Appendix M

Residential Site Preliminary Hydrology Study

PRELIMINARY HYDROLOGY STUDY

Azusa Greens Redevelopment Senior Housing
City of Azusa, County of Los Angeles

Project Address:
919 Sierra Madre Avenue
Azusa, California 91702

Prepared For:

Overton Moore Properties
19700 S. Vermont Avenue, Suite 101
Torrance, CA 90502
Contact: Montana Kanen

Prepared By:

C&V Consulting, Inc.
9830 Irvine Center Drive
Irvine, CA 92618
Contact: Ryan Bittner, P.E.

Prepared: June 2023
Revised: March 2025

Preliminary Hydrology Study
For
Azusa greens Redevelopment Senior Housing

Acknowledgement and Signature Page

This Preliminary Hydrology Study was prepared by C&V Consulting, Inc. under the supervision of Ryan Bittner, P.E.

_____ _____

Ryan Bittner, P.E. 68167 Date
C&V Consulting, Inc.

TABLE OF CONTENTS

APPENDICES

I. Purpose

The purpose of this preliminary hydrology report is to provide quantitative information to verify the design of the storm drain infrastructure and hydrologic mitigation method of the project site. The values and statements within confirm the subject site is designed and planned in accordance with the Los Angeles County Hydrology Manual and the City of Azusa drainage requirements.

II. Site Description

The proposed project site comprises areas of adjusted lots with a total of 21.72 acres. It is located at 919 Sierra Madre Avenue, City of Azusa, County of Los Angeles. (APN:8617-013-001; 8684-013-014; 8684-043-002; 8617-011-001; 8684-013-030; 8617-001-013; 8617-001-005). The site is bounded by Sierra Madre Avenue to the south, a water treatment facility to the north, residential Tract No. 25309 to the east, and residential areas to the west.

According to the federal Emergency Management Agency (FEMA) FIRM rate map number 06037C1420F, effective date September 26, 2008, the site is located within flood Zone X and D, area of minimal flood hazard.

Refer to Appendix A for additional information.

III. Existing Conditions

The site is currently a golf course and appears to have been closed for a long period of time. The perimeter of the site is bounded by chain link fence and some block walls are present along the boundary adjacent to the residential area. Vegetation within the site consists of large trees dividing the different golf holes. The vast majority of the site is covered by grass with limited types of vegetation. A few structures are present onsite with a club house located adjacent to the entrance parking lot.

The existing drainage condition of the site generally flows south-westerly towards Sierra Madre Avenue. An existing inlet is located in Sierra Madre Avenue adjacent to the parking lot near the entrance to intercept a portion of the flows generated onsite. The northerly portion of the site flows southerly along Ave Conejo and golf range, which ultimately routes to downstream inlets located along Sierra Madre Avenue. These inlets connect to a Los Angeles County Flood Control District's 11'-3" x 12'-0" box which runs along the Sierra Madre Avenue that intercepts all the site generated runoff.

A water basin is located directly north of the property and the slope of the basin descends northerly approximately 40 feet in height based on topographic data. An offsite golf range east of the proposed development is vegetated with localized sumps and slopes southerly to Sierra Madre Avenue, which is not included as part of the proposed development.

Refer to the Preliminary Existing Conditions Hydrology Map within Appendix A.

IV. Proposed Conditions

The project proposes the construction of 38 one-story residential buildings and 2 three-story muti-family residential buildings with private garages, private drive aisles, sidewalks, and common landscaped areas. The project site will be accessible with an entrance/ exit along Sierra Madre Avenue. Drive aisles and parking areas will be composed of asphalt concrete pavement. Proposed development imperviousness is assumed to be 86% per Los Angeles County Hydrology Manual recommended value based on development type.

Onsite residential development and the parking lot areas are analyzed as a separate drainage management area as it drains towards Sierra Madre Avenue. The golf course east of the site, which will not be a part of this hydrological analysis, is to remain in-kind to preserve the perviousness of land usage and drainage pattern per existing conditions. The onsite residential development drainage management area is further delineated into 6 subareas per proposed site grading low points with inlets. The inlets collect and direct runoffs from the drainage management area into the proposed interconnected underground infiltration / detention system. A separate infiltration / detention system is proposed for the clubhouse parking area, the outlet confluences with the overflow outlet of the proposed residential development. The proposed systems will also conform with water quality treatment standards.

During the design storm event when the infiltration/ retention system reaches full capacity, excess runoff is routed to the connection to LACFCD public storm drain via a weir system. In cases of a larger storm event beyond the design storm, runoff will pond at the localized sump inlets and the site is graded to overflow towards Sierra Madre Avenue following historical drainage pattern.

Refer to the Preliminary Post-Development Hydrology Map within Appendix A.

A separate Preliminary LID plan is prepared to address the Los Angeles County storm water quality requirements.

V. Methodology

The project site's drainage was analyzed per the Los Angeles County Hydrology Manual. The existing and proposed conditions of the site were analyzed for peak flow rate and time of concentration for the 25- and 100- storm events based on acreage and land cover per LACDPW HydroCalc program.

VI. Design Assumption

1. The LACDPW HydroCalc Calculator Program was used to determine Tc, Peak run-off flow rate, and run-off volume for subarea based on the longest flow path and elevation difference.
2. The Property is located in the "Azusa" rainfall region per Los Angeles County Hydrology Map. A depth of 7.8 inches of rainfall was determined from the 50-year storm 24-hour isohyet map.
3. The site is in the soil classification of "008" per Los Angeles County Hydrology Map.
4. Proposed conditions are assumed to be approximately 86% impervious base on the recommended values for proposed development type per Hydrology Manual.
5. Existing conditions are analyzed conservatively for reference only as allowable Q is provided by Los Angeles County Public Works.
6. Direct connection to Los Angeles County public storm drain is proposed with given allowable Q of 3.6 cfs per acre. Therefore, proposed peak flow mitigation will be governed by the allowable flow.
7. Proposed storm drains will be sized to convey the 100-year storm per urban flood requirement.

VII. Hydrology Analysis

Hydrology Summary

Proposed storm drainage is designed to maintain the two separate drainage areas to confluence prior to the outlet connection to the public storm drain. A summary of the project site proposed conditions peak runoff values for two DMAs of the project site is provided below.

Drainage summary for DMA-A is further delineated into subareas per inlets as it drains toward the interconnected detention system prior to be routed downstream towards the outlet as shown:

Proposed Conditions Drainage Area	Area (ac)	Q_{100} (cfs)
DMA-A-1	1.252	5.88
DMA-A-2	2.964	11.89
DMA-A-3	4.635	17.46
DMA-A-4	1.716	8.06
DMA-A-5	5.747	24.79
DMA-A-6	3.502	15.11
Total (Outlet A)	19.815	83.20

Drainage summary at the parking lot adjacent to the entrance as DMA-B:

Proposed Condition Drainage Area	Area (ac)	Q_{100} (cfs)
DMA-B-7 (Outlet B)	1.908	8.97

Drainage summary of the entire project site:

	Area (ac)	Q_{100} (cfs)
Allowable Q	21.723	78.20
Proposed Conditions Generated Runoff	21.723	92.16
Proposed Mitigated Drainage	21.723	73.94
Percent Difference	-	-5.5%

Refer to Appendix B & C of this report for additional information and LACDPW HydroCalc output data, as well as the existing and post-development conditions hydrology maps.

Detention Sizing/ Routing Analysis

As the proposed conditions of the site generate a higher runoff peak flowrate compared to the allowable flow, detention is required for hydrologic mitigation. An Infiltration/ Retention system is provided for hydrologic mitigation while satisfying the water quality treatment requirement. The infiltration rate will further benefit in reducing peak runoff as the site generated runoff peak flow is detained and peak outflow is controlled with a weir outlet towards the public storm drain system. Refer to summary of detention sizing below:

Proposed Condition Drainage Area	Area (ac)	Water Quality Treatment Volume (cu-ft)	Proposed Detention Volume (cu-ft)
DMA-A	19.815	45,711.6	70977.1
DMA-B	1.908	6,491.0	7,202.5
Total	21.723	52,202.7	78,179.6

Refer to separate prepared LID for additional information on water quality treatment volume.

Refer to Appendix C for additional Detention Routing Analysis.

VIII. Hydraulics Analysis

Pipe Sizing

Onsite storm drain piping will be sized for the 100-year storm event and will be analyzed based on open channel flow. Therefore, WSPG hydraulic pressure analysis is not warranted. Preliminary outflow pipe capacity sizing is provided within Appendix D.

$Q = \frac{k'}{n} d^{8/3} S^{1/2}$ per King's Handbook

k' = 0.463

d = pipe diameter

n=0.013*
S=0.005

Pipe Diameter	Max. Q (cfs)
8"	0.854
12"	2.518
15"	4.566
18"	7.425
24"	15.991
36"	47.146

n=0.013*
S=0.010

Pipe Diameter	Max. Q (cfs)
8"	1.208
12"	3.562
15"	6.457
18"	10.501
24"	22.614
36"	66.675

*A Manning's Roughness Coefficient of 0.013 has been utilized to represent the roughness coefficient of PVC and/or HDPE piping.

Catch Basin Inlet Sizing

Catch Basin inlet will be sized with a capacity based on the 100-year storm event to conform with LACDPW Hydrology urban flood street capacity.

Analysis is to be provided during final engineering per final grading plan.

100-Year Water Surface Elevation (WSE)

The elevations of the 100-year storm event water surface are analyzed at local collection points to determine the proper flood protection of the buildings. Building finished floors are to be set above the 100-year storm event water surface elevation or proper overflow mitigation is provided where storm runoff continues downstream contained within the street capacity to ensure buildings are not susceptible to flooding.

Analysis is to be provided during final engineering per final grading plan.

IX. Conclusion

The results from the hydrologic analysis demonstrate that the overall proposed development condition will generate a higher peak runoff flowrate than the allowable outflow for the project site; therefore, a detention system is proposed to detain the generated runoff and a proposed outlet weir is utilized to control the peak runoff outflow towards the connection to the public LACFCD's storm drain system. The detention system also infiltrates to conform with the water quality treatment requirement. The impervious area will be verified with the final site plan during final engineering to validate the water quality treatment detention volume.

During the design storm event when the infiltration/ retention system reaches full capacity, excess runoff is routed to the connection to LACFCD public storm drain via a weir system. In cases of a larger storm event beyond the design storm, runoff will pond at the localized sump inlets and the site is graded to overflow towards Sierra Madre Avenue following historical drainage pattern.

X. References

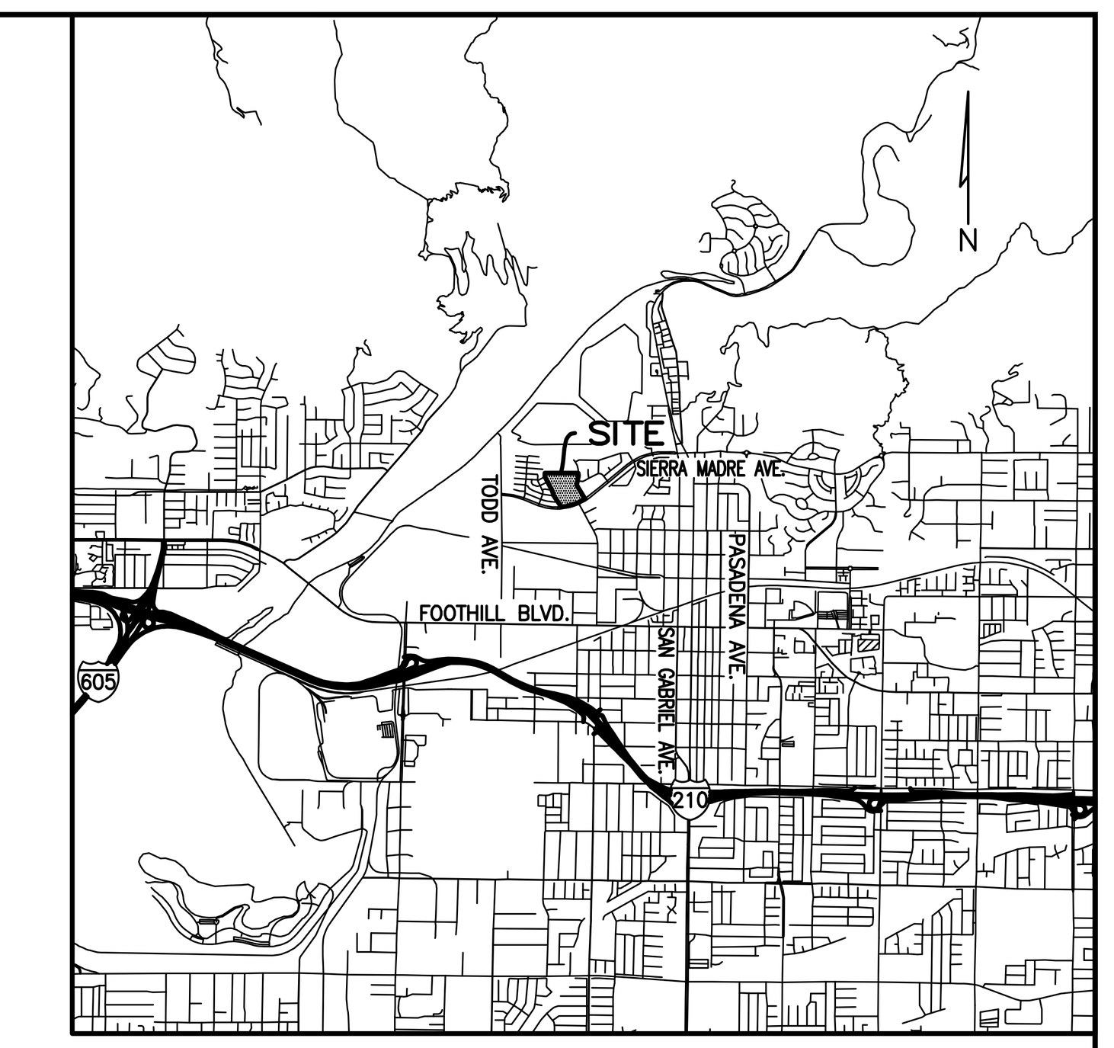
1. Los Angeles County Department of Public Works (LACDPW) Hydrology Manual, January 2006.
2. LACDPW HydroCalc Program was utilized to determine flow rates and time of concentrations.
3. Preliminary Low Impact Development Plan. 919 Sierra Madre Avenue, City of Azusa. Prepared by C&V Consulting, Inc. Dated June 2023.
4. National Flood Hazard Layer FIRMette. Federal Emergency Management Agency. Data refreshed October 2020.
5. KING, HORACE WILLIAMS HANDBOOK OF HYDRAULICS: for the Solution of Hydraulic Problems (Classic Reprint). FORGOTTEN Books, 2015
6. Hydraulic Toolbox 5.0. Federal Highways Administration. Build: 21 Aug 2021

APPENDIX A

Maps and Exhibits

Preliminary Existing Conditions Hydrology Map

PRELIMINARY EXISTING CONDITIONS HYDROLOGY MAP



VICINITY MAP
N.T.S.

DMA	COLOR	LANDUSE	AREA (SF)	AREA (AC)	IMPERVIOUS %
XA		LANDSCAPE	863,154.1	19.815	1%
XB		PARKING	83,104.9	1.908	100%

NOTE: EXISTING CONDITIONS IMPERVIOUS COVERS AND FLOW PATH ARE CONSERVATIVELY ASSUMED FOR HYDROLOGIC ANALYSIS AS REFERENCE ONLY. ALLOWABLE Q ARE GIVEN BY LACFCD FOR DESIGN PROPOSE MITIGATION AS 3.6 CFS PER ACRE.

LEGEND:

- DRAINAGE MANAGEMENT AREA (DMA) BOUNDARY
- SITE BOUNDARY
- EXISTING RIGHT OF WAY
- EXISTING LOT LINE
- EXISTING EASEMENT LINE
- FLOW DIRECTION
- FLOW LINE
- PERVIOUS AREA
- X FL — INITIAL SUBAREA NODE, SPOT ELEVATION
- Q_{100}=X CFS — PEAK RUNOFF IN CUBIC FEET PER SECOND (CFS)
- Tc=X MIN — TIME OF CONCENTRATION IN MINUTES (MIN) PROVIDED FOR 100-YR STORM EVENT

SCALE: 1" = 100'

0 50 100 200

OVERTON MOORE PROPERTIES

C&V CONSULTING, INC.
CIVIL ENGINEERING
LAND PLANNING & SURVEYING
9830 IRVINE CENTER DRIVE
IRVINE, CALIFORNIA 92618
(949) 916-3800
INFO@CVC-INC.NET
WWW.CVC-INC.NET

RYAN J. BITTNER | 68167 R.C.E. NO. | DATE

REGISTERED PROFESSIONAL ENGINEER — RYAN J. BITTNER — No. 68167 — CIVIL — STATE OF CALIFORNIA

PRELIMINARY EXISTING CONDITIONS HYDROLOGY MAP
AZUZA GREENS REDEVELOPMENT
919 SIERRA MADRE AVENUE
CITY OF AZUSA, CA 91702

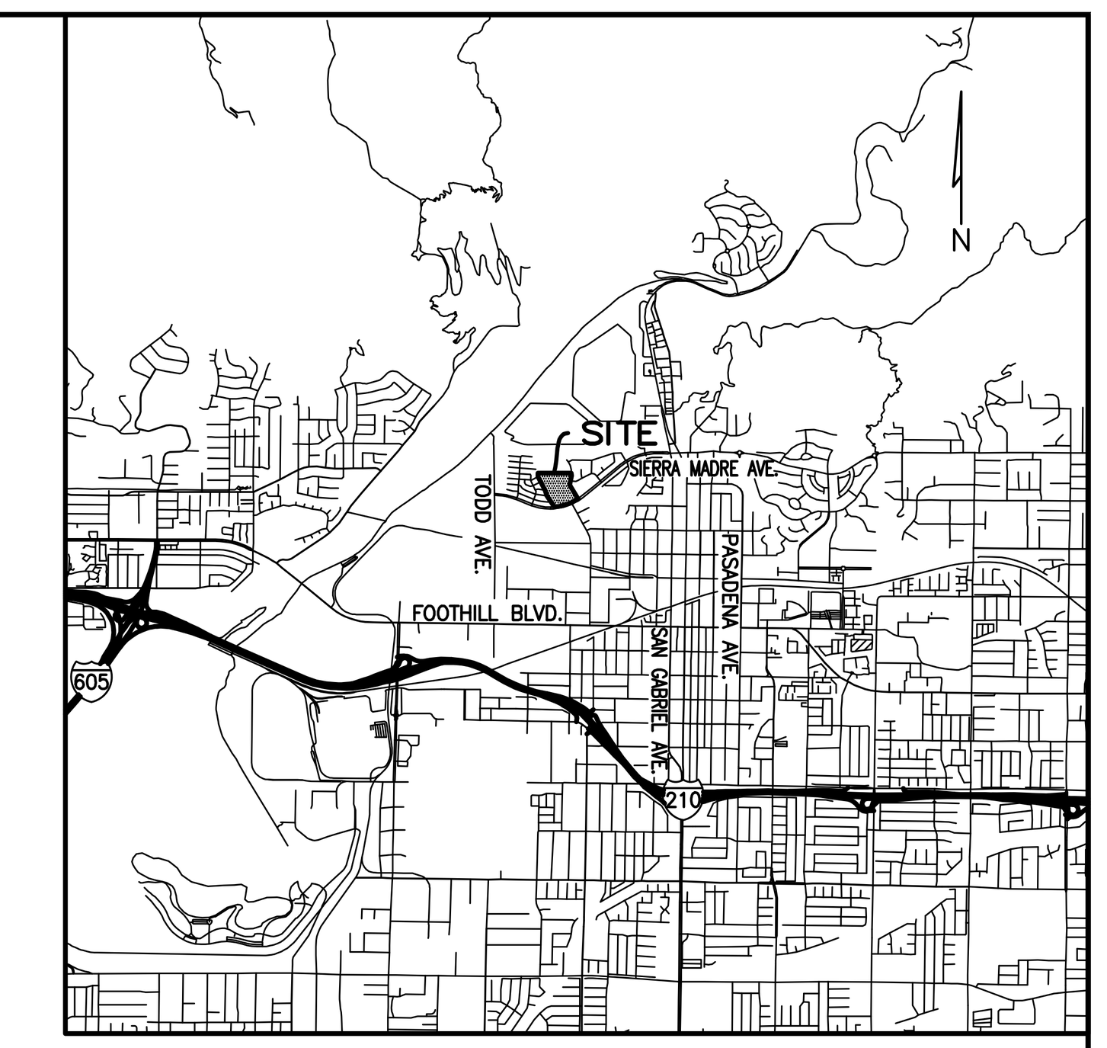
PROJECT REF. NO.

SHEET 1 OF 1
CONTRACT
ACCOUNT
DWG. NO.

PLAN SET: PS01 PROJ: OMPX-001
DATE: 3/17/25

Preliminary Post-Development Hydrology Map

PRELIMINARY POST-DEVELOPMENT HYDROLOGY MAP



VICINITY MAP

N.T.S.

DMA	COLOR	LANDUSE	AREA (SF)	AREA (AC)	IMPERVIOUS %
A-1		RESIDENTIAL	54,536.9	1.252	63%
A-2		RESIDENTIAL	129,117.0	2.964	63%
A-3		RESIDENTIAL	201,889.3	4.635	63%
A-4		RESIDENTIAL	74,733.8	1.716	63%
A-5		RESIDENTIAL	250,335.9	5.747	63%
A-6		RESIDENTIAL	152,542.9	3.502	63%
B-7		PARKING	83,104.9	1.908	100%

NOTE: PROPOSED DEVELOPMENT IMPERVIOUS COVERS ARE DELINEATED PER LANDSCAPE PLAN AS SHOWN WITHIN THIS EXHIBIT.
ALLOWABLE Q GIVEN BY LACFCD AS 3.6 CFS PER ACRE UTILIZED FOR DESIGN MITIGATION.

LEGEND:

- DRAINAGE MANAGEMENT AREA (DMA) BOUNDARY
- SITE BOUNDARY
- EXISTING RIGHT OF WAY
- EXISTING LOT LINE
- EXISTING EASEMENT LINE
- SURFACE FLOW DIRECTION
- PIPE FLOW DIRECTION
- FLOW LINE
- PERVIOUS AREA
- X — INITIAL SUBAREA NODE; X FL — SPOT ELEVATION; Q_{100}=X CFS — PEAK RUNOFF IN CUBIC FEET PER SECOND (CFS); Tc=X MIN — TIME OF CONCENTRATION IN MINUTES (MIN) PROVIDED FOR 100-YR STORM EVENT

SCALE: 1" = 100'

0 50 100 200

OMP
OVERTON MOORE PROPERTIES

C&V CONSULTING, INC.
CIVIL ENGINEERING
LAND PLANNING & SURVEYING
9830 IRVINE CENTER DRIVE
IRVINE, CALIFORNIA 92618
(949) 916-3800
INFO@CVC-INC.NET
WWW.CVC-INC.NET

RYAN J. BITTNER | 68167 R.C.E. NO. | DATE

REGISTERED PROFESSIONAL ENGINEER
RYAN J. BITTNER
No. 68167
CIVIL
STATE OF CALIFORNIA

PRELIMINARY POST-DEVELOPMENT HYDROLOGY MAP
AZUZA GREENS REDEVELOPMENT
919 SIERRA MADRE AVENUE
CITY OF AZUSA, CA 91702

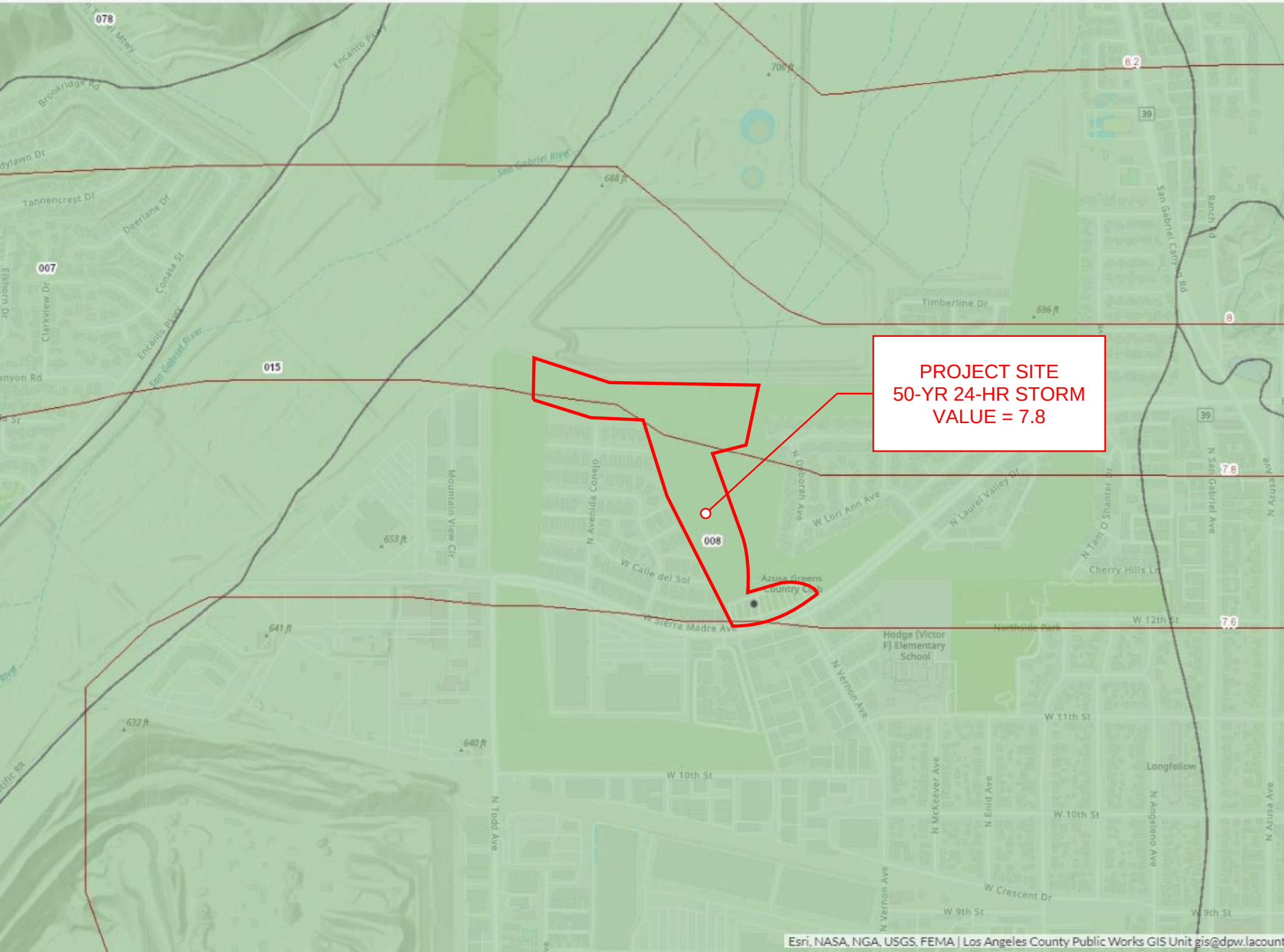
PROJECT REF. NO.

SHEET 1 OF 1
CONTRACT
ACCOUNT
DWG. NO.

