1.35023
987.000	1.27503	1.20537	1.13797	1.07075	1.00656
1,002.000	0.94711	0.89204	0.84015	0.79060	0.74412
1,017.000	0.70107	0.66118	0.62513	0.59320	0.56422
1,032.000	0.53737	0.51250	0.49035	0.47131	0.45426
1,047.000	0.43847	0.42384	0.41051	0.39853	0.38758
1,062.000	0.37744	0.36805	0.35868	0.34890	0.33940
1,077.000	0.33060	0.32245	0.31445	0.30631	0.29848
1,092.000	0.29122	0.28449	0.27827	0.27250	0.26715
1,107.000	0.26220	0.25762	0.25271	0.24705	0.24137
1,122.000	0.23611	0.23124	0.22584	0.21937	0.21278
1,137.000	0.20668	0.20103	0.19579	0.19094	0.18645
1,152.000	0.18229	0.17843	0.17575	0.17473	0.17439
1,167.000	0.17406	0.17376	0.17349	0.17323	0.17299
1,182.000	0.17277	0.17257	0.17149	0.16902	0.16615
1,197.000	0.16348	0.16101	0.15873	0.15661	0.15465
1,212.000	0.15283	0.15115	0.15003	0.14974	0.14976
1,227.000	0.14977	0.14979	0.14981	0.14982	0.14983
1,242.000	0.14985	0.14986	0.14920	0.14749	0.14547
1,257.000	0.14359	0.14185	0.14046	0.13954	0.13884
1,272.000	0.13819	0.13758	0.13680	0.13571	0.13455

Subsection: Pond Routed Hydrograph (total out)
 Label: Det-B3 (OUT)

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,287.000	0.13348	0.13249	0.13179	0.13151	0.13140
1,302.000	0.13130	0.13120	0.13089	0.13023	0.12948
1,317.000	0.12878	0.12813	0.12776	0.12777	0.12794
1,332.000	0.12809	0.12823	0.12814	0.12769	0.12712
1,347.000	0.12660	0.12611	0.12522	0.12365	0.12191
1,362.000	0.12029	0.11880	0.11741	0.11613	0.11494
1,377.000	0.11384	0.11282	0.11187	0.11100	0.11019
1,392.000	0.10944	0.10874	0.10810	0.10750	0.10695
1,407.000	0.10644	0.10596	0.10552	0.10511	0.10474
1,422.000	0.10439	0.10407	0.10377	0.10349	0.10323
1,437.000	0.10299	0.10277	(N/A)	(N/A)	(N/A)

Subsection: Pond Inflow Summary
Label: Det-B3 (IN)

Scenario: Base

Summary for Hydrograph Addition at 'Det-B3'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	B-3

Node Inflows

Inflow Type	Element	Volume (ft ³)	Time to Peak (min)	Flow (Peak) (ft ³ /s)
Flow (From)	B-3	65,437.500	800.000	2.98000
Flow (In)	Det-B3	65,368.800	801.000	2.98000

