

CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director



Mayor Timothy M. Keller

May 21, 2020

Sheldon Greer, P.E.
Respec
5971 Jefferson St. NE
Albuquerque, NM 8710

**RE: Sonta Trails Unit 4 Apartments
Conceptual Grading & Drainage Plan and Drainage Report
Engineer's Stamp Date: No Stamp Date
Hydrology File: C10D001A**

Dear Mr. Greer:

Based upon the information provided in your submittal received 04/30/2020, the Conceptual Grading & Drainage Plan and Drainage Report **are not** approved for action by the DRB on Site Plan for Building Permit and Site Plan for Subdivision. The following comments need to be addressed for approval of the above referenced project:

1. Please provide an engineer's stamp with a signature and date on all sheets and drainage report.
2. Since this project ultimately drains into an Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA) facility (Piedras Marcadas Dam), approval by AMAFCA will be need prior to Hydrology approval. Please contact Nicole Friedt P.E, CFM (nfriedt@amafca.org or 505-884-2215).
3. Please provide a conceptual storm drain layout with pipe sizes.

Drainage Report

4. Please mention that the site also fall within "Upper Piedras Marcadas Watershed Drainage Management Plan by Wilson & Company dated April 2017.
5. Please also mention that the project ultimately drains into an Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA) facility (Piedras Marcadas Dam).
6. In reviewing Existing Basin B with provided existing contours and the City's LiDAR information, the existing Basin B does not drain to existing Basin C to the northeast but rather is drains to the southeast. Therefore the existing 12.21 cfs drains to the southeast, Please review and revised.

CITY OF ALBUQUERQUE

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7. Since existing Basin B drains to the southeast, existing Basin C (28.63 cfs) and ½ of existing Basin A (3.44 cfs) drains to the northeast for a total of 32.07 cfs. Please review and revise.
8. Therefore the proposed Basin A will only be allowed to discharge 32.07 cfs. Please review and revised both the design and the hydrologic calculation (AHYMO).
9. Based on the above comments, please revise the Conclusion of the Drainage Report.
10. Since existing Pond J is being modified with this project, please add a section in the Conceptual Drainage Report for this discussion of the work involved and provide calculations that show that this new pond size will be sufficient to handle the original design of Pond J.
11. If orifice plates in the existing storm system are also being modified, please include a discuss of this along with mentioning sending more drainage into the existing Pond K with calculations that shows the capacity of Pond K can handle this increase in drainage.
12. As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.
13. Standard review fee of \$300 (for DRB Site) will be required at the time of resubmittal.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: _____ **Building Permit #:** _____ **Hydrology File #:** _____

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: _____

City Address: _____

Applicant: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Owner: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

TYPE OF SUBMITTAL: _____ PLAT (____# OF LOTS) _____ RESIDENCE _____ DRB SITE _____ ADMIN SITE

IS THIS A RESUBMITTAL?: _____ Yes _____ No

DEPARTMENT: _____ TRAFFIC/ TRANSPORTATION _____ HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

- _____ ENGINEER/ARCHITECT CERTIFICATION
- _____ PAD CERTIFICATION
- _____ CONCEPTUAL G & D PLAN
- _____ GRADING PLAN
- _____ DRAINAGE MASTER PLAN
- _____ DRAINAGE REPORT
- _____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- _____ ELEVATION CERTIFICATE
- _____ CLOMR/LOMR
- _____ TRAFFIC CIRCULATION LAYOUT (TCL)
- _____ TRAFFIC IMPACT STUDY (TIS)
- _____ OTHER (SPECIFY) _____
- _____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

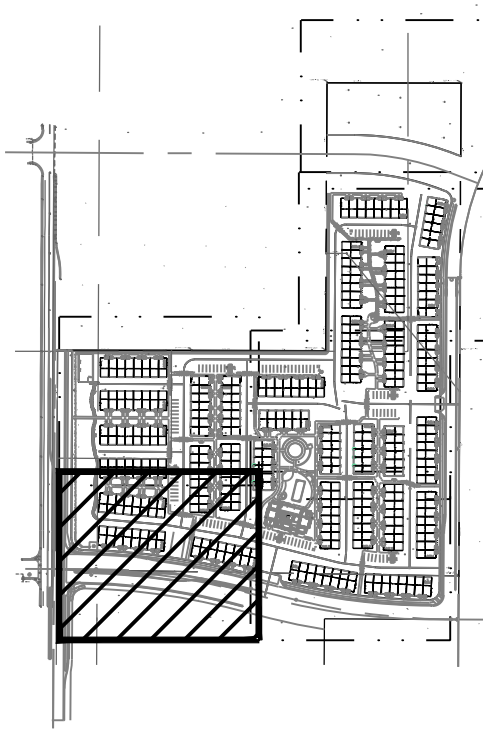
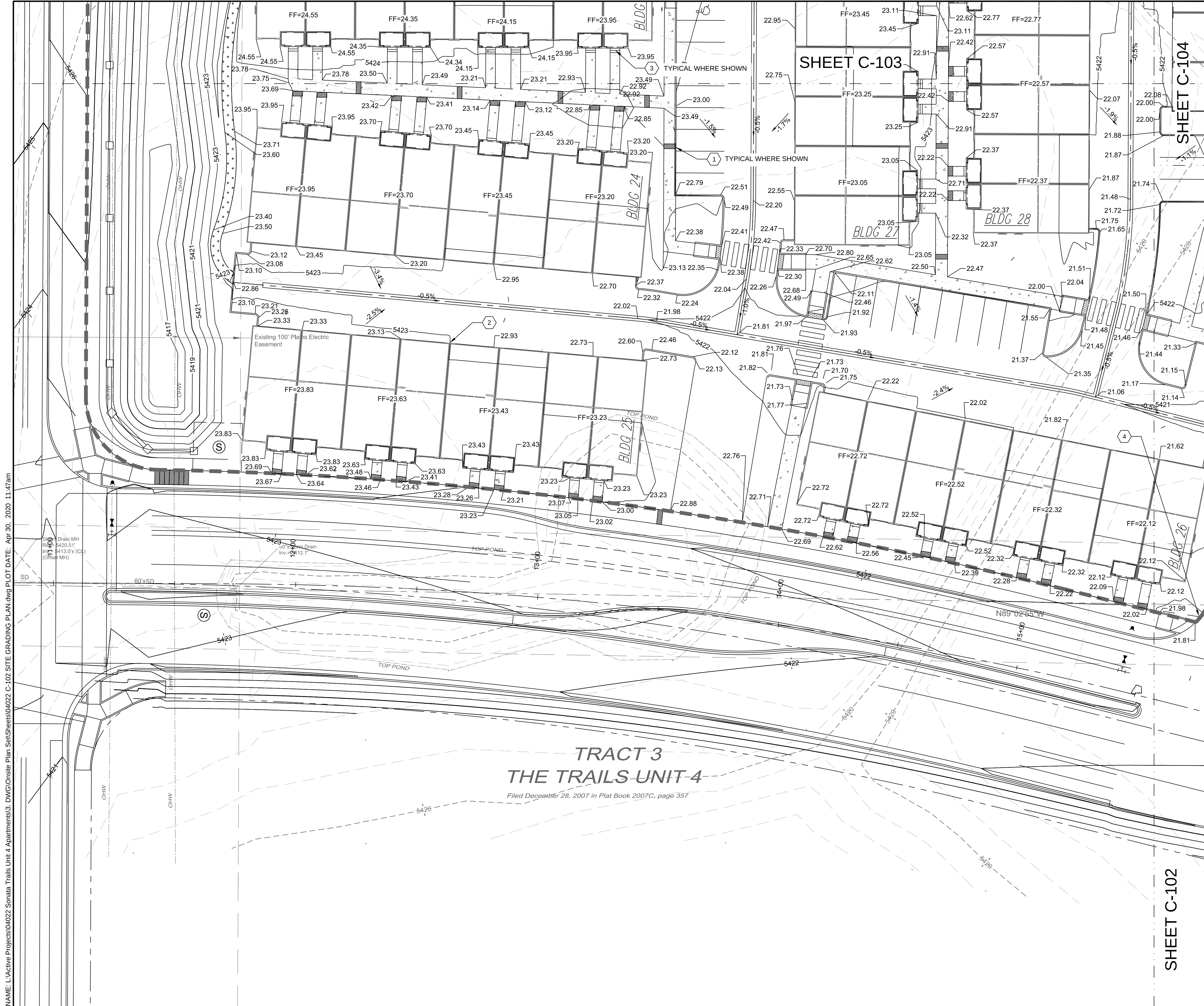
- _____ BUILDING PERMIT APPROVAL
- _____ CERTIFICATE OF OCCUPANCY
- _____ PRELIMINARY PLAT APPROVAL
- _____ SITE PLAN FOR SUB'D APPROVAL
- _____ SITE PLAN FOR BLDG. PERMIT APPROVAL
- _____ FINAL PLAT APPROVAL
- _____ SIA/ RELEASE OF FINANCIAL GUARANTEE
- _____ FOUNDATION PERMIT APPROVAL
- _____ GRADING PERMIT APPROVAL
- _____ SO-19 APPROVAL
- _____ PAVING PERMIT APPROVAL
- _____ GRADING/ PAD CERTIFICATION
- _____ WORK ORDER APPROVAL
- _____ CLOMR/LOMR
- _____ FLOODPLAIN DEVELOPMENT PERMIT
- _____ OTHER (SPECIFY) _____

DATE SUBMITTED: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



KEY MAP

SCALE: NTS

GRADING NOTES

- CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING DRY AND WET UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES. UTILITY RELOCATION MAY BE REQUIRED.
- FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO BE 1/2" BELOW EDGE OF PAVEMENT.
- STRIP AND STOCKPILE TOPSOIL FROM GRADING AREAS. USE STOCKPILED TOPSOIL AND IMPORTED TOPSOIL AS NECESSARY FOR SURFACE RESTORATION.
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LEGEND

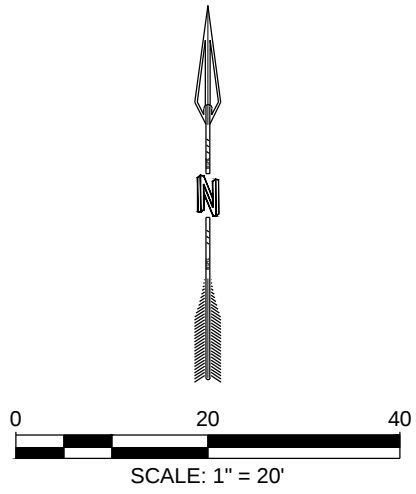
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MAJOR CONTOUR	---
MINOR CONTOUR	---
EXISTING MAJOR CONTOUR	---
EXISTING MINOR CONTOUR	---
MATCHLINE	---
SLOPE ARROW	---
SIDEWALK CULVERT	---

SPOT ELEVATION SYMBOLS

- ALL SPOT ELEVATIONS ARE AT FLOWLINE UNLESS OTHERWISE NOTED IN THE PLANS.
 - 20.00 FLOWLINE
 - 20.00± MATCH EX. GRADE ELEV. (APPROXIMATE)
 - BW 20.00 BOTTOM WALL
 - TW 20.00 TOP WALL
 - SW 20.00 SIDEWALK
 - FG 20.00 FINISHED GROUND

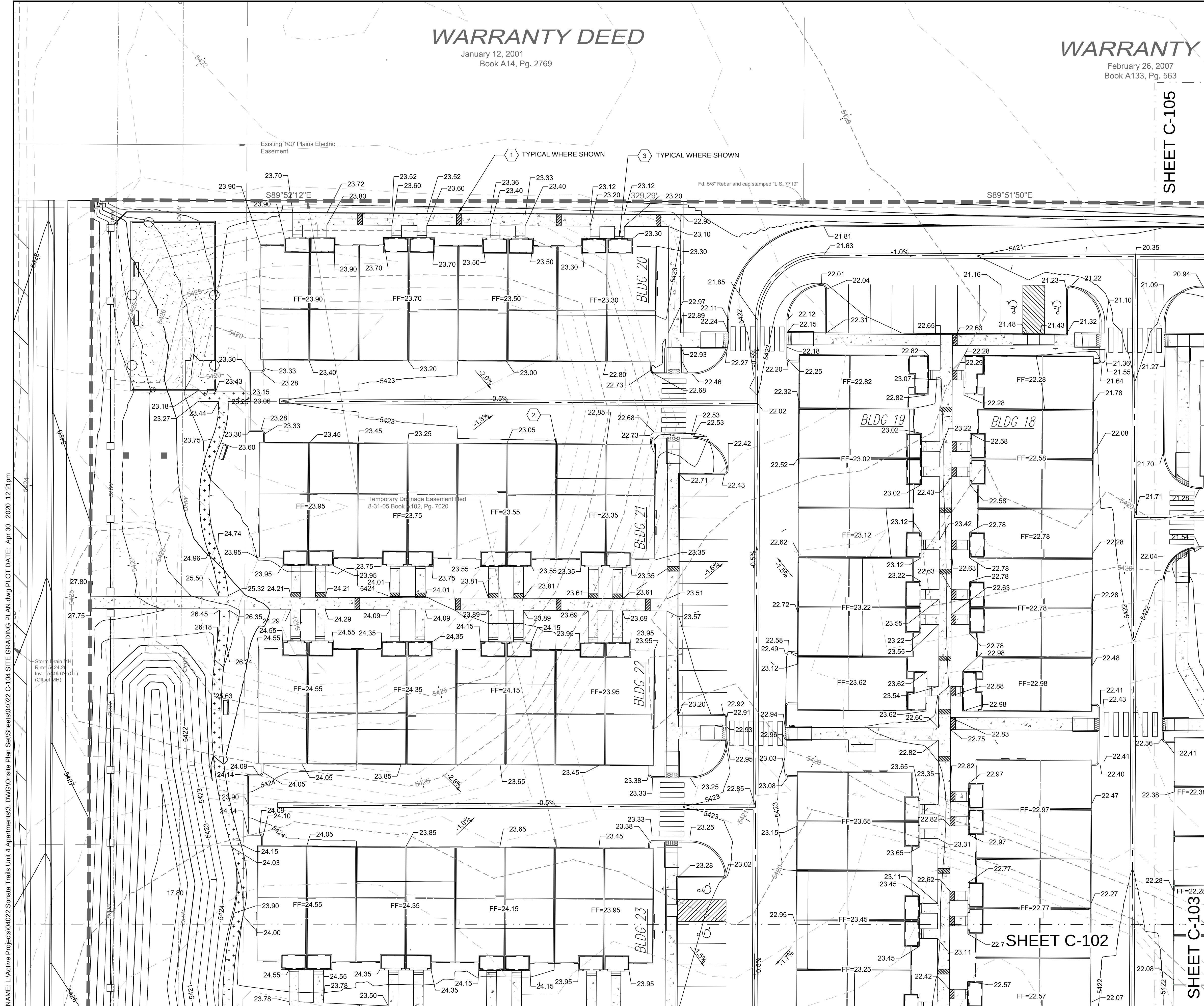
KEYED NOTES

I.D.#	DESCRIPTION
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2	WARP ASPHALT BETWEEN GARAGES/UNITS AS NECESSARY TYP.
3	CONCRETE STEP TYP.
4	1' CURB OPENING. SEE DETAIL12 SHEET C-500.