PLAN SET: PS01 PROJ: OMPX-001
DATE: 3/17/25

Isohyet Map

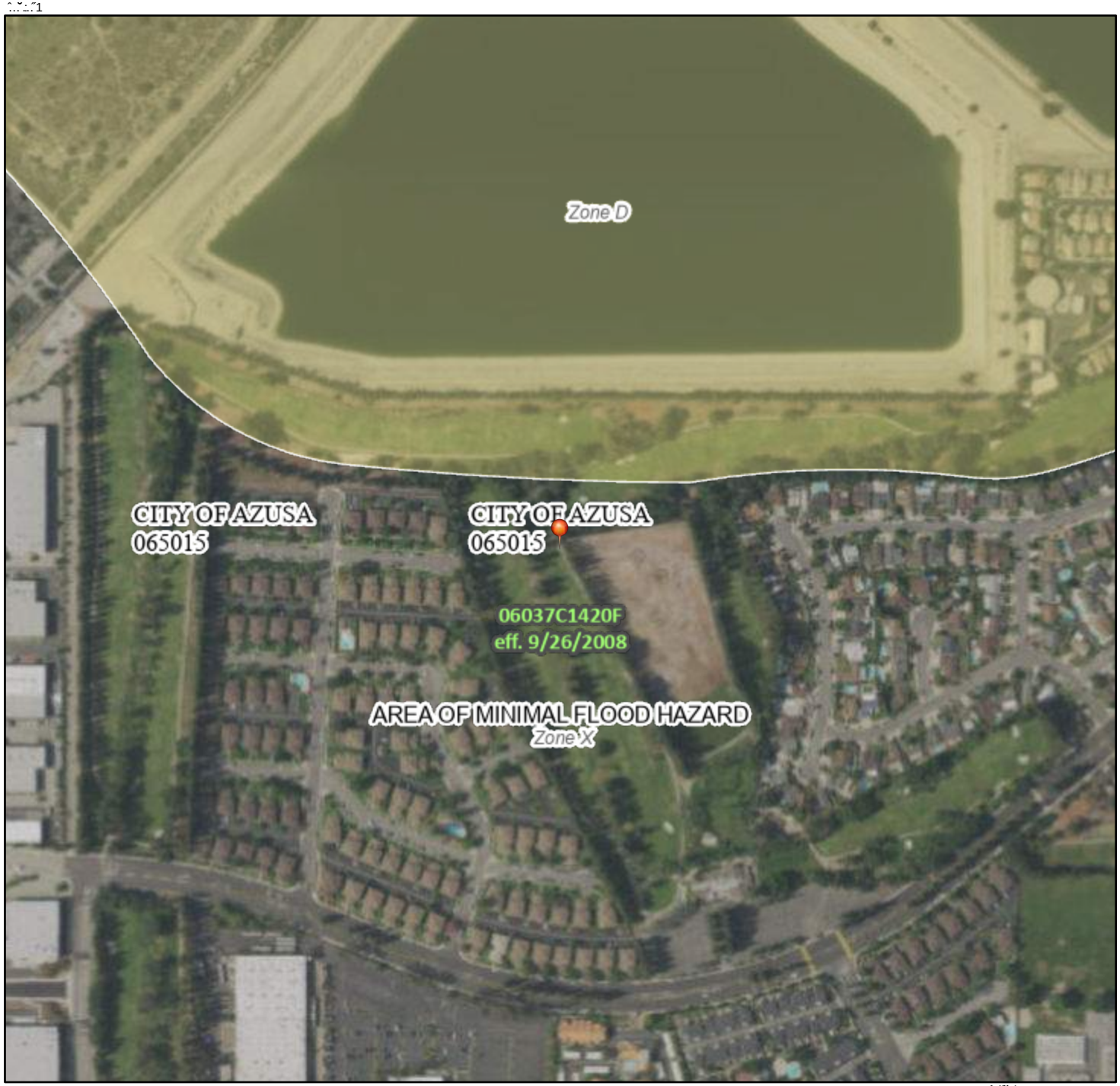
ty Hydrology Map



FEMA Flood Map

1DWLRQDO)ORRG+D]DUG'DWD)6WWH

FEMA



)HHW

%DVHG RQ 1DWLRQDO)ORRG ,QVXUDQFH 3URJUDP 'DWDEDVH

/HJHQG

6(( )/22' ,16(5$1&(5$7(6

L:KHRXW %DVH)ORRG(OHYDWLRQ %)(
=RQH$ 9 $
L:K%)(RUHSWK =RQH$($9 $9($
5HGXFHG)ORRG5LVN

$QQXDO &KDQFH)ORRG+D]DUG $UHDV
R DQQXDO FKDQFHORRGZDWHU
G+D]DUGHVWKDQRQHIRRW RU ZKGUDLQDJH
DUHDV R OHVV WKDQRQHVTXDUHPLOH=RQH;

)XWXUH&RQGLWLRQV $QQXDO
&KDQFH)ORRG+D]DUG =RQH;
$UHDZLWK5HGXFHG)ORRG5LVNGXHWR
/HYHH 6HH1RWHV =RQH;
$UHDZLWK)ORRG5LVNGXHWR/HYHH =RQH'

$UHDRI1RWDEOH)ORRG+D]DUG =RQH;
(IIHFWLYH/LQH
$UHDRI8QGHWHUPLQHG)ORRG+D]DUG =RQH'

&KDQQHO &XOYHUW RU 6WUXFWXUH
/HYHH ORU :DOO

&URVV6HFWLRQ ZLWK$QQXDO &KDQFH
DWHU 6XUIDFH(OHYDWLRQ
&RDVWDO 7UDQVHFW
%DVH)ORRG(OHYDWLRQ/LQH %)(
/LPLW R 6WUXFWXUH
-XULVGLFWLRQ%RXQGDU\
&RDVWDO 7UDQVHFW %DVHOLQH
3URFHVV%DVHOLQH
+LJKZDWHU)ORRGDWXP

L'LWDO DWDEDVH
1R'LWDO DWDEDVH
8QPDSSHG

7KHSLQGLVSODHGRQWKHPDSLV DQDSSUR[LPDWH
SRQW VHOHFWHGEWKHXVHU DQGGRHV QRW UHSUHV
DQDWWRULWDWLYHSURSHUW\ORFDWLRQ

7KLVPSFRROLHVZLWKJVVWDQGDUGIRU WKHXHR
GL.LWDO IORRGPS/LI LW LVQRW YRLGV/GHVFULEHGEHORZ
7KHDMHPSVVKRZQFRROLHVZLWKJVEDHPS
DFFXUDWVWDQGDUG/

7KHIORRGKDUGLQRUPWLQRLVGHULYHGGLUHFWO\IURPWKH
DWWRULWDWLYH)ZEEVHUYLFHVSURYLGHGEJ 7KLVPS
ZVHSRUWHGRQ DW DQGGRHV QRW
UHOHFW FKDQHVRU DPGPQWV VXEVHXHQW WRWKLVGDWHDQG
WLFH 7KH)DQGHHFWLYHLQRUPWLQRPDKQHRU
EHFRVXSUVHGEJQHZGDWDRYHU WLFH

7KLVPSLDHLVYRLGLI WKHIQHRU RUHR WKHIOORZLQJPS
HOHPQWV GR QRW DSSHDU EDHPSLDHU\ IORRGRQHODEHOV
OHHQG VFDOHEDU PSFUHDWLRQGDWH FRRL W\LGHQWLILHUV
)5$QHO QXEHU DQG)5$IIHFWLYHGDWH DSLDHVIRU
XQPSSHGDQGXQRGHUQL}HGDUHDV FDQQRW EHXVHGIRU
UHDOWRU\SUSRVHV

APPENDIX B

HydroCalc Outputs

Existing Conditions – HydroCalc

Peak Flow Hydrologic Analysis

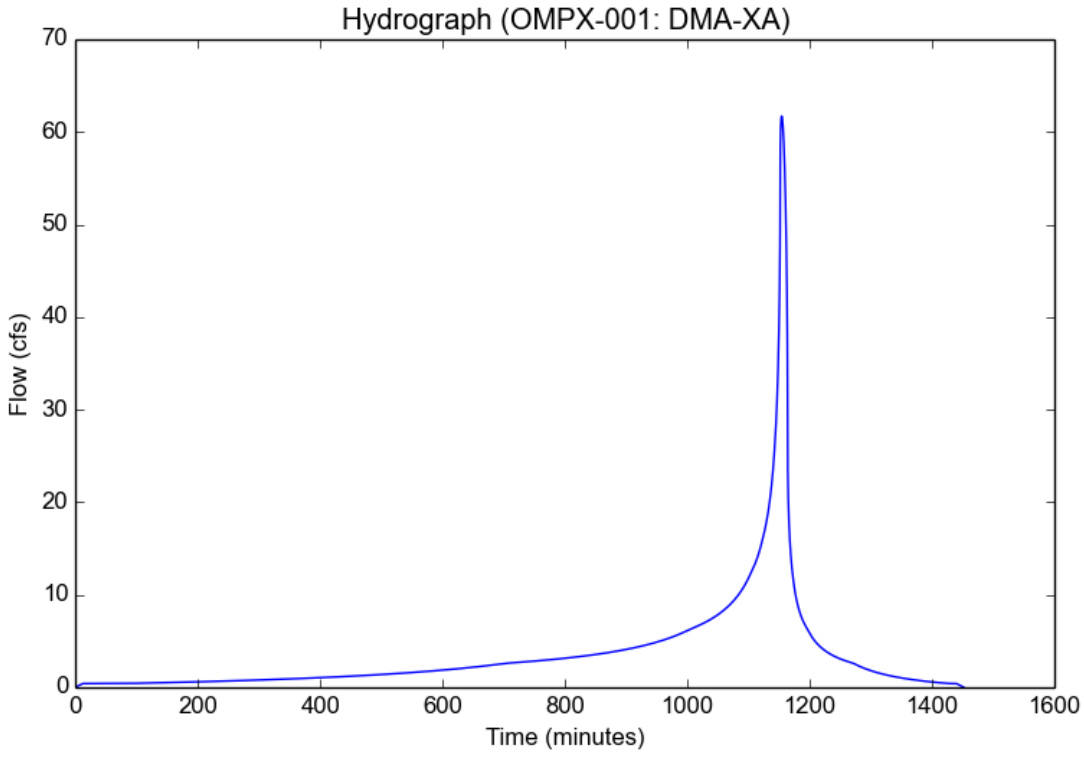
File location: P:/O/OMPX-001/Admin/Reports/Hydrology/Appendix B - Hydrology/HydroCalc/OMPX-001 HydroCalc Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	OMPX-001
Subarea ID	DMA-XA
Area (ac)	19.815
Flow Path Length (ft)	1881.0
Flow Path Slope (vft/hft)	0.0119
50-yr Rainfall Depth (in)	7.8
Percent Impervious	0.01
Soil Type	8
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	8.7516
Peak Intensity (in/hr)	3.4601
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	12.0
Clear Peak Flow Rate (cfs)	61.7061
Burned Peak Flow Rate (cfs)	61.7061
24-Hr Clear Runoff Volume (ac-ft)	7.1736
24-Hr Clear Runoff Volume (cu-ft)	312479.9972



Peak Flow Hydrologic Analysis

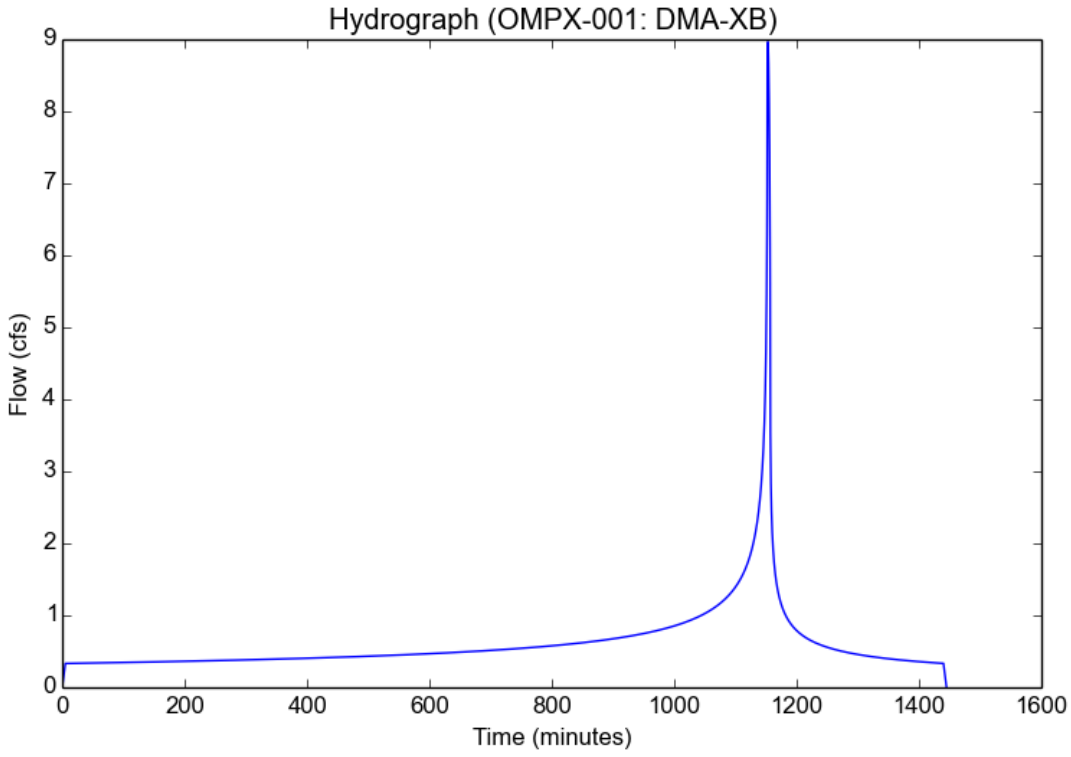
File location: P:/O/OMPX-001/Admin/Reports/Hydrology/Appendix B - Hydrology/HydroCalc/OMPX-001 HydroCalc Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	OMPX-001
Subarea ID	DMA-XB
Area (ac)	1.908
Flow Path Length (ft)	368.0
Flow Path Slope (vft/hft)	0.0158
50-yr Rainfall Depth (in)	7.8
Percent Impervious	1.0
Soil Type	8
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	8.7516
Peak Intensity (in/hr)	5.2214
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	8.9663
Burned Peak Flow Rate (cfs)	8.9663
24-Hr Clear Runoff Volume (ac-ft)	1.242
24-Hr Clear Runoff Volume (cu-ft)	54101.708



Proposed Conditions – HydroCalc

Peak Flow Hydrologic Analysis

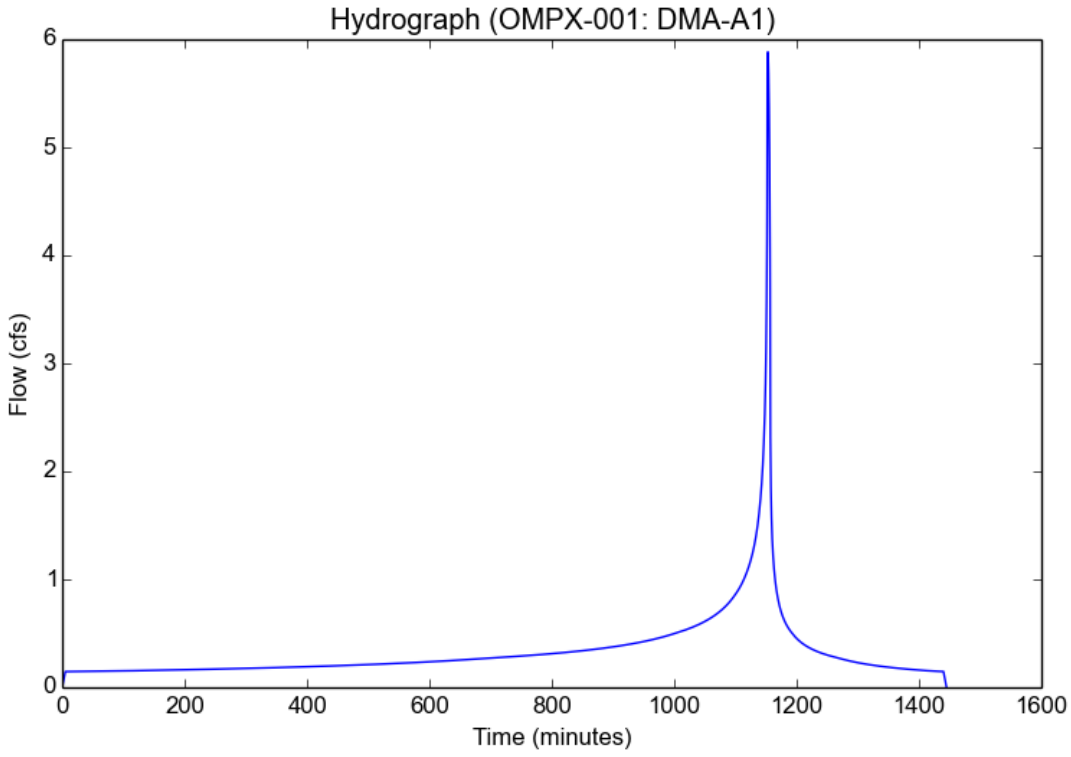
File location: P:/O/OMPX-001/Admin/Reports/Hydrology/Appendix B - Hydrology/HydroCalc/OMPX-001 HydroCalc Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	OMPX-001
Subarea ID	DMA-A1
Area (ac)	1.252
Flow Path Length (ft)	274.0
Flow Path Slope (vft/hft)	0.0102
50-yr Rainfall Depth (in)	7.8
Percent Impervious	0.63
Soil Type	8
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	8.7516
Peak Intensity (in/hr)	5.2214
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	5.8835
Burned Peak Flow Rate (cfs)	5.8835
24-Hr Clear Runoff Volume (ac-ft)	0.6796
24-Hr Clear Runoff Volume (cu-ft)	29603.7079



Peak Flow Hydrologic Analysis

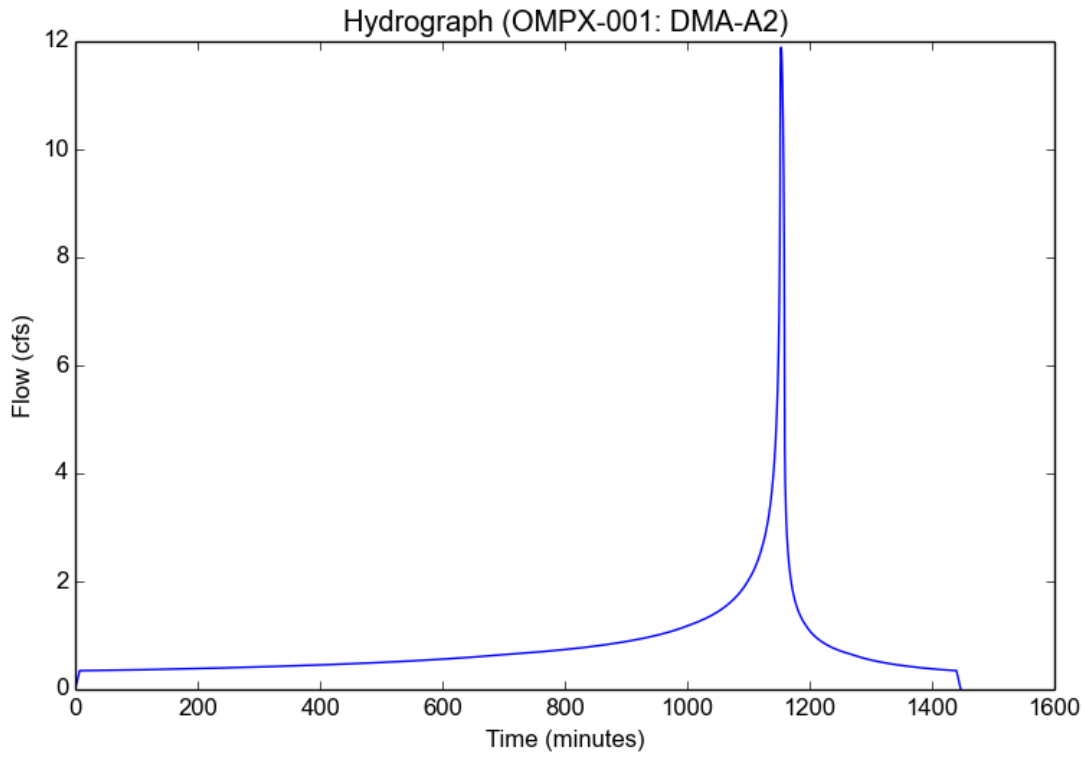
File location: P:/O/OMPX-001/Admin/Reports/Hydrology/Appendix B - Hydrology/HydroCalc/OMPX-001 HydroCalc Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	OMPX-001
Subarea ID	DMA-A2
Area (ac)	2.964
Flow Path Length (ft)	650.0
Flow Path Slope (vft/hft)	0.006
50-yr Rainfall Depth (in)	7.8
Percent Impervious	0.63
Soil Type	8
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	8.7516
Peak Intensity (in/hr)	4.4577
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	11.8914
Burned Peak Flow Rate (cfs)	11.8914
24-Hr Clear Runoff Volume (ac-ft)	1.609
24-Hr Clear Runoff Volume (cu-ft)	70088.2547



Peak Flow Hydrologic Analysis

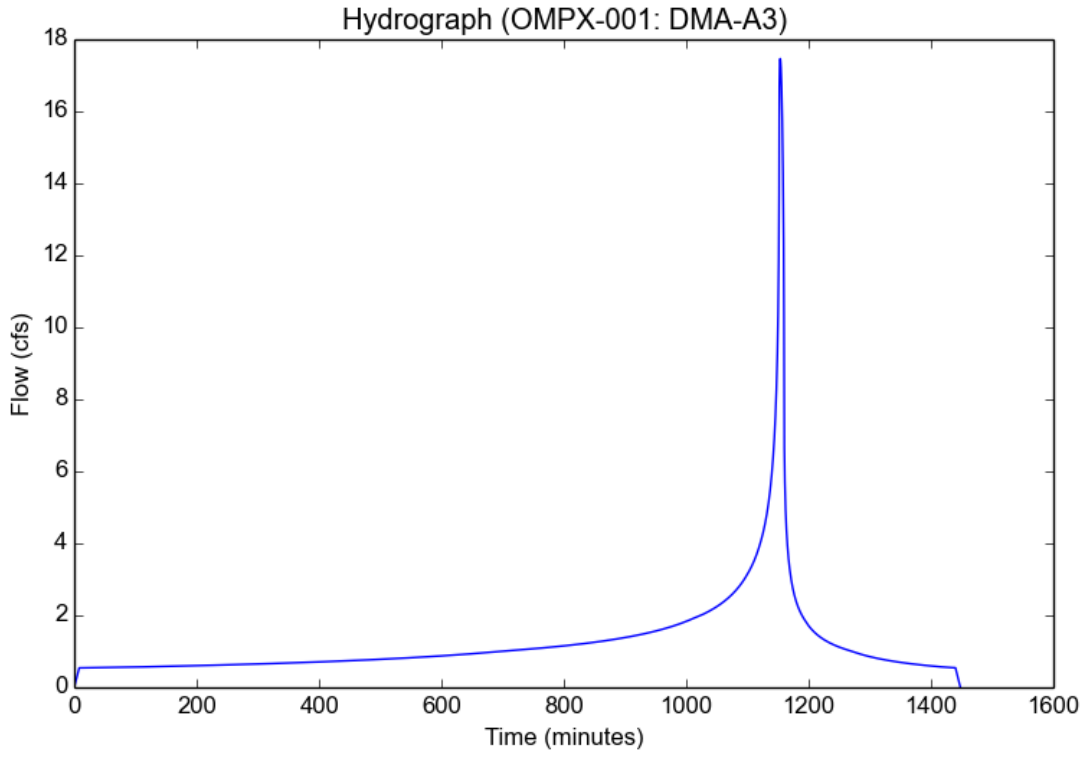
File location: P:/O/OMPX-001/Admin/Reports/Hydrology/Appendix B - Hydrology/HydroCalc/OMPX-001 HydroCalc Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	OMPX-001
Subarea ID	DMA-A3
Area (ac)	4.635
Flow Path Length (ft)	907.0
Flow Path Slope (vft/hft)	0.0073
50-yr Rainfall Depth (in)	7.8
Percent Impervious	0.63
Soil Type	8
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	8.7516
Peak Intensity (in/hr)	4.1865
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	8.0
Clear Peak Flow Rate (cfs)	17.4641
Burned Peak Flow Rate (cfs)	17.4641
24-Hr Clear Runoff Volume (ac-ft)	2.5162
24-Hr Clear Runoff Volume (cu-ft)	109605.5258



Peak Flow Hydrologic Analysis

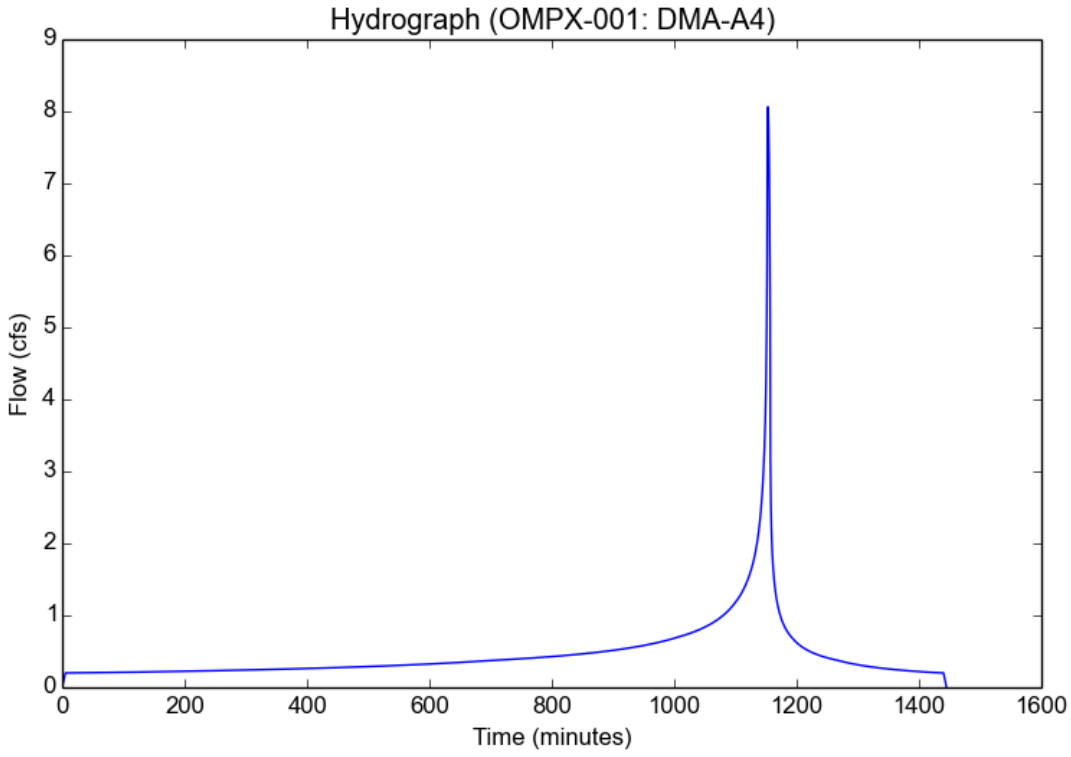
File location: P:/O/OMPX-001/Admin/Reports/Hydrology/Appendix B - Hydrology/HydroCalc/OMPX-001 HydroCalc Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	OMPX-001
Subarea ID	DMA-A4
Area (ac)	1.716
Flow Path Length (ft)	259.0
Flow Path Slope (vft/hft)	0.0181
50-yr Rainfall Depth (in)	7.8
Percent Impervious	0.63
Soil Type	8
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	8.7516
Peak Intensity (in/hr)	5.2214
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	8.064
Burned Peak Flow Rate (cfs)	8.064
24-Hr Clear Runoff Volume (ac-ft)	0.9315
24-Hr Clear Runoff Volume (cu-ft)	40575.0501



Peak Flow Hydrologic Analysis

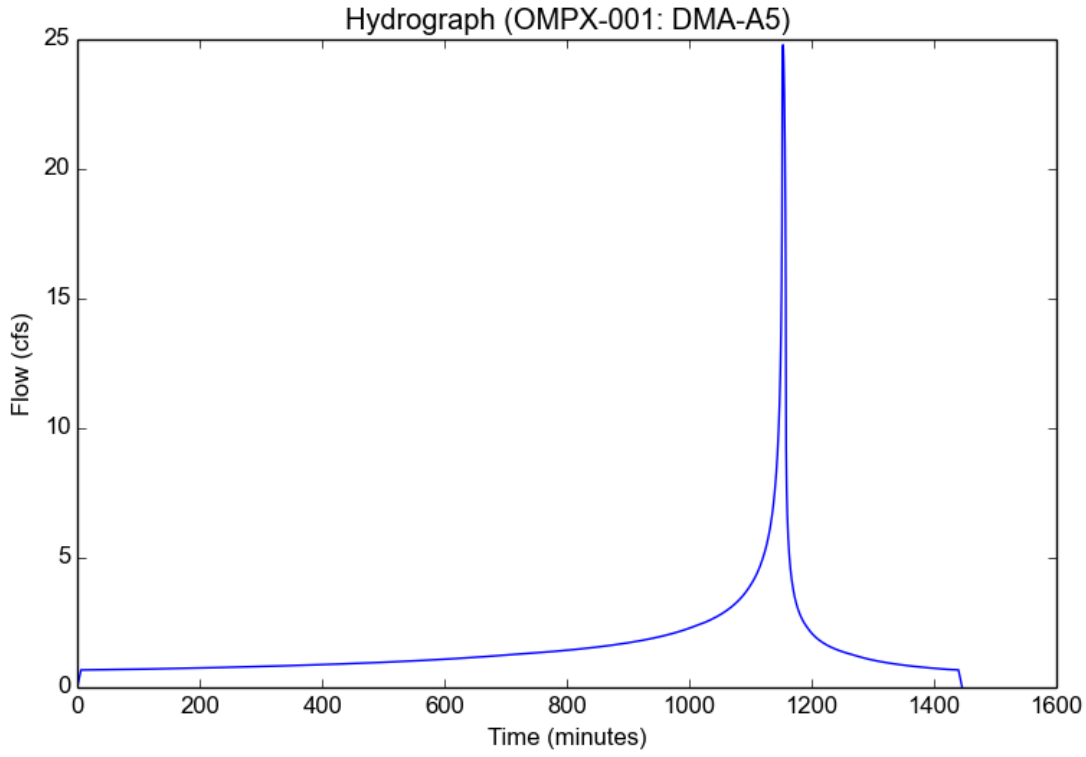
File location: P:/O/OMPX-001/Admin/Reports/Hydrology/Appendix B - Hydrology/HydroCalc/OMPX-001 HydroCalc Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	OMPX-001
Subarea ID	DMA-A5
Area (ac)	5.747
Flow Path Length (ft)	638.0
Flow Path Slope (vft/hft)	0.015
50-yr Rainfall Depth (in)	7.8
Percent Impervious	0.63
Soil Type	8
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	8.7516
Peak Intensity (in/hr)	4.7926
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	24.789
Burned Peak Flow Rate (cfs)	24.789
24-Hr Clear Runoff Volume (ac-ft)	3.1197
24-Hr Clear Runoff Volume (cu-ft)	135892.1242