Subsection: Diverted Hydrograph
 Label: Outlet-2

Scenario: Base

Peak Discharge	0.75551 ft ³ /s
Time to Peak	990.000 min
Hydrograph Volume	42,944.251 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
0.000	0.21815	0.02400	0.06400	0.08000	0.08000
15.000	0.08000	0.11900	0.18400	0.21000	0.21000
30.000	0.21000	0.22800	0.25800	0.27000	0.27000
45.000	0.27000	0.28799	0.31799	0.32999	0.32999
60.000	0.32999	0.33299	0.33799	0.33999	0.33999
75.000	0.33999	0.33099	0.31599	0.30999	0.30999
90.000	0.30999	0.30699	0.30199	0.29999	0.29999
105.000	0.29999	0.31199	0.33199	0.33999	0.33999
120.000	0.33999	0.35199	0.37199	0.37999	0.37999
135.000	0.37999	0.38299	0.38799	0.38998	0.38998
150.000	0.38998	0.40498	0.42998	0.43630	0.43630
165.000	0.43630	0.43630	0.43630	0.43630	0.43630
180.000	0.43630	0.43630	0.43630	0.43630	0.43630
195.000	0.43630	0.43630	0.43630	0.43630	0.43630
210.000	0.43630	0.43630	0.43630	0.43630	0.43630
225.000	0.43630	0.43630	0.43630	0.43630	0.43630
240.000	0.43630	0.43630	0.43630	0.43630	0.43630
255.000	0.43630	0.43630	0.43630	0.43630	0.43630
270.000	0.43630	0.43630	0.43630	0.43630	0.43630
285.000	0.43630	0.43630	0.43630	0.43630	0.43630
300.000	0.43630	0.43630	0.43630	0.43630	0.43630
315.000	0.43630	0.43630	0.43630	0.43630	0.43630
330.000	0.43630	0.43630	0.43630	0.43630	0.43630
345.000	0.43630	0.43630	0.43630	0.43630	0.43630
360.000	0.43630	0.43630	0.43630	0.43630	0.43630
375.000	0.43630	0.43630	0.43630	0.43630	0.43630
390.000	0.43630	0.43630	0.43630	0.43630	0.43630
405.000	0.43630	0.43630	0.43630	0.43630	0.43630
420.000	0.43630	0.43630	0.43630	0.43630	0.43630
435.000	0.43630	0.43630	0.43630	0.43630	0.43630
450.000	0.43630	0.43630	0.43630	0.43630	0.43630
465.000	0.43630	0.43630	0.43630	0.43630	0.43630
480.000	0.43630	0.43630	0.43630	0.43630	0.43630
495.000	0.43630	0.43630	0.43672	0.43721	0.43769
510.000	0.43818	0.43868	0.43921	0.43975	0.44029
525.000	0.44083	0.44140	0.44201	0.44263	0.44325
540.000	0.44387	0.44453	0.44525	0.44599	0.44674
555.000	0.44748	0.44826	0.44910	0.44996	0.45083
570.000	0.45169	0.45258	0.45352	0.45424	0.45462

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
585.000	0.45501	0.45541	0.45583	0.45626	0.45668
600.000	0.45711	0.45751	0.45788	0.45823	0.45858
615.000	0.45893	0.45925	0.45953	0.45978	0.46004
630.000	0.46030	0.46057	0.46087	0.46118	0.46149
645.000	0.46179	0.46209	0.46234	0.46260	0.46286
660.000	0.46312	0.46338	0.46365	0.46391	0.46417
675.000	0.46443	0.46469	0.46495	0.46521	0.46547
690.000	0.46573	0.46598	0.46622	0.46646	0.46670
705.000	0.46694	0.46717	0.46741	0.46764	0.46787
720.000	0.46807	0.46827	0.46849	0.46873	0.46896
735.000	0.46919	0.46945	0.46973	0.47003	0.47033
750.000	0.47063	0.47094	0.47126	0.47160	0.47193
765.000	0.47226	0.47261	0.47296	0.47327	0.47357
780.000	0.47386	0.47417	0.47450	0.47483	0.47517
795.000	0.47551	0.47586	0.47622	0.47659	0.47697
810.000	0.47734	0.47765	0.47793	0.47819	0.47845
825.000	0.47872	0.47896	0.47918	0.47939	0.47960
840.000	0.47981	0.48002	0.48024	0.48045	0.48067
855.000	0.48089	0.48111	0.48134	0.48156	0.48175
870.000	0.48195	0.48215	0.48235	0.48254	0.48274
885.000	0.48294	0.48313	0.48332	0.48352	0.48371
900.000	0.48390	0.48409	0.48428	0.48447	0.48465
915.000	0.48484	0.48502	0.49374	0.51328	0.53271
930.000	0.55202	0.57048	0.58758	0.60408	0.62049
945.000	0.63680	0.65239	0.66685	0.68080	0.69468
960.000	0.70847	0.72019	0.72850	0.73543	0.74232
975.000	0.74917	0.75396	0.75536	0.75541	0.75546
990.000	0.75551	0.75507	0.75382	0.75225	0.75069
1,005.000	0.74915	0.74736	0.74518	0.74286	0.74054
1,020.000	0.73824	0.73604	0.73400	0.73202	0.73006
1,035.000	0.72811	0.72631	0.72475	0.72330	0.72185
1,050.000	0.72041	0.71900	0.71762	0.71627	0.71492
1,065.000	0.71358	0.71217	0.71066	0.70912	0.70758
1,080.000	0.70605	0.70446	0.70276	0.70103	0.69930
1,095.000	0.69759	0.69587	0.69413	0.69238	0.69065
1,110.000	0.68893	0.68715	0.68526	0.68334	0.68143
1,125.000	0.67953	0.67748	0.67519	0.67280	0.67043
1,140.000	0.66807	0.66571	0.66333	0.66096	0.65860
1,155.000	0.65625	0.65404	0.65204	0.65014	0.64825
1,170.000	0.64636	0.64451	0.64270	0.64091	0.63913
1,185.000	0.63736	0.63546	0.63334	0.63113	0.62895
1,200.000	0.62677	0.62461	0.62246	0.62032	0.61820
1,215.000	0.61608	0.61403	0.61208	0.61018	0.60829
1,230.000	0.60641	0.60454	0.60268	0.60083	0.59899