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SHEET TITLE:	CONCEPTUAL SITE GRADING PLAN
SUBMITTED FOR:	DRB SITE PLAN
SHEET NUMBER:	C-102

NAME: L:\Active Projects\04022 Sonata Trails Unit 4 Apartments\3. DWG\Onsite Plan Set\Sheets\04022 C-102 SITE GRADING PLAN.dwg PLOT DATE: Apr 30, 2020 11:47am



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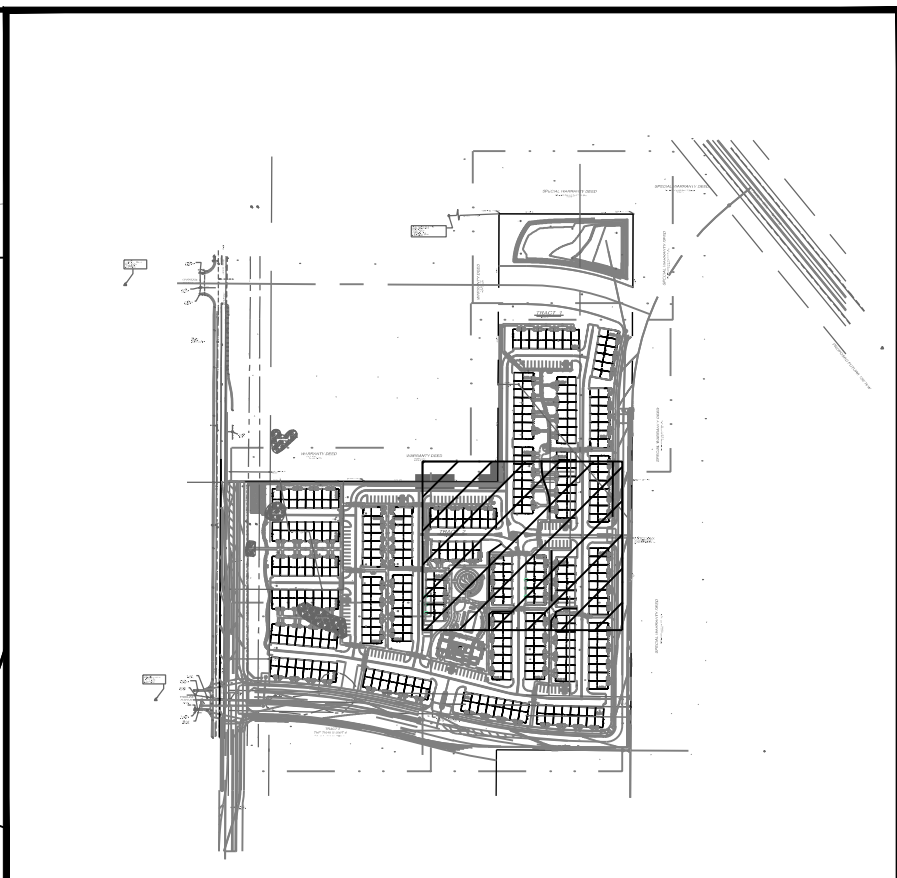
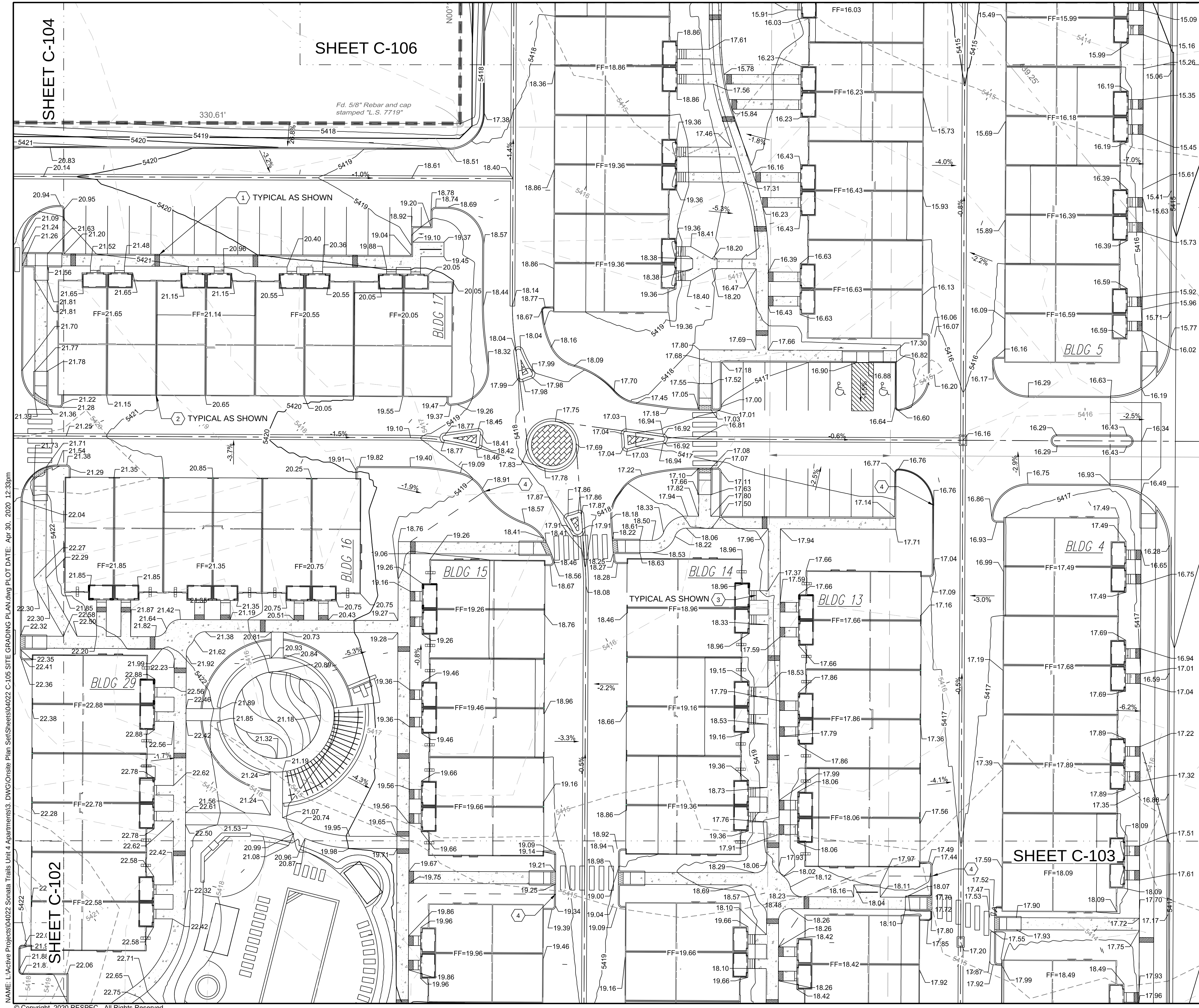
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APARTMENTS

SHEET TITLE:
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GRADING PLAN

SUBMITTED FOR:
DRB SITE PLAN

SHEET NUMBER:
C-104

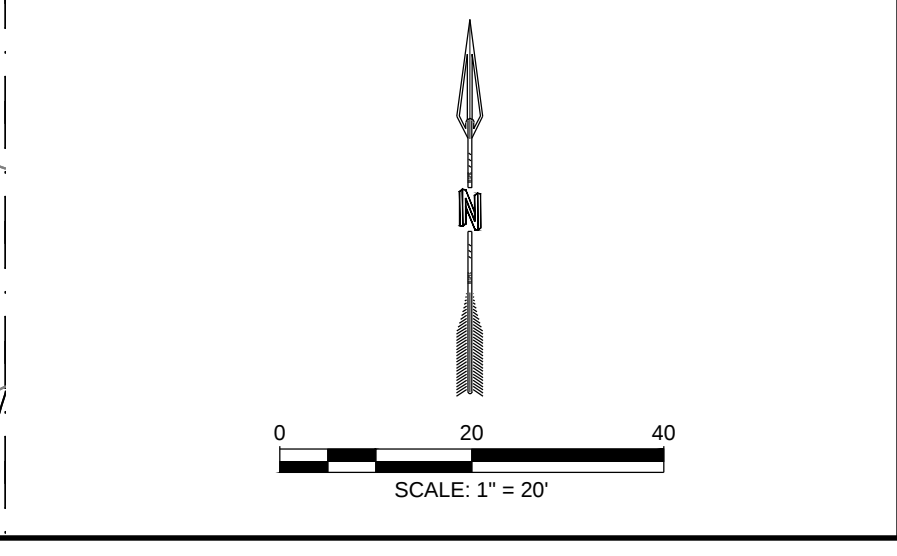


KEY MAP
SCALE: NTS

- GRADING NOTES**
- CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING DRY AND WET UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES. UTILITY RELOCATION MAY BE REQUIRED.
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 - ALL DISTURBED AREAS TO BE RE-SEEDDED OR LANDSCAPE PER LANDSCAPE PLAN PROVIDED BY OTHERS.
- LEGEND**
- | | |
|------------------------|-----|
| GRADING LIMITS | --- |
| MAJOR CONTOUR | --- |
| MINOR CONTOUR | --- |
| EXISTING MAJOR CONTOUR | --- |
| EXISTING MINOR CONTOUR | --- |
| MATCHLINE | --- |
| SLOPE ARROW | --- |
| SIDEWALK CULVERT | --- |
- SPOT ELEVATION SYMBOLS**
- ALL SPOT ELEVATIONS ARE AT FLOWLINE UNLESS OTHERWISE NOTED IN THE PLANS.
- | | |
|--|-----|
| 20.00 FLOWLINE | --- |
| 20.00± MATCH EX. GRADE ELEV. (APPROXIMATE) | --- |
| BW 20.00 BOTTOM WALL | --- |
| TW 20.00 TOP WALL | --- |
| SW 20.00 SIDEWALK | --- |
| FG 20.00 FINISHED GROUND | --- |

KEYED NOTES

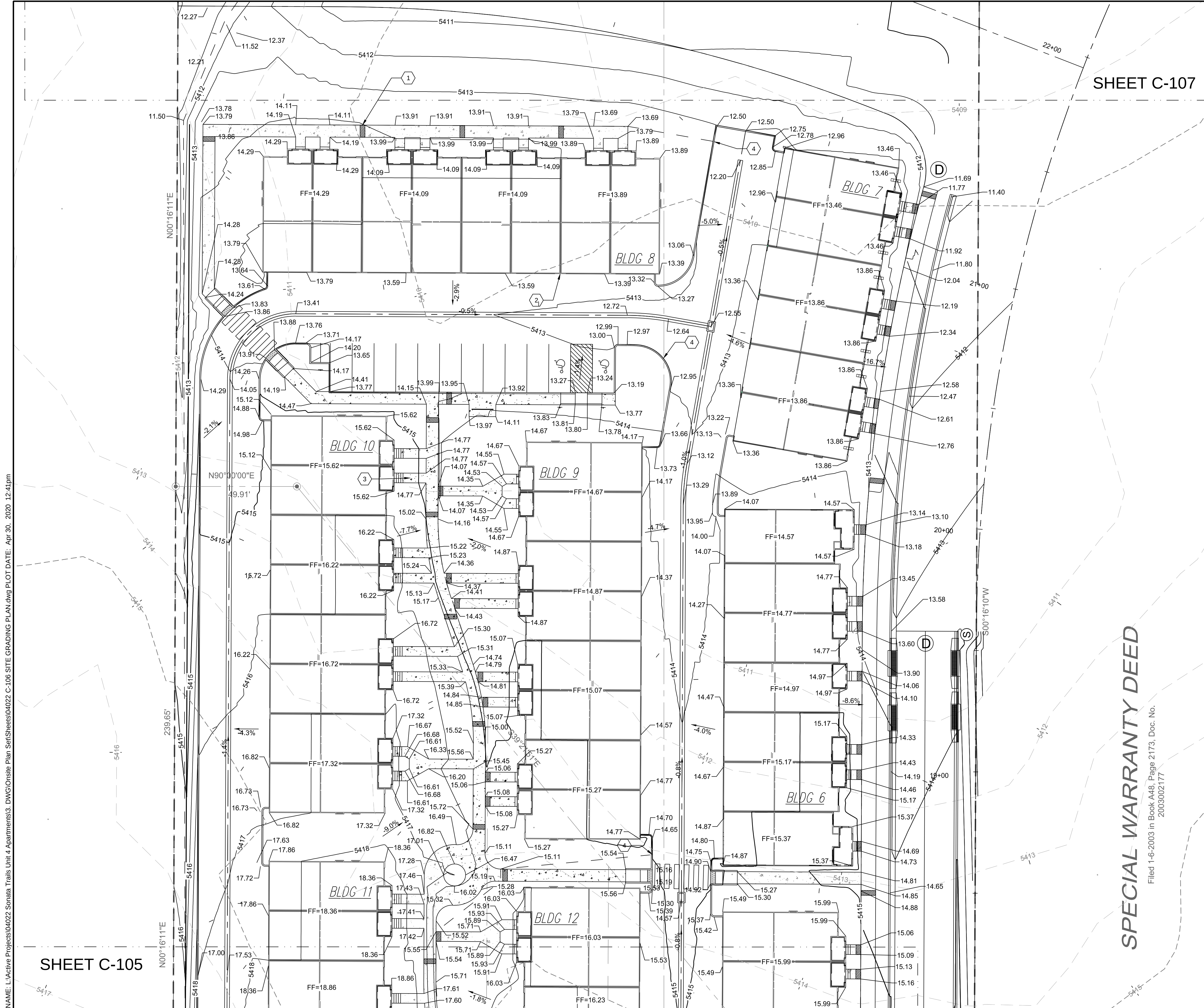
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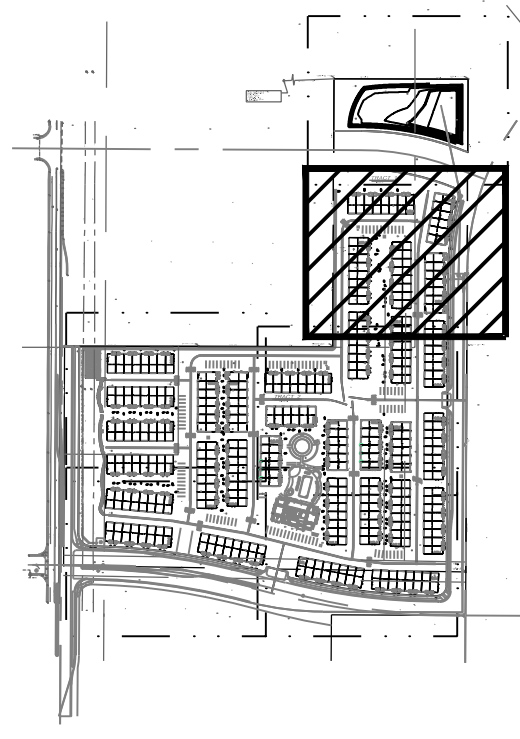
NAME: L:\Active Projects\04022 Sonata Trails Unit 4 Apartments3.DWG\OnSite Plan Set\Sheets\04022 C-105 SITE GRADING PLAN.dwg PLOT DATE: Apr 30, 2020 12:33pm

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SHEET NUMBER: C-105	



SHEET C-107



KEY MAP

SCALE: NTS

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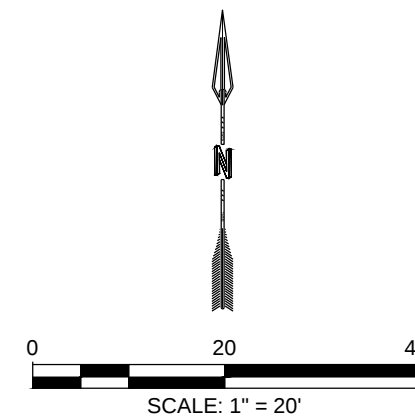
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MAJOR CONTOUR	— 4985 —
MINOR CONTOUR	— 4985 —
EXISTING MAJOR CONTOUR	--- 4985 ---
EXISTING MINOR CONTOUR	--- 4985 ---
MATCHLINE	---
SLOPE ARROW	1.5% 1.2%
SIDEWALK CULVERT	---

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4	1' CURB OPENING. SEE DETAIL12 SHEET C-500.