Peak Flow Hydrologic Analysis

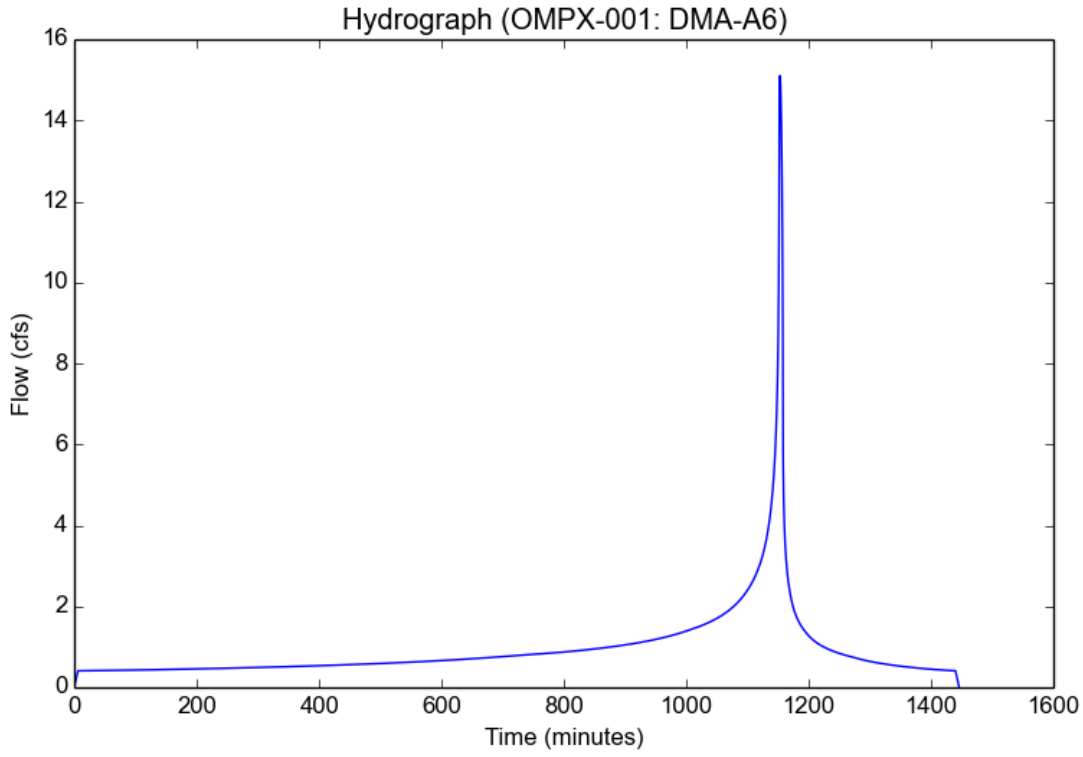
File location: P:/O/OMPX-001/Admin/Reports/Hydrology/Appendix B - Hydrology/HydroCalc/OMPX-001 HydroCalc Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	OMPX-001
Subarea ID	DMA-A6
Area (ac)	3.502
Flow Path Length (ft)	621.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	7.8
Percent Impervious	0.63
Soil Type	8
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	8.7516
Peak Intensity (in/hr)	4.7926
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	15.1055
Burned Peak Flow Rate (cfs)	15.1055
24-Hr Clear Runoff Volume (ac-ft)	1.901
24-Hr Clear Runoff Volume (cu-ft)	82807.4158



Peak Flow Hydrologic Analysis

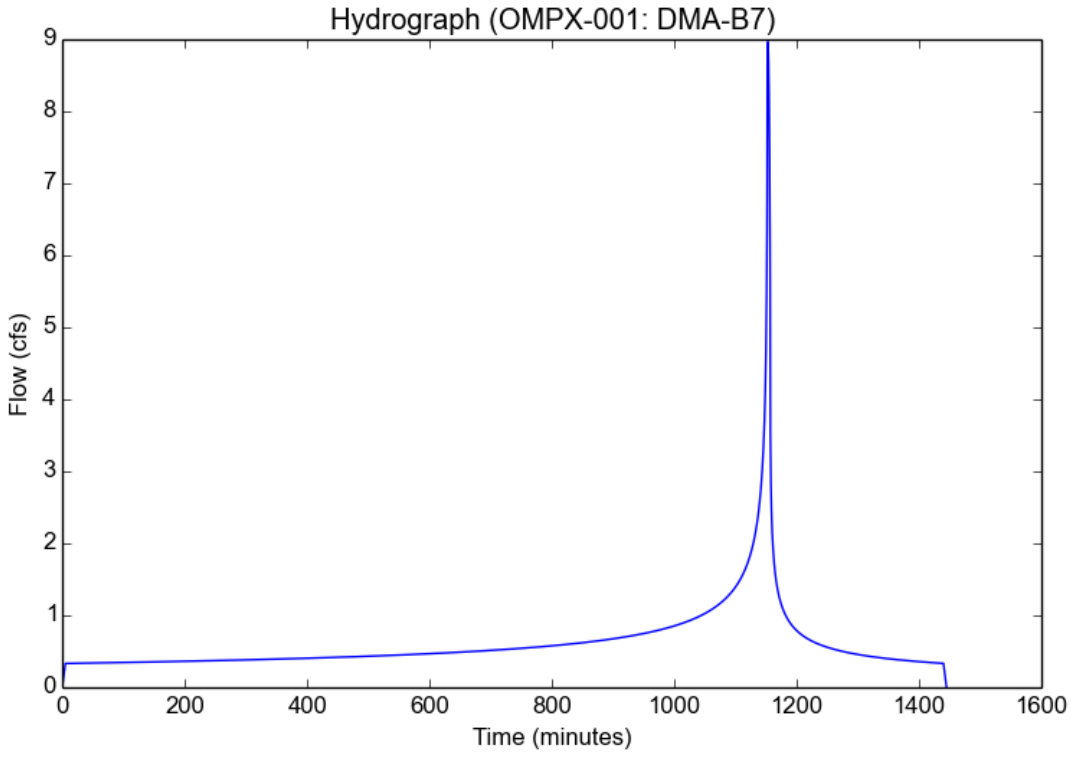
File location: P:/O/OMPX-001/Admin/Reports/Hydrology/Appendix B - Hydrology/HydroCalc/OMPX-001 HydroCalc Report.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	OMPX-001
Subarea ID	DMA-B7
Area (ac)	1.908
Flow Path Length (ft)	460.0
Flow Path Slope (vft/hft)	0.0137
50-yr Rainfall Depth (in)	7.8
Percent Impervious	1.0
Soil Type	8
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	8.7516
Peak Intensity (in/hr)	5.2214
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	8.9663
Burned Peak Flow Rate (cfs)	8.9663
24-Hr Clear Runoff Volume (ac-ft)	1.242
24-Hr Clear Runoff Volume (cu-ft)	54101.708



APPENDIX C

Detention Routing Analysis

Stage-Storage Table

Project: **OMPX-001**
Address: **919 Sierra Madre Avenue, City of Azusa**

ADS StormTech MC-7200 Detention

	# of chamber	# of end cap
ADS chamber/ end cap	260	34

Depth (ft)	Cumulative Volume (cf)	Cumulative Volume (cf)
0	**0**	**0**
1	8174.40	528.02
2	21928.40	1241.00
3	35066.20	1919.64
4	47195.20	2543.88
5	57657.60	3095.36
6	64825.80	3573.74
6.67	69498.00	3919.52

Syste Storage Table Conversion

43560

Depth (ft)	Volume (cf)	Volume (af)
0	0	0
1	8702.42	0.1998
2	23169.40	0.5319
3	36985.84	0.8491
4	49739.08	1.1419
5	60752.96	1.3947
6	68399.54	1.5702
6.67	73417.52	1.6854

Infiltrated Outflow

Design Infiltration rate	Infiltrated Area	Infiltrated Q
2.33 in/hr	18493.4	0.9974

Design Infiltration rate per Geotechnical Report Dated April 26, 2023.
Infitlrated Surface Area per Manufacturer's Specification.

Site Mitigated Outflow

Allowable Q	Mitigated Peak Outflow
78.2	73.94

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	No
Project Name:	OMPX-001 DMA-A
Bed Name	Bed 1
Engineer:	undefined undefined
Project Location:	California
Measurement Type:	Imperial
Required Storage Volume:	500 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(20 ft. x 20 ft.)

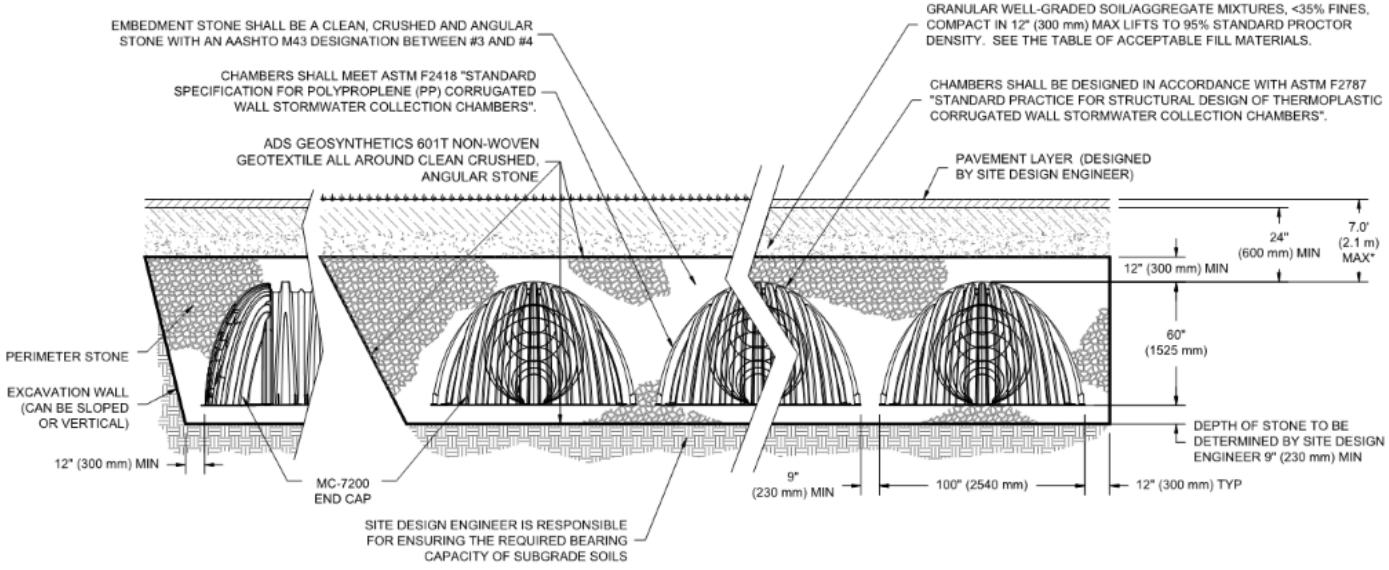
Results

System Volume and Bed Size

Installed Storage Volume:	32617.90 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	108
Number Of End Caps Required:	18
Chamber Rows:	9
Maximum Length:	92.78 ft.
Maximum Width:	83.00 ft.
Approx. Bed Size Required:	7700.88 square ft.

System Components

Amount Of Stone Required:	1196 cubic yards
Volume Of Excavation (Not Including Fill):	1926 cubic yards
Total Non-woven Geotextile Required:	2370 square yards
Woven Geotextile Required (excluding Isolator Row):	234 square yards
Woven Geotextile Required (Isolator Row):	198 square yards
Total Woven Geotextile Required:	431 square yards
Impervious Liner Required:	0 square yards



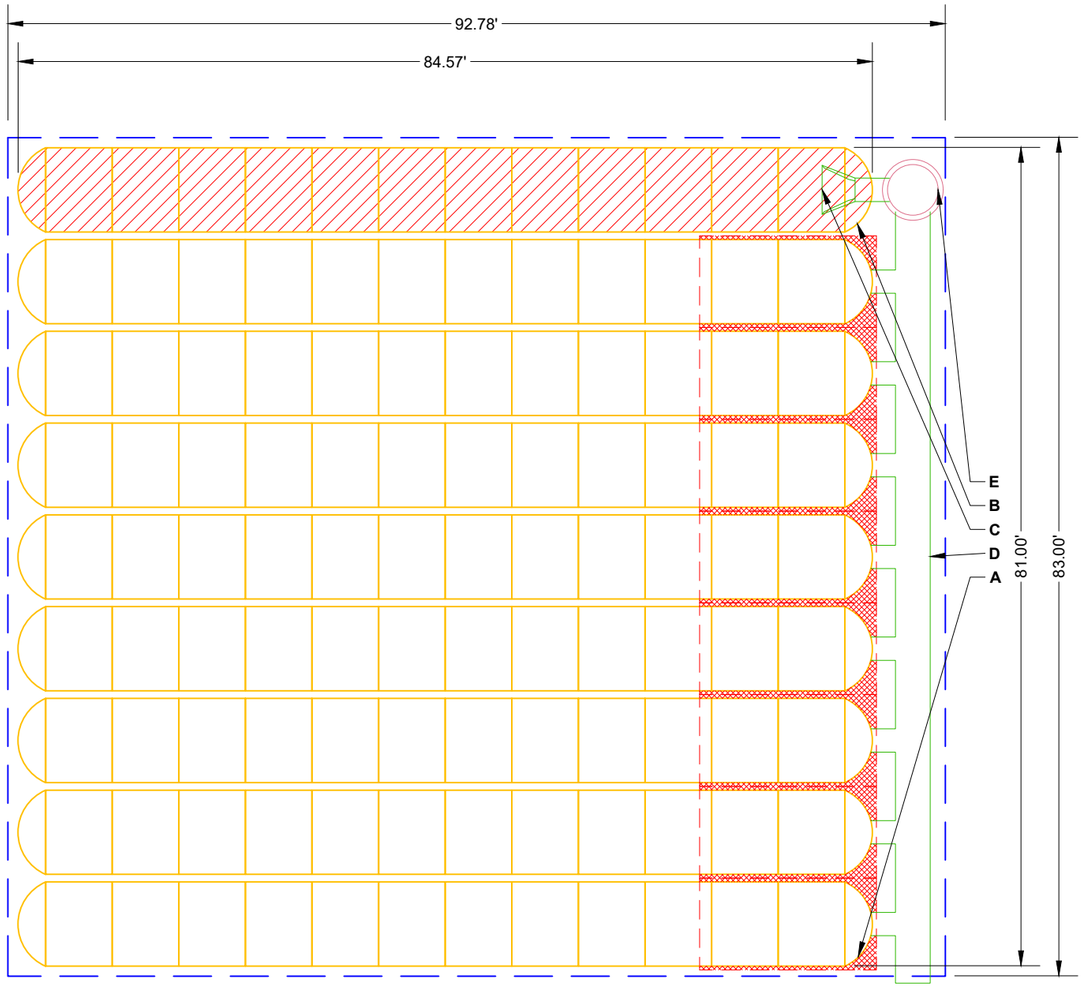
*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).

PROPOSED LAYOUT: BED 1	
108	STORMTECH MC-7200 CHAMBERS
18	STORMTECH MC-7200 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
40	STONE VOID
257	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (BASE STONE INCLUDED)
7701	SYSTEM AREA (SF)
351.6	SYSTEM PERIMETER (ft)

CONCEPTUAL ELEVATIONS	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	12.75
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	8.25
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	7.75
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	7.75
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	7.75
TOP OF STONE:	6.75
TOP OF MC-7200 CHAMBER:	5.75
36" x 24" TOP MANIFOLD INVERT (24" PIPE):	2.67
36" x 24" TOP MANIFOLD INVERT (36" PIPE):	1.68
24" ISOLATOR ROW PLUS INVERT:	0.94
BOTTOM OF MC-7200 CHAMBER:	0.75
BOTTOM OF STONE:	0.00

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" TOP PARTIAL CUT END CAP, PART#: MC7200IEPP24T / TYP OF ALL 24" TOP CONNECTIONS	29.13"	
PREFABRICATED END CAP	B	24" BOTTOM PARTIAL CUT END CAP, PART#: MC7200IEPP24B / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.26"	
FLAMP	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP		
MANIFOLD	D	36" x 24" ADS N-12 (36" PIPE) 36" x 24" ADS N-12 (24" PIPE)	11.13" 23.05"	
CONCRETE STRUCTURE	E	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		76.0 CFS IN



ISOLATOR ROW PLUS
(SEE DETAIL)

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

BED LIMITS

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- **NOT FOR CONSTRUCTION**: THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

OMPX-001
AZUSA, CA, USA
DATE: 03/17/2025 | DRAWN: UU | CHECKED: N/A | PROJECT #:

DESCRIPTION	CHK	DRW	DATE

StormTech®
Chamber System
1-800-821-6710 | WWW.STORMTECH.COM

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

0 15 30

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	No
Project Name:	OMPX-001 DMA-A
Bed Name	Bed 2
Engineer:	undefined undefined
Project Location:	California
Measurement Type:	Imperial
Required Storage Volume:	500 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(20 ft. x 20 ft.)

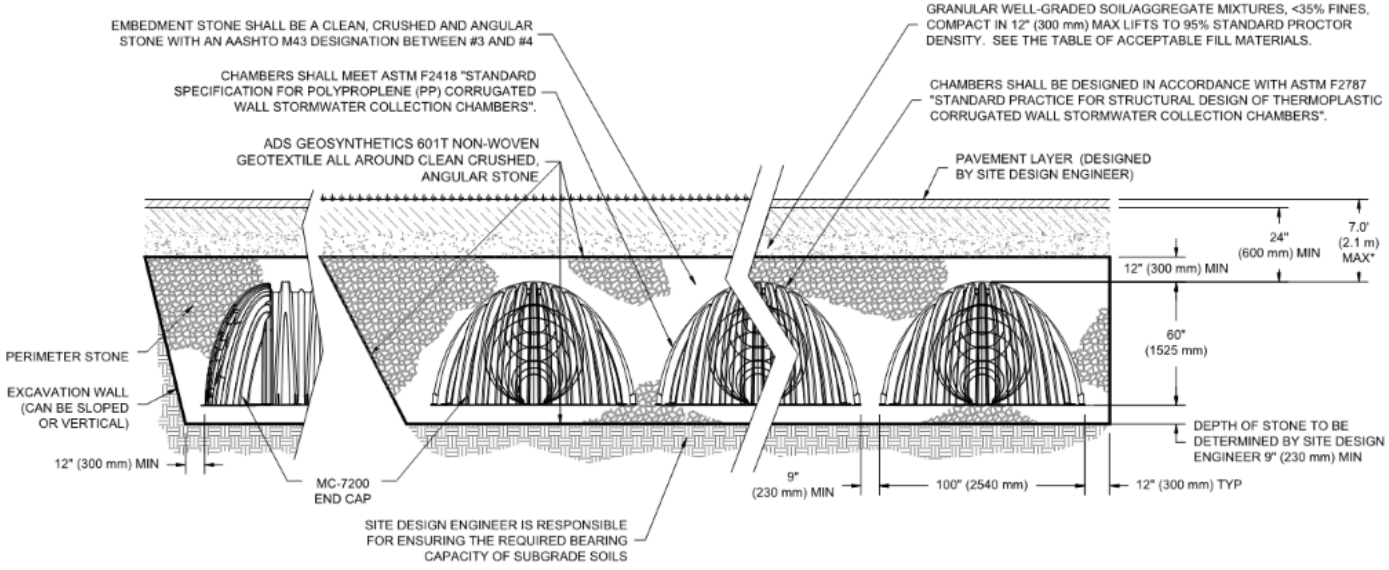
Results

System Volume and Bed Size

Installed Storage Volume:	12674.51 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	40
Number Of End Caps Required:	6
Chamber Rows:	3
Maximum Length:	120.81 ft.
Maximum Width:	28.50 ft.
Approx. Bed Size Required:	3077.96 square ft.

System Components

Amount Of Stone Required:	501 cubic yards
Volume Of Excavation (Not Including Fill):	770 cubic yards
Total Non-woven Geotextile Required:	1090 square yards
Woven Geotextile Required (excluding Isolator Row):	88 square yards
Woven Geotextile Required (Isolator Row):	244 square yards
Total Woven Geotextile Required:	331 square yards
Impervious Liner Required:	0 square yards

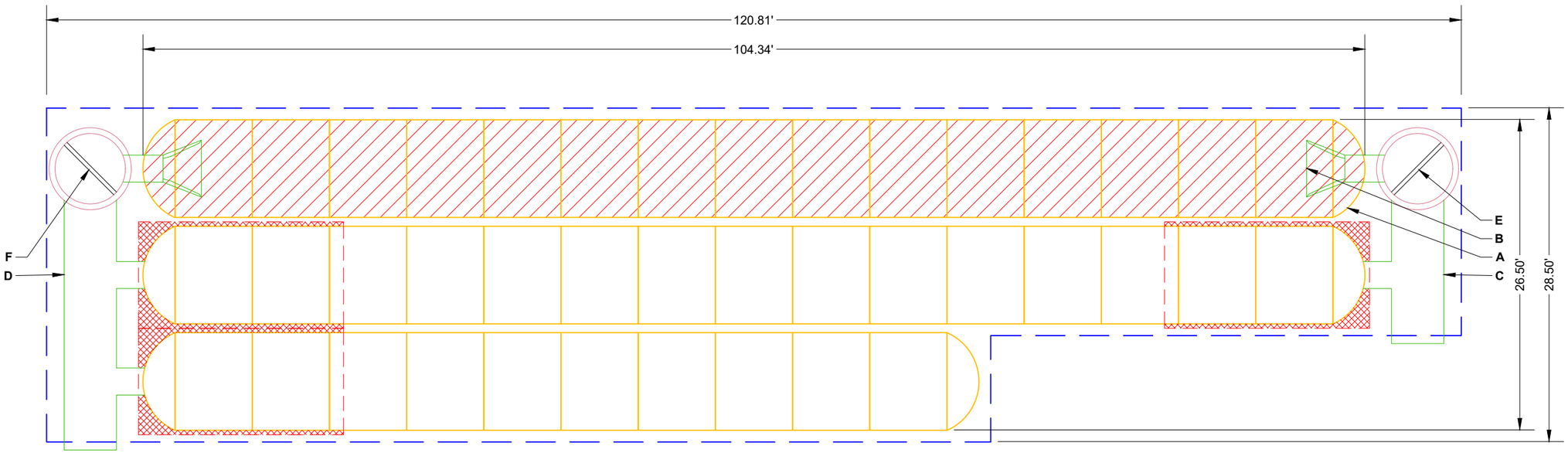


*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).

PROPOSED LAYOUT: BED 2		CONCEPTUAL ELEVATIONS	
40	STORMTECH MC-7200 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	12.75
6	STORMTECH MC-7200 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	8.25
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	7.75
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	7.75
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	7.75
103	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	6.75
		TOP OF MC-7200 CHAMBER:	5.75
		48" x 24" BOTTOM MANIFOLD INVERT (24" PIPE):	0.94
3078	SYSTEM AREA (SF)	48" x 24" BOTTOM MANIFOLD INVERT (24" PIPE):	0.94
298.6	SYSTEM PERIMETER (ft)	24" ISOLATOR ROW PLUS INVERT:	0.94
		24" ISOLATOR ROW PLUS INVERT:	0.94
		BOTTOM OF MC-7200 CHAMBER:	0.75
		BOTTOM OF STONE:	0.00
		48" x 24" BOTTOM MANIFOLD INVERT (48" PIPE):	-1.02
		48" x 24" BOTTOM MANIFOLD INVERT (48" PIPE):	-1.02

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM PARTIAL CUT END CAP, PART#: MC7200IEPP24B / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.26"	
FLAMP	B	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP (TYP 2 PLACES)		
MANIFOLD	C	48" x 24" ADS N-12 (48" PIPE) 48" x 24" ADS N-12 (24" PIPE)	-21.26" 2.26"	
MANIFOLD	D	48" x 24" ADS N-12 (48" PIPE) 48" x 24" ADS N-12 (24" PIPE)	-21.26" 2.26"	
CONCRETE STRUCTURE W/WEIR	E	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		9.5 CFS IN
CONCRETE STRUCTURE W/WEIR	F	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		19.0 CFS IN



ISOLATOR ROW PLUS
(SEE DETAIL)

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

BED LIMITS

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- **NOT FOR CONSTRUCTION**: THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

OMPX-001 DMA-A
AZUSA, CA, USA

DATE: 03/17/2025 | DRAWN: UU | CHECKED: N/A

PROJECT #:

DATE	DRW	CHK	DESCRIPTION

StormTech®
Chamber System
1-800-821-6710 | WWW.STORMTECH.COM

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

0 10 20

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	No
Project Name:	OMPX-001 DMA-A
Bed Name	Bed 3
Engineer:	undefined undefined
Project Location:	California
Measurement Type:	Imperial
Required Storage Volume:	500 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(20 ft. x 20 ft.)

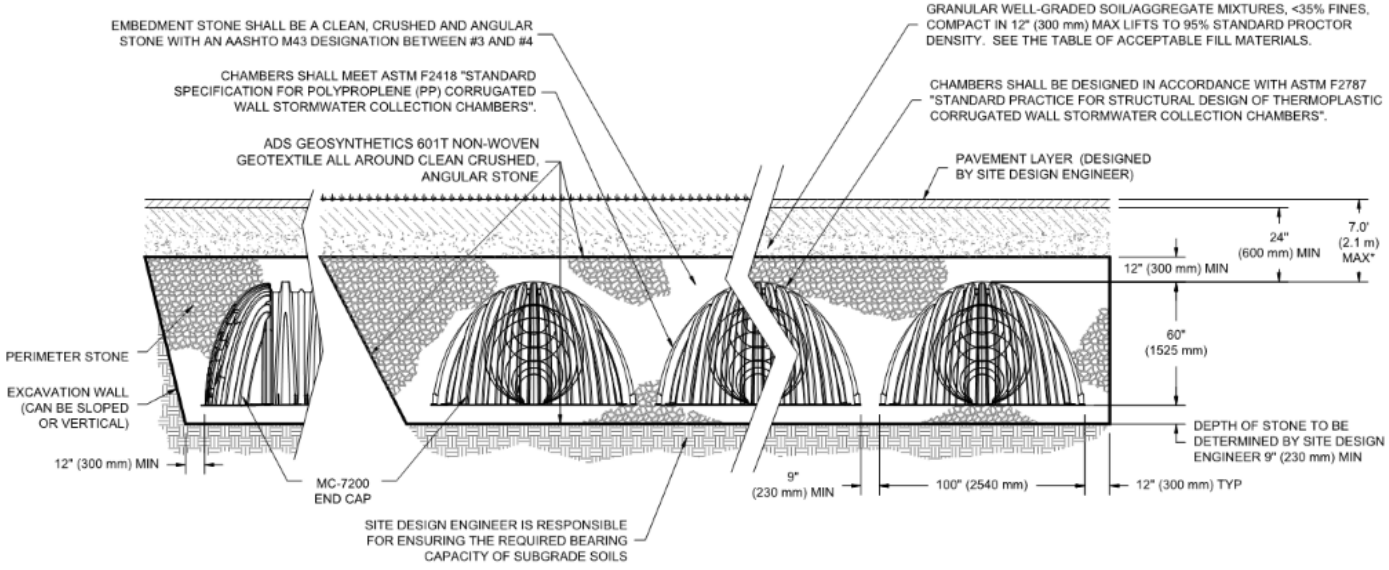
Results

System Volume and Bed Size

Installed Storage Volume:	25684.69 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	88
Number Of End Caps Required:	8
Chamber Rows:	4
Maximum Length:	159.72 ft.
Maximum Width:	37.58 ft.
Approx. Bed Size Required:	6002.68 square ft.