Subsection: Diverted Hydrograph
 Label: Outlet-2

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,245.000	0.59716	0.59529	0.59335	0.59138	0.58942
1,260.000	0.58748	0.58552	0.58355	0.58158	0.57963
1,275.000	0.57768	0.57574	0.57382	0.57191	0.57000
1,290.000	0.56811	0.56623	0.56436	0.56250	0.56066
1,305.000	0.55882	0.55699	0.55518	0.55337	0.55158
1,320.000	0.54979	0.54802	0.54626	0.54450	0.54276
1,335.000	0.54103	0.53930	0.53759	0.53589	0.53419
1,350.000	0.53251	0.53077	0.52892	0.52703	0.52516
1,365.000	0.52330	0.52143	0.51954	0.51765	0.51577
1,380.000	0.51391	0.51205	0.51021	0.50837	0.50655
1,395.000	0.50474	0.50293	0.50114	0.49936	0.49759
1,410.000	0.49583	0.49408	0.49234	0.49061	0.48889
1,425.000	0.48718	0.48548	0.48511	0.48509	0.48508
1,440.000	0.48506	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Diverted Hydrograph
 Label: Outlet-4

Scenario: Base

Peak Discharge	2.13934 ft ³ /s
Time to Peak	906.000 min
Hydrograph Volume	26,274.542 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
42.000	0.00099	0.00110	0.00122	0.00134	0.00147
57.000	0.00160	0.00173	0.00186	0.00199	0.00213
72.000	0.00226	0.00239	0.00251	0.00263	0.00274
87.000	0.00286	0.00297	0.00309	0.00320	0.00331
102.000	0.00343	0.00354	0.00366	0.00379	0.00391
117.000	0.00404	0.00417	0.00431	0.00445	0.00459
132.000	0.00473	0.00488	0.00502	0.00517	0.00532
147.000	0.00548	0.00563	0.00578	0.00595	0.00611
162.000	0.00628	0.00644	0.00661	0.00679	0.00697
177.000	0.00715	0.00733	0.00752	0.00770	0.00789
192.000	0.00808	0.00827	0.00845	0.00864	0.00883
207.000	0.00902	0.00920	0.00939	0.00958	0.00976
222.000	0.00995	0.01014	0.01033	0.01053	0.01073
237.000	0.01093	0.01113	0.01133	0.01155	0.01176
252.000	0.01198	0.01219	0.01242	0.01265	0.01289
267.000	0.01313	0.01337	0.01361	0.01386	0.01411
282.000	0.01437	0.01462	0.01488	0.01515	0.01542
297.000	0.01570	0.01597	0.01624	0.01650	0.01675
312.000	0.01700	0.01725	0.01750	0.01774	0.01798
327.000	0.01823	0.01847	0.01870	0.01881	0.01892
342.000	0.01903	0.01915	0.01926	0.01938	0.01950
357.000	0.01962	0.01974	0.01986	0.01999	0.02011
372.000	0.02024	0.02037	0.02050	0.02064	0.02077
387.000	0.02091	0.02104	0.02118	0.02132	0.02147
402.000	0.02161	0.02176	0.02190	0.02205	0.02220
417.000	0.02235	0.02250	0.02266	0.02281	0.02296
432.000	0.02312	0.02327	0.02343	0.02360	0.02377
447.000	0.02394	0.02412	0.02430	0.02449	0.02470
462.000	0.02490	0.02510	0.02531	0.02554	0.02578
477.000	0.02601	0.02625	0.02648	0.02670	0.02691
492.000	0.02713	0.02735	0.02757	0.02781	0.02805
507.000	0.02830	0.02854	0.02879	0.02904	0.02930