SPECIAL WARRANTY DEED

Filed 1-6-2003 in Book A48, Page 2173, Doc. No. 2003002177

NAME: L:\Active Projects\04022 Sonata Trails Unit 4 Apartments\3. DWG\Onsite Plan Set\Sheets\04022 C-106 SITE GRADING PLAN.dwg PLOT DATE: Apr 30, 2020 12:41pm

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DATE
4.30.2020

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SONATA TRAILS UNIT 4
APARTMENTS

SHEET TITLE:
CONCEPTUAL SITE
GRADING PLAN

SUBMITTED FOR:
DRB SITE PLAN

SHEET NUMBER:
C-106

Filed 1-6-2003 in Book A48, Page 2173, Doc. No.
2003002177

Filed 1-6-20C

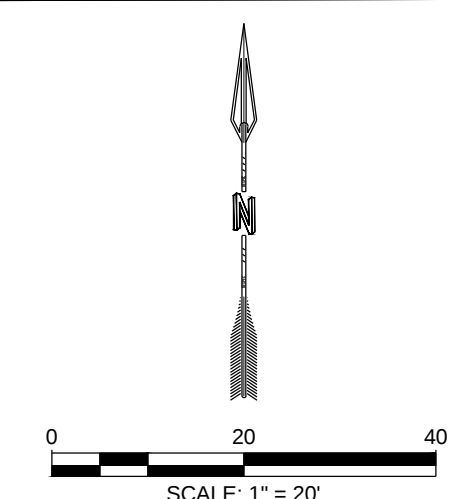
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GRADING LIMITS	
MAJOR CONTOUR	4985
MINOR CONTOUR	
EXISTING MAJOR CONTOUR	4985
EXISTING MINOR CONTOUR	
MATCHLINE	
SLOPE ARROW	-1.5% -51.2%
SIDEWALK CULVERT	

1. ALL SPOT ELEVATIONS ARE AT FLOWLINE UNLESS OTHERWISE NOTED IN THE PLANS.
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 - ✓ 20.00±2 MATCH EX. GRADE ELEV. (APPROXIMATE)
 - ✓ BW 20.00 BOTTOM WALL
 - ✓ TW 20.00 TOP WALL
 - ✓ SW 20.00 SIDEWALK
 - ✓ FG 20.00 FINISHED GROUND

I.D.#	DESCRIPTION
1	1' OVERFLOW WEIR. TOP OF POND ELEVATION = 5410'. TOP OF WEIR ELEVATION = 5409'.
2	1' DEEP MINIMUM EARTHEN SWALE.
3	RIP RAP D50=8" DOWNSTREAM OF OVERFLOW WEIR.
4	RIP RAP D50=8" POND RUNDOWN.



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PROJECT NAME:

SONATA TRAILS UNIT 4
APARTMENTS

CONCEPTUAL SITE GRADING PLAN

SUBMITTED FOR:

DRB SITE PLAN

SHEET NUMBER:

C-107

REFUGION

NAME: L:\Active Projects\04022 Sonata Trails Unit 4 Apartments\3. DWG\Onsite Plan Set\Sheets\04022 C-107 SITE GRADING PLAN.dwg PLOT DATE: Apr 30, 2020 12:50pm

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WARRANTY DEED

February 26, 2007
Book A133, Pg. 563

SHEET C-106



CONCEPTUAL DRAINAGE REPORT FOR SONATA TRAILS UNIT 4 APARTMENTS



PREPARED FOR

City of Albuquerque, Planning Department
Development Review Services, Hydrology Section

PREPARED BY

RESPEC, Inc.
5971 Jefferson St. NE, Suite 101
Albuquerque, NM 87109
505.253.9718

MAY 2020





I, Sheldon Greer, do hereby certify that this report was duly prepared by me or under my direction and that I am a duly registered Professional Engineer under the laws of the State of New Mexico.

Sheldon Greer, P.E.
NMPE No. 17154

5 / 01 / 2020

Date

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this conceptual drainage report is to demonstrate that the proposed development of Sonata Trails Unit 4 Apartments safely conveys the peak 100-year storm runoff. The drainage intent for proposed conditions is to match current existing conditions for the site.

The proposed development of Sonata Trails Unit 4 Apartments impacts the existing detention pond J from the Trails Units 1, 2, and 3, Drainage Master Plan (DMP). The Amendment to the Trails Units 1, 2, and 3 DMP was completed by Thompson Engineering Consultants (TEC) in April 2014 and approved by the City Hydrologist in May 2014. All the Trails surge/detention ponds were based on conservative assumptions when modeled initially by AHYMO but were later modeled using PCSWMM software to maximize the efficiency of the system while decreasing the footprint of Pond D. We have revised the Trails PCSWMM model due to the proposed confined footprint of Pond J and propose increasing the water surface elevation in Pond K, without changing the footprint of Pond K.

1.2 LOCATION AND DESCRIPTION

Sonata Trails Unit 4 Apartments is located southwest of Paseo Del Norte NW and Universe Boulevard NE intersection and contain approximately 17.4 acres. See Figure 1.2.1 below. The legal description of the property is Tracts 1 and 2, The Trails Unit 4, on the plat entitled "Bulk land plat of The Trails Unit 4 within the Town of Alameda Grant in projected Section 15, Township 11 North, Range 2 East, New Mexico Principal Meridian, City of Albuquerque, Bernalillo County, New Mexico, October, 2007." The existing site includes detention pond J for the Trails Units 1, 2, and 3, but is otherwise undeveloped. The existing conditions are described in more detail in Section 3.1 and the proposed conditions are described in Section 3.2.



FIGURE 1.2.1 – PROJECT LOCATION

2.0 METHODOLOGY

The hydrologic analysis was performed for the site in accordance with the Albuquerque Development Process Manual (DPM) Section 22.2. AHYMO-S4 (April 2018) was used to develop peak flow rates for the 100-year, 24-hour design storm in order to ensure all flow paths are sufficient to carry flows. The required water quality volume was calculated by multiplying the onsite impervious area by the first flush runoff value of 0.34". All hydrologic and hydraulic calculations are included in this report.

3.0 HYDROLOGY

3.1 EXISTING CONDITIONS

The Sonata Trails Unit 4 Apartment receive offsite flows from the Trails Units 1, 2, and 3 and as well as the neighboring parcel to the northwest. The existing site is 100% pervious area and a portion of the property contains a detention pond, Pond J, which receives flows from the Trails Units 1, 2, and 3. The

total flow generated by the property under existing conditions is 47.71 cfs. The existing property has been split into three sub-basins. Exhibit 1 shows the existing sub-basin boundaries for the site.

Basin A is located in the western corner of the property and is primarily made up of existing detention pond, Pond J, and undeveloped pervious area. In general, the basin slopes from north to south and south to north at varying slopes between 1%-20%. Under existing conditions, runoff from the Universe storm drain system surges into Pond J and exits the detention pond back into the Universe storm drain system or at the overflow weir at the northwest corner of the pond and discharges into Basins B and Basin C. The existing Pond J has a maximum water surface elevation of 5418.46 ft, maximum volume of 3.70 ac-ft, maximum inflow of 136.80 cfs, and maximum outflow of 26.65 cfs. Historically, before the berm and pond were built, the basin flowed northeast into Basins B and Basin C. Basin A generates 6.88 cfs.

Basin B contains the southeast corner of the property and is undeveloped pervious area. In general, the basin slopes from south to north at varying slopes between 1-8%. After ponding a small amount, roughly 6", runoff exits this basin at the northern end of the basin and discharges into Basin C. Basin B generates 12.21 cfs.

Basin C contains of the north end of the property and offsite area west of the property boundary. The area contains undeveloped pervious area. In general, the basin slopes from southeast to northwest at varying slopes between 1-16%. Runoff exists this basin at the northern end of the basin. Basin C generates 28.63 cfs.

TABLE 3.1.1 – HYDROLOGIC DATA - EXISTING

HYDROLOGIC DATA - EXISTING							
SUB-BASIN	AREA (AC)	LAND USE PERCENTAGES				Q100 (CFS)	V100 (AC-FT)
		A	B	C	D		
A	5.14	100%	0%	0%	0%	6.88	0.188
B	9.14	100%	0%	0%	0%	12.21	0.335
C	21.44	100%	0%	0%	0%	28.63	0.785
TOTAL	35.73					47.72	1.308

3.2 PROPOSED CONDITIONS

The proposed site development for the Trails Unit 4 Apartments includes apartment buildings, parking lots, public and private streets, detention ponds, and landscaping. Under the proposed condition, approximately 80% of the site will consist of impervious area and 20% will be landscaped. The total flow generated by the proposed development is 81.35 cfs. Therefore, the discharge from the proposed site is greater than the existing condition so we will limit the discharge in a proposed public Pond A to existing conditions, 47.71 cfs. See Appendix A for the AHYMO input and output results verifying the proposed Pond A reduces the drainage discharge below historic levels. The property has been split into nine proposed basins. Exhibit 2 shows the proposed basin boundaries for the site.

Basin A consists of the edges of the property from the southwest corner to the northeast corner and is made up of apartment buildings, asphalt roads and parking, and landscaping. In general, the basin slopes from southwest to northeast at varying slopes between 0.5%-1%. Runoff is collected in

proposed drop inlets in the new road which discharges into a storm drain that will connect to the public storm drain system, and ultimately discharge into the proposed Pond A. The proposed flow is 19.52 cfs.

Basin B consists of the center portion of the property and is made up of apartment buildings, asphalt roads and parking, and landscaping. In general, the basin slopes from west to east at varying slopes between 0.5%-1%. Runoff is collected in the new road which discharges into Basin A. The proposed flow is 11.84 cfs.

Basin C consists of the center portion of the property and is made up of apartment buildings, asphalt roads and parking, and landscaping. In general, the basin slopes from west to east at varying slopes between 0.5%-1%. Runoff is collected in the new road which discharges into Basin A. The proposed flow is 16.36 cfs.

Basin D is an undeveloped off-site basin to the west and north of the property. The basin also includes a proposed Pond A at the northeast corner of the basin. In general, the basin slopes from southeast to northwest at varying slopes between 3-5%. The southwestern portion of the basin discharges into the swale in Basin F. Runoff exits Basin D at the overflow weir spillway in the proposed Pond A and discharges to the northwest to match the historic discharge. We are proposing a wide spillway to best replicate the sheet flow that historically discharges to this point. The proposed Pond A has a maximum water surface elevation of 5419.33 ft, maximum volume of 2.326 ac-ft, maximum inflow of 80.71 cfs, and maximum outflow of 11.18 cfs. Pond A limits the discharge well below historic rate of 47.72 cfs down to 11.18 cfs. Basin D generates 16.38 cfs.

Basin E consists of the northern end of the property and is made up of apartment buildings, asphalt roads and parking, landscaping, and undeveloped pervious area. In general, the basin slopes from south to north at varying slopes between 0.5%-1%. Runoff is overland flow and discharges into Basin D. The proposed flow is 1.54 cfs.

Basin F consists of the northwestern boundary of the property and is made up of landscaping and a swale. In general, the basin slopes west and then north at varying slopes between 0.5%-1%. Runoff is conveyed in a proposed swale. The primary purpose of the swale is to convey offsite drainage from Basin D to prevent the offsite drainage from affecting the proposed property. The proposed swale ultimately discharges into the ROW at the northwest corner of the property, into Basin D and then Pond A. The proposed flow is 0.94 cfs.

Basin G is an off-site basin and consists of the proposed public streets, Treeline Avenue and Chatsworth Drive. In general, the basin slopes from west to east on Treeline Avenue and south to north on Chatsworth Drive at varying slopes between 0.5%-1%. Runoff is collected in drop inlets which discharges into the proposed Pond A in Basin D via storm drain. The proposed flow is 14.88 cfs.

Basin H is an off-site basin and consists of the half-street expansion of the proposed public street, Universe Drive. In general, the basin slopes from north to south at 0.5%. Runoff in Universe Drive continues south until it is collected in drop inlets immediately south of Woodmont Avenue which discharges directly into Pond K. The proposed flow is 2.88 cfs. This flow has been accounted for in the existing PCSWMM model.

Basin I consists of the reconfiguration of Pond J and landscaping. In general, the basin slopes from north to south at varying slopes between 0.5%-1%. Runoff is collected in Pond J which discharges into the existing storm drain network paralleling Universe Drive. Due to Pond J losing volume, we propose sending more drainage into Pond K, raising the 100-yr water surface elevation 0.33 feet from 5410.67' to 5411'. The proposed Pond J has a maximum volume of 0.04 ac-ft, maximum inflow of 22.56 cfs, and maximum outflow of 28.30 cfs. In order to keep the hydraulic grade line below the existing manhole rim elevations, we propose installing a 36" storm drain out of the next storm drain manhole to the south into Pond K. The proposed flow is 2.00 cfs. This flow has been accounted for in the existing PCSWMM model and the only changes that were made to the existing PCSWMM model is the Pond J volume and the addition the 36" storm drain. Also, after a field investigation it was discovered the orifice plate for Pond J was never installed so we removed that orifice from the model.