System Components

Amount Of Stone Required:	916 cubic yards
Volume Of Excavation (Not Including Fill):	1501 cubic yards
Total Non-woven Geotextile Required:	1956 square yards
Woven Geotextile Required (excluding Isolator Row):	88 square yards
Woven Geotextile Required (Isolator Row):	352 square yards
Total Woven Geotextile Required:	439 square yards
Impervious Liner Required:	0 square yards

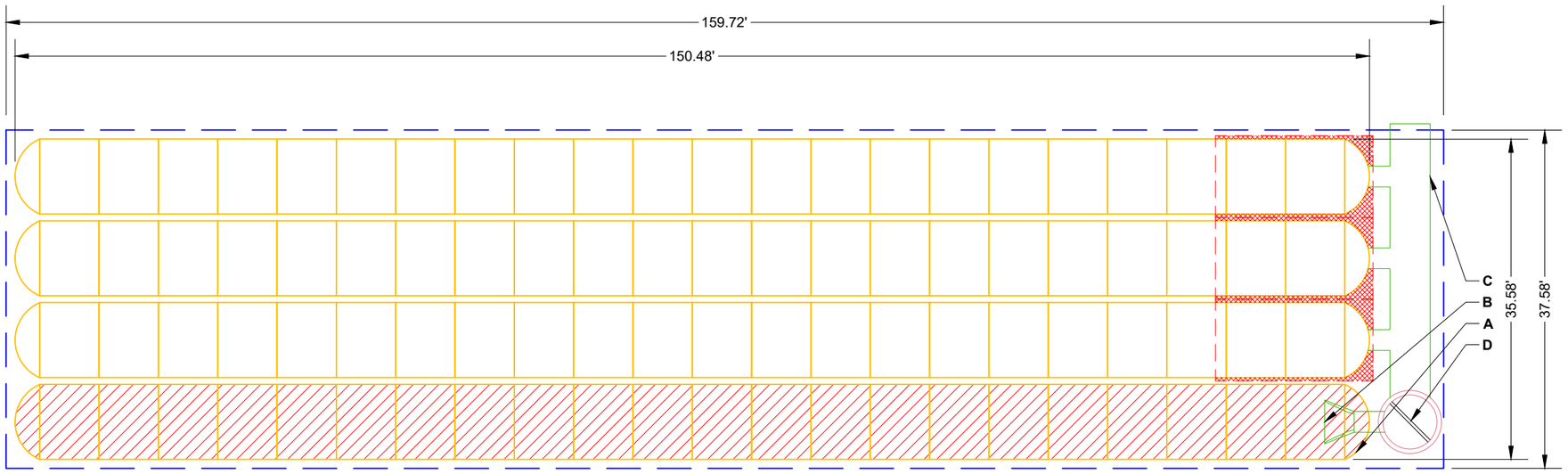


*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).

PROPOSED LAYOUT: BED 3		CONCEPTUAL ELEVATIONS	
88	STORMTECH MC-7200 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	12.75
8	STORMTECH MC-7200 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	8.25
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	7.75
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	7.75
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	7.75
200	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	6.75
		TOP OF MC-7200 CHAMBER:	5.75
		48" x 24" BOTTOM MANIFOLD INVERT (24" PIPE):	0.94
6003	SYSTEM AREA (SF)	24" ISOLATOR ROW PLUS INVERT:	0.94
394.6	SYSTEM PERIMETER (ft)	BOTTOM OF MC-7200 CHAMBER:	0.75
		BOTTOM OF STONE:	0.00
		48" x 24" BOTTOM MANIFOLD INVERT (48" PIPE):	-1.02

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM PARTIAL CUT END CAP, PART#: MC7200IEPP24B / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.26"	
FLAMP	B	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP		
MANIFOLD	C	48" x 24" ADS N-12 (48" PIPE) 48" x 24" ADS N-12 (24" PIPE)	-21.26" 2.26"	
CONCRETE STRUCTURE W/WEIR	D	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		28.5 CFS IN



ISOLATOR ROW PLUS
(SEE DETAIL)

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

BED LIMITS

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- **NOT FOR CONSTRUCTION**: THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

OMPX-001 DMA-A
AZUSA, CA, USA

DATE: 03/17/2025 | DRAWN: UU | CHECKED: N/A
PROJECT #:

DATE	DRW	CHK	DESCRIPTION

StormTech®
Chamber System

1-800-821-6710 | WWW.STORMTECH.COM

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

ADS

0 15 30

SHEET
2 OF 5

User Inputs

Chamber Model:	MC-7200
Outlet Control Structure:	No
Project Name:	OMPX-001 DMA-B
Engineer:	Ka Hei Lam
Project Location:	California
Measurement Type:	Imperial
Required Storage Volume:	500 cubic ft.
Stone Porosity:	40%
Stone Foundation Depth:	9 in.
Stone Above Chambers:	12 in.
Average Cover Over Chambers:	24 in.
Design Constraint Dimensions:	(20 ft. x 20 ft.)

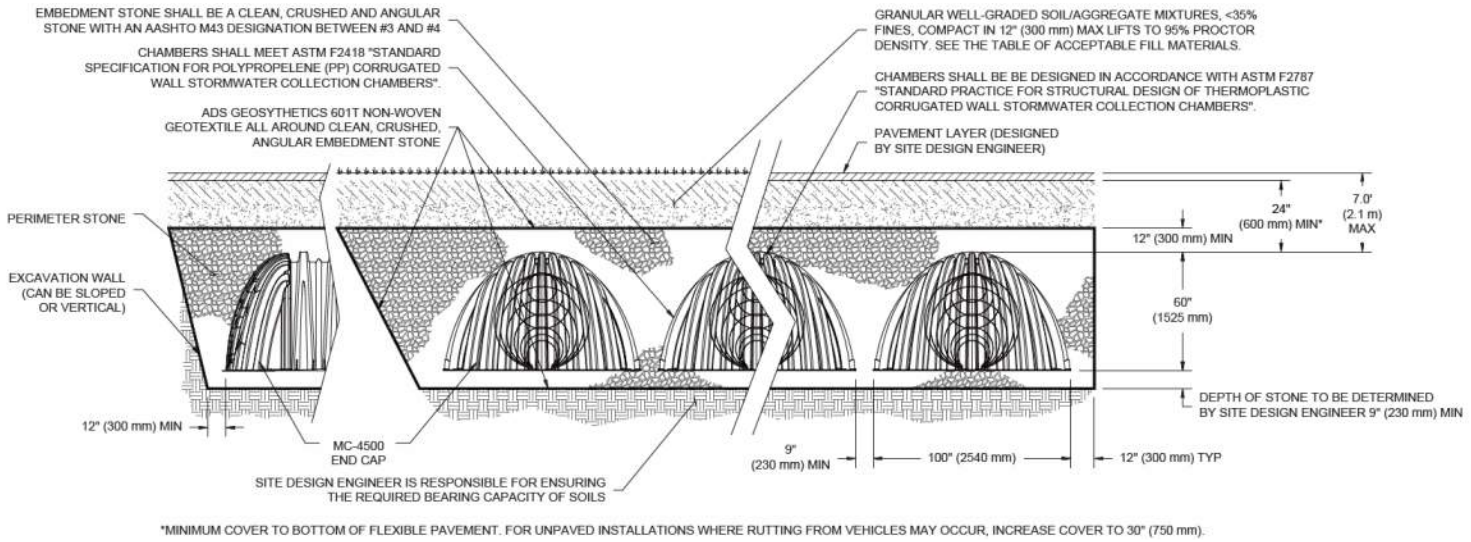
Results

System Volume and Bed Size

Installed Storage Volume:	7202.46 cubic ft.
Storage Volume Per Chamber:	175.90 cubic ft.
Number Of Chambers Required:	24
Number Of End Caps Required:	2
Chamber Rows:	1
Maximum Length:	165.67 ft.
Maximum Width:	10.33 ft.
Approx. Bed Size Required:	1711.89 square ft.

System Components

Amount Of Stone Required:	269 cubic yards
Volume Of Excavation (Not Including Fill):	428 cubic yards
Total Non-woven Geotextile Required:	774 square yards
Woven Geotextile Required (excluding Isolator Row):	0 square yards
Woven Geotextile Required (Isolator Row):	382 square yards
Total Woven Geotextile Required:	382 square yards
Impervious Liner Required:	0 square yards



Hydraulic Analysis Report

Project Data

Project Title: OMPX-001 Detention Routing

Designer: C&V Consulting, Inc.

Project Date: Monday, March 17, 2025

Project Units: U.S. Customary Units

Notes: Federal Highway Administration. Hydraulic Toolbox 5.3.0.0

Detention Basin Analysis: Detention Analysis - Q100

Notes:

Storage Input Parameters

Storage Capacity: ADS Stormtech

Elevation ft	Volume acre-ft
0.00	0.00
1.00	0.20
2.00	0.53
3.00	0.85
4.00	1.14
5.00	1.39
6.00	1.57
6.67	1.69

Discharge Input Parameters

Known Discharge: Infiltrated Q

Discharge cfs

0.00	**1.00**
1.00	1.00
2.00	1.00
3.00	1.00
4.00	1.00
5.00	1.00
6.00	1.00
6.67	1.00

Riser: Riser

Rectangular Opening

Opening Width: 6.0000 ft

Opening Height: 2.0000 ft

Weir Coefficient: 3.3300

Orifice Coefficient: 0.6000

Height above Base Elev to Bottom of Opening: 4.0000 ft

Base Elevation: 0.0000 ft

Storage & Discharge Input Parameters

Elevation - Storage - Discharge

Elevation ft	Storage acre-ft	Discharge cfs
0.00	0.00	1.00
1.00	0.20	1.00
2.00	0.53	1.00
3.00	0.85	1.00
4.00	1.14	1.00
5.00	1.39	20.98
6.00	1.57	57.51
6.67	1.69	75.67

Detention Basin Input Parameters

Inflow Hydrograph

Peak Inflow Discharge: 91.874 cfs, Time to Peak: 1153.00 (min), Total Inflow Volume: 599764.67 ft^3

Time (min)	Discharge cfs
0.00	0.00
1.00	0.53
2.00	1.06
3.00	1.58
4.00	2.11
5.00	2.64
6.00	3.00
7.00	3.28
8.00	3.37
9.00	3.47
10.00	3.47
11.00	3.47
12.00	3.47

13.00	3.47
14.00	3.47
15.00	3.48
16.00	3.48
17.00	3.48
18.00	3.48
19.00	3.48
20.00	3.48
21.00	3.48
22.00	3.49
23.00	3.49
24.00	3.49
25.00	3.49
26.00	3.49
27.00	3.49
28.00	3.49
29.00	3.50
30.00	3.50
31.00	3.50
32.00	3.50
33.00	3.50
34.00	3.50
35.00	3.50
36.00	3.51
37.00	3.51
38.00	3.51
39.00	3.51
40.00	3.51
41.00	3.51
42.00	3.51
43.00	3.52
44.00	3.52
45.00	3.52
46.00	3.52
47.00	3.52
48.00	3.52
49.00	3.53
50.00	3.53
51.00	3.53
52.00	3.53
53.00	3.53
54.00	3.53
55.00	3.53
56.00	3.54
57.00	3.54
58.00	3.54
59.00	3.54
60.00	3.54
61.00	3.54
62.00	3.54

63.00	3.55
64.00	3.55
65.00	3.55
66.00	3.55
67.00	3.55
68.00	3.55
69.00	3.56
70.00	3.56
71.00	3.56
72.00	3.56
73.00	3.56
74.00	3.56
75.00	3.56
76.00	3.57
77.00	3.57
78.00	3.57
79.00	3.57
80.00	3.57
81.00	3.57
82.00	3.58
83.00	3.58
84.00	3.58
85.00	3.58
86.00	3.58
87.00	3.58
88.00	3.59
89.00	3.59
90.00	3.59
91.00	3.59
92.00	3.59
93.00	3.59
94.00	3.60
95.00	3.60
96.00	3.60
97.00	3.60
98.00	3.60
99.00	3.61
100.00	3.61
101.00	3.61
102.00	3.61
103.00	3.61
104.00	3.61
105.00	3.62
106.00	3.62
107.00	3.62
108.00	3.62
109.00	3.62
110.00	3.62
111.00	3.63
112.00	3.63

113.00	3.63
114.00	3.63
115.00	3.63
116.00	3.64
117.00	3.64
118.00	3.64
119.00	3.64
120.00	3.64
121.00	3.65
122.00	3.65
123.00	3.65
124.00	3.65
125.00	3.65
126.00	3.65
127.00	3.66
128.00	3.66
129.00	3.66
130.00	3.66
131.00	3.66
132.00	3.67
133.00	3.67
134.00	3.67
135.00	3.67
136.00	3.67
137.00	3.67
138.00	3.68
139.00	3.68
140.00	3.68
141.00	3.68
142.00	3.68
143.00	3.69
144.00	3.69
145.00	3.69
146.00	3.69
147.00	3.69
148.00	3.70
149.00	3.70
150.00	3.70
151.00	3.70
152.00	3.70
153.00	3.71
154.00	3.71
155.00	3.71
156.00	3.71
157.00	3.71
158.00	3.71
159.00	3.72
160.00	3.72
161.00	3.72
162.00	3.72

163.00	3.72
164.00	3.73
165.00	3.73
166.00	3.73
167.00	3.73
168.00	3.73
169.00	3.74
170.00	3.74
171.00	3.74
172.00	3.74
173.00	3.74
174.00	3.75
175.00	3.75
176.00	3.75
177.00	3.75
178.00	3.75
179.00	3.76
180.00	3.76
181.00	3.76
182.00	3.76
183.00	3.76
184.00	3.77
185.00	3.77
186.00	3.77
187.00	3.77
188.00	3.77
189.00	3.78
190.00	3.78
191.00	3.78
192.00	3.78
193.00	3.79
194.00	3.79
195.00	3.79
196.00	3.79
197.00	3.79
198.00	3.80
199.00	3.80
200.00	3.80
201.00	3.80
202.00	3.80
203.00	3.81
204.00	3.81
205.00	3.81
206.00	3.81
207.00	3.81
208.00	3.82
209.00	3.82
210.00	3.82
211.00	3.82
212.00	3.82

213.00	3.83
214.00	3.83
215.00	3.83
216.00	3.83
217.00	3.84
218.00	3.84
219.00	3.84
220.00	3.84
221.00	3.84
222.00	3.85
223.00	3.85
224.00	3.85
225.00	3.85
226.00	3.85
227.00	3.86
228.00	3.86
229.00	3.86
230.00	3.86
231.00	3.87
232.00	3.87
233.00	3.87
234.00	3.87
235.00	3.87
236.00	3.88
237.00	3.88
238.00	3.88
239.00	3.88
240.00	3.89
241.00	3.89
242.00	3.89
243.00	3.89
244.00	3.89
245.00	3.90
246.00	3.90
247.00	3.90
248.00	3.90
249.00	3.91
250.00	3.91
251.00	3.91
252.00	3.91
253.00	3.91
254.00	3.92
255.00	3.92
256.00	3.92
257.00	3.92
258.00	3.93
259.00	3.93
260.00	3.93
261.00	3.93
262.00	3.94

263.00	3.94
264.00	3.94
265.00	3.94
266.00	3.94
267.00	3.95
268.00	3.95
269.00	3.95
270.00	3.95
271.00	3.96
272.00	3.96
273.00	3.96
274.00	3.96
275.00	3.97
276.00	3.97
277.00	3.97
278.00	3.97
279.00	3.98
280.00	3.98
281.00	3.98
282.00	3.98
283.00	3.98
284.00	3.99
285.00	3.99
286.00	3.99
287.00	3.99
288.00	4.00
289.00	4.00
290.00	4.00
291.00	4.00
292.00	4.01
293.00	4.01
294.00	4.01
295.00	4.01
296.00	4.02
297.00	4.02
298.00	4.02
299.00	4.02
300.00	4.03
301.00	4.03
302.00	4.03
303.00	4.03
304.00	4.04
305.00	4.04
306.00	4.04
307.00	4.04
308.00	4.05
309.00	4.05
310.00	4.05
311.00	4.05
312.00	4.06

313.00	4.06
314.00	4.06
315.00	4.06
316.00	4.07
317.00	4.07
318.00	4.07
319.00	4.07
320.00	4.08
321.00	4.08
322.00	4.08
323.00	4.08
324.00	4.09
325.00	4.09
326.00	4.09
327.00	4.09
328.00	4.10
329.00	4.10
330.00	4.10
331.00	4.11
332.00	4.11
333.00	4.11
334.00	4.11
335.00	4.12
336.00	4.12
337.00	4.12
338.00	4.12
339.00	4.13
340.00	4.13
341.00	4.13
342.00	4.13
343.00	4.14
344.00	4.14
345.00	4.14
346.00	4.15
347.00	4.15
348.00	4.15
349.00	4.15
350.00	4.16
351.00	4.16
352.00	4.16
353.00	4.16
354.00	4.17
355.00	4.17
356.00	4.17
357.00	4.18
358.00	4.18
359.00	4.18
360.00	4.18
361.00	4.19
362.00	4.19

363.00	4.19
364.00	4.19
365.00	4.20
366.00	4.20
367.00	4.20
368.00	4.21
369.00	4.21
370.00	4.21
371.00	4.21
372.00	4.22
373.00	4.22
374.00	4.22
375.00	4.23
376.00	4.23
377.00	4.23
378.00	4.23
379.00	4.24
380.00	4.24
381.00	4.24
382.00	4.25
383.00	4.25
384.00	4.25
385.00	4.25
386.00	4.26
387.00	4.26
388.00	4.26
389.00	4.27
390.00	4.27
391.00	4.27
392.00	4.28
393.00	4.28
394.00	4.28
395.00	4.28
396.00	4.29
397.00	4.29
398.00	4.29
399.00	4.30
400.00	4.30
401.00	4.30
402.00	4.30
403.00	4.31
404.00	4.31
405.00	4.31
406.00	4.32
407.00	4.32
408.00	4.32
409.00	4.33
410.00	4.33
411.00	4.33
412.00	4.34

413.00	4.34
414.00	4.34
415.00	4.34
416.00	4.35
417.00	4.35
418.00	4.35
419.00	4.36
420.00	4.36
421.00	4.36
422.00	4.37
423.00	4.37
424.00	4.37
425.00	4.38
426.00	4.38
427.00	4.38
428.00	4.39
429.00	4.39
430.00	4.39
431.00	4.40
432.00	4.40
433.00	4.40
434.00	4.41
435.00	4.41
436.00	4.41
437.00	4.41
438.00	4.42
439.00	4.42
440.00	4.42
441.00	4.43
442.00	4.43
443.00	4.43
444.00	4.44
445.00	4.44
446.00	4.44
447.00	4.45
448.00	4.45
449.00	4.45
450.00	4.46
451.00	4.46
452.00	4.46
453.00	4.47
454.00	4.47
455.00	4.47
456.00	4.48
457.00	4.48
458.00	4.48
459.00	4.49
460.00	4.49
461.00	4.50
462.00	4.50

463.00	4.50
464.00	4.51
465.00	4.51
466.00	4.51
467.00	4.52
468.00	4.52
469.00	4.52
470.00	4.53
471.00	4.53
472.00	4.53
473.00	4.54
474.00	4.54
475.00	4.54
476.00	4.55
477.00	4.55
478.00	4.55
479.00	4.56
480.00	4.56
481.00	4.57
482.00	4.57
483.00	4.57
484.00	4.58
485.00	4.58
486.00	4.58
487.00	4.59
488.00	4.59
489.00	4.59
490.00	4.60
491.00	4.60
492.00	4.61
493.00	4.61
494.00	4.61
495.00	4.62
496.00	4.62
497.00	4.62
498.00	4.63
499.00	4.63
500.00	4.64
501.00	4.64
502.00	4.64
503.00	4.65
504.00	4.65
505.00	4.65
506.00	4.66
507.00	4.66
508.00	4.67
509.00	4.67
510.00	4.67
511.00	4.68
512.00	4.68

513.00	4.68
514.00	4.69
515.00	4.69
516.00	4.70
517.00	4.70
518.00	4.70
519.00	4.71
520.00	4.71
521.00	4.72
522.00	4.72
523.00	4.72
524.00	4.73
525.00	4.73
526.00	4.74
527.00	4.74
528.00	4.74
529.00	4.75
530.00	4.75
531.00	4.76
532.00	4.76
533.00	4.76
534.00	4.77
535.00	4.77
536.00	4.78
537.00	4.78
538.00	4.79
539.00	4.79
540.00	4.79
541.00	4.80
542.00	4.80
543.00	4.81
544.00	4.81
545.00	4.81
546.00	4.82
547.00	4.82
548.00	4.83
549.00	4.83
550.00	4.84
551.00	4.84
552.00	4.84
553.00	4.85
554.00	4.85
555.00	4.86
556.00	4.86
557.00	4.87
558.00	4.87
559.00	4.87
560.00	4.88
561.00	4.88
562.00	4.89

563.00	4.89
564.00	4.90
565.00	4.90
566.00	4.91
567.00	4.91
568.00	4.91
569.00	4.92
570.00	4.92
571.00	4.93
572.00	4.93
573.00	4.94
574.00	4.94
575.00	4.95
576.00	4.95
577.00	4.95
578.00	4.96
579.00	4.96
580.00	4.97
581.00	4.97
582.00	4.98
583.00	4.98
584.00	4.99
585.00	4.99
586.00	5.00
587.00	5.00
588.00	5.01
589.00	5.01
590.00	5.02
591.00	5.02
592.00	5.03
593.00	5.03
594.00	5.03
595.00	5.04
596.00	5.04
597.00	5.05
598.00	5.05
599.00	5.06
600.00	5.06
601.00	5.07
602.00	5.07
603.00	5.08
604.00	5.08
605.00	5.09
606.00	5.09
607.00	5.10
608.00	5.10
609.00	5.11
610.00	5.11
611.00	5.12
612.00	5.12

613.00	5.13
614.00	5.13
615.00	5.14
616.00	5.14
617.00	5.15
618.00	5.15
619.00	5.16
620.00	5.16
621.00	5.17
622.00	5.17
623.00	5.18
624.00	5.19
625.00	5.19
626.00	5.20
627.00	5.20
628.00	5.21
629.00	5.21
630.00	5.22
631.00	5.22
632.00	5.23
633.00	5.23
634.00	5.24
635.00	5.24
636.00	5.25
637.00	5.25
638.00	5.26
639.00	5.27
640.00	5.27
641.00	5.28
642.00	5.28
643.00	5.29
644.00	5.29
645.00	5.30
646.00	5.30
647.00	5.31
648.00	5.32
649.00	5.32
650.00	5.33
651.00	5.33
652.00	5.34
653.00	5.34
654.00	5.35
655.00	5.36
656.00	5.36
657.00	5.37
658.00	5.37
659.00	5.38
660.00	5.38
661.00	5.39
662.00	5.40

663.00	5.40
664.00	5.41
665.00	5.41
666.00	5.42
667.00	5.43
668.00	5.43
669.00	5.44
670.00	5.44
671.00	5.45
672.00	5.46
673.00	5.46
674.00	5.47
675.00	5.48
676.00	5.48
677.00	5.49
678.00	5.49
679.00	5.50
680.00	5.51
681.00	5.51
682.00	5.52
683.00	5.53
684.00	5.53
685.00	5.54
686.00	5.54
687.00	5.55
688.00	5.56
689.00	5.56
690.00	5.57
691.00	5.58
692.00	5.58
693.00	5.59
694.00	5.60
695.00	5.60
696.00	5.61
697.00	5.62
698.00	5.62
699.00	5.63
700.00	5.64
701.00	5.64
702.00	5.65
703.00	5.66
704.00	5.66
705.00	5.67
706.00	5.67
707.00	5.68
708.00	5.69
709.00	5.69
710.00	5.70
711.00	5.71
712.00	5.71

713.00	5.72
714.00	5.73
715.00	5.73
716.00	5.74
717.00	5.74
718.00	5.75
719.00	5.76
720.00	5.76
721.00	5.77
722.00	5.78
723.00	5.78
724.00	5.79
725.00	5.80
726.00	5.80
727.00	5.81
728.00	5.82
729.00	5.82
730.00	5.83
731.00	5.84
732.00	5.84
733.00	5.85
734.00	5.86
735.00	5.86
736.00	5.87
737.00	5.88
738.00	5.88
739.00	5.89
740.00	5.90
741.00	5.91
742.00	5.91
743.00	5.92
744.00	5.93
745.00	5.93
746.00	5.94
747.00	5.95
748.00	5.96
749.00	5.96
750.00	5.97
751.00	5.98
752.00	5.98
753.00	5.99
754.00	6.00
755.00	6.01
756.00	6.01
757.00	6.02
758.00	6.03
759.00	6.04
760.00	6.04
761.00	6.05
762.00	6.06

763.00	6.07
764.00	6.07
765.00	6.08
766.00	6.09
767.00	6.10
768.00	6.11
769.00	6.11
770.00	6.12
771.00	6.13
772.00	6.14
773.00	6.14
774.00	6.15
775.00	6.16
776.00	6.17
777.00	6.18
778.00	6.18
779.00	6.19
780.00	6.20
781.00	6.21
782.00	6.22
783.00	6.23
784.00	6.23
785.00	6.24
786.00	6.25
787.00	6.26
788.00	6.27
789.00	6.28
790.00	6.28
791.00	6.29
792.00	6.30
793.00	6.31
794.00	6.32
795.00	6.33
796.00	6.34
797.00	6.34
798.00	6.35
799.00	6.36
800.00	6.37
801.00	6.38
802.00	6.39
803.00	6.40
804.00	6.41
805.00	6.42
806.00	6.42
807.00	6.43
808.00	6.44
809.00	6.45
810.00	6.46
811.00	6.47
812.00	6.48

813.00	6.49
814.00	6.50
815.00	6.51
816.00	6.52
817.00	6.53
818.00	6.54
819.00	6.55
820.00	6.56
821.00	6.56
822.00	6.57
823.00	6.58
824.00	6.59
825.00	6.60
826.00	6.61
827.00	6.62
828.00	6.63
829.00	6.64
830.00	6.65
831.00	6.66
832.00	6.67
833.00	6.68
834.00	6.69
835.00	6.71
836.00	6.72
837.00	6.73
838.00	6.74
839.00	6.75
840.00	6.76
841.00	6.77
842.00	6.78
843.00	6.79
844.00	6.80
845.00	6.81
846.00	6.82
847.00	6.83
848.00	6.84
849.00	6.86
850.00	6.87
851.00	6.88
852.00	6.89
853.00	6.90
854.00	6.91
855.00	6.92
856.00	6.93
857.00	6.95
858.00	6.96
859.00	6.97
860.00	6.98
861.00	6.99
862.00	7.00

863.00	7.02
864.00	7.03
865.00	7.04
866.00	7.05
867.00	7.06
868.00	7.08
869.00	7.09
870.00	7.10
871.00	7.11
872.00	7.13
873.00	7.14
874.00	7.15
875.00	7.16
876.00	7.18
877.00	7.19
878.00	7.20
879.00	7.21
880.00	7.23
881.00	7.24
882.00	7.25
883.00	7.27
884.00	7.28
885.00	7.29
886.00	7.31
887.00	7.32
888.00	7.33
889.00	7.35
890.00	7.36
891.00	7.38
892.00	7.39
893.00	7.40
894.00	7.42
895.00	7.43
896.00	7.45
897.00	7.46
898.00	7.47
899.00	7.49
900.00	7.50
901.00	7.52
902.00	7.53
903.00	7.55
904.00	7.56
905.00	7.58
906.00	7.59
907.00	7.61
908.00	7.62
909.00	7.64
910.00	7.65
911.00	7.67
912.00	7.69

913.00	7.70
914.00	7.72
915.00	7.73
916.00	7.75
917.00	7.77
918.00	7.78
919.00	7.80
920.00	7.81
921.00	7.83
922.00	7.85
923.00	7.86
924.00	7.88
925.00	7.90
926.00	7.92
927.00	7.93
928.00	7.95
929.00	7.97
930.00	7.99
931.00	8.00
932.00	8.02
933.00	8.04
934.00	8.06
935.00	8.08
936.00	8.09
937.00	8.11
938.00	8.13
939.00	8.15
940.00	8.17
941.00	8.19
942.00	8.21
943.00	8.23
944.00	8.25
945.00	8.27
946.00	8.28
947.00	8.30
948.00	8.32
949.00	8.35
950.00	8.37
951.00	8.39
952.00	8.41
953.00	8.43
954.00	8.45
955.00	8.47
956.00	8.49
957.00	8.51
958.00	8.53
959.00	8.55
960.00	8.58
961.00	8.60
962.00	8.62