522.000	0.02956	0.02982	0.03009	0.03037	0.03065
537.000	0.03093	0.03122	0.03151	0.03183	0.03215
552.000	0.03246	0.03273	0.03301	0.03331	0.03361
567.000	0.03391	0.03421	0.03452	0.03484	0.03516
582.000	0.03548	0.03581	0.03614	0.03648	0.03683
597.000	0.03717	0.03750	0.03779	0.03805	0.03830
612.000	0.03855	0.03880	0.03904	0.03925	0.03945

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
627.000	0.03965	0.03985	0.04007	0.04030	0.04054
642.000	0.04078	0.04102	0.04127	0.04154	0.04181
657.000	0.04206	0.04231	0.04256	0.04280	0.04305
672.000	0.04330	0.04354	0.04379	0.04403	0.04427
687.000	0.04452	0.04476	0.04500	0.04523	0.04545
702.000	0.04568	0.04589	0.04610	0.04630	0.04650
717.000	0.04671	0.04691	0.04713	0.04738	0.04764
732.000	0.04790	0.04816	0.04844	0.04874	0.04906
747.000	0.04937	0.04967	0.04997	0.05028	0.05060
762.000	0.05092	0.05124	0.05156	0.05190	0.05224
777.000	0.05258	0.05292	0.05325	0.05360	0.05396
792.000	0.05432	0.05468	0.05505	0.05544	0.05583
807.000	0.13125	0.34123	0.52446	0.67538	0.80766
822.000	0.93020	1.04369	1.13954	1.21284	1.27455
837.000	1.33171	1.38465	1.43657	1.48945	1.54035
852.000	1.58750	1.63117	1.67362	1.71625	1.75707
867.000	1.79488	1.82990	1.86212	1.89159	1.93751
882.000	1.98248	2.02118	2.05281	2.07724	2.09714
897.000	2.11427	2.12902	2.13794	2.13934	2.13804
912.000	2.13692	2.13595	2.13136	2.12113	2.10982
927.000	2.10008	2.09170	2.07404	2.04140	2.00635
942.000	1.97618	1.95022	1.92118	1.89101	1.87177
957.000	1.85395	1.83744	1.80579	1.74920	1.68586
972.000	1.62720	1.57286	1.51014	1.43141	1.35023
987.000	1.27503	1.20537	1.13797	1.07075	1.00656
1,002.000	0.94711	0.89204	0.84015	0.79060	0.74412
1,017.000	0.70107	0.66118	0.62513	0.59320	0.56422
1,032.000	0.53737	0.51250	0.49035	0.47131	0.45426
1,047.000	0.43847	0.42384	0.41051	0.39853	0.38758
1,062.000	0.37744	0.36805	0.35868	0.34890	0.33940
1,077.000	0.33060	0.32245	0.31445	0.30631	0.29848
1,092.000	0.29122	0.28449	0.27827	0.27250	0.26715
1,107.000	0.26220	0.25762	0.25271	0.24705	0.24137
1,122.000	0.23611	0.23124	0.22584	0.21937	0.21278
1,137.000	0.20668	0.20103	0.19579	0.19094	0.18645
1,152.000	0.18229	0.17843	0.17575	0.17473	0.17439
1,167.000	0.17406	0.17376	0.17349	0.17323	0.17299
1,182.000	0.17277	0.17257	0.17149	0.16902	0.16615
1,197.000	0.16348	0.16101	0.15873	0.15661	0.15465
1,212.000	0.15283	0.15115	0.15003	0.14974	0.14976
1,227.000	0.14977	0.14979	0.14981	0.14982	0.14983
1,242.000	0.14985	0.14986	0.14920	0.14749	0.14547
1,257.000	0.14359	0.14185	0.14046	0.13954	0.13884
1,272.000	0.13819	0.13758	0.13680	0.13571	0.13455