The hydrologic data table below depicts in further detail each sub-basin and its characteristics.

TABLE 3.2.1 – HYDROLOGIC DATA - PROPOSED

HYDROLOGIC DATA - PROPOSED							
SUB-BASIN	AREA (AC)	LAND USE PERCENTAGES				Q100 (CFS)	V100 (AC-FT)
		A	B	C	D		
A	4.89	0%	10%	10%	80%	19.52	0.857
B	2.96	0%	10%	10%	80%	11.84	0.520
C	4.10	0%	10%	10%	80%	16.36	0.718
D	10.01	90%	0%	0%	10%	16.38	0.532
E	0.62	0%	50%	50%	0%	1.54	0.042
F	0.35	0%	45%	45%	10%	0.94	0.028
G	3.55	0%	5%	5%	90%	14.88	0.670
H	0.69	0%	5%	5%	90%	2.88	0.129
I	0.47	0%	5%	5%	90%	2.00	0.089
TOTAL	27.64					86.34	3.585

The total required water quality volume for the site was calculated based on the total proposed onsite impervious area multiplied by the is 13,064 cubic feet. The required stormwater quality volume has been provided in the proposed Pond A. More details regarding water quality will be provided at Building Permit review.

4.0 HYDRAULICS

4.1 STREETS

Runoff flow rates and volumes for the hydraulic design of the Sonata Trails Unit 4 development are those calculated by the AHYMO model. Private street capacities were checked at certain locations throughout the roadways where flow runoff rates are critical. These include the proposed roadways in Basins A, B, and C.

The maximum street capacity was determined for a given street section using ManningSolver Version 1.019 to ensure the design criteria mentioned in Section 2.0 of this report were met. Calculations for street capacities are shown in Appendix B.

4.2 STORM INLETS AND STORM DRAINS

Flow intercepted by drainage inlets were determined using the orifice and weir equations based on the City of Albuquerque Type "D" inlets. Flow quantities intercepted by curb inlets were determined using the Albuquerque DPM grating capacities rating curves for the appropriate inlets. All proposed storm drain capacities were determined using ManningSolver Version 1.019. For further information on drainage inlet and storm drain capacity calculations see Appendix B.

5.0 CONCLUSION

This drainage report is prepared in support of the new development for Sonata Trails Unit 4 Apartments. The existing site is undeveloped and the new development will include apartments, parking, landscaping, public roadways, public Pond A, and revising existing Pond J. The existing detention Pond J will be redesigned to allow for the development of the apartment complex sending more drainage to existing Pond K. The 100-year water surface elevation in Pond K increases from 5410.67' to 5411', a 0.33' increase. Pond K will have 2.10' of remaining freeboard after the proposed increase. The proposed conditions limit the discharge out of the proposed Pond A significantly below existing conditions, 47.71 cfs, down to 11.18 cfs. The proposed spillway for Pond A is wide to best replicate the sheet flow that historically discharges out of Basin D. The hydrologic calculations are included in Appendix A. The hydraulic calculations are included in Appendix B.

NAME: L:\WNR\Active Projects\04022 Sonata Trails Unit 4 Apartments\3. DWG\Onsite Plan Set\Exhibits\04022 Drainage Existing Conditions.dwg PLOT DATE: Apr 30, 2020 11:15am



LEGEND

- PROPERTY BOUNDARY
- BASIN BOUNDARY
- EXISTING STORM DRAIN
- FLOW ARROW
- EXISTING STORM DRAIN MANHOLE
- EXISTING STORM DRAIN INLET

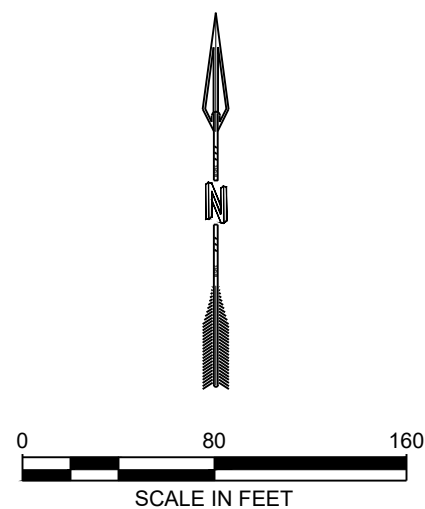
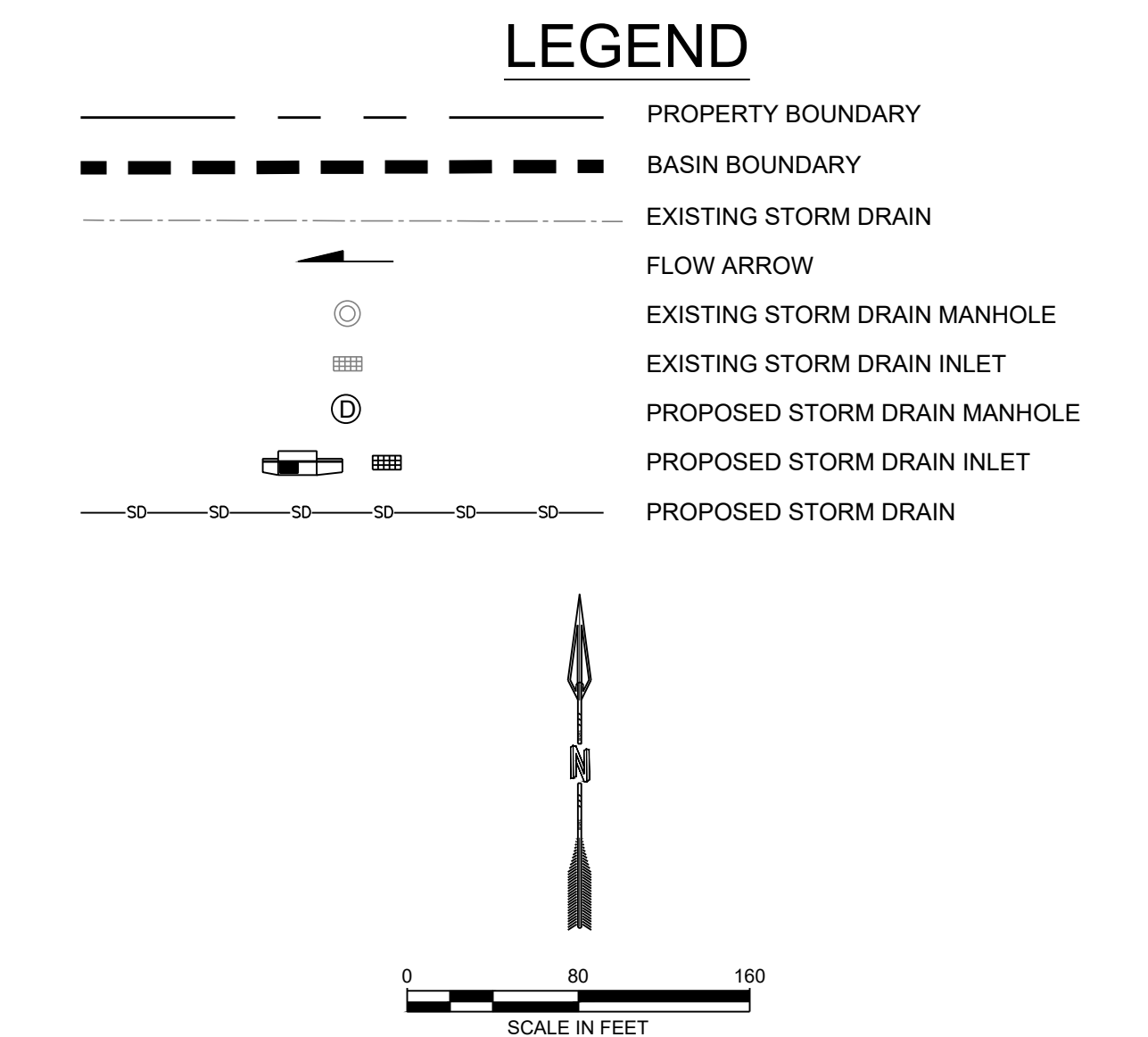


EXHIBIT 1 EXISTING BASINS



RESPEC
COMMUNITY DESIGN SOLUTIONS
5971 JEFFERSON STREET SUITE 101
ALBUQUERQUE, NEW MEXICO 87109
WWW.RESPEC.COM PHONE: (505)253-9718



The logo for RESPEC features a large, stylized black 'R' with a white outline. To its right, the word 'RESPEC' is written in a bold, red, sans-serif font. Below 'RESPEC', the words 'COMMUNITY DESIGN SOLUTIONS' are written in a smaller, red, sans-serif font. Further down, the address '5971 JEFFERSON STREET SUITE 101 ALBUQUERQUE, NEW MEXICO 87109' is listed in a black, sans-serif font. At the bottom, the website 'WWW.RESPEC.COM' and phone number '(505)253-9718' are provided in a black, sans-serif font.



APPENDIX A

HYDROLOGIC CALCULATIONS



04022 Input.HMI

* 100 YEAR RAINFALL TABLE

RAINFALL TYPE=13 RAIN QUARTER=0 IN
RAIN ONE=1.87 IN RAIN SIX=2.20 IN
RAIN DAY=2.66 IN DT=0.033 HR

*S EXISTING CONDITIONS

*S COMPUTE HYD EXISTING BASIN A

COMPUTE NM HYD ID=1 HYDNO=101 DA=0.00804SQ MI
PER A=100 PER B=0 PER C=0 PER D=0
TP=-0.13 RAIN=-1

PRINT HYD ID=1 CODE=10

*S COMPUTE HYD EXISTING BASIN B

COMPUTE NM HYD ID=2 HYDNO=102 DA=0.01428SQ MI
PER A=100 PER B=0 PER C=0 PER D=0
TP=-0.13 RAIN=-1

PRINT HYD ID=2 CODE=10

*S COMPUTE HYD EXISTING BASIN C

COMPUTE NM HYD ID=3 HYDNO=103 DA=0.03350SQ MI
PER A=100 PER B=0 PER C=0 PER D=0
TP=-0.13 RAIN=-1

PRINT HYD ID=3 CODE=10

ADD HYD ID=4 HYD=101T0102 ID I=1 II=2

PRINT HYD ID=4 CODE=10

ADD HYD ID=5 HYD=COMBINED101-102T0103 ID I=3 II=4

PRINT HYD ID=5 CODE=10

*S PROPOSED CONDITIONS

*S COMPUTE HYD PROPOSED BASIN A

COMPUTE NM HYD ID=6 HYDNO=104 DA=0.00764SQ MI
PER A=0 PER B=10 PER C=10 PER D=80
TP=-0.13 RAIN=-1

PRINT HYD ID=6 CODE=10

*S COMPUTE HYD PROPOSED BASIN B

COMPUTE NM HYD ID=7 HYDNO=105 DA=0.00463SQ MI
PER A=0 PER B=10 PER C=10 PER D=80
TP=-0.13 RAIN=-1

PRINT HYD ID=7 CODE=10

*S COMPUTE HYD PROPOSED BASIN C

COMPUTE NM HYD ID=8 HYDNO=106 DA=0.00640SQ MI

```

                                04022 Input.HMI
                                PER A=0  PER B=10  PER C=10  PER D=80
                                TP=-0.13  RAIN=-1
PRINT HYD                      ID=8  CODE=10

ADD HYD                      ID=10 HYD=BTOA ID I=6 II=7
PRINT HYD                      ID=10 CODE=10

ADD HYD                      ID=11 HYD=B-CTOA ID I=8 II=10
PRINT HYD                      ID=11 CODE=10

*S  COMPUTE HYD PROPOSED BASIN D
COMPUTE NM HYD                ID=12  HYDNO=107  DA=0.01564SQ MI
                                PER A=90  PER B=0  PER C=0  PER D=10
                                TP=-0.13  RAIN=-1
PRINT HYD                      ID=12  CODE=10

*S  COMPUTE HYD PROPOSED BASIN E
COMPUTE NM HYD                ID=13  HYDNO=108  DA=0.00096SQ MI
                                PER A=0  PER B=50  PER C=50  PER D=0
                                TP=-0.13  RAIN=-1
PRINT HYD                      ID=13  CODE=10

*S  COMPUTE HYD PROPOSED BASIN F
COMPUTE NM HYD                ID=14  HYDNO=109  DA=0.00054SQ MI
                                PER A=0  PER B=45  PER C=45  PER D=10
                                TP=-0.13  RAIN=-1
PRINT HYD                      ID=14  CODE=10

ADD HYD                      ID=15 HYD=DTOF ID I=12 II=14
PRINT HYD                      ID=15 CODE=10

ADD HYD                      ID=16 HYD=ETOF-D ID I=13 II=15
PRINT HYD                      ID=16 CODE=10

*S  COMPUTE HYD PROPOSED BASIN G
COMPUTE NM HYD                ID=17  HYDNO=110  DA=0.00555SQ MI
                                PER A=0  PER B=5  PER C=5  PER D=90
                                TP=-0.13  RAIN=-1
PRINT HYD                      ID=17  CODE=10

*S  COMPUTE HYD PROPOSED BASIN H
COMPUTE NM HYD                ID=18  HYDNO=111  DA=0.00107Q MI
                                PER A=0  PER B=5  PER C=5  PER D=90
                                TP=-0.13  RAIN=-1
PRINT HYD                      ID=18  CODE=10

*S  COMPUTE HYD PROPOSED BASIN I
COMPUTE NM HYD                ID=19  HYDNO=112  DA=0.00074SQ MI

```

```

                                04022 Input.HMI
                                PER A=0  PER B=5  PER C=5  PER D=90
                                TP=-0.13  RAIN=-1
PRINT HYD                      ID=19  CODE=10

ADD HYD                      ID=20  HYD=HTOI  ID I=18  II=19
PRINT HYD                      ID=20  CODE=10

ADD HYD                      ID=21  HYD=A-CTOG  ID I=11  II=17
PRINT HYD                      ID=21  CODE=10

ADD HYD                      ID=22  HYD=D-FTOA-DTOG  ID I=16  II=21
PRINT HYD                      ID=22  CODE=10


ROUTE RESERVOIR  ID=50  HYD=POND.A  INFLOW ID=22  CODE=5
                                OUTFLOW      STORAGE DEPTH
                                0.0           0           5404.00
                                0.01          0.17        5405.00
                                0.01          0.43        5406.00
                                0.01          0.86        5407.00
                                0.01          1.44        5408.00
                                0.01          2.10        5409.00
                                16.80          2.44        5409.50
                                47.71          2.80        5410.00

*
PRINT HYD                      ID=50  CODE=10

FINISH

```

AHYMO.OUT

AHYMO PROGRAM (AHYMO-S4)

- Version: S4.02a - Rel: 02a

RUN DATE (MON/DAY/YR) = 04/30/2020

START TIME (HR:MIN:SEC) = 11:39:10

USER NO. =

AHYMO-S4TempUser05901704

INPUT FILE = y\ENG Tools\ahymo-s4-r2\ahymo-s4-r2\DISK1\program
files\AHYMO-S4\04022 Input.HMI

* 100 YEAR RAINFALL TABLE

RAINFALL TYPE=13 RAIN QUARTER=0 IN

RAIN ONE=1.87 IN RAIN SIX=2.20 IN

RAIN DAY=2.66 IN DT=0.033 HR

COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 -

PEAK AT 1.40 HR.