963.00	8.64
964.00	8.67
965.00	8.69
966.00	8.71
967.00	8.74
968.00	8.76
969.00	8.78
970.00	8.81
971.00	8.83
972.00	8.85
973.00	8.88
974.00	8.90
975.00	8.93
976.00	8.95
977.00	8.98
978.00	9.00
979.00	9.03
980.00	9.05
981.00	9.08
982.00	9.11
983.00	9.13
984.00	9.16
985.00	9.19
986.00	9.21
987.00	9.24
988.00	9.27
989.00	9.30
990.00	9.33
991.00	9.35
992.00	9.38
993.00	9.41
994.00	9.44
995.00	9.47
996.00	9.50
997.00	9.53
998.00	9.56
999.00	9.59
1000.00	9.62
1001.00	9.65
1002.00	9.69
1003.00	9.72
1004.00	9.75
1005.00	9.78
1006.00	9.81
1007.00	9.84
1008.00	9.88
1009.00	9.91
1010.00	9.94
1011.00	9.98
1012.00	10.01

1013.00	10.04
1014.00	10.08
1015.00	10.11
1016.00	10.15
1017.00	10.18
1018.00	10.22
1019.00	10.26
1020.00	10.29
1021.00	10.33
1022.00	10.37
1023.00	10.40
1024.00	10.44
1025.00	10.48
1026.00	10.52
1027.00	10.56
1028.00	10.60
1029.00	10.64
1030.00	10.68
1031.00	10.72
1032.00	10.77
1033.00	10.81
1034.00	10.85
1035.00	10.90
1036.00	10.94
1037.00	10.98
1038.00	11.03
1039.00	11.08
1040.00	11.12
1041.00	11.17
1042.00	11.22
1043.00	11.27
1044.00	11.31
1045.00	11.36
1046.00	11.42
1047.00	11.47
1048.00	11.52
1049.00	11.57
1050.00	11.62
1051.00	11.68
1052.00	11.73
1053.00	11.79
1054.00	11.85
1055.00	11.90
1056.00	11.96
1057.00	12.02
1058.00	12.08
1059.00	12.14
1060.00	12.20
1061.00	12.27
1062.00	12.33

1063.00	12.39
1064.00	12.46
1065.00	12.53
1066.00	12.60
1067.00	12.67
1068.00	12.74
1069.00	12.81
1070.00	12.88
1071.00	12.96
1072.00	13.03
1073.00	13.11
1074.00	13.19
1075.00	13.27
1076.00	13.35
1077.00	13.43
1078.00	13.52
1079.00	13.60
1080.00	13.69
1081.00	13.78
1082.00	13.87
1083.00	13.97
1084.00	14.06
1085.00	14.16
1086.00	14.26
1087.00	14.36
1088.00	14.46
1089.00	14.57
1090.00	14.68
1091.00	14.79
1092.00	14.91
1093.00	15.02
1094.00	15.14
1095.00	15.27
1096.00	15.39
1097.00	15.52
1098.00	15.65
1099.00	15.79
1100.00	15.93
1101.00	16.07
1102.00	16.21
1103.00	16.36
1104.00	16.51
1105.00	16.67
1106.00	16.83
1107.00	17.00
1108.00	17.18
1109.00	17.35
1110.00	17.54
1111.00	17.73
1112.00	17.92

1113.00	18.13
1114.00	18.34
1115.00	18.56
1116.00	18.79
1117.00	19.02
1118.00	19.27
1119.00	19.52
1120.00	19.79
1121.00	20.07
1122.00	20.35
1123.00	20.65
1124.00	20.97
1125.00	21.30
1126.00	21.64
1127.00	22.01
1128.00	22.39
1129.00	22.80
1130.00	23.23
1131.00	23.68
1132.00	24.17
1133.00	24.69
1134.00	25.24
1135.00	25.84
1136.00	26.48
1137.00	27.17
1138.00	27.93
1139.00	28.75
1140.00	29.66
1141.00	30.66
1142.00	31.77
1143.00	33.01
1144.00	34.42
1145.00	36.05
1146.00	37.96
1147.00	40.24
1148.00	43.01
1149.00	46.54
1150.00	51.35
1151.00	58.83
1152.00	82.96
1153.00	91.87
1154.00	91.20
1155.00	87.99
1156.00	82.34
1157.00	69.91
1158.00	57.25
1159.00	43.09
1160.00	35.34
1161.00	28.09
1162.00	24.13

1163.00	22.13
1164.00	20.65
1165.00	19.45
1166.00	18.46
1167.00	17.62
1168.00	16.89
1169.00	16.24
1170.00	15.67
1171.00	15.15
1172.00	14.68
1173.00	14.26
1174.00	13.86
1175.00	13.51
1176.00	13.17
1177.00	12.87
1178.00	12.58
1179.00	12.31
1180.00	12.06
1181.00	11.83
1182.00	11.61
1183.00	11.40
1184.00	11.20
1185.00	11.01
1186.00	10.84
1187.00	10.67
1188.00	10.50
1189.00	10.35
1190.00	10.20
1191.00	10.06
1192.00	9.93
1193.00	9.80
1194.00	9.67
1195.00	9.55
1196.00	9.43
1197.00	9.31
1198.00	9.20
1199.00	9.09
1200.00	8.99
1201.00	8.89
1202.00	8.79
1203.00	8.70
1204.00	8.61
1205.00	8.52
1206.00	8.44
1207.00	8.35
1208.00	8.27
1209.00	8.20
1210.00	8.12
1211.00	8.05
1212.00	7.98

1213.00	7.91
1214.00	7.84
1215.00	7.77
1216.00	7.71
1217.00	7.65
1218.00	7.58
1219.00	7.52
1220.00	7.47
1221.00	7.41
1222.00	7.35
1223.00	7.30
1224.00	7.25
1225.00	7.19
1226.00	7.14
1227.00	7.09
1228.00	7.04
1229.00	7.00
1230.00	6.95
1231.00	6.90
1232.00	6.86
1233.00	6.82
1234.00	6.77
1235.00	6.73
1236.00	6.69
1237.00	6.65
1238.00	6.61
1239.00	6.57
1240.00	6.53
1241.00	6.49
1242.00	6.45
1243.00	6.42
1244.00	6.38
1245.00	6.35
1246.00	6.31
1247.00	6.28
1248.00	6.24
1249.00	6.21
1250.00	6.18
1251.00	6.15
1252.00	6.12
1253.00	6.08
1254.00	6.05
1255.00	6.02
1256.00	5.99
1257.00	5.96
1258.00	5.94
1259.00	5.91
1260.00	5.88
1261.00	5.85
1262.00	5.83

1263.00	5.80
1264.00	5.77
1265.00	5.75
1266.00	5.72
1267.00	5.70
1268.00	5.67
1269.00	5.64
1270.00	5.62
1271.00	5.59
1272.00	5.57
1273.00	5.54
1274.00	5.51
1275.00	5.49
1276.00	5.46
1277.00	5.44
1278.00	5.42
1279.00	5.39
1280.00	5.37
1281.00	5.35
1282.00	5.32
1283.00	5.30
1284.00	5.28
1285.00	5.26
1286.00	5.23
1287.00	5.21
1288.00	5.19
1289.00	5.17
1290.00	5.15
1291.00	5.13
1292.00	5.11
1293.00	5.09
1294.00	5.07
1295.00	5.05
1296.00	5.03
1297.00	5.01
1298.00	4.99
1299.00	4.97
1300.00	4.96
1301.00	4.94
1302.00	4.92
1303.00	4.90
1304.00	4.88
1305.00	4.87
1306.00	4.85
1307.00	4.83
1308.00	4.82
1309.00	4.80
1310.00	4.78
1311.00	4.77
1312.00	4.75

1313.00	4.73
1314.00	4.72
1315.00	4.70
1316.00	4.69
1317.00	4.67
1318.00	4.66
1319.00	4.64
1320.00	4.62
1321.00	4.61
1322.00	4.60
1323.00	4.58
1324.00	4.57
1325.00	4.55
1326.00	4.54
1327.00	4.52
1328.00	4.51
1329.00	4.50
1330.00	4.48
1331.00	4.47
1332.00	4.46
1333.00	4.44
1334.00	4.43
1335.00	4.42
1336.00	4.40
1337.00	4.39
1338.00	4.38
1339.00	4.36
1340.00	4.35
1341.00	4.34
1342.00	4.33
1343.00	4.31
1344.00	4.30
1345.00	4.29
1346.00	4.28
1347.00	4.27
1348.00	4.26
1349.00	4.24
1350.00	4.23
1351.00	4.22
1352.00	4.21
1353.00	4.20
1354.00	4.19
1355.00	4.18
1356.00	4.16
1357.00	4.15
1358.00	4.14
1359.00	4.13
1360.00	4.12
1361.00	4.11
1362.00	4.10

1363.00	4.09
1364.00	4.08
1365.00	4.07
1366.00	4.06
1367.00	4.05
1368.00	4.04
1369.00	4.03
1370.00	4.02
1371.00	4.01
1372.00	4.00
1373.00	3.99
1374.00	3.98
1375.00	3.97
1376.00	3.96
1377.00	3.95
1378.00	3.94
1379.00	3.93
1380.00	3.92
1381.00	3.92
1382.00	3.91
1383.00	3.90
1384.00	3.89
1385.00	3.88
1386.00	3.87
1387.00	3.86
1388.00	3.85
1389.00	3.84
1390.00	3.84
1391.00	3.83
1392.00	3.82
1393.00	3.81
1394.00	3.80
1395.00	3.79
1396.00	3.79
1397.00	3.78
1398.00	3.77
1399.00	3.76
1400.00	3.75
1401.00	3.75
1402.00	3.74
1403.00	3.73
1404.00	3.72
1405.00	3.71
1406.00	3.71
1407.00	3.70
1408.00	3.69
1409.00	3.68
1410.00	3.68
1411.00	3.67
1412.00	3.66

1413.00	3.65
1414.00	3.65
1415.00	3.64
1416.00	3.63
1417.00	3.62
1418.00	3.62
1419.00	3.61
1420.00	3.60
1421.00	3.60
1422.00	3.59
1423.00	3.58
1424.00	3.57
1425.00	3.57
1426.00	3.56
1427.00	3.56
1428.00	3.55
1429.00	3.54
1430.00	3.54
1431.00	3.53
1432.00	3.53
1433.00	3.52
1434.00	3.51
1435.00	3.51
1436.00	3.50
1437.00	3.50
1438.00	3.49
1439.00	3.48
1440.00	3.48
1441.00	2.95
1442.00	2.42
1443.00	1.88
1444.00	1.36
1445.00	0.83
1446.00	0.46
1447.00	0.18
1448.00	0.09
1449.00	0.00

Initial Storage = 0.0000 acre-ft

Detention Basin Result Parameters

Routed Hydrograph

Peak Outflow Discharge: 73.945 cfs, Time to Peak: 1157.00 (min), Total Outflow Volume: 599769.18 ft^3

Time min	Discharge cfs	Storage acre-ft
0.00	0.00	0.000000
1.00	0.00	0.000727
2.00	1.00	0.000806
3.00	1.00	0.001612
4.00	1.00	0.003145
5.00	1.00	0.005405
6.00	1.00	0.008168
7.00	1.00	0.011314
8.00	1.00	0.014587
9.00	1.00	0.017989
10.00	1.00	0.021392
11.00	1.00	0.024798
12.00	1.00	0.028205
13.00	1.00	0.031615
14.00	1.00	0.035026
15.00	1.00	0.038440
16.00	1.00	0.041855
17.00	1.00	0.045272
18.00	1.00	0.048691
19.00	1.00	0.052113
20.00	1.00	0.055536
21.00	1.00	0.058961
22.00	1.00	0.062388
23.00	1.00	0.065818
24.00	1.00	0.069249
25.00	1.00	0.072682
26.00	1.00	0.076117
27.00	1.00	0.079554
28.00	1.00	0.082994
29.00	1.00	0.086435
30.00	1.00	0.089878
31.00	1.00	0.093323
32.00	1.00	0.096771
33.00	1.00	0.100220
34.00	1.00	0.103671
35.00	1.00	0.107125
36.00	1.00	0.110580
37.00	1.00	0.114037
38.00	1.00	0.117497
39.00	1.00	0.120958
40.00	1.00	0.124422
41.00	1.00	0.127887

42.00	1.00	0.131355
43.00	1.00	0.134824
44.00	1.00	0.138296
45.00	1.00	0.141770
46.00	1.00	0.145245
47.00	1.00	0.148723
48.00	1.00	0.152203
49.00	1.00	0.155685
50.00	1.00	0.159169
51.00	1.00	0.162655
52.00	1.00	0.166143
53.00	1.00	0.169633
54.00	1.00	0.173126
55.00	1.00	0.176620
56.00	1.00	0.180116
57.00	1.00	0.183615
58.00	1.00	0.187116
59.00	1.00	0.190618
60.00	1.00	0.194123
61.00	1.00	0.197630
62.00	1.00	0.201139
63.00	1.00	0.204650
64.00	1.00	0.208163
65.00	1.00	0.211678
66.00	1.00	0.215196
67.00	1.00	0.218715
68.00	1.00	0.222237
69.00	1.00	0.225761
70.00	1.00	0.229287
71.00	1.00	0.232815
72.00	1.00	0.236345
73.00	1.00	0.239877
74.00	1.00	0.243411
75.00	1.00	0.246948
76.00	1.00	0.250487
77.00	1.00	0.254027
78.00	1.00	0.257570
79.00	1.00	0.261115
80.00	1.00	0.264663
81.00	1.00	0.268212
82.00	1.00	0.271764
83.00	1.00	0.275317
84.00	1.00	0.278873
85.00	1.00	0.282431
86.00	1.00	0.285992
87.00	1.00	0.289555
88.00	1.00	0.293120
89.00	1.00	0.296688
90.00	1.00	0.300258
91.00	1.00	0.303831

92.00	1.00	0.307406
93.00	1.00	0.310983
94.00	1.00	0.314563
95.00	1.00	0.318145
96.00	1.00	0.321730
97.00	1.00	0.325317
98.00	1.00	0.328907
99.00	1.00	0.332499
100.00	1.00	0.336094
101.00	1.00	0.339691
102.00	1.00	0.343290
103.00	1.00	0.346892
104.00	1.00	0.350496
105.00	1.00	0.354103
106.00	1.00	0.357712
107.00	1.00	0.361324
108.00	1.00	0.364939
109.00	1.00	0.368555
110.00	1.00	0.372175
111.00	1.00	0.375796
112.00	1.00	0.379421
113.00	1.00	0.383047
114.00	1.00	0.386677
115.00	1.00	0.390308
116.00	1.00	0.393943
117.00	1.00	0.397579
118.00	1.00	0.401219
119.00	1.00	0.404860
120.00	1.00	0.408505
121.00	1.00	0.412151
122.00	1.00	0.415801
123.00	1.00	0.419453
124.00	1.00	0.423107
125.00	1.00	0.426764
126.00	1.00	0.430424
127.00	1.00	0.434086
128.00	1.00	0.437750
129.00	1.00	0.441418
130.00	1.00	0.445087
131.00	1.00	0.448760
132.00	1.00	0.452435
133.00	1.00	0.456112
134.00	1.00	0.459792
135.00	1.00	0.463475
136.00	1.00	0.467160
137.00	1.00	0.470848
138.00	1.00	0.474538
139.00	1.00	0.478231
140.00	1.00	0.481927
141.00	1.00	0.485625

142.00	1.00	0.489326
143.00	1.00	0.493029
144.00	1.00	0.496735
145.00	1.00	0.500444
146.00	1.00	0.504155
147.00	1.00	0.507869
148.00	1.00	0.511586
149.00	1.00	0.515305
150.00	1.00	0.519027
151.00	1.00	0.522752
152.00	1.00	0.526479
153.00	1.00	0.530209
154.00	1.00	0.533941
155.00	1.00	0.537676
156.00	1.00	0.541414
157.00	1.00	0.545155
158.00	1.00	0.548898
159.00	1.00	0.552644
160.00	1.00	0.556392
161.00	1.00	0.560143
162.00	1.00	0.563897
163.00	1.00	0.567654
164.00	1.00	0.571413
165.00	1.00	0.575176
166.00	1.00	0.578940
167.00	1.00	0.582708
168.00	1.00	0.586478
169.00	1.00	0.590251
170.00	1.00	0.594026
171.00	1.00	0.597805
172.00	1.00	0.601586
173.00	1.00	0.605370
174.00	1.00	0.609156
175.00	1.00	0.612946
176.00	1.00	0.616738
177.00	1.00	0.620533
178.00	1.00	0.624330
179.00	1.00	0.628131
180.00	1.00	0.631934
181.00	1.00	0.635740
182.00	1.00	0.639549
183.00	1.00	0.643360
184.00	1.00	0.647174
185.00	1.00	0.650991
186.00	1.00	0.654811
187.00	1.00	0.658634
188.00	1.00	0.662460
189.00	1.00	0.666288
190.00	1.00	0.670119
191.00	1.00	0.673953

192.00	1.00	0.677790
193.00	1.00	0.681630
194.00	1.00	0.685472
195.00	1.00	0.689317
196.00	1.00	0.693165
197.00	1.00	0.697016
198.00	1.00	0.700870
199.00	1.00	0.704727
200.00	1.00	0.708586
201.00	1.00	0.712449
202.00	1.00	0.716314
203.00	1.00	0.720182
204.00	1.00	0.724053
205.00	1.00	0.727927
206.00	1.00	0.731804
207.00	1.00	0.735684
208.00	1.00	0.739566
209.00	1.00	0.743452
210.00	1.00	0.747340
211.00	1.00	0.751232
212.00	1.00	0.755126
213.00	1.00	0.759023
214.00	1.00	0.762923
215.00	1.00	0.766826
216.00	1.00	0.770732
217.00	1.00	0.774641
218.00	1.00	0.778553
219.00	1.00	0.782468
220.00	1.00	0.786386
221.00	1.00	0.790307
222.00	1.00	0.794231
223.00	1.00	0.798157
224.00	1.00	0.802087
225.00	1.00	0.806020
226.00	1.00	0.809956
227.00	1.00	0.813894
228.00	1.00	0.817836
229.00	1.00	0.821781
230.00	1.00	0.825728
231.00	1.00	0.829679
232.00	1.00	0.833633
233.00	1.00	0.837589
234.00	1.00	0.841549
235.00	1.00	0.845512
236.00	1.00	0.849478
237.00	1.00	0.853447
238.00	1.00	0.857419
239.00	1.00	0.861394
240.00	1.00	0.865372
241.00	1.00	0.869353

242.00	1.00	0.873337
243.00	1.00	0.877325
244.00	1.00	0.881315
245.00	1.00	0.885308
246.00	1.00	0.889305
247.00	1.00	0.893305
248.00	1.00	0.897307
249.00	1.00	0.901313
250.00	1.00	0.905322
251.00	1.00	0.909334
252.00	1.00	0.913350
253.00	1.00	0.917368
254.00	1.00	0.921389
255.00	1.00	0.925414
256.00	1.00	0.929442
257.00	1.00	0.933473
258.00	1.00	0.937507
259.00	1.00	0.941544
260.00	1.00	0.945585
261.00	1.00	0.949628
262.00	1.00	0.953675
263.00	1.00	0.957725
264.00	1.00	0.961778
265.00	1.00	0.965835
266.00	1.00	0.969894
267.00	1.00	0.973957
268.00	1.00	0.978023
269.00	1.00	0.982092
270.00	1.00	0.986165
271.00	1.00	0.990241
272.00	1.00	0.994319
273.00	1.00	0.998402
274.00	1.00	1.002487
275.00	1.00	1.006576
276.00	1.00	1.010668
277.00	1.00	1.014763
278.00	1.00	1.018861
279.00	1.00	1.022963
280.00	1.00	1.027068
281.00	1.00	1.031176
282.00	1.00	1.035288
283.00	1.00	1.039403
284.00	1.00	1.043521
285.00	1.00	1.047642
286.00	1.00	1.051767
287.00	1.00	1.055895
288.00	1.00	1.060027
289.00	1.00	1.064162
290.00	1.00	1.068300
291.00	1.00	1.072441

292.00	1.00	1.076586
293.00	1.00	1.080735
294.00	1.00	1.084886
295.00	1.00	1.089041
296.00	1.00	1.093199
297.00	1.00	1.097361
298.00	1.00	1.101526
299.00	1.00	1.105695
300.00	1.00	1.109867
301.00	1.00	1.114042
302.00	1.00	1.118221
303.00	1.00	1.122403
304.00	1.00	1.126589
305.00	1.00	1.130778
306.00	1.00	1.134970
307.00	1.00	1.139166
308.00	1.00	1.143366
309.00	1.26	1.147200
310.00	1.55	1.150642
311.00	1.81	1.153732
312.00	2.04	1.156506
313.00	2.25	1.158998
314.00	2.44	1.161235
315.00	2.60	1.163244
316.00	2.76	1.165050
317.00	2.89	1.166672
318.00	3.01	1.168130
319.00	3.12	1.169441
320.00	3.22	1.170620
321.00	3.31	1.171681
322.00	3.39	1.172635
323.00	3.46	1.173495
324.00	3.53	1.174269
325.00	3.58	1.174966
326.00	3.64	1.175595
327.00	3.68	1.176162
328.00	3.73	1.176675
329.00	3.76	1.177137
330.00	3.80	1.177556
331.00	3.83	1.177934
332.00	3.86	1.178277
333.00	3.88	1.178588
334.00	3.91	1.178870
335.00	3.93	1.179127
336.00	3.95	1.179360
337.00	3.97	1.179573
338.00	3.98	1.179767
339.00	4.00	1.179945
340.00	4.01	1.180108
341.00	4.02	1.180258

342.00	4.03	1.180395
343.00	4.04	1.180522
344.00	4.05	1.180639
345.00	4.06	1.180748
346.00	4.07	1.180849
347.00	4.08	1.180943
348.00	4.09	1.181031
349.00	4.09	1.181114
350.00	4.10	1.181191
351.00	4.11	1.181264
352.00	4.11	1.181333
353.00	4.12	1.181399
354.00	4.12	1.181461
355.00	4.13	1.181520
356.00	4.13	1.181577
357.00	4.14	1.181632
358.00	4.14	1.181685
359.00	4.14	1.181735
360.00	4.15	1.181785
361.00	4.15	1.181832
362.00	4.16	1.181879
363.00	4.16	1.181924
364.00	4.16	1.181968
365.00	4.17	1.182011
366.00	4.17	1.182054
367.00	4.17	1.182096
368.00	4.18	1.182137
369.00	4.18	1.182177
370.00	4.18	1.182218
371.00	4.19	1.182257
372.00	4.19	1.182296
373.00	4.19	1.182335
374.00	4.19	1.182374
375.00	4.20	1.182412
376.00	4.20	1.182451
377.00	4.20	1.182489
378.00	4.21	1.182526
379.00	4.21	1.182564
380.00	4.21	1.182601
381.00	4.22	1.182639
382.00	4.22	1.182676
383.00	4.22	1.182714
384.00	4.22	1.182751
385.00	4.23	1.182788
386.00	4.23	1.182825
387.00	4.23	1.182862
388.00	4.24	1.182899
389.00	4.24	1.182937
390.00	4.24	1.182974
391.00	4.25	1.183011

392.00	4.25	1.183048
393.00	4.25	1.183085
394.00	4.25	1.183123
395.00	4.26	1.183160
396.00	4.26	1.183197
397.00	4.26	1.183235
398.00	4.27	1.183272
399.00	4.27	1.183309
400.00	4.27	1.183347
401.00	4.27	1.183385
402.00	4.28	1.183422
403.00	4.28	1.183460
404.00	4.28	1.183498
405.00	4.29	1.183536
406.00	4.29	1.183574
407.00	4.29	1.183612
408.00	4.30	1.183650
409.00	4.30	1.183688
410.00	4.30	1.183726
411.00	4.30	1.183764
412.00	4.31	1.183803
413.00	4.31	1.183841
414.00	4.31	1.183880
415.00	4.32	1.183918
416.00	4.32	1.183957
417.00	4.32	1.183996
418.00	4.33	1.184034
419.00	4.33	1.184073
420.00	4.33	1.184112
421.00	4.34	1.184151
422.00	4.34	1.184190
423.00	4.34	1.184230
424.00	4.34	1.184269
425.00	4.35	1.184308
426.00	4.35	1.184348
427.00	4.35	1.184387
428.00	4.36	1.184427
429.00	4.36	1.184467
430.00	4.36	1.184506
431.00	4.37	1.184546
432.00	4.37	1.184586
433.00	4.37	1.184626
434.00	4.38	1.184666
435.00	4.38	1.184707
436.00	4.38	1.184747
437.00	4.39	1.184787
438.00	4.39	1.184828
439.00	4.39	1.184868
440.00	4.39	1.184909
441.00	4.40	1.184950

442.00	4.40	1.184991
443.00	4.40	1.185032
444.00	4.41	1.185073
445.00	4.41	1.185114
446.00	4.41	1.185155
447.00	4.42	1.185196
448.00	4.42	1.185237
449.00	4.42	1.185279
450.00	4.43	1.185321
451.00	4.43	1.185362
452.00	4.43	1.185404
453.00	4.44	1.185446
454.00	4.44	1.185488
455.00	4.44	1.185530
456.00	4.45	1.185572
457.00	4.45	1.185614
458.00	4.45	1.185656
459.00	4.46	1.185699
460.00	4.46	1.185741
461.00	4.46	1.185784
462.00	4.47	1.185826
463.00	4.47	1.185869
464.00	4.47	1.185912
465.00	4.48	1.185955
466.00	4.48	1.185998
467.00	4.48	1.186041
468.00	4.49	1.186085
469.00	4.49	1.186128
470.00	4.49	1.186171
471.00	4.50	1.186215
472.00	4.50	1.186258
473.00	4.50	1.186302
474.00	4.51	1.186346
475.00	4.51	1.186390
476.00	4.52	1.186434
477.00	4.52	1.186478
478.00	4.52	1.186523
479.00	4.53	1.186567
480.00	4.53	1.186611
481.00	4.53	1.186656
482.00	4.54	1.186701
483.00	4.54	1.186745
484.00	4.54	1.186790
485.00	4.55	1.186835
486.00	4.55	1.186880
487.00	4.55	1.186926
488.00	4.56	1.186971
489.00	4.56	1.187016
490.00	4.56	1.187062
491.00	4.57	1.187107

492.00	4.57	1.187153
493.00	4.58	1.187199
494.00	4.58	1.187245
495.00	4.58	1.187291
496.00	4.59	1.187337
497.00	4.59	1.187383
498.00	4.59	1.187430
499.00	4.60	1.187476
500.00	4.60	1.187523
501.00	4.61	1.187570
502.00	4.61	1.187616
503.00	4.61	1.187663
504.00	4.62	1.187710
505.00	4.62	1.187757
506.00	4.62	1.187805
507.00	4.63	1.187852
508.00	4.63	1.187900
509.00	4.63	1.187947
510.00	4.64	1.187995
511.00	4.64	1.188043
512.00	4.65	1.188091
513.00	4.65	1.188139
514.00	4.65	1.188187
515.00	4.66	1.188235
516.00	4.66	1.188284
517.00	4.67	1.188332
518.00	4.67	1.188381
519.00	4.67	1.188430
520.00	4.68	1.188479
521.00	4.68	1.188528
522.00	4.68	1.188577
523.00	4.69	1.188626
524.00	4.69	1.188676
525.00	4.70	1.188725
526.00	4.70	1.188775
527.00	4.70	1.188824
528.00	4.71	1.188874
529.00	4.71	1.188924
530.00	4.72	1.188974
531.00	4.72	1.189025
532.00	4.72	1.189075
533.00	4.73	1.189126
534.00	4.73	1.189176
535.00	4.74	1.189227
536.00	4.74	1.189278
537.00	4.74	1.189329
538.00	4.75	1.189380
539.00	4.75	1.189431
540.00	4.76	1.189483
541.00	4.76	1.189534

542.00	4.76	1.189586
543.00	4.77	1.189638
544.00	4.77	1.189690
545.00	4.78	1.189742
546.00	4.78	1.189794
547.00	4.78	1.189846
548.00	4.79	1.189899
549.00	4.79	1.189951
550.00	4.80	1.190004
551.00	4.80	1.190057
552.00	4.81	1.190110
553.00	4.81	1.190163
554.00	4.81	1.190216
555.00	4.82	1.190270
556.00	4.82	1.190323
557.00	4.83	1.190377
558.00	4.83	1.190431
559.00	4.84	1.190485
560.00	4.84	1.190539
561.00	4.84	1.190593
562.00	4.85	1.190647
563.00	4.85	1.190702
564.00	4.86	1.190757
565.00	4.86	1.190812
566.00	4.87	1.190867
567.00	4.87	1.190922
568.00	4.87	1.190977
569.00	4.88	1.191032
570.00	4.88	1.191088
571.00	4.89	1.191144
572.00	4.89	1.191199
573.00	4.90	1.191256
574.00	4.90	1.191312
575.00	4.90	1.191368
576.00	4.91	1.191424
577.00	4.91	1.191481
578.00	4.92	1.191538
579.00	4.92	1.191595
580.00	4.93	1.191652
581.00	4.93	1.191709
582.00	4.94	1.191766
583.00	4.94	1.191824
584.00	4.95	1.191882
585.00	4.95	1.191940
586.00	4.95	1.191998
587.00	4.96	1.192056
588.00	4.96	1.192114
589.00	4.97	1.192173
590.00	4.97	1.192231
591.00	4.98	1.192290