Subsection: Diverted Hydrograph
 Label: Outlet-4

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,287.000	0.13348	0.13249	0.13179	0.13151	0.13140
1,302.000	0.13130	0.13120	0.13089	0.13023	0.12948
1,317.000	0.12878	0.12813	0.12776	0.12777	0.12794
1,332.000	0.12809	0.12823	0.12814	0.12769	0.12712
1,347.000	0.12660	0.12611	0.12522	0.12365	0.12191
1,362.000	0.12029	0.11880	0.11741	0.11613	0.11494
1,377.000	0.11384	0.11282	0.11187	0.11100	0.11019
1,392.000	0.10944	0.10874	0.10810	0.10750	0.10695
1,407.000	0.10644	0.10596	0.10552	0.10511	0.10474
1,422.000	0.10439	0.10407	0.10377	0.10349	0.10323
1,437.000	0.10299	0.10277	(N/A)	(N/A)	(N/A)

Subsection: Diverted Hydrograph
 Label: Outlet-5

Scenario: Base

Peak Discharge	4.91930 ft ³ /s
Time to Peak	810.000 min
Hydrograph Volume	96,320.497 ft ³

HYDROGRAPH ORDINATES (ft³/s)

Output Time Increment = 3.000 min

Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
39.000	0.00097	0.00111	0.00124	0.00139	0.00156
54.000	0.00173	0.00190	0.00207	0.00224	0.00241
69.000	0.00258	0.00275	0.00292	0.00308	0.00322
84.000	0.00335	0.00349	0.00362	0.00376	0.00389
99.000	0.00403	0.00416	0.00430	0.00444	0.00460
114.000	0.00477	0.00486	0.00493	0.00500	0.00506
129.000	0.00513	0.00520	0.00527	0.00535	0.00543
144.000	0.00551	0.00560	0.00568	0.00576	0.00585
159.000	0.00593	0.00602	0.00610	0.00619	0.00628
174.000	0.00638	0.00648	0.00658	0.00667	0.00677
189.000	0.00685	0.00692	0.00700	0.00707	0.00715
204.000	0.00722	0.00730	0.00737	0.00745	0.00752
219.000	0.00760	0.00767	0.00775	0.00783	0.00791
234.000	0.00800	0.00808	0.00817	0.00825	0.00833
249.000	0.00841	0.00848	0.00855	0.00863	0.00871
264.000	0.00879	0.00887	0.00895	0.00903	0.00912
279.000	0.00921	0.00930	0.00939	0.00948	0.00957
294.000	0.00966	0.00974	0.00982	0.00989	0.00997
309.000	0.01005	0.01013	0.01021	0.01029	0.01036
324.000	0.01043	0.01051	0.01058	0.01065	0.01073
339.000	0.01080	0.01087	0.01094	0.01102	0.01110
354.000	0.01118	0.01125	0.01133	0.01141	0.01150
369.000	0.01159	0.01167	0.01312	0.02679	0.04020
384.000	0.05336	0.06625	0.07890	0.09165	0.10474
399.000	0.11780	0.13062	0.14318	0.15585	0.16885
414.000	0.48991	0.83870	0.83930	0.83930	0.83930
429.000	0.83930	0.83930	0.83930	0.85727	0.88725
444.000	0.89928	0.89930	0.89930	0.91727	0.94725
459.000	0.95928	0.95930	0.95930	1.01321	1.10315
474.000	1.13924	1.13930	1.13930	1.21118	1.33109
489.000	1.37922	1.37930	1.37930	1.43321	1.52315
504.000	1.55924	1.55930	1.55930	1.59524	1.65520
519.000	1.67926	1.67930	1.67930	1.73321	1.82315
534.000	1.85924	1.85930	1.85930	1.93118	2.05109
549.000	2.09922	2.09930	2.09930	2.17118	2.29109
564.000	2.33922	2.33930	2.33930	2.41118	2.53109
579.000	2.57922	2.57930	2.57930	2.63321	2.72315
594.000	2.75924	2.75930	2.75930	2.59758	2.32777
609.000	2.21949	2.21930	2.21930	2.09352	1.88366