DT =	0.033000	HOURS	END TIME =	23.990999	HOURS
0.0000	0.0016	0.0033	0.0049	0.0066	0.0084
0.0120	0.0139	0.0158	0.0178	0.0198	0.0219
0.0262	0.0285	0.0308	0.0332	0.0357	0.0383
0.0437	0.0465	0.0495	0.0526	0.0558	0.0592
0.0664	0.0704	0.0745	0.0793	0.0847	0.0904
0.1220	0.1595	0.2144	0.2903	0.3910	0.5206
0.8823	1.1227	1.2303	1.3056	1.3716	1.4312
1.5365	1.5836	1.6278	1.6693	1.7085	1.7455
1.8136	1.8451	1.8749	1.9032	1.9301	1.9482
1.9597	1.9650	1.9700	1.9749	1.9795	1.9840
1.9925	1.9965	2.0004	2.0041	2.0078	2.0114
2.0182	2.0215	2.0247	2.0278	2.0309	2.0339
2.0396	2.0425	2.0452	2.0479	2.0506	2.0532
2.0582	2.0607	2.0631	2.0655	2.0678	2.0702
2.0747	2.0769	2.0791	2.0812	2.0833	2.0854
2.0895	2.0915	2.0935	2.0955	2.0974	2.0993
2.1031	2.1049	2.1067	2.1086	2.1103	2.1121
2.1156	2.1173	2.1190	2.1207	2.1223	2.1240
2.1272	2.1288	2.1304	2.1320	2.1335	2.1351
2.1381	2.1396	2.1411	2.1426	2.1440	2.1455
2.1484	2.1498	2.1512	2.1526	2.1540	2.1553
2.1581	2.1594	2.1607	2.1621	2.1634	2.1647
2.1673	2.1686	2.1698	2.1711	2.1723	2.1736
2.1761	2.1773	2.1785	2.1797	2.1809	2.1821
2.1844	2.1856	2.1868	2.1879	2.1891	2.1902
2.1925	2.1936	2.1947	2.1958	2.1969	2.1980
2.2002	2.2015	2.2028	2.2041	2.2054	2.2067
2.2092	2.2105	2.2118	2.2130	2.2143	2.2156
					2.2168

AHYMO.OUT

2.2181	2.2193	2.2206	2.2218	2.2231	2.2243	2.2255
2.2268	2.2280	2.2292	2.2305	2.2317	2.2329	2.2341
2.2354	2.2366	2.2378	2.2390	2.2402	2.2414	2.2426
2.2438	2.2450	2.2462	2.2474	2.2486	2.2497	2.2509
2.2521	2.2533	2.2545	2.2556	2.2568	2.2580	2.2591
2.2603	2.2615	2.2626	2.2638	2.2649	2.2661	2.2672
2.2684	2.2695	2.2706	2.2718	2.2729	2.2741	2.2752
2.2763	2.2774	2.2786	2.2797	2.2808	2.2819	2.2830
2.2842	2.2853	2.2864	2.2875	2.2886	2.2897	2.2908
2.2919	2.2930	2.2941	2.2952	2.2963	2.2974	2.2984
2.2995	2.3006	2.3017	2.3028	2.3038	2.3049	2.3060
2.3071	2.3081	2.3092	2.3103	2.3113	2.3124	2.3134
2.3145	2.3155	2.3166	2.3176	2.3187	2.3197	2.3208
2.3218	2.3229	2.3239	2.3249	2.3260	2.3270	2.3280
2.3291	2.3301	2.3311	2.3321	2.3331	2.3342	2.3352
2.3362	2.3372	2.3382	2.3392	2.3402	2.3413	2.3423
2.3433	2.3443	2.3453	2.3463	2.3473	2.3482	2.3492
2.3502	2.3512	2.3522	2.3532	2.3542	2.3552	2.3561
2.3571	2.3581	2.3591	2.3600	2.3610	2.3620	2.3630
2.3639	2.3649	2.3659	2.3668	2.3678	2.3687	2.3697
2.3706	2.3716	2.3726	2.3735	2.3745	2.3754	2.3763
2.3773	2.3782	2.3792	2.3801	2.3811	2.3820	2.3829
2.3839	2.3848	2.3857	2.3867	2.3876	2.3885	2.3894
2.3904	2.3913	2.3922	2.3931	2.3940	2.3950	2.3959
2.3968	2.3977	2.3986	2.3995	2.4004	2.4013	2.4022
2.4031	2.4040	2.4049	2.4058	2.4067	2.4076	2.4085
2.4094	2.4103	2.4112	2.4121	2.4130	2.4139	2.4148
2.4156	2.4165	2.4174	2.4183	2.4192	2.4200	2.4209
2.4218	2.4227	2.4235	2.4244	2.4253	2.4261	2.4270
2.4279	2.4287	2.4296	2.4305	2.4313	2.4322	2.4330
2.4339	2.4348	2.4356	2.4365	2.4373	2.4382	2.4390
2.4399	2.4407	2.4416	2.4424	2.4432	2.4441	2.4449
2.4458	2.4466	2.4474	2.4483	2.4491	2.4499	2.4508
2.4516	2.4524	2.4533	2.4541	2.4549	2.4557	2.4566
2.4574	2.4582	2.4590	2.4599	2.4607	2.4615	2.4623
2.4631	2.4639	2.4647	2.4656	2.4664	2.4672	2.4680
2.4688	2.4696	2.4704	2.4712	2.4720	2.4728	2.4736
2.4744	2.4752	2.4760	2.4768	2.4776	2.4784	2.4792
2.4800	2.4808	2.4816	2.4823	2.4831	2.4839	2.4847
2.4855	2.4863	2.4871	2.4878	2.4886	2.4894	2.4902
2.4910	2.4917	2.4925	2.4933	2.4941	2.4948	2.4956
2.4964	2.4971	2.4979	2.4987	2.4994	2.5002	2.5010
2.5017	2.5025	2.5033	2.5040	2.5048	2.5055	2.5063
2.5070	2.5078	2.5086	2.5093	2.5101	2.5108	2.5116
2.5123	2.5131	2.5138	2.5146	2.5153	2.5161	2.5168
2.5175	2.5183	2.5190	2.5198	2.5205	2.5212	2.5220
2.5227	2.5235	2.5242	2.5249	2.5257	2.5264	2.5271
2.5279	2.5286	2.5293	2.5300	2.5308	2.5315	2.5322

AHYMO.OUT

2.5329	2.5337	2.5344	2.5351	2.5358	2.5366	2.5373
2.5380	2.5387	2.5394	2.5401	2.5409	2.5416	2.5423
2.5430	2.5437	2.5444	2.5451	2.5458	2.5465	2.5472
2.5480	2.5487	2.5494	2.5501	2.5508	2.5515	2.5522
2.5529	2.5536	2.5543	2.5550	2.5557	2.5564	2.5571
2.5578	2.5585	2.5591	2.5598	2.5605	2.5612	2.5619
2.5626	2.5633	2.5640	2.5647	2.5654	2.5660	2.5667
2.5674	2.5681	2.5688	2.5695	2.5701	2.5708	2.5715
2.5722	2.5729	2.5735	2.5742	2.5749	2.5756	2.5762
2.5769	2.5776	2.5782	2.5789	2.5796	2.5803	2.5809
2.5816	2.5823	2.5829	2.5836	2.5843	2.5849	2.5856
2.5863	2.5869	2.5876	2.5882	2.5889	2.5896	2.5902
2.5909	2.5915	2.5922	2.5928	2.5935	2.5942	2.5948
2.5955	2.5961	2.5968	2.5974	2.5981	2.5987	2.5994
2.6000	2.6007	2.6013	2.6020	2.6026	2.6032	2.6039
2.6045	2.6052	2.6058	2.6065	2.6071	2.6077	2.6084
2.6090	2.6097	2.6103	2.6109	2.6116	2.6122	2.6128
2.6135	2.6141	2.6147	2.6154	2.6160	2.6166	2.6173
2.6179	2.6185	2.6191	2.6198	2.6204	2.6210	2.6217
2.6223	2.6229	2.6235	2.6241	2.6248	2.6254	2.6260
2.6266	2.6273	2.6279	2.6285	2.6291	2.6297	2.6303
2.6310	2.6316	2.6322	2.6328	2.6334	2.6340	2.6346
2.6353	2.6359	2.6365	2.6371	2.6377	2.6383	2.6389
2.6395	2.6401	2.6407	2.6413	2.6420	2.6426	2.6432
2.6438	2.6444	2.6450	2.6456	2.6462	2.6468	2.6474
2.6480	2.6486	2.6492	2.6498	2.6504	2.6510	2.6516
2.6522	2.6527	2.6533	2.6539	2.6545	2.6551	2.6557
2.6563	2.6569	2.6575	2.6581	2.6587	2.6593	2.6598

*S EXISTING CONDITIONS

*S COMPUTE HYD EXISTING BASIN A

COMPUTE NM HYD ID=1 HYDNO=101 DA=0.00804SQ MI

PER A=100 PER B=0 PER C=0 PER D=0

TP=-0.13 RAIN=-1

K = 0.159632HR TP = 0.130000HR K/TP RATIO = 1.227936 SHAPE
 CONSTANT, N = 2.899626
 UNIT PEAK = 16.917 CFS UNIT VOLUME = 0.9988 B = 273.54
 P60 = 1.8700

AHYMO.OUT

AREA = 0.008040 SQ MI IA = 0.65000 INCHES INF = 1.67000
 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033000

PRINT HYD ID=1 CODE=10

PARTIAL HYDROGRAPH 101.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	CFS		HRS	CFS		HRS	CFS
	0.000	0.0		0.990	0.0	1.980	0.7
2.970	0.1		3.960	0.0			
	0.330	0.0		1.320	0.0	2.310	0.3
3.300	0.0		4.290	0.0			
	0.660	0.0		1.650	4.1	2.640	0.2
3.630	0.0						

RUNOFF VOLUME = 0.43934 INCHES = 0.1884 ACRE-FEET
 PEAK DISCHARGE RATE = 6.88 CFS AT 1.518 HOURS BASIN AREA = 0.0080 SQ. MI.

*S COMPUTE HYD EXISTING BASIN B

COMPUTE NM HYD ID=2 HYDNO=102 DA=0.01428SQ MI

PER A=100 PER B=0 PER C=0 PER D=0

TP=-0.13 RAIN=-1

K = 0.159632HR TP = 0.130000HR K/TP RATIO = 1.227936 SHAPE
 CONSTANT, N = 2.899626

UNIT PEAK = 30.047 CFS UNIT VOLUME = 0.9991 B = 273.54
 P60 = 1.8700

AREA = 0.014280 SQ MI IA = 0.65000 INCHES INF = 1.67000
 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033000

PRINT HYD ID=2 CODE=10

AHYMO.OUT

PARTIAL HYDROGRAPH 102.00

TIME	TIME FLOW	FLOW	TIME	TIME FLOW	FLOW	TIME	FLOW
	HRS	CFS		HRS	CFS		CFS
	0.000	0.0		0.990	0.0	1.980	1.2
2.970	0.1		3.960	0.0			
	0.330	0.0		1.320	0.0	2.310	0.6
3.300	0.1		4.290	0.0			
	0.660	0.0		1.650	7.3	2.640	0.3
3.630	0.0		4.620	0.0			

RUNOFF VOLUME = 0.43934 INCHES = 0.3346 ACRE-FEET
 PEAK DISCHARGE RATE = 12.21 CFS AT 1.518 HOURS BASIN AREA =
 0.0143 SQ. MI.

*S COMPUTE HYD EXISTING BASIN C

COMPUTE NM HYD ID=3 HYDNO=103 DA=0.03350SQ MI

PER A=100 PER B=0 PER C=0 PER D=0

TP=-0.13 RAIN=-1

K = 0.159632HR TP = 0.130000HR K/TP RATIO = 1.227936 SHAPE
 CONSTANT, N = 2.899626

UNIT PEAK = 70.489 CFS UNIT VOLUME = 0.9994 B = 273.54

P60 = 1.8700

AREA = 0.033500 SQ MI IA = 0.65000 INCHES INF = 1.67000
 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

PRINT HYD ID=3 CODE=10

PARTIAL HYDROGRAPH 103.00

TIME	TIME FLOW	FLOW	TIME	TIME FLOW	FLOW	TIME	FLOW
------	--------------	------	------	--------------	------	------	------

				AHYMO.OUT			
HRS	CFS	HRS	CFS	HRS	CFS	HRS	CFS
	0.000		0.0	1.320	0.0	2.640	0.7
3.960	0.0						
	0.330		0.0	1.650	17.1	2.970	0.3
4.290	0.0						
	0.660		0.0	1.980	2.7	3.300	0.2
4.620	0.0						
	0.990		0.0	2.310	1.3	3.630	0.1
4.950	0.0						

RUNOFF VOLUME = 0.43934 INCHES = 0.7850 ACRE-FEET
 PEAK DISCHARGE RATE = 28.63 CFS AT 1.518 HOURS BASIN AREA =
 0.0335 SQ. MI.

ADD HYD ID=4 HYD=101T0102 ID I=1 II=2

PRINT HYD ID=4 CODE=10

HYDROGRAPH FROM AREA 101T0102

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	FLOW	CFS	HRS	FLOW	CFS	HRS	CFS
	0.000	0.0		0.990	0.0	1.980	1.8
2.970	0.2		3.960	0.0			
	0.330	0.0		1.320	0.0	2.310	0.9
3.300	0.1		4.290	0.0			
	0.660	0.0		1.650	11.4	2.640	0.4
3.630	0.1		4.620	0.0			

RUNOFF VOLUME = 0.43933 INCHES = 0.5230 ACRE-FEET
 PEAK DISCHARGE RATE = 19.08 CFS AT 1.518 HOURS BASIN AREA =
 0.0223 SQ. MI.