592.00	4.98	1.192349
593.00	4.99	1.192408
594.00	4.99	1.192468
595.00	5.00	1.192527
596.00	5.00	1.192587
597.00	5.01	1.192647
598.00	5.01	1.192707
599.00	5.02	1.192767
600.00	5.02	1.192827
601.00	5.02	1.192887
602.00	5.03	1.192948
603.00	5.03	1.193009
604.00	5.04	1.193070
605.00	5.04	1.193131
606.00	5.05	1.193193
607.00	5.05	1.193254
608.00	5.06	1.193316
609.00	5.06	1.193378
610.00	5.07	1.193440
611.00	5.07	1.193502
612.00	5.08	1.193564
613.00	5.08	1.193627
614.00	5.09	1.193690
615.00	5.09	1.193753
616.00	5.10	1.193816
617.00	5.10	1.193879
618.00	5.11	1.193943
619.00	5.11	1.194006
620.00	5.12	1.194070
621.00	5.12	1.194134
622.00	5.13	1.194198
623.00	5.13	1.194263
624.00	5.14	1.194328
625.00	5.14	1.194392
626.00	5.15	1.194457
627.00	5.15	1.194523
628.00	5.16	1.194588
629.00	5.16	1.194654
630.00	5.17	1.194719
631.00	5.17	1.194785
632.00	5.18	1.194852
633.00	5.19	1.194918
634.00	5.19	1.194984
635.00	5.20	1.195051
636.00	5.20	1.195118
637.00	5.21	1.195185
638.00	5.21	1.195253
639.00	5.22	1.195320
640.00	5.22	1.195388
641.00	5.23	1.195456

642.00	5.23	1.195524
643.00	5.24	1.195593
644.00	5.24	1.195661
645.00	5.25	1.195730
646.00	5.25	1.195799
647.00	5.26	1.195868
648.00	5.27	1.195938
649.00	5.27	1.196008
650.00	5.28	1.196078
651.00	5.28	1.196148
652.00	5.29	1.196218
653.00	5.29	1.196289
654.00	5.30	1.196359
655.00	5.30	1.196430
656.00	5.31	1.196502
657.00	5.32	1.196573
658.00	5.32	1.196645
659.00	5.33	1.196717
660.00	5.33	1.196789
661.00	5.34	1.196861
662.00	5.34	1.196934
663.00	5.35	1.197006
664.00	5.36	1.197079
665.00	5.36	1.197153
666.00	5.37	1.197226
667.00	5.37	1.197300
668.00	5.38	1.197374
669.00	5.38	1.197448
670.00	5.39	1.197523
671.00	5.40	1.197597
672.00	5.40	1.197672
673.00	5.41	1.197747
674.00	5.41	1.197823
675.00	5.42	1.197898
676.00	5.43	1.197974
677.00	5.43	1.198050
678.00	5.44	1.198127
679.00	5.44	1.198204
680.00	5.45	1.198280
681.00	5.46	1.198358
682.00	5.46	1.198435
683.00	5.47	1.198513
684.00	5.47	1.198591
685.00	5.48	1.198669
686.00	5.49	1.198747
687.00	5.49	1.198826
688.00	5.50	1.198905
689.00	5.51	1.198984
690.00	5.51	1.199064
691.00	5.52	1.199144

692.00	5.52	1.199224
693.00	5.53	1.199304
694.00	5.54	1.199385
695.00	5.54	1.199465
696.00	5.55	1.199547
697.00	5.56	1.199628
698.00	5.56	1.199710
699.00	5.57	1.199792
700.00	5.58	1.199874
701.00	5.58	1.199957
702.00	5.59	1.200039
703.00	5.60	1.200122
704.00	5.60	1.200205
705.00	5.61	1.200288
706.00	5.62	1.200370
707.00	5.62	1.200452
708.00	5.63	1.200533
709.00	5.63	1.200614
710.00	5.64	1.200695
711.00	5.65	1.200776
712.00	5.65	1.200857
713.00	5.66	1.200938
714.00	5.67	1.201018
715.00	5.67	1.201099
716.00	5.68	1.201180
717.00	5.69	1.201261
718.00	5.69	1.201342
719.00	5.70	1.201423
720.00	5.70	1.201504
721.00	5.71	1.201585
722.00	5.72	1.201667
723.00	5.72	1.201748
724.00	5.73	1.201830
725.00	5.74	1.201912
726.00	5.74	1.201994
727.00	5.75	1.202076
728.00	5.76	1.202159
729.00	5.76	1.202242
730.00	5.77	1.202325
731.00	5.78	1.202408
732.00	5.78	1.202492
733.00	5.79	1.202576
734.00	5.80	1.202660
735.00	5.80	1.202744
736.00	5.81	1.202829
737.00	5.82	1.202914
738.00	5.82	1.202999
739.00	5.83	1.203085
740.00	5.84	1.203170
741.00	5.84	1.203256

742.00	5.85	1.203343
743.00	5.86	1.203429
744.00	5.86	1.203516
745.00	5.87	1.203604
746.00	5.88	1.203691
747.00	5.88	1.203779
748.00	5.89	1.203867
749.00	5.90	1.203956
750.00	5.91	1.204045
751.00	5.91	1.204134
752.00	5.92	1.204223
753.00	5.93	1.204313
754.00	5.93	1.204403
755.00	5.94	1.204494
756.00	5.95	1.204584
757.00	5.96	1.204675
758.00	5.96	1.204767
759.00	5.97	1.204859
760.00	5.98	1.204951
761.00	5.98	1.205043
762.00	5.99	1.205136
763.00	6.00	1.205229
764.00	6.01	1.205323
765.00	6.01	1.205417
766.00	6.02	1.205511
767.00	6.03	1.205606
768.00	6.04	1.205700
769.00	6.04	1.205796
770.00	6.05	1.205891
771.00	6.06	1.205987
772.00	6.07	1.206084
773.00	6.07	1.206181
774.00	6.08	1.206278
775.00	6.09	1.206375
776.00	6.10	1.206473
777.00	6.10	1.206572
778.00	6.11	1.206670
779.00	6.12	1.206769
780.00	6.13	1.206869
781.00	6.14	1.206969
782.00	6.14	1.207069
783.00	6.15	1.207169
784.00	6.16	1.207271
785.00	6.17	1.207372
786.00	6.18	1.207474
787.00	6.18	1.207576
788.00	6.19	1.207679
789.00	6.20	1.207782
790.00	6.21	1.207885
791.00	6.22	1.207989

792.00	6.22	1.208094
793.00	6.23	1.208198
794.00	6.24	1.208304
795.00	6.25	1.208409
796.00	6.26	1.208515
797.00	6.27	1.208622
798.00	6.27	1.208729
799.00	6.28	1.208836
800.00	6.29	1.208944
801.00	6.30	1.209052
802.00	6.31	1.209161
803.00	6.32	1.209270
804.00	6.33	1.209380
805.00	6.34	1.209490
806.00	6.34	1.209601
807.00	6.35	1.209712
808.00	6.36	1.209824
809.00	6.37	1.209936
810.00	6.38	1.210048
811.00	6.39	1.210161
812.00	6.40	1.210275
813.00	6.41	1.210389
814.00	6.41	1.210503
815.00	6.42	1.210618
816.00	6.43	1.210733
817.00	6.44	1.210849
818.00	6.45	1.210966
819.00	6.46	1.211083
820.00	6.47	1.211200
821.00	6.48	1.211318
822.00	6.49	1.211437
823.00	6.50	1.211556
824.00	6.51	1.211676
825.00	6.52	1.211796
826.00	6.53	1.211917
827.00	6.54	1.212038
828.00	6.55	1.212159
829.00	6.56	1.212282
830.00	6.56	1.212405
831.00	6.57	1.212528
832.00	6.58	1.212652
833.00	6.59	1.212777
834.00	6.60	1.212902
835.00	6.61	1.213027
836.00	6.62	1.213154
837.00	6.63	1.213281
838.00	6.64	1.213408
839.00	6.65	1.213536
840.00	6.66	1.213665
841.00	6.67	1.213794

842.00	6.68	1.213924
843.00	6.69	1.214054
844.00	6.71	1.214186
845.00	6.72	1.214317
846.00	6.73	1.214450
847.00	6.74	1.214583
848.00	6.75	1.214716
849.00	6.76	1.214851
850.00	6.77	1.214986
851.00	6.78	1.215121
852.00	6.79	1.215257
853.00	6.80	1.215394
854.00	6.81	1.215532
855.00	6.82	1.215670
856.00	6.83	1.215809
857.00	6.84	1.215949
858.00	6.86	1.216089
859.00	6.87	1.216230
860.00	6.88	1.216372
861.00	6.89	1.216514
862.00	6.90	1.216657
863.00	6.91	1.216801
864.00	6.92	1.216946
865.00	6.93	1.217091
866.00	6.95	1.217237
867.00	6.96	1.217384
868.00	6.97	1.217532
869.00	6.98	1.217680
870.00	6.99	1.217829
871.00	7.00	1.217979
872.00	7.02	1.218130
873.00	7.03	1.218281
874.00	7.04	1.218434
875.00	7.05	1.218587
876.00	7.06	1.218741
877.00	7.08	1.218895
878.00	7.09	1.219051
879.00	7.10	1.219207
880.00	7.11	1.219364
881.00	7.13	1.219522
882.00	7.14	1.219681
883.00	7.15	1.219841
884.00	7.16	1.220002
885.00	7.18	1.220163
886.00	7.19	1.220326
887.00	7.20	1.220489
888.00	7.22	1.220653
889.00	7.23	1.220818
890.00	7.24	1.220984
891.00	7.25	1.221151

892.00	7.27	1.221319
893.00	7.28	1.221487
894.00	7.29	1.221657
895.00	7.31	1.221828
896.00	7.32	1.222000
897.00	7.33	1.222172
898.00	7.35	1.222346
899.00	7.36	1.222520
900.00	7.38	1.222696
901.00	7.39	1.222873
902.00	7.40	1.223050
903.00	7.42	1.223229
904.00	7.43	1.223409
905.00	7.45	1.223590
906.00	7.46	1.223772
907.00	7.48	1.223955
908.00	7.49	1.224139
909.00	7.50	1.224324
910.00	7.52	1.224510
911.00	7.53	1.224698
912.00	7.55	1.224886
913.00	7.56	1.225076
914.00	7.58	1.225267
915.00	7.59	1.225459
916.00	7.61	1.225652
917.00	7.62	1.225846
918.00	7.64	1.226042
919.00	7.66	1.226239
920.00	7.67	1.226437
921.00	7.69	1.226636
922.00	7.70	1.226836
923.00	7.72	1.227038
924.00	7.73	1.227241
925.00	7.75	1.227446
926.00	7.77	1.227652
927.00	7.78	1.227858
928.00	7.80	1.228067
929.00	7.82	1.228277
930.00	7.83	1.228488
931.00	7.85	1.228700
932.00	7.87	1.228914
933.00	7.88	1.229129
934.00	7.90	1.229346
935.00	7.92	1.229564
936.00	7.93	1.229784
937.00	7.95	1.230005
938.00	7.97	1.230227
939.00	7.99	1.230451
940.00	8.00	1.230677
941.00	8.02	1.230904

942.00	8.04	1.231133
943.00	8.06	1.231363
944.00	8.08	1.231595
945.00	8.10	1.231829
946.00	8.11	1.232064
947.00	8.13	1.232301
948.00	8.15	1.232539
949.00	8.17	1.232780
950.00	8.19	1.233022
951.00	8.21	1.233265
952.00	8.23	1.233511
953.00	8.25	1.233758
954.00	8.27	1.234007
955.00	8.29	1.234258
956.00	8.31	1.234510
957.00	8.33	1.234765
958.00	8.35	1.235021
959.00	8.37	1.235280
960.00	8.39	1.235540
961.00	8.41	1.235802
962.00	8.43	1.236067
963.00	8.45	1.236333
964.00	8.47	1.236601
965.00	8.49	1.236872
966.00	8.51	1.237144
967.00	8.54	1.237419
968.00	8.56	1.237695
969.00	8.58	1.237974
970.00	8.60	1.238255
971.00	8.62	1.238539
972.00	8.65	1.238824
973.00	8.67	1.239112
974.00	8.69	1.239402
975.00	8.72	1.239695
976.00	8.74	1.239990
977.00	8.76	1.240287
978.00	8.79	1.240587
979.00	8.81	1.240890
980.00	8.83	1.241195
981.00	8.86	1.241502
982.00	8.88	1.241812
983.00	8.91	1.242124
984.00	8.93	1.242440
985.00	8.96	1.242758
986.00	8.98	1.243078
987.00	9.01	1.243402
988.00	9.03	1.243728
989.00	9.06	1.244058
990.00	9.08	1.244390
991.00	9.11	1.244725

992.00	9.14	1.245063
993.00	9.16	1.245404
994.00	9.19	1.245748
995.00	9.22	1.246096
996.00	9.25	1.246446
997.00	9.27	1.246800
998.00	9.30	1.247157
999.00	9.33	1.247518
1000.00	9.36	1.247881
1001.00	9.39	1.248248
1002.00	9.42	1.248619
1003.00	9.45	1.248993
1004.00	9.48	1.249369
1005.00	9.51	1.249748
1006.00	9.54	1.250128
1007.00	9.57	1.250511
1008.00	9.60	1.250897
1009.00	9.63	1.251286
1010.00	9.66	1.251677
1011.00	9.69	1.252072
1012.00	9.72	1.252470
1013.00	9.75	1.252871
1014.00	9.78	1.253276
1015.00	9.82	1.253684
1016.00	9.85	1.254096
1017.00	9.88	1.254512
1018.00	9.91	1.254931
1019.00	9.95	1.255355
1020.00	9.98	1.255783
1021.00	10.02	1.256215
1022.00	10.05	1.256652
1023.00	10.08	1.257093
1024.00	10.12	1.257538
1025.00	10.15	1.257988
1026.00	10.19	1.258443
1027.00	10.23	1.258903
1028.00	10.26	1.259368
1029.00	10.30	1.259838
1030.00	10.34	1.260313
1031.00	10.38	1.260794
1032.00	10.41	1.261280
1033.00	10.45	1.261771
1034.00	10.49	1.262268
1035.00	10.53	1.262771
1036.00	10.57	1.263279
1037.00	10.61	1.263794
1038.00	10.65	1.264315
1039.00	10.69	1.264842
1040.00	10.74	1.265376
1041.00	10.78	1.265916

1042.00	10.82	1.266463
1043.00	10.86	1.267016
1044.00	10.91	1.267577
1045.00	10.95	1.268144
1046.00	11.00	1.268719
1047.00	11.04	1.269302
1048.00	11.09	1.269892
1049.00	11.14	1.270489
1050.00	11.18	1.271095
1051.00	11.23	1.271709
1052.00	11.28	1.272331
1053.00	11.33	1.272962
1054.00	11.38	1.273601
1055.00	11.43	1.274249
1056.00	11.48	1.274906
1057.00	11.54	1.275573
1058.00	11.59	1.276249
1059.00	11.64	1.276935
1060.00	11.70	1.277632
1061.00	11.75	1.278338
1062.00	11.81	1.279055
1063.00	11.87	1.279783
1064.00	11.92	1.280522
1065.00	11.98	1.281272
1066.00	12.04	1.282034
1067.00	12.10	1.282807
1068.00	12.17	1.283593
1069.00	12.23	1.284392
1070.00	12.29	1.285204
1071.00	12.36	1.286029
1072.00	12.42	1.286868
1073.00	12.49	1.287721
1074.00	12.56	1.288588
1075.00	12.63	1.289471
1076.00	12.70	1.290369
1077.00	12.77	1.291282
1078.00	12.84	1.292212
1079.00	12.91	1.293159
1080.00	12.99	1.294122
1081.00	13.07	1.295104
1082.00	13.15	1.296105
1083.00	13.23	1.297124
1084.00	13.31	1.298163
1085.00	13.39	1.299222
1086.00	13.47	1.300302
1087.00	13.56	1.301403
1088.00	13.65	1.302527
1089.00	13.74	1.303675
1090.00	13.83	1.304846
1091.00	13.92	1.306042

1092.00	14.02	1.307264
1093.00	14.12	1.308512
1094.00	14.22	1.309788
1095.00	14.32	1.311093
1096.00	14.42	1.312428
1097.00	14.53	1.313794
1098.00	14.64	1.315192
1099.00	14.75	1.316623
1100.00	14.86	1.318087
1101.00	14.98	1.319584
1102.00	15.10	1.321115
1103.00	15.22	1.322683
1104.00	15.35	1.324288
1105.00	15.48	1.325934
1106.00	15.61	1.327623
1107.00	15.74	1.329355
1108.00	15.88	1.331135
1109.00	16.03	1.332963
1110.00	16.17	1.334843
1111.00	16.32	1.336778
1112.00	16.48	1.338770
1113.00	16.64	1.340823
1114.00	16.80	1.342940
1115.00	16.97	1.345124
1116.00	17.15	1.347379
1117.00	17.33	1.349711
1118.00	17.52	1.352122
1119.00	17.71	1.354619
1120.00	17.91	1.357206
1121.00	18.12	1.359886
1122.00	18.34	1.362665
1123.00	18.56	1.365549
1124.00	18.79	1.368545
1125.00	19.03	1.371663
1126.00	19.28	1.374910
1127.00	19.55	1.378299
1128.00	19.82	1.381840
1129.00	20.11	1.385545
1130.00	20.41	1.389429
1131.00	20.72	1.393509
1132.00	21.16	1.397653
1133.00	21.98	1.401382
1134.00	22.73	1.404844
1135.00	23.43	1.408155
1136.00	24.12	1.411409
1137.00	24.80	1.414684
1138.00	25.49	1.418047
1139.00	26.20	1.421562
1140.00	26.96	1.425287
1141.00	27.76	1.429280

1142.00	28.63	1.433605
1143.00	29.57	1.438344
1144.00	30.61	1.443597
1145.00	31.77	1.449495
1146.00	33.08	1.456213
1147.00	34.59	1.463989
1148.00	36.35	1.473154
1149.00	38.47	1.484269
1150.00	41.09	1.498397
1151.00	44.60	1.517989
1152.00	51.19	1.561741
1153.00	59.67	1.606097
1154.00	65.91	1.640935
1155.00	70.55	1.664960
1156.00	73.41	1.677261
1157.00	73.94	1.674482
1158.00	71.92	1.661606
1159.00	67.66	1.634589
1160.00	62.09	1.599246
1161.00	55.75	1.561769
1162.00	48.32	1.528445
1163.00	42.00	1.501076
1164.00	36.83	1.478781
1165.00	32.62	1.460640
1166.00	29.20	1.445855
1167.00	26.40	1.433758
1168.00	24.11	1.423814
1169.00	22.22	1.415590
1170.00	20.84	1.408469
1171.00	20.28	1.401406
1172.00	19.73	1.394458
1173.00	19.18	1.387669
1174.00	18.65	1.381071
1175.00	18.14	1.374685
1176.00	17.65	1.368526
1177.00	17.17	1.362601
1178.00	16.71	1.356915
1179.00	16.27	1.351466
1180.00	15.85	1.346254
1181.00	15.45	1.341272
1182.00	15.06	1.336516
1183.00	14.69	1.331977
1184.00	14.34	1.327650
1185.00	14.01	1.323524
1186.00	13.69	1.319591
1187.00	13.39	1.315843
1188.00	13.10	1.312272
1189.00	12.82	1.308868
1190.00	12.56	1.305623
1191.00	12.31	1.302528

1192.00	12.07	1.299577
1193.00	11.84	1.296761
1194.00	11.62	1.294071
1195.00	11.42	1.291496
1196.00	11.22	1.289031
1197.00	11.03	1.286670
1198.00	10.84	1.284407
1199.00	10.67	1.282237
1200.00	10.50	1.280157
1201.00	10.34	1.278160
1202.00	10.18	1.276244
1203.00	10.04	1.274403
1204.00	9.89	1.272634
1205.00	9.76	1.270933
1206.00	9.62	1.269296
1207.00	9.50	1.267721
1208.00	9.38	1.266204
1209.00	9.26	1.264741
1210.00	9.14	1.263331
1211.00	9.03	1.261971
1212.00	8.93	1.260657
1213.00	8.83	1.259388
1214.00	8.73	1.258162
1215.00	8.63	1.256976
1216.00	8.54	1.255828
1217.00	8.45	1.254717
1218.00	8.37	1.253641
1219.00	8.28	1.252598
1220.00	8.20	1.251586
1221.00	8.12	1.250605
1222.00	8.05	1.249652
1223.00	7.97	1.248726
1224.00	7.90	1.247827
1225.00	7.83	1.246952
1226.00	7.76	1.246101
1227.00	7.69	1.245274
1228.00	7.63	1.244467
1229.00	7.57	1.243682
1230.00	7.51	1.242917
1231.00	7.45	1.242171
1232.00	7.39	1.241443
1233.00	7.33	1.240733
1234.00	7.28	1.240040
1235.00	7.22	1.239363
1236.00	7.17	1.238702
1237.00	7.12	1.238056
1238.00	7.07	1.237424
1239.00	7.02	1.236807
1240.00	6.97	1.236202
1241.00	6.92	1.235611

1242.00	6.87	1.235032
1243.00	6.83	1.234465
1244.00	6.79	1.233910
1245.00	6.74	1.233366
1246.00	6.70	1.232832
1247.00	6.66	1.232310
1248.00	6.62	1.231797
1249.00	6.58	1.231294
1250.00	6.54	1.230800
1251.00	6.50	1.230316
1252.00	6.46	1.229840
1253.00	6.42	1.229374
1254.00	6.39	1.228915
1255.00	6.35	1.228465
1256.00	6.32	1.228022
1257.00	6.28	1.227587
1258.00	6.25	1.227159
1259.00	6.21	1.226739
1260.00	6.18	1.226325
1261.00	6.15	1.225919
1262.00	6.12	1.225518
1263.00	6.08	1.225125
1264.00	6.05	1.224737
1265.00	6.02	1.224356
1266.00	5.99	1.223980
1267.00	5.96	1.223611
1268.00	5.93	1.223246
1269.00	5.91	1.222886
1270.00	5.88	1.222528
1271.00	5.85	1.222172
1272.00	5.82	1.221820
1273.00	5.79	1.221470
1274.00	5.77	1.221123
1275.00	5.74	1.220779
1276.00	5.71	1.220439
1277.00	5.69	1.220102
1278.00	5.66	1.219768
1279.00	5.63	1.219438
1280.00	5.61	1.219111
1281.00	5.58	1.218788
1282.00	5.56	1.218468
1283.00	5.53	1.218152
1284.00	5.51	1.217839
1285.00	5.48	1.217531
1286.00	5.46	1.217225
1287.00	5.43	1.216923
1288.00	5.41	1.216625
1289.00	5.39	1.216329
1290.00	5.36	1.216038
1291.00	5.34	1.215750

1292.00	5.32	1.215465
1293.00	5.29	1.215183
1294.00	5.27	1.214905
1295.00	5.25	1.214630
1296.00	5.23	1.214358
1297.00	5.21	1.214089
1298.00	5.19	1.213823
1299.00	5.17	1.213561
1300.00	5.14	1.213301
1301.00	5.12	1.213044
1302.00	5.10	1.212791
1303.00	5.08	1.212540
1304.00	5.06	1.212292
1305.00	5.05	1.212046
1306.00	5.03	1.211804
1307.00	5.01	1.211564
1308.00	4.99	1.211326
1309.00	4.97	1.211092
1310.00	4.95	1.210860
1311.00	4.93	1.210630
1312.00	4.91	1.210403
1313.00	4.90	1.210178
1314.00	4.88	1.209955
1315.00	4.86	1.209735
1316.00	4.84	1.209518
1317.00	4.83	1.209302
1318.00	4.81	1.209089
1319.00	4.79	1.208878
1320.00	4.78	1.208669
1321.00	4.76	1.208462
1322.00	4.74	1.208257
1323.00	4.73	1.208055
1324.00	4.71	1.207854
1325.00	4.70	1.207656
1326.00	4.68	1.207459
1327.00	4.67	1.207264
1328.00	4.65	1.207071
1329.00	4.63	1.206880
1330.00	4.62	1.206691
1331.00	4.60	1.206504
1332.00	4.59	1.206318
1333.00	4.58	1.206134
1334.00	4.56	1.205952
1335.00	4.55	1.205772
1336.00	4.53	1.205593
1337.00	4.52	1.205416
1338.00	4.50	1.205241
1339.00	4.49	1.205067
1340.00	4.48	1.204894
1341.00	4.46	1.204724

1342.00	4.45	1.204554
1343.00	4.44	1.204387
1344.00	4.42	1.204221
1345.00	4.41	1.204056
1346.00	4.40	1.203893
1347.00	4.38	1.203731
1348.00	4.37	1.203570
1349.00	4.36	1.203411
1350.00	4.35	1.203253
1351.00	4.33	1.203097
1352.00	4.32	1.202942
1353.00	4.31	1.202788
1354.00	4.30	1.202636
1355.00	4.29	1.202484
1356.00	4.27	1.202334
1357.00	4.26	1.202186
1358.00	4.25	1.202038
1359.00	4.24	1.201892
1360.00	4.23	1.201747
1361.00	4.22	1.201603
1362.00	4.20	1.201460
1363.00	4.19	1.201318
1364.00	4.18	1.201178
1365.00	4.17	1.201038
1366.00	4.16	1.200900
1367.00	4.15	1.200763
1368.00	4.14	1.200627
1369.00	4.13	1.200491
1370.00	4.12	1.200357
1371.00	4.11	1.200224
1372.00	4.10	1.200092
1373.00	4.09	1.199961
1374.00	4.08	1.199831
1375.00	4.06	1.199702
1376.00	4.05	1.199574
1377.00	4.04	1.199447
1378.00	4.03	1.199321
1379.00	4.02	1.199195
1380.00	4.01	1.199071
1381.00	4.00	1.198947
1382.00	4.00	1.198825
1383.00	3.99	1.198703
1384.00	3.98	1.198582
1385.00	3.97	1.198462
1386.00	3.96	1.198343
1387.00	3.95	1.198225
1388.00	3.94	1.198108
1389.00	3.93	1.197991
1390.00	3.92	1.197875
1391.00	3.91	1.197760

1392.00	3.90	1.197646
1393.00	3.89	1.197532
1394.00	3.88	1.197420
1395.00	3.87	1.197308
1396.00	3.87	1.197197
1397.00	3.86	1.197087
1398.00	3.85	1.196977
1399.00	3.84	1.196868
1400.00	3.83	1.196760
1401.00	3.82	1.196653
1402.00	3.81	1.196546
1403.00	3.81	1.196440
1404.00	3.80	1.196335
1405.00	3.79	1.196230
1406.00	3.78	1.196126
1407.00	3.77	1.196023
1408.00	3.76	1.195920
1409.00	3.76	1.195818
1410.00	3.75	1.195717
1411.00	3.74	1.195616
1412.00	3.73	1.195516
1413.00	3.72	1.195417
1414.00	3.72	1.195318
1415.00	3.71	1.195220
1416.00	3.70	1.195122
1417.00	3.69	1.195026
1418.00	3.69	1.194929
1419.00	3.68	1.194833
1420.00	3.67	1.194738
1421.00	3.66	1.194644
1422.00	3.66	1.194550
1423.00	3.65	1.194456
1424.00	3.64	1.194364
1425.00	3.63	1.194273
1426.00	3.63	1.194184
1427.00	3.62	1.194095
1428.00	3.61	1.194008
1429.00	3.61	1.193922
1430.00	3.60	1.193837
1431.00	3.59	1.193752
1432.00	3.59	1.193669
1433.00	3.58	1.193586
1434.00	3.57	1.193504
1435.00	3.57	1.193423
1436.00	3.56	1.193343
1437.00	3.55	1.193263
1438.00	3.55	1.193184
1439.00	3.54	1.193105
1440.00	3.54	1.193027
1441.00	3.50	1.192262