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
624.000	1.79945	1.79930	1.79930	1.90712	2.08699
639.000	2.15918	2.15930	2.15930	2.24915	2.39904
654.000	2.45920	2.45930	2.45930	2.45930	2.45930
669.000	2.45930	2.45930	2.45930	2.44133	2.41135
684.000	2.39932	2.39930	2.39930	2.36336	2.30340
699.000	2.27934	2.27930	2.27930	2.26133	2.23135
714.000	2.21932	2.21930	2.21930	2.41696	2.74673
729.000	2.87907	2.87930	2.87930	3.04102	3.31084
744.000	3.41911	3.41930	3.41930	3.52712	3.70699
759.000	3.77918	3.77930	3.77930	3.85118	3.97109
774.000	4.01922	4.01930	4.01930	4.18102	4.45084
789.000	4.55911	4.55930	4.55930	4.66712	4.84699
804.000	4.91918	4.91930	4.91930	4.66773	4.24802
819.000	4.07959	4.07930	4.07930	3.86367	3.50392
834.000	3.35955	3.35930	3.35930	3.43118	3.55109
849.000	3.59922	3.59930	3.59930	3.65321	3.74315
864.000	3.77924	3.77930	3.77930	3.76133	3.73135
879.000	3.71932	3.71930	3.71930	3.70133	3.67135
894.000	3.65932	3.65930	3.65930	3.62336	3.56340
909.000	3.53934	3.53930	3.53930	3.48539	3.39546
924.000	3.35936	3.35930	3.35930	3.23352	3.02366
939.000	2.93945	2.93930	2.93930	2.84946	2.69956
954.000	2.63940	2.63930	2.63930	2.27992	1.68033
969.000	1.43972	1.43930	1.43930	1.16977	0.72008
984.000	0.53961	0.53930	0.53930	0.48539	0.39546
999.000	0.35936	0.35930	0.35930	0.34133	0.31135
1,014.000	0.29932	0.29930	0.29930	0.31727	0.34725
1,029.000	0.35928	0.35930	0.35930	0.37727	0.40725
1,044.000	0.41928	0.41930	0.41930	0.41930	0.41930
1,059.000	0.41930	0.41930	0.41930	0.40133	0.37135
1,074.000	0.35932	0.35930	0.35930	0.35930	0.35930
1,089.000	0.35930	0.35930	0.35930	0.35930	0.35930
1,104.000	0.35930	0.35930	0.35930	0.34133	0.31135
1,119.000	0.29932	0.29930	0.29930	0.28133	0.25135
1,134.000	0.23932	0.23930	0.23930	0.23930	0.23930
1,149.000	0.23930	0.23930	0.23930	0.25727	0.28725
1,164.000	0.29928	0.29930	0.29930	0.29930	0.29930
1,179.000	0.29930	0.29930	0.29930	0.28133	0.25135
1,194.000	0.23932	0.23930	0.23930	0.23930	0.23930
1,209.000	0.23930	0.23930	0.23930	0.23930	0.23930
1,224.000	0.23930	0.23930	0.23930	0.23930	0.23930
1,239.000	0.23930	0.23930	0.23930	0.22133	0.19135
1,254.000	0.17932	0.17930	0.17930	0.19727	0.22725
1,269.000	0.23928	0.23930	0.23930	0.22133	0.19135