ADD HYD ID=5 HYD=COMBINED101-102T0103 ID I=3 II=4

PRINT HYD

AHYMO.OUT
ID=5 CODE=10

HYDROGRAPH FROM AREA

COMBINED101-102T0103

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	CFS	CFS	HRS	CFS	CFS	HRS	CFS
	0.000	0.0	1.320	0.0		2.640	1.1
3.960	0.1		1.650	28.5		2.970	0.6
	0.330	0.0					
4.290	0.0		1.980	4.5		3.300	0.3
	0.660	0.0					
4.620	0.0		2.310	2.2		3.630	0.1
	0.990	0.0					
4.950	0.0						

RUNOFF VOLUME = 0.43934 INCHES = 1.3079 ACRE-FEET
PEAK DISCHARGE RATE = 47.71 CFS AT 1.518 HOURS BASIN AREA =
0.0558 SQ. MI.

*S PROPOSED CONDITIONS

*S COMPUTE HYD PROPOSED BASIN A

COMPUTE NM HYD ID=6 HYDNO=104 DA=0.00764SQ MI

PER A=0 PER B=10 PER C=10 PER D=80

TP=-0.13 RAIN=-1

K = 0.070850HR TP = 0.130000HR K/TP RATIO = 0.545000 SHAPE
CONSTANT, N = 7.106428
UNIT PEAK = 24.743 CFS UNIT VOLUME = 0.9993 B = 526.28
P60 = 1.8700
AREA = 0.006112 SQ MI IA = 0.10000 INCHES INF = 0.04000
INCHES PER HOUR

AHYMO.OUT

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033000

K = 0.115497HR TP = 0.130000HR K/TP RATIO = 0.888442 SHAPE
CONSTANT, N = 3.992344

UNIT PEAK = 4.1687 CFS UNIT VOLUME = 0.9971 B = 354.66
P60 = 1.8700

AREA = 0.001528 SQ MI IA = 0.42500 INCHES INF = 1.04000
INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033000

PRINT HYD ID=6 CODE=10

PARTIAL HYDROGRAPH 104.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	0.000	0.0		4.950	0.1	9.900	0.1
14.850	0.1		19.800	0.1			
	0.330	0.0		5.280	0.1	10.230	0.1
15.180	0.1		20.130	0.1			
	0.660	0.0		5.610	0.1	10.560	0.1
15.510	0.1		20.460	0.1			
	0.990	0.0		5.940	0.1	10.890	0.1
15.840	0.1		20.790	0.1			
	1.320	4.8		6.270	0.1	11.220	0.1
16.170	0.1		21.120	0.1			
	1.650	10.4		6.600	0.1	11.550	0.1
16.500	0.1		21.450	0.1			
	1.980	4.6		6.930	0.1	11.880	0.1
16.830	0.1		21.780	0.1			
	2.310	1.0		7.260	0.1	12.210	0.1
17.160	0.1		22.110	0.1			
	2.640	0.4		7.590	0.1	12.540	0.1
17.490	0.1		22.440	0.1			
	2.970	0.2		7.920	0.1	12.870	0.1
17.820	0.1		22.770	0.1			
	3.300	0.1		8.250	0.1	13.200	0.1
18.150	0.1		23.100	0.1			
	3.630	0.1		8.580	0.1	13.530	0.1
18.480	0.1		23.430	0.1			
	3.960	0.1		8.910	0.1	13.860	0.1
18.810	0.1		23.760	0.1			

				AHYMO.OUT		
	4.290	0.1	9.240	0.1	14.190	0.1
19.140	0.1	24.090	0.1			
	4.620	0.1	9.570	0.1	14.520	0.1
19.470	0.1	24.420	0.0			

RUNOFF VOLUME = 2.10390 INCHES = 0.8573 ACRE-FEET
 PEAK DISCHARGE RATE = 19.52 CFS AT 1.485 HOURS BASIN AREA =
 0.0076 SQ. MI.

*S COMPUTE HYD PROPOSED BASIN B

COMPUTE NM HYD ID=7 HYDNO=105 DA=0.00463SQ MI

PER A=0 PER B=10 PER C=10 PER D=80

TP=-0.13 RAIN=-1

K = 0.070850HR TP = 0.130000HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 14.995 CFS UNIT VOLUME = 0.9991 B = 526.28
 P60 = 1.8700
 AREA = 0.003704 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

K = 0.115497HR TP = 0.130000HR K/TP RATIO = 0.888442 SHAPE
 CONSTANT, N = 3.992344
 UNIT PEAK = 2.5263 CFS UNIT VOLUME = 0.9951 B = 354.66
 P60 = 1.8700
 AREA = 0.000926 SQ MI IA = 0.42500 INCHES INF = 1.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

PRINT HYD ID=7 CODE=10

PARTIAL HYDROGRAPH 105.00

	TIME	FLOW		TIME	FLOW		TIME	FLOW
TIME	FLOW		TIME	FLOW		TIME	FLOW	

				AHYMO.OUT			
HRS	HRS CFS	CFS	HRS	HRS CFS	CFS	HRS	CFS
	0.000	0.0		4.950	0.1	9.900	0.1
14.850	0.1		19.800	0.0			
	0.330	0.0		5.280	0.1	10.230	0.1
15.180	0.1		20.130	0.0			
	0.660	0.0		5.610	0.1	10.560	0.1
15.510	0.1		20.460	0.0			
	0.990	0.0		5.940	0.1	10.890	0.1
15.840	0.1		20.790	0.0			
	1.320	2.9		6.270	0.1	11.220	0.1
16.170	0.1		21.120	0.0			
	1.650	6.3		6.600	0.1	11.550	0.1
16.500	0.1		21.450	0.0			
	1.980	2.8		6.930	0.1	11.880	0.1
16.830	0.1		21.780	0.0			
	2.310	0.6		7.260	0.1	12.210	0.1
17.160	0.1		22.110	0.0			
	2.640	0.2		7.590	0.1	12.540	0.1
17.490	0.1		22.440	0.0			
	2.970	0.1		7.920	0.1	12.870	0.1
17.820	0.1		22.770	0.0			
	3.300	0.1		8.250	0.1	13.200	0.1
18.150	0.1		23.100	0.0			
	3.630	0.1		8.580	0.1	13.530	0.1
18.480	0.1		23.430	0.0			
	3.960	0.1		8.910	0.1	13.860	0.1
18.810	0.1		23.760	0.0			
	4.290	0.1		9.240	0.1	14.190	0.1
19.140	0.1		24.090	0.0			
	4.620	0.1		9.570	0.1	14.520	0.1
19.470	0.0		24.420	0.0			

RUNOFF VOLUME = 2.10390 INCHES = 0.5195 ACRE-Feet
 PEAK DISCHARGE RATE = 11.84 CFS AT 1.485 HOURS BASIN AREA =
 0.0046 SQ. MI.

*S COMPUTE HYD PROPOSED BASIN C

COMPUTE NM HYD ID=8 HYDNO=106 DA=0.00640SQ MI

PER A=0 PER B=10 PER C=10 PER D=80

TP=-0.13 RAIN=-1

AHYMO.OUT

K = 0.070850HR TP = 0.130000HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 20.727 CFS UNIT VOLUME = 0.9993 B = 526.28
 P60 = 1.8700
 AREA = 0.005120 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

K = 0.115497HR TP = 0.130000HR K/TP RATIO = 0.888442 SHAPE
 CONSTANT, N = 3.992344
 UNIT PEAK = 3.4921 CFS UNIT VOLUME = 0.9964 B = 354.66
 P60 = 1.8700
 AREA = 0.001280 SQ MI IA = 0.42500 INCHES INF = 1.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

PRINT HYD ID=8 CODE=10

PARTIAL HYDROGRAPH 106.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	CFS	CFS	HRS	CFS	CFS	HRS	CFS
	0.000	0.0		4.950	0.1	9.900	0.1
14.850	0.1		19.800	0.1			
	0.330	0.0		5.280	0.1	10.230	0.1
15.180	0.1		20.130	0.1			
	0.660	0.0		5.610	0.1	10.560	0.1
15.510	0.1		20.460	0.1			
	0.990	0.0		5.940	0.1	10.890	0.1
15.840	0.1		20.790	0.1			
	1.320	4.0		6.270	0.1	11.220	0.1
16.170	0.1		21.120	0.1			
	1.650	8.7		6.600	0.1	11.550	0.1
16.500	0.1		21.450	0.1			
	1.980	3.9		6.930	0.1	11.880	0.1
16.830	0.1		21.780	0.1			
	2.310	0.8		7.260	0.1	12.210	0.1
17.160	0.1		22.110	0.1			
	2.640	0.3		7.590	0.1	12.540	0.1
17.490	0.1		22.440	0.1			

	AHYMO.OUT					
	2.970	0.2	7.920	0.1	12.870	0.1
17.820	0.1	22.770	0.1			
	3.300	0.1	8.250	0.1	13.200	0.1
18.150	0.1	23.100	0.1			
	3.630	0.1	8.580	0.1	13.530	0.1
18.480	0.1	23.430	0.1			
	3.960	0.1	8.910	0.1	13.860	0.1
18.810	0.1	23.760	0.1			
	4.290	0.1	9.240	0.1	14.190	0.1
19.140	0.1	24.090	0.0			
	4.620	0.1	9.570	0.1	14.520	0.1
19.470	0.1	24.420	0.0			

RUNOFF VOLUME = 2.10390 INCHES = 0.7181 ACRE-FEET
 PEAK DISCHARGE RATE = 16.36 CFS AT 1.485 HOURS BASIN AREA =
 0.0064 SQ. MI.

ADD HYD ID=10 HYD=BTOA ID I=6 II=7

PRINT HYD ID=10 CODE=10

HYDROGRAPH FROM AREA BTOA

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	0.000	0.0		4.950	0.2	9.900	0.2
14.850	0.2	0.0	19.800	0.1			
	0.330	0.0		5.280	0.2	10.230	0.2
15.180	0.2	0.0	20.130	0.1			
	0.660	0.0		5.610	0.2	10.560	0.2
15.510	0.2	0.0	20.460	0.1			
	0.990	0.0		5.940	0.2	10.890	0.2
15.840	0.1		20.790	0.1			
	1.320	7.6		6.270	0.2	11.220	0.2
16.170	0.1		21.120	0.1			
	1.650	16.8		6.600	0.2	11.550	0.2
16.500	0.1		21.450	0.1			
	1.980	7.4		6.930	0.2	11.880	0.2
16.830	0.1		21.780	0.1			
	2.310	1.6		7.260	0.2	12.210	0.2

AHYMO.OUT						
17.160	0.1	22.110	0.1			
	2.640	0.7	7.590	0.2	12.540	0.2
17.490	0.1	22.440	0.1			
	2.970	0.3	7.920	0.2	12.870	0.2
17.820	0.1	22.770	0.1			
	3.300	0.2	8.250	0.2	13.200	0.2
18.150	0.1	23.100	0.1			
	3.630	0.2	8.580	0.2	13.530	0.2
18.480	0.1	23.430	0.1			
	3.960	0.2	8.910	0.2	13.860	0.2
18.810	0.1	23.760	0.1			
	4.290	0.2	9.240	0.2	14.190	0.2
19.140	0.1	24.090	0.1			
	4.620	0.2	9.570	0.2	14.520	0.2
19.470	0.1	24.420	0.0			

RUNOFF VOLUME = 2.10385 INCHES = 1.3768 ACRE-FEET
 PEAK DISCHARGE RATE = 31.36 CFS AT 1.485 HOURS BASIN AREA =
 0.0123 SQ. MI.

ADD HYD ID=11 HYD=B-CTOA ID I=8 II=10

PRINT HYD ID=11 CODE=10

HYDROGRAPH FROM AREA B-CTOA

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	0.000	0.0	4.950	0.2	9.900	0.3	
14.850	0.2	0.0	5.280	0.3	10.230	0.3	
	0.330	0.0	5.610	0.3	10.560	0.3	
15.180	0.2	0.0	5.940	0.3	10.890	0.3	
	0.660	0.0	6.270	0.4	11.220	0.3	
15.510	0.2	0.0	6.600	0.4	11.550	0.3	
	0.990	0.0					
15.840	0.2	11.6					
	1.320						
16.170	0.2	25.5					
	1.650						
16.500	0.2						

	AHYMO.OUT					
	1.980	11.3	6.930	0.4	11.880	0.3
16.830	0.2	21.780	0.2			
	2.310	2.5	7.260	0.4	12.210	0.3
17.160	0.2	22.110	0.2			
	2.640	1.0	7.590	0.3	12.540	0.3
17.490	0.2	22.440	0.2			
	2.970	0.5	7.920	0.3	12.870	0.3
17.820	0.2	22.770	0.2			
	3.300	0.3	8.250	0.3	13.200	0.3
18.150	0.2	23.100	0.2			
	3.630	0.3	8.580	0.3	13.530	0.3
18.480	0.2	23.430	0.2			
	3.960	0.3	8.910	0.3	13.860	0.2
18.810	0.2	23.760	0.2			
	4.290	0.2	9.240	0.3	14.190	0.2
19.140	0.2	24.090	0.1			
	4.620	0.2	9.570	0.3	14.520	0.2
19.470	0.2	24.420	0.0			

RUNOFF VOLUME = 2.10385 INCHES = 2.0949 ACRE-FEET
 PEAK DISCHARGE RATE = 47.71 CFS AT 1.485 HOURS BASIN AREA =
 0.0187 SQ. MI.

*S COMPUTE HYD PROPOSED BASIN D

COMPUTE NM HYD ID=12 HYDNO=107 DA=0.01564SQ MI

PER A=90 PER B=0 PER C=0 PER D=10

TP=-0.13 RAIN=-1

K = 0.070850HR TP = 0.130000HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 6.3315 CFS UNIT VOLUME = 0.9979 B = 526.28
 P60 = 1.8700
 AREA = 0.001564 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

K = 0.159632HR TP = 0.130000HR K/TP RATIO = 1.227936 SHAPE
 CONSTANT, N = 2.899626

AHYMO.OUT

UNIT PEAK = 29.618 CFS UNIT VOLUME = 0.9991 B = 273.54
P60 = 1.8700
AREA = 0.014076 SQ MI IA = 0.65000 INCHES INF = 1.67000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.033000

PRINT HYD ID=12 CODE=10

PARTIAL HYDROGRAPH 107.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	CFS			CFS			
	0.000	0.0		4.950	0.0	9.900	0.0
14.850	0.0		19.800	0.0			
	0.330	0.0		5.280	0.0	10.230	0.0
15.180	0.0		20.130	0.0			
	0.660	0.0		5.610	0.0	10.560	0.0
15.510	0.0		20.460	0.0			
	0.990	0.0		5.940	0.0	10.890	0.0
15.840	0.0		20.790	0.0			
	1.320	1.2		6.270	0.0	11.220	0.0
16.170	0.0		21.120	0.0			
	1.650	9.5		6.600	0.0	11.550	0.0
16.500	0.0		21.450	0.0			
	1.980	2.3		6.930	0.0	11.880	0.0
16.830	0.0		21.780	0.0			
	2.310	0.8		7.260	0.0	12.210	0.0
17.160	0.0		22.110	0.0			
	2.640	0.4		7.590	0.0	12.540	0.0
17.490	0.0		22.440	0.0			
	2.970	0.2		7.920	0.0	12.870	0.0
17.820	0.0		22.770	0.0			
	3.300	0.1		8.250	0.0	13.200	0.0
18.150	0.0		23.100	0.0			
	3.630	0.1		8.580	0.0	13.530	0.0
18.480	0.0		23.430	0.0			
	3.960	0.0		8.910	0.0	13.860	0.0
18.810	0.0		23.760	0.0			
	4.290	0.0		9.240	0.0	14.190	0.0
19.140	0.0		24.090	0.0			
	4.620	0.0		9.570	0.0	14.520	0.0
19.470	0.0		24.420	0.0			

RUNOFF VOLUME = 0.63801 INCHES = 0.5322 ACRE-FEET

AHYMO.OUT

PEAK DISCHARGE RATE = 16.38 CFS AT 1.518 HOURS BASIN AREA = 0.0156 SQ. MI.