1442.00	3.42	1.190882
1443.00	3.29	1.188951
1444.00	3.11	1.186529
1445.00	2.91	1.183665
1446.00	2.67	1.180619
1447.00	2.43	1.177526
1448.00	2.19	1.174632
1449.00	1.97	1.171917
1450.00	1.77	1.169483
1451.00	1.59	1.167299
1452.00	1.42	1.165341
1453.00	1.27	1.163586
1454.00	1.14	1.162011
1455.00	1.03	1.160599
1456.00	1.00	1.159226
1457.00	1.00	1.157852
1458.00	1.00	1.156478
1459.00	1.00	1.155104
1460.00	1.00	1.153730
1461.00	1.00	1.152356
1462.00	1.00	1.150983
1463.00	1.00	1.149609
1464.00	1.00	1.148235
1465.00	1.00	1.146861
1466.00	1.00	1.145487
1467.00	1.00	1.144113
1468.00	1.00	1.142740
1469.00	1.00	1.141366
1470.00	1.00	1.139992
1471.00	1.00	1.138618
1472.00	1.00	1.137244
1473.00	1.00	1.135871
1474.00	1.00	1.134497
1475.00	1.00	1.133123
1476.00	1.00	1.131749
1477.00	1.00	1.130375
1478.00	1.00	1.129001
1479.00	1.00	1.127628
1480.00	1.00	1.126254
1481.00	1.00	1.124880
1482.00	1.00	1.123506
1483.00	1.00	1.122132
1484.00	1.00	1.120758
1485.00	1.00	1.119385
1486.00	1.00	1.118011
1487.00	1.00	1.116637
1488.00	1.00	1.115263
1489.00	1.00	1.113889
1490.00	1.00	1.112516
1491.00	1.00	1.111142

1492.00	1.00	1.109768
1493.00	1.00	1.108394
1494.00	1.00	1.107020
1495.00	1.00	1.105646
1496.00	1.00	1.104273
1497.00	1.00	1.102899
1498.00	1.00	1.101525
1499.00	1.00	1.100151
1500.00	1.00	1.098777
1501.00	1.00	1.097403
1502.00	1.00	1.096030
1503.00	1.00	1.094656
1504.00	1.00	1.093282
1505.00	1.00	1.091908
1506.00	1.00	1.090534
1507.00	1.00	1.089161
1508.00	1.00	1.087787
1509.00	1.00	1.086413
1510.00	1.00	1.085039
1511.00	1.00	1.083665
1512.00	1.00	1.082291
1513.00	1.00	1.080918
1514.00	1.00	1.079544
1515.00	1.00	1.078170
1516.00	1.00	1.076796
1517.00	1.00	1.075422
1518.00	1.00	1.074048
1519.00	1.00	1.072675
1520.00	1.00	1.071301
1521.00	1.00	1.069927
1522.00	1.00	1.068553
1523.00	1.00	1.067179
1524.00	1.00	1.065806
1525.00	1.00	1.064432
1526.00	1.00	1.063058
1527.00	1.00	1.061684
1528.00	1.00	1.060310
1529.00	1.00	1.058936
1530.00	1.00	1.057563
1531.00	1.00	1.056189
1532.00	1.00	1.054815
1533.00	1.00	1.053441
1534.00	1.00	1.052067
1535.00	1.00	1.050693
1536.00	1.00	1.049320
1537.00	1.00	1.047946
1538.00	1.00	1.046572
1539.00	1.00	1.045198
1540.00	1.00	1.043824
1541.00	1.00	1.042450

1542.00	1.00	1.041077
1543.00	1.00	1.039703
1544.00	1.00	1.038329
1545.00	1.00	1.036955
1546.00	1.00	1.035581
1547.00	1.00	1.034208
1548.00	1.00	1.032834
1549.00	1.00	1.031460
1550.00	1.00	1.030086
1551.00	1.00	1.028712
1552.00	1.00	1.027338
1553.00	1.00	1.025965
1554.00	1.00	1.024591
1555.00	1.00	1.023217
1556.00	1.00	1.021843
1557.00	1.00	1.020469
1558.00	1.00	1.019095
1559.00	1.00	1.017722
1560.00	1.00	1.016348
1561.00	1.00	1.014974
1562.00	1.00	1.013600
1563.00	1.00	1.012226
1564.00	1.00	1.010853
1565.00	1.00	1.009479
1566.00	1.00	1.008105
1567.00	1.00	1.006731
1568.00	1.00	1.005357
1569.00	1.00	1.003983
1570.00	1.00	1.002610
1571.00	1.00	1.001236
1572.00	1.00	0.999862
1573.00	1.00	0.998488
1574.00	1.00	0.997114
1575.00	1.00	0.995740
1576.00	1.00	0.994367
1577.00	1.00	0.992993
1578.00	1.00	0.991619
1579.00	1.00	0.990245
1580.00	1.00	0.988871
1581.00	1.00	0.987498
1582.00	1.00	0.986124
1583.00	1.00	0.984750
1584.00	1.00	0.983376
1585.00	1.00	0.982002
1586.00	1.00	0.980628
1587.00	1.00	0.979255
1588.00	1.00	0.977881
1589.00	1.00	0.976507
1590.00	1.00	0.975133
1591.00	1.00	0.973759

1592.00	1.00	0.972385
1593.00	1.00	0.971012
1594.00	1.00	0.969638
1595.00	1.00	0.968264
1596.00	1.00	0.966890
1597.00	1.00	0.965516
1598.00	1.00	0.964143
1599.00	1.00	0.962769
1600.00	1.00	0.961395
1601.00	1.00	0.960021
1602.00	1.00	0.958647
1603.00	1.00	0.957273
1604.00	1.00	0.955900
1605.00	1.00	0.954526
1606.00	1.00	0.953152
1607.00	1.00	0.951778
1608.00	1.00	0.950404
1609.00	1.00	0.949030
1610.00	1.00	0.947657
1611.00	1.00	0.946283
1612.00	1.00	0.944909
1613.00	1.00	0.943535
1614.00	1.00	0.942161
1615.00	1.00	0.940788
1616.00	1.00	0.939414
1617.00	1.00	0.938040
1618.00	1.00	0.936666
1619.00	1.00	0.935292
1620.00	1.00	0.933918
1621.00	1.00	0.932545
1622.00	1.00	0.931171
1623.00	1.00	0.929797
1624.00	1.00	0.928423
1625.00	1.00	0.927049
1626.00	1.00	0.925675
1627.00	1.00	0.924302
1628.00	1.00	0.922928
1629.00	1.00	0.921554
1630.00	1.00	0.920180
1631.00	1.00	0.918806
1632.00	1.00	0.917433
1633.00	1.00	0.916059
1634.00	1.00	0.914685
1635.00	1.00	0.913311
1636.00	1.00	0.911937
1637.00	1.00	0.910563
1638.00	1.00	0.909190
1639.00	1.00	0.907816
1640.00	1.00	0.906442
1641.00	1.00	0.905068

1642.00	1.00	0.903694
1643.00	1.00	0.902320
1644.00	1.00	0.900947
1645.00	1.00	0.899573
1646.00	1.00	0.898199
1647.00	1.00	0.896825
1648.00	1.00	0.895451
1649.00	1.00	0.894078
1650.00	1.00	0.892704
1651.00	1.00	0.891330
1652.00	1.00	0.889956
1653.00	1.00	0.888582
1654.00	1.00	0.887208
1655.00	1.00	0.885835
1656.00	1.00	0.884461
1657.00	1.00	0.883087
1658.00	1.00	0.881713
1659.00	1.00	0.880339
1660.00	1.00	0.878965
1661.00	1.00	0.877592
1662.00	1.00	0.876218
1663.00	1.00	0.874844
1664.00	1.00	0.873470
1665.00	1.00	0.872096
1666.00	1.00	0.870723
1667.00	1.00	0.869349
1668.00	1.00	0.867975
1669.00	1.00	0.866601
1670.00	1.00	0.865227
1671.00	1.00	0.863853
1672.00	1.00	0.862480
1673.00	1.00	0.861106
1674.00	1.00	0.859732
1675.00	1.00	0.858358
1676.00	1.00	0.856984
1677.00	1.00	0.855610
1678.00	1.00	0.854237
1679.00	1.00	0.852863
1680.00	1.00	0.851489
1681.00	1.00	0.850115
1682.00	1.00	0.848741
1683.00	1.00	0.847368
1684.00	1.00	0.845994
1685.00	1.00	0.844620
1686.00	1.00	0.843246
1687.00	1.00	0.841872
1688.00	1.00	0.840498
1689.00	1.00	0.839125
1690.00	1.00	0.837751
1691.00	1.00	0.836377

1692.00	1.00	0.835003
1693.00	1.00	0.833629
1694.00	1.00	0.832255
1695.00	1.00	0.830882
1696.00	1.00	0.829508
1697.00	1.00	0.828134
1698.00	1.00	0.826760
1699.00	1.00	0.825386
1700.00	1.00	0.824013
1701.00	1.00	0.822639
1702.00	1.00	0.821265
1703.00	1.00	0.819891
1704.00	1.00	0.818517
1705.00	1.00	0.817143
1706.00	1.00	0.815770
1707.00	1.00	0.814396
1708.00	1.00	0.813022
1709.00	1.00	0.811648
1710.00	1.00	0.810274
1711.00	1.00	0.808900
1712.00	1.00	0.807527
1713.00	1.00	0.806153
1714.00	1.00	0.804779
1715.00	1.00	0.803405
1716.00	1.00	0.802031
1717.00	1.00	0.800658
1718.00	1.00	0.799284
1719.00	1.00	0.797910
1720.00	1.00	0.796536
1721.00	1.00	0.795162
1722.00	1.00	0.793788
1723.00	1.00	0.792415
1724.00	1.00	0.791041
1725.00	1.00	0.789667
1726.00	1.00	0.788293
1727.00	1.00	0.786919
1728.00	1.00	0.785545
1729.00	1.00	0.784172
1730.00	1.00	0.782798
1731.00	1.00	0.781424
1732.00	1.00	0.780050
1733.00	1.00	0.778676
1734.00	1.00	0.777303
1735.00	1.00	0.775929
1736.00	1.00	0.774555
1737.00	1.00	0.773181
1738.00	1.00	0.771807
1739.00	1.00	0.770433
1740.00	1.00	0.769060
1741.00	1.00	0.767686

1742.00	1.00	0.766312
1743.00	1.00	0.764938
1744.00	1.00	0.763564
1745.00	1.00	0.762190
1746.00	1.00	0.760817
1747.00	1.00	0.759443
1748.00	1.00	0.758069
1749.00	1.00	0.756695
1750.00	1.00	0.755321
1751.00	1.00	0.753948
1752.00	1.00	0.752574
1753.00	1.00	0.751200
1754.00	1.00	0.749826
1755.00	1.00	0.748452
1756.00	1.00	0.747078
1757.00	1.00	0.745705
1758.00	1.00	0.744331
1759.00	1.00	0.742957
1760.00	1.00	0.741583
1761.00	1.00	0.740209
1762.00	1.00	0.738835
1763.00	1.00	0.737462
1764.00	1.00	0.736088
1765.00	1.00	0.734714
1766.00	1.00	0.733340
1767.00	1.00	0.731966
1768.00	1.00	0.730593
1769.00	1.00	0.729219
1770.00	1.00	0.727845
1771.00	1.00	0.726471
1772.00	1.00	0.725097
1773.00	1.00	0.723723
1774.00	1.00	0.722350
1775.00	1.00	0.720976
1776.00	1.00	0.719602
1777.00	1.00	0.718228
1778.00	1.00	0.716854
1779.00	1.00	0.715480
1780.00	1.00	0.714107
1781.00	1.00	0.712733
1782.00	1.00	0.711359
1783.00	1.00	0.709985
1784.00	1.00	0.708611
1785.00	1.00	0.707238
1786.00	1.00	0.705864
1787.00	1.00	0.704490
1788.00	1.00	0.703116
1789.00	1.00	0.701742
1790.00	1.00	0.700368
1791.00	1.00	0.698995

1792.00	1.00	0.697621
1793.00	1.00	0.696247
1794.00	1.00	0.694873
1795.00	1.00	0.693499
1796.00	1.00	0.692125
1797.00	1.00	0.690752
1798.00	1.00	0.689378
1799.00	1.00	0.688004
1800.00	1.00	0.686630
1801.00	1.00	0.685256
1802.00	1.00	0.683883
1803.00	1.00	0.682509
1804.00	1.00	0.681135
1805.00	1.00	0.679761
1806.00	1.00	0.678387
1807.00	1.00	0.677013
1808.00	1.00	0.675640
1809.00	1.00	0.674266
1810.00	1.00	0.672892
1811.00	1.00	0.671518
1812.00	1.00	0.670144
1813.00	1.00	0.668770
1814.00	1.00	0.667397
1815.00	1.00	0.666023
1816.00	1.00	0.664649
1817.00	1.00	0.663275
1818.00	1.00	0.661901
1819.00	1.00	0.660528
1820.00	1.00	0.659154
1821.00	1.00	0.657780
1822.00	1.00	0.656406
1823.00	1.00	0.655032
1824.00	1.00	0.653658
1825.00	1.00	0.652285
1826.00	1.00	0.650911
1827.00	1.00	0.649537
1828.00	1.00	0.648163
1829.00	1.00	0.646789
1830.00	1.00	0.645415
1831.00	1.00	0.644042
1832.00	1.00	0.642668
1833.00	1.00	0.641294
1834.00	1.00	0.639920
1835.00	1.00	0.638546
1836.00	1.00	0.637173
1837.00	1.00	0.635799
1838.00	1.00	0.634425
1839.00	1.00	0.633051
1840.00	1.00	0.631677
1841.00	1.00	0.630303

1842.00	1.00	0.628930
1843.00	1.00	0.627556
1844.00	1.00	0.626182
1845.00	1.00	0.624808
1846.00	1.00	0.623434
1847.00	1.00	0.622060
1848.00	1.00	0.620687
1849.00	1.00	0.619313
1850.00	1.00	0.617939
1851.00	1.00	0.616565
1852.00	1.00	0.615191
1853.00	1.00	0.613818
1854.00	1.00	0.612444
1855.00	1.00	0.611070
1856.00	1.00	0.609696
1857.00	1.00	0.608322
1858.00	1.00	0.606948
1859.00	1.00	0.605575
1860.00	1.00	0.604201
1861.00	1.00	0.602827
1862.00	1.00	0.601453
1863.00	1.00	0.600079
1864.00	1.00	0.598705
1865.00	1.00	0.597332
1866.00	1.00	0.595958
1867.00	1.00	0.594584
1868.00	1.00	0.593210
1869.00	1.00	0.591836
1870.00	1.00	0.590462
1871.00	1.00	0.589089
1872.00	1.00	0.587715
1873.00	1.00	0.586341
1874.00	1.00	0.584967
1875.00	1.00	0.583593
1876.00	1.00	0.582220
1877.00	1.00	0.580846
1878.00	1.00	0.579472
1879.00	1.00	0.578098
1880.00	1.00	0.576724
1881.00	1.00	0.575350
1882.00	1.00	0.573977
1883.00	1.00	0.572603
1884.00	1.00	0.571229
1885.00	1.00	0.569855
1886.00	1.00	0.568481
1887.00	1.00	0.567107
1888.00	1.00	0.565734
1889.00	1.00	0.564360
1890.00	1.00	0.562986
1891.00	1.00	0.561612

1892.00	1.00	0.560238
1893.00	1.00	0.558865
1894.00	1.00	0.557491
1895.00	1.00	0.556117
1896.00	1.00	0.554743
1897.00	1.00	0.553369
1898.00	1.00	0.551995
1899.00	1.00	0.550622
1900.00	1.00	0.549248
1901.00	1.00	0.547874
1902.00	1.00	0.546500
1903.00	1.00	0.545126
1904.00	1.00	0.543752
1905.00	1.00	0.542379
1906.00	1.00	0.541005
1907.00	1.00	0.539631
1908.00	1.00	0.538257
1909.00	1.00	0.536883
1910.00	1.00	0.535510
1911.00	1.00	0.534136
1912.00	1.00	0.532762
1913.00	1.00	0.531388
1914.00	1.00	0.530014
1915.00	1.00	0.528640
1916.00	1.00	0.527267
1917.00	1.00	0.525893
1918.00	1.00	0.524519
1919.00	1.00	0.523145
1920.00	1.00	0.521771
1921.00	1.00	0.520397
1922.00	1.00	0.519024
1923.00	1.00	0.517650
1924.00	1.00	0.516276
1925.00	1.00	0.514902
1926.00	1.00	0.513528
1927.00	1.00	0.512155
1928.00	1.00	0.510781
1929.00	1.00	0.509407
1930.00	1.00	0.508033
1931.00	1.00	0.506659
1932.00	1.00	0.505285
1933.00	1.00	0.503912
1934.00	1.00	0.502538
1935.00	1.00	0.501164
1936.00	1.00	0.499790
1937.00	1.00	0.498416
1938.00	1.00	0.497042
1939.00	1.00	0.495669
1940.00	1.00	0.494295
1941.00	1.00	0.492921

1942.00	1.00	0.491547
1943.00	1.00	0.490173
1944.00	1.00	0.488800
1945.00	1.00	0.487426
1946.00	1.00	0.486052
1947.00	1.00	0.484678
1948.00	1.00	0.483304
1949.00	1.00	0.481930
1950.00	1.00	0.480557
1951.00	1.00	0.479183
1952.00	1.00	0.477809
1953.00	1.00	0.476435
1954.00	1.00	0.475061
1955.00	1.00	0.473687
1956.00	1.00	0.472314
1957.00	1.00	0.470940
1958.00	1.00	0.469566
1959.00	1.00	0.468192
1960.00	1.00	0.466818
1961.00	1.00	0.465445
1962.00	1.00	0.464071
1963.00	1.00	0.462697
1964.00	1.00	0.461323
1965.00	1.00	0.459949
1966.00	1.00	0.458575
1967.00	1.00	0.457202
1968.00	1.00	0.455828
1969.00	1.00	0.454454
1970.00	1.00	0.453080
1971.00	1.00	0.451706
1972.00	1.00	0.450332
1973.00	1.00	0.448959
1974.00	1.00	0.447585
1975.00	1.00	0.446211
1976.00	1.00	0.444837
1977.00	1.00	0.443463
1978.00	1.00	0.442090
1979.00	1.00	0.440716
1980.00	1.00	0.439342
1981.00	1.00	0.437968
1982.00	1.00	0.436594
1983.00	1.00	0.435220
1984.00	1.00	0.433847
1985.00	1.00	0.432473
1986.00	1.00	0.431099
1987.00	1.00	0.429725
1988.00	1.00	0.428351
1989.00	1.00	0.426977
1990.00	1.00	0.425604
1991.00	1.00	0.424230

1992.00	1.00	0.422856
1993.00	1.00	0.421482
1994.00	1.00	0.420108
1995.00	1.00	0.418735
1996.00	1.00	0.417361
1997.00	1.00	0.415987
1998.00	1.00	0.414613
1999.00	1.00	0.413239
2000.00	1.00	0.411865
2001.00	1.00	0.410492
2002.00	1.00	0.409118
2003.00	1.00	0.407744
2004.00	1.00	0.406370
2005.00	1.00	0.404996
2006.00	1.00	0.403622
2007.00	1.00	0.402249
2008.00	1.00	0.400875
2009.00	1.00	0.399501
2010.00	1.00	0.398127
2011.00	1.00	0.396753
2012.00	1.00	0.395380
2013.00	1.00	0.394006
2014.00	1.00	0.392632
2015.00	1.00	0.391258
2016.00	1.00	0.389884
2017.00	1.00	0.388510
2018.00	1.00	0.387137
2019.00	1.00	0.385763
2020.00	1.00	0.384389
2021.00	1.00	0.383015
2022.00	1.00	0.381641
2023.00	1.00	0.380267
2024.00	1.00	0.378894
2025.00	1.00	0.377520
2026.00	1.00	0.376146
2027.00	1.00	0.374772
2028.00	1.00	0.373398
2029.00	1.00	0.372025
2030.00	1.00	0.370651
2031.00	1.00	0.369277
2032.00	1.00	0.367903
2033.00	1.00	0.366529
2034.00	1.00	0.365155
2035.00	1.00	0.363782
2036.00	1.00	0.362408
2037.00	1.00	0.361034
2038.00	1.00	0.359660
2039.00	1.00	0.358286
2040.00	1.00	0.356912
2041.00	1.00	0.355539

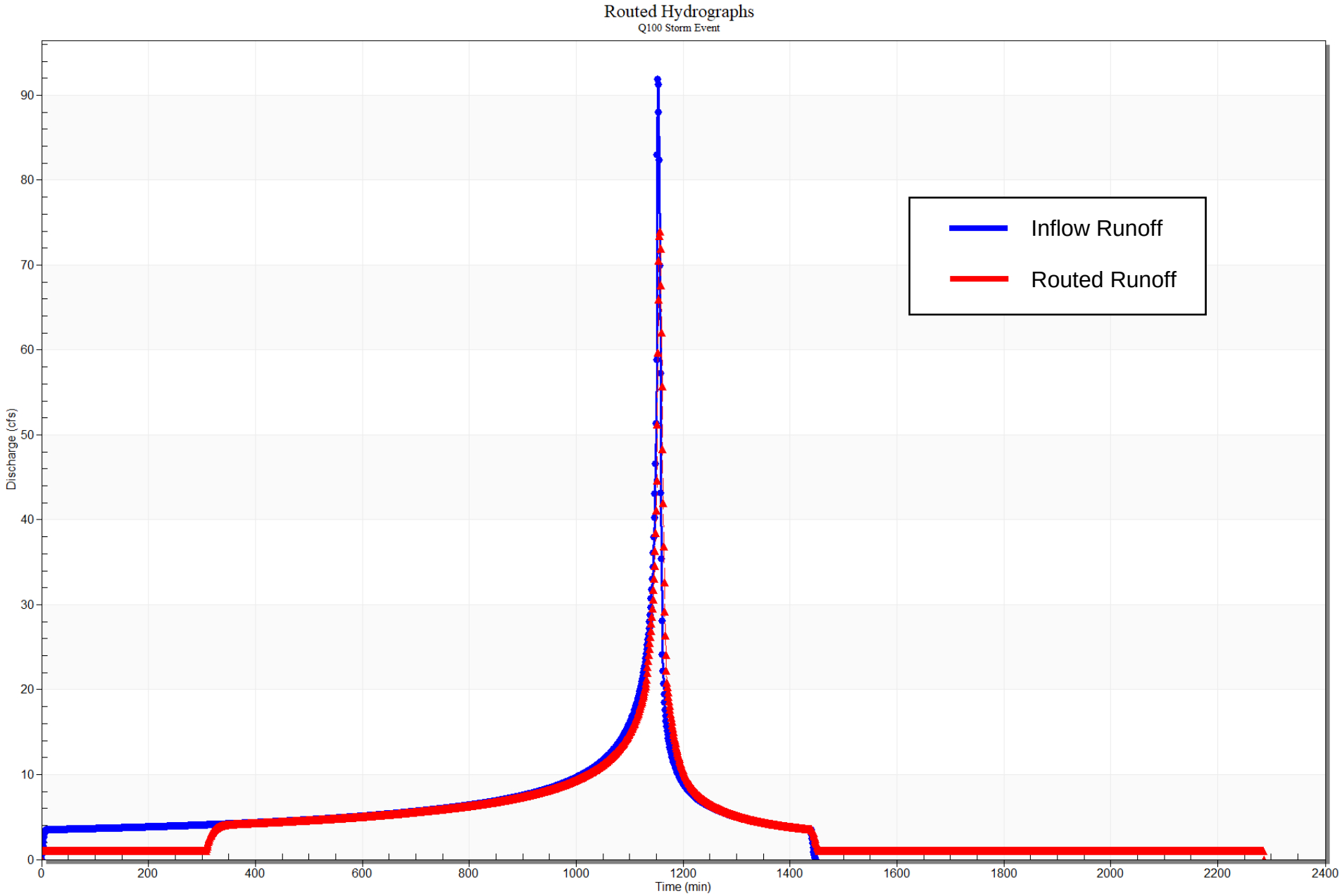
2042.00	1.00	0.354165
2043.00	1.00	0.352791
2044.00	1.00	0.351417
2045.00	1.00	0.350043
2046.00	1.00	0.348670
2047.00	1.00	0.347296
2048.00	1.00	0.345922
2049.00	1.00	0.344548
2050.00	1.00	0.343174
2051.00	1.00	0.341800
2052.00	1.00	0.340427
2053.00	1.00	0.339053
2054.00	1.00	0.337679
2055.00	1.00	0.336305
2056.00	1.00	0.334931
2057.00	1.00	0.333557
2058.00	1.00	0.332184
2059.00	1.00	0.330810
2060.00	1.00	0.329436
2061.00	1.00	0.328062
2062.00	1.00	0.326688
2063.00	1.00	0.325315
2064.00	1.00	0.323941
2065.00	1.00	0.322567
2066.00	1.00	0.321193
2067.00	1.00	0.319819
2068.00	1.00	0.318445
2069.00	1.00	0.317072
2070.00	1.00	0.315698
2071.00	1.00	0.314324
2072.00	1.00	0.312950
2073.00	1.00	0.311576
2074.00	1.00	0.310202
2075.00	1.00	0.308829
2076.00	1.00	0.307455
2077.00	1.00	0.306081
2078.00	1.00	0.304707
2079.00	1.00	0.303333
2080.00	1.00	0.301960
2081.00	1.00	0.300586
2082.00	1.00	0.299212
2083.00	1.00	0.297838
2084.00	1.00	0.296464
2085.00	1.00	0.295090
2086.00	1.00	0.293717
2087.00	1.00	0.292343
2088.00	1.00	0.290969
2089.00	1.00	0.289595
2090.00	1.00	0.288221
2091.00	1.00	0.286847

2092.00	1.00	0.285474
2093.00	1.00	0.284100
2094.00	1.00	0.282726
2095.00	1.00	0.281352
2096.00	1.00	0.279978
2097.00	1.00	0.278605
2098.00	1.00	0.277231
2099.00	1.00	0.275857
2100.00	1.00	0.274483
2101.00	1.00	0.273109
2102.00	1.00	0.271735
2103.00	1.00	0.270362
2104.00	1.00	0.268988
2105.00	1.00	0.267614
2106.00	1.00	0.266240
2107.00	1.00	0.264866
2108.00	1.00	0.263492
2109.00	1.00	0.262119
2110.00	1.00	0.260745
2111.00	1.00	0.259371
2112.00	1.00	0.257997
2113.00	1.00	0.256623
2114.00	1.00	0.255250
2115.00	1.00	0.253876
2116.00	1.00	0.252502
2117.00	1.00	0.251128
2118.00	1.00	0.249754
2119.00	1.00	0.248380
2120.00	1.00	0.247007
2121.00	1.00	0.245633
2122.00	1.00	0.244259
2123.00	1.00	0.242885
2124.00	1.00	0.241511
2125.00	1.00	0.240137
2126.00	1.00	0.238764
2127.00	1.00	0.237390
2128.00	1.00	0.236016
2129.00	1.00	0.234642
2130.00	1.00	0.233268
2131.00	1.00	0.231895
2132.00	1.00	0.230521
2133.00	1.00	0.229147
2134.00	1.00	0.227773
2135.00	1.00	0.226399
2136.00	1.00	0.225025
2137.00	1.00	0.223652
2138.00	1.00	0.222278
2139.00	1.00	0.220904
2140.00	1.00	0.219530
2141.00	1.00	0.218156

2142.00	1.00	0.216782
2143.00	1.00	0.215409
2144.00	1.00	0.214035
2145.00	1.00	0.212661
2146.00	1.00	0.211287
2147.00	1.00	0.209913
2148.00	1.00	0.208540
2149.00	1.00	0.207166
2150.00	1.00	0.205792
2151.00	1.00	0.204418
2152.00	1.00	0.203044
2153.00	1.00	0.201670
2154.00	1.00	0.200297
2155.00	1.00	0.198923
2156.00	1.00	0.197549
2157.00	1.00	0.196175
2158.00	1.00	0.194801
2159.00	1.00	0.193427
2160.00	1.00	0.192054
2161.00	1.00	0.190680
2162.00	1.00	0.189306
2163.00	1.00	0.187932
2164.00	1.00	0.186558
2165.00	1.00	0.185185
2166.00	1.00	0.183811
2167.00	1.00	0.182437
2168.00	1.00	0.181063
2169.00	1.00	0.179689
2170.00	1.00	0.178315
2171.00	1.00	0.176942
2172.00	1.00	0.175568
2173.00	1.00	0.174194
2174.00	1.00	0.172820
2175.00	1.00	0.171446
2176.00	1.00	0.170072
2177.00	1.00	0.168699
2178.00	1.00	0.167325
2179.00	1.00	0.165951
2180.00	1.00	0.164577
2181.00	1.00	0.163203
2182.00	1.00	0.161830
2183.00	1.00	0.160456
2184.00	1.00	0.159082
2185.00	1.00	0.157708
2186.00	1.00	0.156334
2187.00	1.00	0.154960
2188.00	1.00	0.153587
2189.00	1.00	0.152213
2190.00	1.00	0.150839
2191.00	1.00	0.149465