Subsection: Diverted Hydrograph
 Label: Outlet-5

Scenario: Base

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 3.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)	Flow (ft ³ /s)
1,284.000	0.17932	0.17930	0.17930	0.19727	0.22725
1,299.000	0.23928	0.23930	0.23930	0.22133	0.19135
1,314.000	0.17932	0.17930	0.17930	0.19727	0.22725
1,329.000	0.23928	0.23930	0.23930	0.22133	0.19135
1,344.000	0.17932	0.17930	0.17930	0.17930	0.17930
1,359.000	0.17930	0.17930	0.17930	0.17930	0.17930
1,374.000	0.17930	0.17930	0.17930	0.17930	0.17930
1,389.000	0.17930	0.17930	0.17930	0.17930	0.17930
1,404.000	0.17930	0.17930	0.17930	0.17930	0.17930
1,419.000	0.17930	0.17930	0.17930	0.17930	0.17930
1,434.000	0.17930	0.17930	0.17930	(N/A)	(N/A)

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APPENDIX F: INLET AND PIPE CAPACITY CALCULATIONS

Worksheet for 2'x2' Grate Inlet

Project Description	
Solve For	Spread
Input Data	
Discharge	2.17 cfs
Gutter Width	0.00 ft
Gutter Cross Slope	0.030 ft/ft
Road Cross Slope	0.030 ft/ft
Grate Width	2.00 ft
Grate Length	2.0 ft
Local Depression	0.0 in
Local Depression Width	0.0 in
Grate Type	P-50 mm (P-1 -7/8")
Clogging	50.0 %
Results	
Spread	12.2 ft
Depth	4.4 in
Gutter Depression	0.0 in
Total Depression	0.0 in
Open Grate Area	1.8 ft ²
Active Grate Weir Length	4.0 ft

Worksheet for 3.5' Curb

Project Description	
Solve For	Spread
Input Data	
Discharge	1.98 cfs
Gutter Width	0.00 ft
Gutter Cross Slope	0.020 ft/ft
Road Cross Slope	0.020 ft/ft
Curb Opening Length	3.5 ft
Opening Height	0.6 ft
Curb Throat Type	Horizontal
Local Depression	0.0 in
Local Depression Width	0.0 in
Throat Incline Angle	90.00 degrees
Results	
Spread	16.4 ft
Depth	3.9 in
Gutter Depression	0.0 in
Total Depression	0.0 in

Worksheet for 7' Curb

Project Description	
Solve For	Spread
Input Data	
Discharge	2.96 cfs
Gutter Width	0.00 ft
Gutter Cross Slope	0.020 ft/ft
Road Cross Slope	0.020 ft/ft
Curb Opening Length	3.5 ft
Opening Height	0.6 ft
Curb Throat Type	Horizontal
Local Depression	0.0 in
Local Depression Width	0.0 in
Throat Incline Angle	90.00 degrees
Results	
Spread	21.5 ft
Depth	5.2 in
Gutter Depression	0.0 in
Total Depression	0.0 in

Worksheet for 10" Pipe Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.010
Channel Slope	0.005 ft/ft
Normal Depth	10.0 in
Diameter	10.0 in
Results	
Discharge	2.01 cfs
Flow Area	0.5 ft ²
Wetted Perimeter	2.6 ft
Hydraulic Radius	2.5 in
Top Width	0.00 ft
Critical Depth	7.6 in
Percent Full	100.0 %
Critical Slope	0.006 ft/ft
Velocity	3.69 ft/s
Velocity Head	0.21 ft
Specific Energy	1.05 ft
Froude Number	(N/A)
Maximum Discharge	2.17 cfs
Discharge Full	2.01 cfs
Slope Full	0.005 ft/ft
Flow Type	Supercritical
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	27.8 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	10.0 in
Critical Depth	7.6 in
Channel Slope	0.005 ft/ft
Critical Slope	0.006 ft/ft