*S COMPUTE HYD PROPOSED BASIN E

COMPUTE NM HYD ID=13 HYDNO=108 DA=0.00096SQ MI

PER A=0 PER B=50 PER C=50 PER D=0

TP=-0.13 RAIN=-1

K = 0.115498HR TP = 0.130000HR K/TP RATIO = 0.888442 SHAPE CONSTANT, N = 3.992344

UNIT PEAK = 2.6191 CFS UNIT VOLUME = 0.9951 B = 354.66

P60 = 1.8700

AREA = 0.000960 SQ MI IA = 0.42500 INCHES INF = 1.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.033000

PRINT HYD ID=13 CODE=10

PARTIAL HYDROGRAPH 108.00

TIME	TIME FLOW HRS	FLOW CFS	TIME	TIME FLOW HRS	FLOW CFS	TIME	FLOW CFS
	0.000	0.0		0.660	0.0	1.320	0.0
1.980	0.2		2.640	0.0			
	0.330	0.0	0.990	0.0		1.650	0.9
2.310	0.1		2.970	0.0			

RUNOFF VOLUME = 0.81538 INCHES = 0.0417 ACRE-FEET

PEAK DISCHARGE RATE = 1.54 CFS AT 1.518 HOURS BASIN AREA = 0.0010 SQ. MI.

*S COMPUTE HYD PROPOSED BASIN F

AHYMO.OUT

COMPUTE NM HYD ID=14 HYDNO=109 DA=0.00054SQ MI

PER A=0 PER B=45 PER C=45 PER D=10

TP=-0.13 RAIN=-1

K = 0.070850HR TP = 0.130000HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 0.21861 CFS UNIT VOLUME = 0.9495 B = 526.28
 P60 = 1.8700
 AREA = 0.000054 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

K = 0.115497HR TP = 0.130000HR K/TP RATIO = 0.888442 SHAPE
 CONSTANT, N = 3.992344
 UNIT PEAK = 1.3259 CFS UNIT VOLUME = 0.9902 B = 354.66
 P60 = 1.8700
 AREA = 0.000486 SQ MI IA = 0.42500 INCHES INF = 1.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

PRINT HYD ID=14 CODE=10

PARTIAL HYDROGRAPH 109.00

TIME	TIME	FLOW	TIME	FLOW	TIME	FLOW
	FLOW		FLOW			
HRS	HRS	CFS	HRS	CFS	HRS	CFS
	0.000	0.0	2.310	0.0	4.620	0.0
6.930	0.0		2.640	0.0	4.950	0.0
	0.330	0.0		0.0		
7.260	0.0		2.970	0.0	5.280	0.0
	0.660	0.0		0.0		
7.590	0.0		3.300	0.0	5.610	0.0
	0.990	0.0		0.0		
7.920	0.0	10.230	3.630	0.0	5.940	0.0
	1.320	0.1		0.0		
8.250	0.0	10.560	3.960	0.0	6.270	0.0
	1.650	0.5		0.0		
8.580	0.0	10.890		0.0		

			AHYMO.OUT			
	1.980	0.1	4.290	0.0	6.600	0.0
8.910	0.0	11.220	0.0			

RUNOFF VOLUME = 0.97645 INCHES = 0.0281 ACRE-Feet
 PEAK DISCHARGE RATE = 0.94 CFS AT 1.518 HOURS BASIN AREA =
 0.0005 SQ. MI.

ADD HYD ID=15 HYD=DTOF ID I=12 II=14

PRINT HYD ID=15 CODE=10

HYDROGRAPH FROM AREA DTOF

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	0.000	0.0		4.950	0.0	9.900	0.0
14.850	0.0		19.800	0.0			
	0.330	0.0		5.280	0.0	10.230	0.0
15.180	0.0		20.130	0.0			
	0.660	0.0		5.610	0.0	10.560	0.0
15.510	0.0		20.460	0.0			
	0.990	0.0		5.940	0.0	10.890	0.0
15.840	0.0		20.790	0.0			
	1.320	1.3		6.270	0.0	11.220	0.0
16.170	0.0		21.120	0.0			
	1.650	10.0		6.600	0.0	11.550	0.0
16.500	0.0		21.450	0.0			
	1.980	2.4		6.930	0.0	11.880	0.0
16.830	0.0		21.780	0.0			
	2.310	0.8		7.260	0.0	12.210	0.0
17.160	0.0		22.110	0.0			
	2.640	0.4		7.590	0.0	12.540	0.0
17.490	0.0		22.440	0.0			
	2.970	0.2		7.920	0.0	12.870	0.0
17.820	0.0		22.770	0.0			
	3.300	0.1		8.250	0.0	13.200	0.0
18.150	0.0		23.100	0.0			
	3.630	0.1		8.580	0.0	13.530	0.0
18.480	0.0		23.430	0.0			
	3.960	0.0		8.910	0.0	13.860	0.0

			AHYMO.OUT			
18.810	0.0	23.760	0.0			
	4.290	0.0	9.240	0.0	14.190	0.0
19.140	0.0	24.090	0.0			
	4.620	0.0	9.570	0.0	14.520	0.0
19.470	0.0	24.420	0.0			

RUNOFF VOLUME = 0.64835 INCHES = 0.5595 ACRE-FEET
 PEAK DISCHARGE RATE = 17.32 CFS AT 1.518 HOURS BASIN AREA =
 0.0162 SQ. MI.

ADD HYD ID=16 HYD=ETOF-D ID I=13 II=15

PRINT HYD ID=16 CODE=10

HYDROGRAPH FROM AREA ETOF-D

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	0.000	0.0		4.950	0.0	9.900	0.0
14.850	0.0		19.800	0.0			
	0.330	0.0		5.280	0.0	10.230	0.0
15.180	0.0		20.130	0.0			
	0.660	0.0		5.610	0.0	10.560	0.0
15.510	0.0		20.460	0.0			
	0.990	0.0		5.940	0.0	10.890	0.0
15.840	0.0		20.790	0.0			
	1.320	1.3		6.270	0.0	11.220	0.0
16.170	0.0		21.120	0.0			
	1.650	10.9		6.600	0.0	11.550	0.0
16.500	0.0		21.450	0.0			
	1.980	2.5		6.930	0.0	11.880	0.0
16.830	0.0		21.780	0.0			
	2.310	0.9		7.260	0.0	12.210	0.0
17.160	0.0		22.110	0.0			
	2.640	0.4		7.590	0.0	12.540	0.0
17.490	0.0		22.440	0.0			
	2.970	0.2		7.920	0.0	12.870	0.0
17.820	0.0		22.770	0.0			
	3.300	0.1		8.250	0.0	13.200	0.0
18.150	0.0		23.100	0.0			

	AHYMO.OUT					
	3.630	0.1	8.580	0.0	13.530	0.0
18.480	0.0	23.430	0.0			
	3.960	0.0	8.910	0.0	13.860	0.0
18.810	0.0	23.760	0.0			
	4.290	0.0	9.240	0.0	14.190	0.0
19.140	0.0	24.090	0.0			
	4.620	0.0	9.570	0.0	14.520	0.0
19.470	0.0	24.420	0.0			

RUNOFF VOLUME = 0.65770 INCHES = 0.6012 ACRE-FEET
 PEAK DISCHARGE RATE = 18.86 CFS AT 1.518 HOURS BASIN AREA =
 0.0171 SQ. MI.

*S COMPUTE HYD PROPOSED BASIN G

COMPUTE NM HYD ID=17 HYDNO=110 DA=0.00555SQ MI

PER A=0 PER B=5 PER C=5 PER D=90

TP=-0.13 RAIN=-1

K = 0.070850HR TP = 0.130000HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 20.221 CFS UNIT VOLUME = 0.9993 B = 526.28
 P60 = 1.8700
 AREA = 0.004995 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

K = 0.115497HR TP = 0.130000HR K/TP RATIO = 0.888442 SHAPE
 CONSTANT, N = 3.992344
 UNIT PEAK = 1.5141 CFS UNIT VOLUME = 0.9919 B = 354.66
 P60 = 1.8700
 AREA = 0.000555 SQ MI IA = 0.42500 INCHES INF = 1.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

PRINT HYD ID=17 CODE=10

AHYMO.OUT

PARTIAL HYDROGRAPH 110.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
	HRS	CFS		HRS	CFS	HRS	CFS
HRS	CFS		HRS	CFS			
	0.000	0.0		4.950	0.1	9.900	0.1
14.850	0.1		19.800	0.1			
	0.330	0.0		5.280	0.1	10.230	0.1
15.180	0.1		20.130	0.1			
	0.660	0.0		5.610	0.1	10.560	0.1
15.510	0.1		20.460	0.1			
	0.990	0.0		5.940	0.1	10.890	0.1
15.840	0.1		20.790	0.1			
	1.320	3.9		6.270	0.1	11.220	0.1
16.170	0.1		21.120	0.1			
	1.650	7.9		6.600	0.1	11.550	0.1
16.500	0.1		21.450	0.1			
	1.980	3.7		6.930	0.1	11.880	0.1
16.830	0.1		21.780	0.1			
	2.310	0.8		7.260	0.1	12.210	0.1
17.160	0.1		22.110	0.1			
	2.640	0.3		7.590	0.1	12.540	0.1
17.490	0.1		22.440	0.1			
	2.970	0.2		7.920	0.1	12.870	0.1
17.820	0.1		22.770	0.1			
	3.300	0.1		8.250	0.1	13.200	0.1
18.150	0.1		23.100	0.1			
	3.630	0.1		8.580	0.1	13.530	0.1
18.480	0.1		23.430	0.1			
	3.960	0.1		8.910	0.1	13.860	0.1
18.810	0.1		23.760	0.1			
	4.290	0.1		9.240	0.1	14.190	0.1
19.140	0.1		24.090	0.0			
	4.620	0.1		9.570	0.1	14.520	0.1
19.470	0.1		24.420	0.0			

RUNOFF VOLUME = 2.26496 INCHES = 0.6704 ACRE-FEET

PEAK DISCHARGE RATE = 14.88 CFS AT 1.485 HOURS BASIN AREA = 0.0056 SQ. MI.

*S COMPUTE HYD PROPOSED BASIN H

COMPUTE NM HYD ID=18 HYDNO=111 DA=0.00107Q MI

AHYMO.OUT

PER A=0 PER B=5 PER C=5 PER D=90

TP=-0.13 RAIN=-1

K = 0.070850HR TP = 0.130000HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 3.8985 CFS UNIT VOLUME = 0.9967 B = 526.28
 P60 = 1.8700
 AREA = 0.000963 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

K = 0.115497HR TP = 0.130000HR K/TP RATIO = 0.888442 SHAPE
 CONSTANT, N = 3.992344
 UNIT PEAK = 0.29192 CFS UNIT VOLUME = 0.9534 B = 354.66
 P60 = 1.8700
 AREA = 0.000107 SQ MI IA = 0.42500 INCHES INF = 1.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

PRINT HYD

ID=18 CODE=10

PARTIAL HYDROGRAPH 111.00

TIME	TIME FLOW HRS	FLOW CFS	TIME	TIME FLOW HRS	FLOW CFS	TIME	FLOW CFS
	HRS	CFS	HRS	CFS		HRS	CFS
	0.000	0.0	4.950	0.0		9.900	0.0
14.850	0.0	0.0	5.280	0.0		10.230	0.0
	0.330	0.0		0.0			
15.180	0.0	0.0	5.610	0.0		10.560	0.0
	0.660	0.0		0.0			
15.510	0.0	0.0	5.940	0.0		10.890	0.0
	0.990	0.0		0.0			
15.840	0.0	0.7	6.270	0.0		11.220	0.0
	1.320	0.7		0.0			
16.170	0.0	1.5	6.600	0.0		11.550	0.0
	1.650	1.5		0.0			
16.500	0.0	0.7	6.930	0.0		11.880	0.0
	1.980	0.7		0.0			
16.830	0.0		21.780	0.0			

	AHYMO.OUT					
	2.310	0.1	7.260	0.0	12.210	0.0
17.160	0.0	22.110	0.0			
	2.640	0.1	7.590	0.0	12.540	0.0
17.490	0.0	22.440	0.0			
	2.970	0.0	7.920	0.0	12.870	0.0
17.820	0.0	22.770	0.0			
	3.300	0.0	8.250	0.0	13.200	0.0
18.150	0.0	23.100	0.0			
	3.630	0.0	8.580	0.0	13.530	0.0
18.480	0.0	23.430	0.0			
	3.960	0.0	8.910	0.0	13.860	0.0
18.810	0.0	23.760	0.0			
	4.290	0.0	9.240	0.0	14.190	0.0
19.140	0.0	24.090	0.0			
	4.620	0.0	9.570	0.0	14.520	0.0
19.470	0.0					

RUNOFF VOLUME = 2.26496 INCHES = 0.1293 ACRE-FEET
 PEAK DISCHARGE RATE = 2.88 CFS AT 1.485 HOURS BASIN AREA =
 0.0011 SQ. MI.