2192.00	1.00	0.148091
2193.00	1.00	0.146717
2194.00	1.00	0.145344
2195.00	1.00	0.143970
2196.00	1.00	0.142596
2197.00	1.00	0.141222
2198.00	1.00	0.139848
2199.00	1.00	0.138474
2200.00	1.00	0.137101
2201.00	1.00	0.135727
2202.00	1.00	0.134353
2203.00	1.00	0.132979
2204.00	1.00	0.131605
2205.00	1.00	0.130232
2206.00	1.00	0.128858
2207.00	1.00	0.127484
2208.00	1.00	0.126110
2209.00	1.00	0.124736
2210.00	1.00	0.123362
2211.00	1.00	0.121989
2212.00	1.00	0.120615
2213.00	1.00	0.119241
2214.00	1.00	0.117867
2215.00	1.00	0.116493
2216.00	1.00	0.115119
2217.00	1.00	0.113746
2218.00	1.00	0.112372
2219.00	1.00	0.110998
2220.00	1.00	0.109624
2221.00	1.00	0.108250
2222.00	1.00	0.106877
2223.00	1.00	0.105503
2224.00	1.00	0.104129
2225.00	1.00	0.102755
2226.00	1.00	0.101381
2227.00	1.00	0.100007
2228.00	1.00	0.098634
2229.00	1.00	0.097260
2230.00	1.00	0.095886
2231.00	1.00	0.094512
2232.00	1.00	0.093138
2233.00	1.00	0.091764
2234.00	1.00	0.090391
2235.00	1.00	0.089017
2236.00	1.00	0.087643
2237.00	1.00	0.086269
2238.00	1.00	0.084895
2239.00	1.00	0.083522
2240.00	1.00	0.082148
2241.00	1.00	0.080774

2242.00	1.00	0.079400
2243.00	1.00	0.078026
2244.00	1.00	0.076652
2245.00	1.00	0.075279
2246.00	1.00	0.073905
2247.00	1.00	0.072531
2248.00	1.00	0.071157
2249.00	1.00	0.069783
2250.00	1.00	0.068409
2251.00	1.00	0.067036
2252.00	1.00	0.065662
2253.00	1.00	0.064288
2254.00	1.00	0.062914
2255.00	1.00	0.061540
2256.00	1.00	0.060167
2257.00	1.00	0.058793
2258.00	1.00	0.057419
2259.00	1.00	0.056045
2260.00	1.00	0.054671
2261.00	1.00	0.053297
2262.00	1.00	0.051924
2263.00	1.00	0.050550
2264.00	1.00	0.049176
2265.00	1.00	0.047802
2266.00	1.00	0.046428
2267.00	1.00	0.045054
2268.00	1.00	0.043681
2269.00	1.00	0.042307
2270.00	1.00	0.040933
2271.00	1.00	0.039559
2272.00	1.00	0.038185
2273.00	1.00	0.036812
2274.00	1.00	0.035438
2275.00	1.00	0.034064
2276.00	1.00	0.032690
2277.00	1.00	0.031316
2278.00	1.00	0.029942
2279.00	1.00	0.028569
2280.00	1.00	0.027195
2281.00	1.00	0.025821
2282.00	1.00	0.024447
2283.00	1.00	0.023073
2284.00	1.00	0.021699
2285.00	1.00	0.020326
2286.00	1.00	0.018952
2287.00	0.00	0.018952


Routed Hydrographs
Q100 Storm Event
Inflow Runoff
Routed Runoff
Discharge (cfs)
Time (min)
0
10
20
30
40
50
60
70
80
90
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400

APPENDIX D

Hydraulics Analysis

Channel Report

Outlet Pipe - Q100

Circular

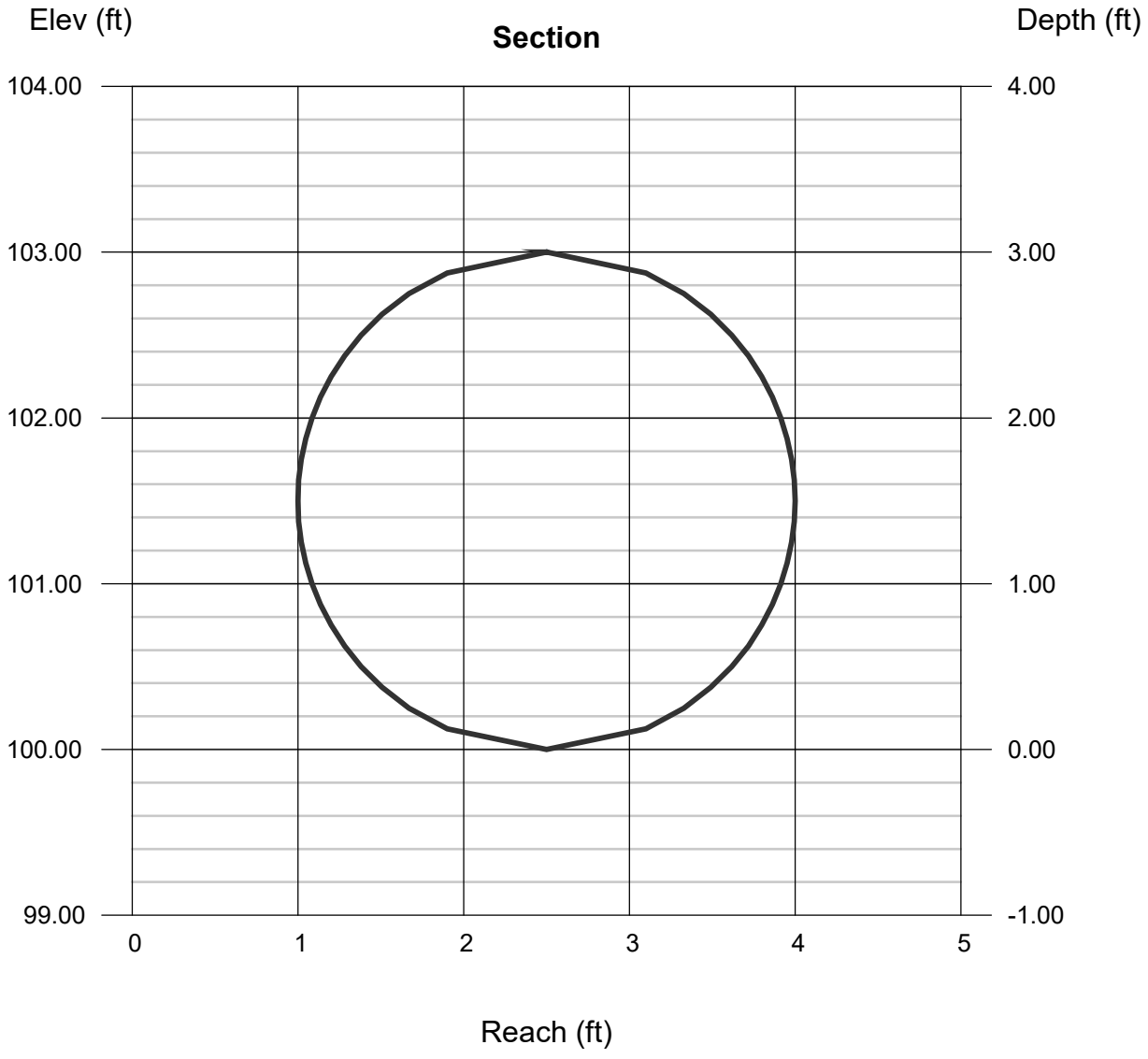
Diameter (ft)	= 3.00
Invert Elev (ft)	= 100.00
Slope (%)	= 1.25
N-Value	= 0.013

Calculations

Compute by:	Q vs Depth
No. Increments	= 1

Highlighted

Depth (ft)	= 3.00
Q (cfs)	= 74.56
Area (sqft)	= 7.07
Velocity (ft/s)	= 10.55
Wetted Perim (ft)	= 9.42
Crit Depth, Yc (ft)	= 2.72
Top Width (ft)	= 0.00
EGL (ft)	= 4.73



APPENDIX E

References

Los Angeles County Public Works – Allowable Q

LOS ANGELES COUNTY
PUBLIC WORKS
DESIGN DIVISION – HYDRAULIC ANALYSIS UNIT

INFORMATION REQUEST INSTRUCTIONS

1. Please fill out the Information Request Summary on page 2 of this PDF form. **The fields marked with an asterisk are required.** At the bottom are buttons that you may use to Save and/or Print the form. Please save the form and email it as an attachment with "Information Request" in the subject line along with any other attachments for requests as described in items 2 - 4 below. Address the email to hydraulicinfo@dpw.lacounty.gov. Please note that an incomplete form will cause a delay in processing.

2. Include the as-built drawing showing the proposed connection location and identify the station or catch basin at the proposed connection. Most as-built drawings can be obtained from the following website: http://dpw.lacounty.gov/des/plans/. Please make sure that you select the Drainage tab prior to searching. The Los Angeles County Storm Drain System website http://dpw.lacounty.gov/fcd/stormdrain/. is also a useful reference.

3. A project Location Map is required with your submission. The Location Map can be made using Google Maps. Please shade the area with your proposed improvements on the location map, including any offsite areas draining into this area, and attach it with your email request. Alternatively you can use an assessor map as your location map while still adhering to the above instructions. You can obtain the assessor map from http://assessor.lacounty.gov/homeowners/property-search.

4. In addition, submit a preliminary sketch or plan showing any proposed improvements in the areas you indicated on the assessor map.

If you have any questions, contact Design Division staff via email at hydraulicinfo@dpw.lacounty.gov or at (626) 458-7806

BELOW SECTION TO BE COMPLETED BY THE HYDRAULIC ANALYSIS UNIT

REFERENCES SEARCHED: LA County Storm Drain Network

RESPONSE:

The Allowable Q = 3.6 cfs

COUNTY OF LOS ANGELES
PUBLIC WORKS
DESIGN DIVISION
Hydraulic Analysis Unit
OFFICIAL RECORD DOCUMENT
Issued By: Calvin Tran
Date: 5/12/23
Public Service That Works

INFORMATION PROVIDED BY: Sama Ali Date: 5/3/2023

INFORMATION REVIEWED BY: C. TRAN Date: 5/12/23

Print Save a Copy

LOS ANGELES COUNTY
PUBLIC WORKS
DESIGN DIVISION – HYDRAULIC ANALYSIS UNIT

INFORMATION REQUEST SUMMARY

INFORMATION REQUESTED BY

*Requester's Name: Evan Salcido
*Company: C&V Consulting, Inc.
*Phone Number: (949) 445-1812 Date: 3/10/23
*Email: esalcido@cvc-inc.net

Intended Use: Allowable Q Request Storm Water Drainage

Proposed Project Type: Residential Acreage Involved: 20.53

*Will information be used in any litigation? ☐ YES ☑ NO
Case Info. Name: _____ No: _____ Location: _____

INFORMATION NEEDED: ☑ Location Map Attached ☑ Plans Attached

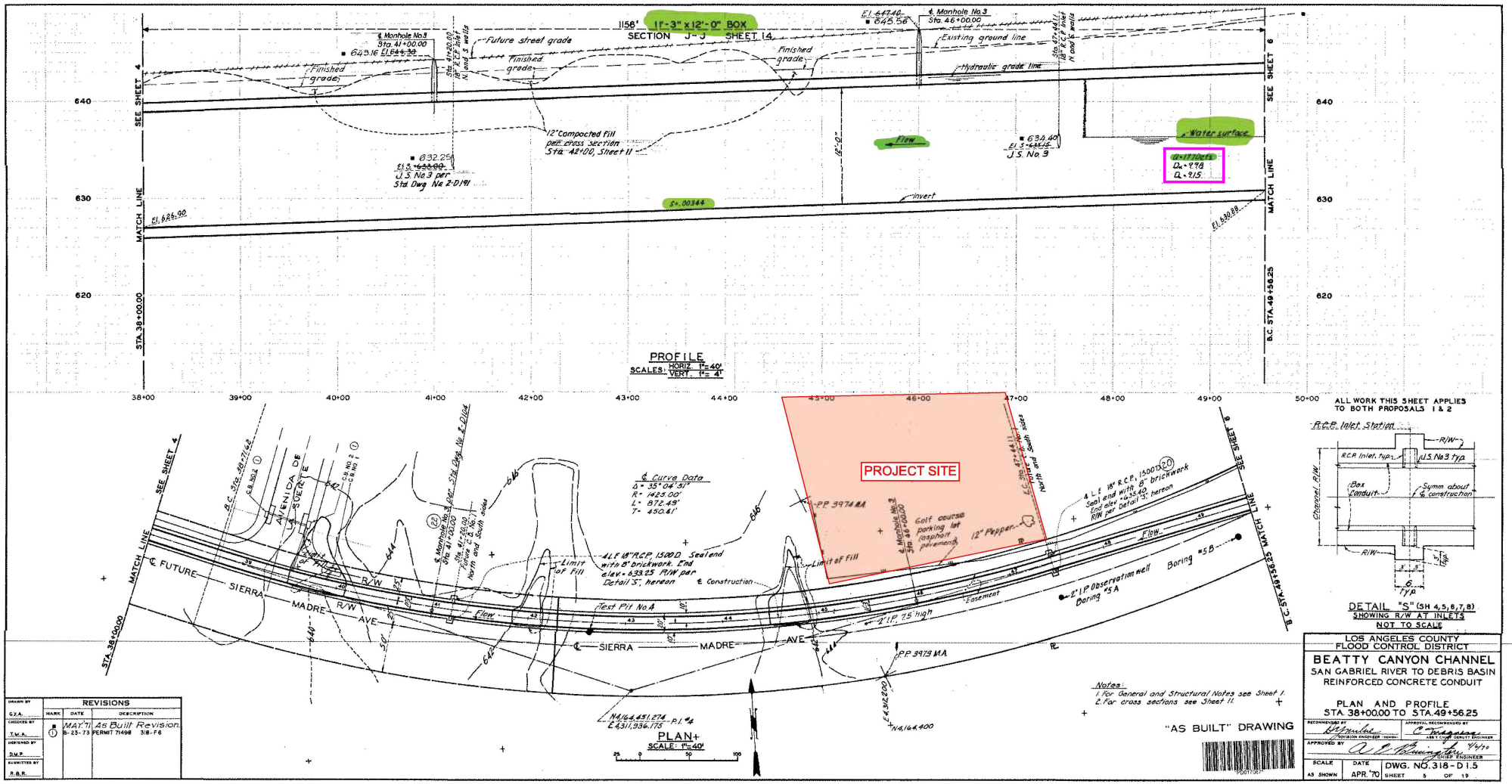
LACFCD Facility: Name: Beatty Canyon Channel
Unit: _____ Line: DWG 318 - D 1.5
City: Azusa Station: 38+00 to 49+56.6
Address: 919 West Sierra Madre Avenue
*Street/Cross-street: W. Sierra Madre Ave/N. Ve

REQUEST INFORMATION:
(please select all that apply)

☐ HYDROLOGY ☐ HYDRAULICS ☑ ALLOWABLE Q (DISCHARGE)

Additional Info Requested:

Print Save a Copy



ALL WORK THIS SHEET APPLIES TO BOTH PROPOSALS 1 & 2

DETAIL "S" (SH 4,5,6,7,8)
SHOWING R/W AT INLETS
NOT TO SCALE

REVISIONS		
MARK	DATE	DESCRIPTION
1	MAY '71 8-23-73	As Built Revision. PERMIT 71498 318-F6

DRAWN BY G.K.A.
CHECKED BY T.M.A.
VERIFIED BY D.M.P.
SUBMITTED BY R.B.R.

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

BEATTY CANYON CHANNEL

SAN GABRIEL RIVER TO DEBRIS BASIN
REINFORCED CONCRETE CONDUIT

PLAN AND PROFILE
STA. 38+00.00 TO STA. 49+56.25

RECOMMENDED BY: DIVISION ENGINEER
APPROVAL RECOMMENDED BY: ASST. CHIEF DEPUTY ENGINEER
APPROVED BY: CHIEF ENGINEER 4/4/70

SCALE	DATE	DWG. NO. 318-D1.5
AS SHOWN	APR. '70	SHEET 5 OF 19


SITE
Timberline Dr
Hidden Valley Dr
Montecito W
The Azusa Rockery & Geology Park
Larga Team Real Estate
W Calle De Las Estrellas
EZAccessory.com
Chris Hillseth Enterprises
W Calle De la Luna
Mountain View Cir
SolarLife
Ave De La Suerte
Ave Conejo
Calle Del Sol
N Deborah Ave
Brian Ave
W Edith Ann Dr
Sierra Madre Ave
N Laurel Valley Dr
W Lori Ann Ave
W Point O Woods Dr
English Los Ange
919 Sierra Madre Ave, Azusa, CA 91702
Sierra Madre Ave
HYTX Logistics
JABA USA
N Todd Ave
Sierra Madre Ave
Northside Park Disc Golf Course
N Vernon Ave
Rain Bird Corporation
Northside Park
Victor Hodge Elementary School
City of Azusa Recreation Division
Le Med Apartments
World Depot Inc
W 11th St
Sierra Village
W 10th St
Perazzi
W 10th St
Economy Auto Center
N McKeever Ave
N Enid Ave
N Orange Ave
Pacific Sporting Arms
W 10th St
Public CNG Station - SoCal Gas AZUSA BASE
So Cal Gas Azusa Base

VILLAS
3 story buildings
150 homes
6.19 acres (approximate)
24.2 du/ac
140,025 to 149,250 total NRSF
933 to 995 average NRSF
10,000 sf leasing/club/fitness/yoga/kitchen/mailroom
1,500 sf cabana

MIX

A1	1 bedroom/1 bath	18	650 to 700 sf	stacked flat 24' x 32'
A2	1 bedroom/1 bath	42	750 to 800 sf	stacked flat 26' x 32'
A3	1 bedroom/1 bath	21	900 to 950 sf	stacked flat 28' x 35'
		81	54%	1 bedroom
B1	2 bed/2 bath	21	1025 to 1100 sf	stacked flat (could be 1 + den) 36' x 32'
B2	2 bed/2 bath	24	1125 to 1200 sf	stacked flat 37' x 34'
B3	2 bed/2 bath	24	1225 to 1300 sf	stacked flat (corner location) 37' x 32'
		69	46%	2 bedroom
TOTAL		150		

PARKING (per city code)
Required

150 units x 1.00 spaces/du	150 (in garage)
150 guest x 0.25 spaces/du	38
TOTAL	188 (1.25 spaces/du)
Provided	
Open/Carport	188 (1.25 spaces/du)

Notes:
1. Open parking stalls 9' by 20'
2. Drive aisles 24' (fire may require wider)
3. Single car garages 10' x 20' minimum

COTTAGES
1 story buildings
3 building types – Type 100 is B1/B2, Type 200 is B2/B3 and Type 300 is B1/B3
There are 14 Type 100, 16 Type 200 and 10 Type 300
80 homes
14.91 acres (approximate)
5.4 du/ac
114,200 to 120,200 total NRSF
1427 to 1502 average NRSF
4 outside BBQ/tables/gathering areas

MIX

B1	2 bed/2 bath	24	30%	1325 to 1400 sf stacked flat with 1 car attached garage 28' x 58'
B2	2 bed/2 bath	30	38%	1425 to 1500 sf stacked flat with 1 car attached garage 32' x 55'
B3	2 bed+den/2 bath	26	33%	1525 to 1600 sf stacked flat with 2 car attached garage 36' x 58'
TOTAL		80		

PARKING (per city code)
Required

80 units x 1.00 spaces/du	80 (in garage)
80 guest x 0.25 spaces/du	20
TOTAL	100 (1.25 spaces/du)

Provided

Garages	
1 car	54 (24 B1 and 30 B2 have 1 car garage)
2 car	52 (26 B3 have 2 car garage)
Garage Apron (2nd tandem)	TBD
Open for guest	20 (90 degree)
TOTAL	126 (1.58 spaces/du) (plus garage aprons)

Notes:
1. Open parking stalls 9' by 20'
2. Drive aisles 24' (fire may require wider)
3. Single car garages 10' x 20' minimum
4. The number and location of the buildings with long aprons may vary as the site plan and plotting of the building adjust

GREENS GOLF COURSE

Azusa, California

OVERTON MOORE PROPERTIES

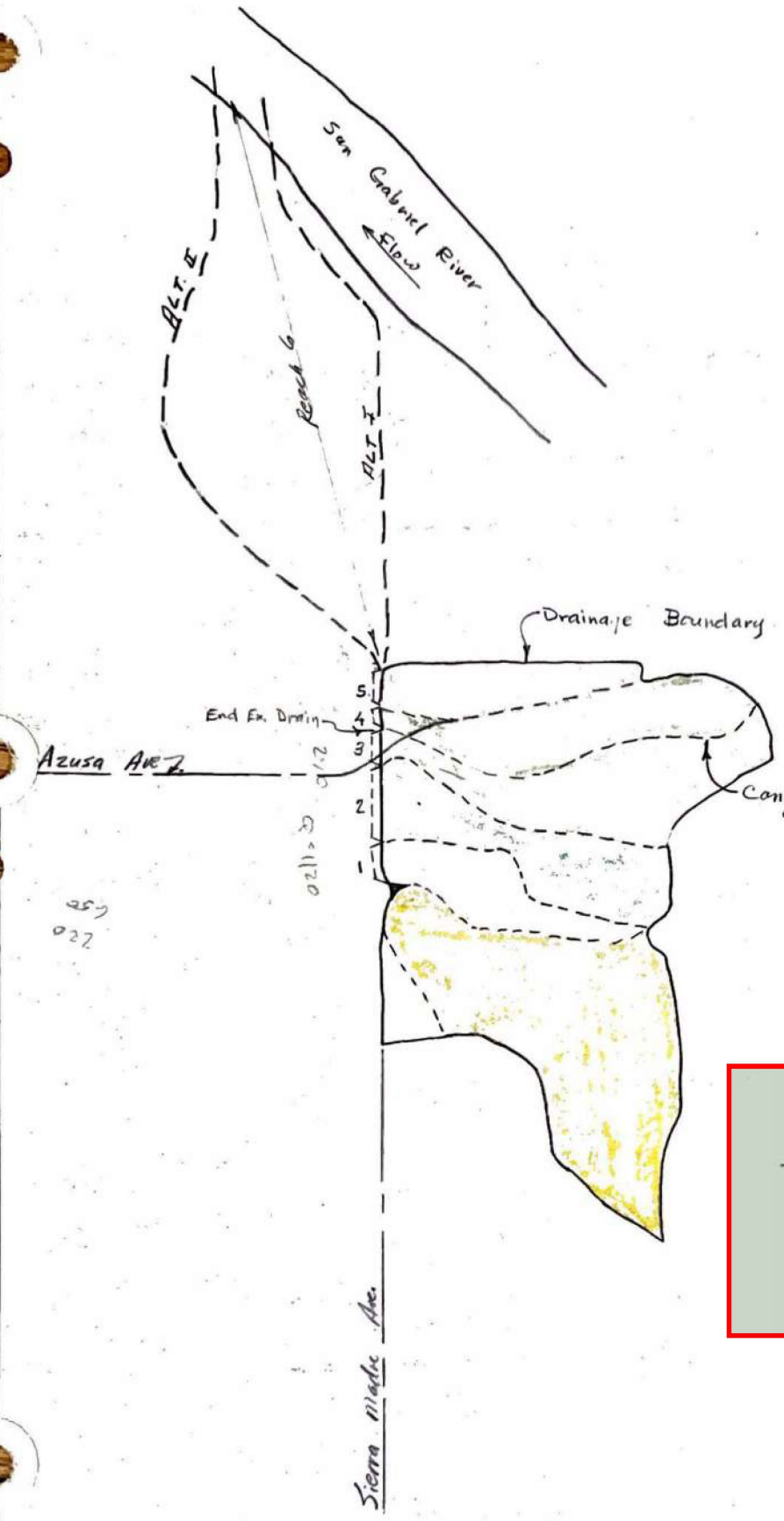
Site Plan

Architecture. Design. Relationships.

01

Job No. 0022-661
Date 2023-01-16

1651



Reach	Design Q cfs	Area Acres
1	780	187
2	860	228
3	1120	296
4	1410	378
5	1670	443
6	1770	481

Scale 1" = 2000'

Copy of dwg. dated oct. 1968
from Hydraulics

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

STORM DRAIN ANALYSIS
(INPUT)

EDP JOB R4412
DATE 1-12-70
PAGE 1

PROJECT BEATTY CANYON CHANNEL BOX ALTERNATE
DESIGNER ED MARCISZ

STATION	CD	L2	MAX Q	ADJ Q	LENGTH	FL 1	FL 2	CTL/TW	D	W	S	KJ	KE	KM	LC	L1	L3	L4	A1	A3	A4	J	N
	8	1						629.50															
(8+55)	2	2	1770.0	1770.0	4135.00	616.76	631.00	0.0	144.	135.	3	0.0	0.0	0.30	1	0	0	0	0.	0.	0.	10.00	0.013
(49+90) (50+00)	2	3	1770.0	1770.0	1200.00	632.50	645.86	0.0	126.	106.	3	0.0	0.0	0.0	0	0	0	0	0.	0.	0.	0.0	0.013
(62+00)	2	4	1770.0	1770.0	1240.00	645.86	661.00	0.0	126.	106.	3	0.0	0.0	0.0	0	0	18	0	0.	30.	0.	15.00	0.013
(74+48) (74+55)	2	5	1550.0	1550.0	495.00	661.67	670.00	0.0	108.	90.	3	0.0	0.0	0.0	0	0	0	0	0.	0.	0.	10.00	0.013
(74+50) (74+60)	2	6	1550.0	1550.0	150.00	672.00	673.75	0.0	114.	96.	3	0.0	0.0	0.0	0	0	19	0	0.	30.	0.	10.00	0.013
(81+10) (81+20)	2	7	1410.0	1410.0	250.00	674.75	678.36	0.0	108.	90.	3	0.0	0.0	0.0	0	0	20	0	0.	30.	0.	10.00	0.013
(83+70) (83+80)	2	8	1120.0	1120.0	92.76	678.50	684.30	0.0	90.	76.	3	0.0	0.0	0.0	0	0	0	0	0.	0.	0.	10.00	0.013
(84+93) (84+83) = 10+50	2	9	1120.0	1120.0	237.00	684.93	689.16	0.0	90.	0.	3	0.0	0.0	0.05	0	0	21	0	0.	30.	0.	15.00	0.013
(12+87)	2	10	860.0	860.0	197.00	689.51	694.10	0.0	78.	0.	3	0.0	0.0	0.0	0	0	0	0	0.	0.	0.	4.00	0.013
	2	11	860.0	860.0	168.00	694.70	699.02	0.0	72.	0.	3	0.0	0.0	0.0	0	0	0	0	0.	0.	0.	4.66	0.013
	2	12	860.0	860.0	490.34	699.16	716.90	0.0	72.	0.	3	0.0	0.0	0.0	0	0	22	0	0.	25.	0.	11.00	0.013
	2	13	780.0	780.0	300.00	717.76	734.33	0.0	69.	0.	3	0.0	0.0	0.0	0	0	0	0	0.	0.	0.	13.48	0.013
	2	14	780.0	780.0	125.54	735.07	743.23	0.0	69.	0.	3	0.0	0.0	0.13	0	0	0	0	0.	0.	0.	0.0	0.013
	2	15	780.0	780.0	188.89	743.23	755.20	0.0	69.	0.	3	0.0	0.0	0.0	0	0	0	0	0.	0.	0.	10.00	0.013
	2	16	780.0	780.0	350.00	755.83	778.00	782.36	78.	0.	3	0.0	0.0	0.09	0	0	0	0	0.	0.	0.	0.0	0.013
	2	17	780.0	780.0	9000.00	778.00	1097.71	0.0	78.	0.	1	0.0	0.0	0.0	0	0	0	0	0.	0.	0.	0.0	0.013
	2	18	220.0	220.0	1.00	662.75	662.76	0.0	54.	0.	1	0.0	0.0	0.0	5	0	0	0	0.	0.	0.	0.0	0.013
	2	19	140.0	140.0	1.00	674.75	674.77	0.0	42.	0.	1	0.0	0.0	0.0	7	0	0	0	0.	0.	0.	0.0	0.013
	2	20	290.0	290.0	1.00	678.50	678.51	0.0	60.	0.	1	0.0	0.0	0.0	8	0	0	0	0.	0.	0.	0.0	0.013
	2	21	260.0	260.0	1.00	692.30	692.45	0.0	36.	0.	1	0.0	0.0	0.0	10	0	0	0	0.	0.	0.	0.0	0.013
	2	22	80.0	80.0	1.00	723.67	723.79	0.0	27.	0.	1	0.0	0.0	0.0	13	0	0	0	0.	0.	0.	0.0	0.013