Worksheet for 12" Pipe Capacity

Project Description	
Friction Method	Manning
	Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.010
Channel Slope	0.005 ft/ft
Normal Depth	12.0 in
Diameter	12.0 in
Results	
Discharge	3.27 cfs
Flow Area	0.8 ft ²
Wetted Perimeter	3.1 ft
Hydraulic Radius	3.0 in
Top Width	0.00 ft
Critical Depth	9.3 in
Percent Full	100.0 %
Critical Slope	0.006 ft/ft
Velocity	4.17 ft/s
Velocity Head	0.27 ft
Specific Energy	1.27 ft
Froude Number	(N/A)
Maximum Discharge	3.52 cfs
Discharge Full	3.27 cfs
Slope Full	0.005 ft/ft
Flow Type	Undefined
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	0.0 %
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	12.0 in
Critical Depth	9.3 in
Channel Slope	0.005 ft/ft
Critical Slope	0.006 ft/ft

Worksheet for 18" Pipe Capacity

Project Description	
Friction Method	Manning
Solve For	Formula Discharge
Input Data	
Roughness Coefficient	0.010
Channel Slope	0.005 ft/ft
Normal Depth	18.0 in
Diameter	18.0 in
Results	
Discharge	9.66 cfs
Flow Area	1.8 ft ²
Wetted Perimeter	4.7 ft
Hydraulic Radius	4.5 in
Top Width	0.00 ft
Critical Depth	14.4 in
Percent Full	100.0 %
Critical Slope	0.005 ft/ft
Velocity	5.46 ft/s
Velocity Head	0.46 ft
Specific Energy	1.96 ft
Froude Number	(N/A)
Maximum Discharge	10.39 cfs
Discharge Full	9.66 cfs
Slope Full	0.005 ft/ft
Flow Type	Undefined
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	0.0 %
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	18.0 in
Critical Depth	14.4 in
Channel Slope	0.005 ft/ft
Critical Slope	0.005 ft/ft

Worksheet for 24" Pipe Capacity

Project Description	
Friction Method	Manning
	Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.010
Channel Slope	0.005 ft/ft
Normal Depth	24.0 in
Diameter	24.0 in
Results	
Discharge	20.79 cfs
Flow Area	3.1 ft ²
Wetted Perimeter	6.3 ft
Hydraulic Radius	6.0 in
Top Width	0.00 ft
Critical Depth	19.6 in
Percent Full	100.0 %
Critical Slope	0.005 ft/ft
Velocity	6.62 ft/s
Velocity Head	0.68 ft
Specific Energy	2.68 ft
Froude Number	(N/A)
Maximum Discharge	22.37 cfs
Discharge Full	20.79 cfs
Slope Full	0.005 ft/ft
Flow Type	Undefined
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	0.0 %
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	24.0 in
Critical Depth	19.6 in
Channel Slope	0.005 ft/ft
Critical Slope	0.005 ft/ft

Worksheet for 42" Pipe Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.010
Channel Slope	0.005 ft/ft
Normal Depth	42.0 in
Diameter	42.0 in
Results	
Discharge	92.48 cfs
Flow Area	9.6 ft ²
Wetted Perimeter	11.0 ft
Hydraulic Radius	10.5 in
Top Width	0.00 ft
Critical Depth	35.7 in
Percent Full	100.0 %
Critical Slope	0.005 ft/ft
Velocity	9.61 ft/s
Velocity Head	1.44 ft
Specific Energy	4.94 ft
Froude Number	(N/A)
Maximum Discharge	99.48 cfs
Discharge Full	92.48 cfs
Slope Full	0.005 ft/ft
Flow Type	Undefined
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	100.0 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	42.0 in
Critical Depth	35.7 in
Channel Slope	0.005 ft/ft
Critical Slope	0.005 ft/ft