*S COMPUTE HYD PROPOSED BASIN I

COMPUTE NM HYD ID=19 HYDNO=112 DA=0.00074SQ MI

PER A=0 PER B=5 PER C=5 PER D=90

TP=-0.13 RAIN=-1

K = 0.070850HR TP = 0.130000HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 2.6961 CFS UNIT VOLUME = 0.9956 B = 526.28
 P60 = 1.8700
 AREA = 0.000666 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.033000

K = 0.115497HR TP = 0.130000HR K/TP RATIO = 0.888442 SHAPE
 CONSTANT, N = 3.992344
 UNIT PEAK = 0.20189 CFS UNIT VOLUME = 0.9316 B = 354.66
 P60 = 1.8700

AHYMO.OUT

AREA = 0.000074 SQ MI IA = 0.42500 INCHES INF = 1.04000
INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.033000

PRINT HYD

ID=19 CODE=10

PARTIAL HYDROGRAPH 112.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	CFS	CFS	HRS	CFS	CFS	HRS	CFS
	0.000	0.0		4.950	0.0	9.900	0.0
14.850	0.0		19.800	0.0			
	0.330	0.0		5.280	0.0	10.230	0.0
15.180	0.0		20.130	0.0			
	0.660	0.0		5.610	0.0	10.560	0.0
15.510	0.0		20.460	0.0			
	0.990	0.0		5.940	0.0	10.890	0.0
15.840	0.0		20.790	0.0			
	1.320	0.5		6.270	0.0	11.220	0.0
16.170	0.0		21.120	0.0			
	1.650	1.1		6.600	0.0	11.550	0.0
16.500	0.0		21.450	0.0			
	1.980	0.5		6.930	0.0	11.880	0.0
16.830	0.0		21.780	0.0			
	2.310	0.1		7.260	0.0	12.210	0.0
17.160	0.0		22.110	0.0			
	2.640	0.0		7.590	0.0	12.540	0.0
17.490	0.0		22.440	0.0			
	2.970	0.0		7.920	0.0	12.870	0.0
17.820	0.0		22.770	0.0			
	3.300	0.0		8.250	0.0	13.200	0.0
18.150	0.0		23.100	0.0			
	3.630	0.0		8.580	0.0	13.530	0.0
18.480	0.0		23.430	0.0			
	3.960	0.0		8.910	0.0	13.860	0.0
18.810	0.0		23.760	0.0			
	4.290	0.0		9.240	0.0	14.190	0.0
19.140	0.0		24.090	0.0			
	4.620	0.0		9.570	0.0	14.520	0.0
19.470	0.0						

RUNOFF VOLUME = 2.26496 INCHES = 0.0894 ACRE-FEET
PEAK DISCHARGE RATE = 2.00 CFS AT 1.485 HOURS BASIN AREA =
0.0007 SQ. MI.

AHYMO.OUT

ADD HYD

ID=20 HYD=HTOI ID I=18 II=19

PRINT HYD

ID=20 CODE=10

HYDROGRAPH FROM AREA HTOI

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	0.000	0.0		4.950	0.0	9.900	0.0
14.850	0.0		19.800	0.0			
	0.330	0.0		5.280	0.0	10.230	0.0
15.180	0.0		20.130	0.0			
	0.660	0.0		5.610	0.0	10.560	0.0
15.510	0.0		20.460	0.0			
	0.990	0.0		5.940	0.0	10.890	0.0
15.840	0.0		20.790	0.0			
	1.320	1.3		6.270	0.0	11.220	0.0
16.170	0.0		21.120	0.0			
	1.650	2.6		6.600	0.0	11.550	0.0
16.500	0.0		21.450	0.0			
	1.980	1.2		6.930	0.0	11.880	0.0
16.830	0.0		21.780	0.0			
	2.310	0.2		7.260	0.0	12.210	0.0
17.160	0.0		22.110	0.0			
	2.640	0.1		7.590	0.0	12.540	0.0
17.490	0.0		22.440	0.0			
	2.970	0.1		7.920	0.0	12.870	0.0
17.820	0.0		22.770	0.0			
	3.300	0.0		8.250	0.0	13.200	0.0
18.150	0.0		23.100	0.0			
	3.630	0.0		8.580	0.0	13.530	0.0
18.480	0.0		23.430	0.0			
	3.960	0.0		8.910	0.0	13.860	0.0
18.810	0.0		23.760	0.0			
	4.290	0.0		9.240	0.0	14.190	0.0
19.140	0.0		24.090	0.0			
	4.620	0.0		9.570	0.0	14.520	0.0
19.470	0.0						

AHYMO.OUT

RUNOFF VOLUME = 2.26462 INCHES = 0.2186 ACRE-FEET
 PEAK DISCHARGE RATE = 4.88 CFS AT 1.485 HOURS BASIN AREA =
 0.0018 SQ. MI.

ADD HYD ID=21 HYD=A-CTOG ID I=11 II=17

PRINT HYD ID=21 CODE=10

HYDROGRAPH FROM AREA A-CTOG

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	0.000	0.0		4.950	0.3	9.900	0.4
14.850	0.3		19.800	0.3			
	0.330	0.0		5.280	0.3	10.230	0.4
15.180	0.3		20.130	0.3			
	0.660	0.0		5.610	0.4	10.560	0.4
15.510	0.3		20.460	0.3			
	0.990	0.0		5.940	0.4	10.890	0.4
15.840	0.3		20.790	0.3			
	1.320	15.5		6.270	0.5	11.220	0.4
16.170	0.3		21.120	0.3			
	1.650	33.4		6.600	0.5	11.550	0.4
16.500	0.3		21.450	0.2			
	1.980	14.9		6.930	0.5	11.880	0.4
16.830	0.3		21.780	0.2			
	2.310	3.3		7.260	0.5	12.210	0.4
17.160	0.3		22.110	0.2			
	2.640	1.3		7.590	0.5	12.540	0.4
17.490	0.3		22.440	0.2			
	2.970	0.7		7.920	0.4	12.870	0.3
17.820	0.3		22.770	0.2			
	3.300	0.4		8.250	0.4	13.200	0.3
18.150	0.3		23.100	0.2			
	3.630	0.4		8.580	0.4	13.530	0.3
18.480	0.3		23.430	0.2			
	3.960	0.3		8.910	0.4	13.860	0.3
18.810	0.3		23.760	0.2			

			AHYMO.OUT			
	4.290	0.3	9.240	0.4	14.190	0.3
19.140	0.3	24.090	0.2			
	4.620	0.3	9.570	0.4	14.520	0.3
19.470	0.3	24.420	0.0			

RUNOFF VOLUME = 2.14076 INCHES = 2.7653 ACRE-FEET
 PEAK DISCHARGE RATE = 62.60 CFS AT 1.485 HOURS BASIN AREA =
 0.0242 SQ. MI.

ADD HYD ID=22 HYD=D-FTOA-DTOG ID I=16 II=21

PRINT HYD ID=22 CODE=10

HYDROGRAPH FROM AREA D-FTOA-DTOG

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	0.000	0.0		4.950	0.4	9.900	0.4
14.850	0.3		19.800	0.3			
	0.330	0.0		5.280	0.4	10.230	0.4
15.180	0.3		20.130	0.3			
	0.660	0.0		5.610	0.4	10.560	0.4
15.510	0.3		20.460	0.3			
	0.990	0.0		5.940	0.4	10.890	0.4
15.840	0.3		20.790	0.3			
	1.320	16.8		6.270	0.5	11.220	0.4
16.170	0.3		21.120	0.3			
	1.650	44.4		6.600	0.5	11.550	0.4
16.500	0.3		21.450	0.3			
	1.980	17.4		6.930	0.5	11.880	0.4
16.830	0.3		21.780	0.3			
	2.310	4.2		7.260	0.5	12.210	0.4
17.160	0.3		22.110	0.3			
	2.640	1.7		7.590	0.5	12.540	0.4
17.490	0.3		22.440	0.3			
	2.970	0.9		7.920	0.5	12.870	0.4
17.820	0.3		22.770	0.3			
	3.300	0.6		8.250	0.5	13.200	0.4
18.150	0.3		23.100	0.3			
	3.630	0.4		8.580	0.5	13.530	0.4

AHYMO.OUT						
18.480	0.3	23.430	0.3			
	3.960	0.4	8.910	0.5	13.860	0.4
18.810	0.3	23.760	0.2			
	4.290	0.4	9.240	0.4	14.190	0.4
19.140	0.3	24.090	0.2			
	4.620	0.4	9.570	0.4	14.520	0.3
19.470	0.3	24.420	0.0			

RUNOFF VOLUME = 1.52616 INCHES = 3.3665 ACRE-FEET
 PEAK DISCHARGE RATE = 81.07 CFS AT 1.518 HOURS BASIN AREA = 0.0414 SQ. MI.

ROUTE RESERVOIR ID=50 HYD=POND.A INFLOW ID=22 CODE=5

OUTFLOW	STORAGE	DEPTH
0.0	0	5404.00
0.01	0.17	5405.00
0.01	0.43	5406.00
0.01	0.86	5407.00
0.01	1.44	5408.00
0.01	2.10	5409.00
16.80	2.44	5409.50
47.71	2.80	5410.00

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	5404.00	0.000	0.00
0.16	0.00	5404.00	0.000	0.00

			AHYMO.OUT	
0.33	0.00	5404.00	0.000	0.00
0.50	0.00	5404.00	0.000	0.00
0.66	0.00	5404.00	0.000	0.00
0.82	0.00	5404.00	0.000	0.00
0.99	0.00	5404.00	0.000	0.00
1.15	0.04	5404.00	0.000	0.00
1.32	16.78	5404.46	0.078	0.00
1.49	80.71	5409.00	2.100	0.01
1.65	44.35	5409.00	2.100	0.01
1.81	25.48	5409.00	2.100	0.01
1.98	17.43	5409.27	2.283	9.05
2.14	9.00	5409.33	2.326	11.18
2.31	4.15	5409.25	2.272	8.50
2.47	2.60	5409.18	2.220	5.91
2.64	1.74	5409.12	2.182	4.04
2.81	1.20	5409.08	2.156	2.75
2.97	0.87	5409.06	2.138	1.90
3.13	0.67	5409.04	2.127	1.33
3.30	0.56	5409.03	2.120	0.97
3.46	0.48	5409.02	2.115	0.75
3.63	0.44	5409.02	2.112	0.60
3.80	0.40	5409.02	2.110	0.51
3.96	0.38	5409.01	2.109	0.45
4.12	0.36	5409.01	2.108	0.41
4.29	0.36	5409.01	2.108	0.39
4.45	0.35	5409.01	2.107	0.37
4.62	0.35	5409.01	2.107	0.36
4.78	0.35	5409.01	2.107	0.36
4.95	0.36	5409.01	2.107	0.36
5.11	0.37	5409.01	2.107	0.36
5.28	0.38	5409.01	2.107	0.37
5.45	0.39	5409.01	2.107	0.38
5.61	0.40	5409.01	2.108	0.39
5.78	0.42	5409.01	2.108	0.40
5.94	0.44	5409.01	2.108	0.42
6.11	0.48	5409.01	2.109	0.43
6.27	0.53	5409.01	2.109	0.47
6.43	0.53	5409.01	2.110	0.50
6.60	0.53	5409.02	2.110	0.51
6.76	0.52	5409.02	2.110	0.52
6.93	0.52	5409.02	2.110	0.52
7.09	0.51	5409.02	2.110	0.52
7.26	0.51	5409.02	2.110	0.51
7.43	0.50	5409.01	2.110	0.51
7.59	0.50	5409.01	2.110	0.50
7.76	0.49	5409.01	2.110	0.50
7.92	0.49	5409.01	2.110	0.49
8.09	0.48	5409.01	2.110	0.49

AHYMO.OUT				
8.25	0.48	5409.01	2.110	0.48
8.41	0.47	5409.01	2.109	0.48
8.58	0.47	5409.01	2.109	0.47
8.74	0.46	5409.01	2.109	0.47
8.91	0.46	5409.01	2.109	0.46
9.07	0.46	5409.01	2.109	0.46
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
9.24	0.45	5409.01	2.109	0.46
9.40	0.44	5409.01	2.109	0.45
9.57	0.44	5409.01	2.109	0.45
9.73	0.44	5409.01	2.109	0.44
9.90	0.43	5409.01	2.109	0.44
10.06	0.43	5409.01	2.109	0.43
10.23	0.43	5409.01	2.109	0.43
10.39	0.42	5409.01	2.108	0.43
10.56	0.42	5409.01	2.108	0.42
10.73	0.41	5409.01	2.108	0.42
10.89	0.41	5409.01	2.108	0.42
11.06	0.41	5409.01	2.108	0.41
11.22	0.41	5409.01	2.108	0.41
11.39	0.40	5409.01	2.108	0.40
11.55	0.40	5409.01	2.108	0.40
11.72	0.39	5409.01	2.108	0.40
11.88	0.39	5409.01	2.108	0.39
12.05	0.39	5409.01	2.108	0.39
12.21	0.38	5409.01	2.108	0.39
12.38	0.38	5409.01	2.108	0.38
12.54	0.38	5409.01	2.108	0.38
12.70	0.38	5409.01	2.107	0.38
12.87	0.37	5409.01	2.107	0.38
13.03	0.37	5409.01	2.107	0.37
13.20	0.37	5409.01	2.107	0.37
13.36	0.36	5409.01	2.107	0.37
13.53	0.36	5409.01	2.107	0.36
13.69	0.36	5409.01	2.107	0.36
13.86	0.35	5409.01	2.107	0.36
14.02	0.35	5409.01	2.107	0.36
14.19	0.35	5409.01	2.107	0.35
14.35	0.35	5409.01	2.107	0.35
14.52	0.35	5409.01	2.107	0.35
14.68	0.34	5409.01	2.107	0.35
14.85	0.34	5409.01	2.107	0.34
15.02	0.34	5409.01	2.107	0.34
15.18	0.34	5409.01	2.107	0.34
15.35	0.34	5409.01	2.107	0.34

			AHYMO.OUT	
15.51	0.33	5409.01	2.107	0.33
15.68	0.33	5409.01	2.107	0.33
15.84	0.33	5409.01	2.106	0.33
16.00	0.32	5409.01	2.106	0.33
16.17	0.32	5409.01	2.106	0.33
16.33	0.32	5409.01	2.106	0.32
16.50	0.32	5409.01	2.106	0.32
16.66	0.32	5409.01	2.106	0.32
16.83	0.32	5409.01	2.106	0.32
17.00	0.31	5409.01	2.106	0.32
17.16	0.31	5409.01	2.106	0.31
17.33	0.31	5409.01	2.106	0.31
17.49	0.30	5409.01	2.106	0.31
17.66	0.31	5409.01	2.106	0.31
17.82	0.31	5409.01	2.106	0.31
17.99	0.30	5409.01	2.106	0.30
18.15	0.30	5409.01	2.106	0.30
18.32	0.30	5409.01	2.106	0.30

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
18.48	0.30	5409.01	2.106	0.30
18.65	0.29	5409.01	2.106	0.30
18.81	0.29	5409.01	2.106	0.30
18.98	0.29	5409.01	2.106	0.29
19.14	0.29	5409.01	2.106	0.29
19.31	0.29	5409.01	2.106	0.29
19.47	0.29	5409.01	2.106	0.29
19.64	0.29	5409.01	2.106	0.29
19.80	0.28	5409.01	2.106	0.28
19.97	0.28	5409.01	2.106	0.28
20.13	0.28	5409.01	2.106	0.28
20.30	0.28	5409.01	2.105	0.28
20.46	0.27	5409.01	2.105	0.28
20.62	0.28	5409.01	2.105	0.28
20.79	0.27	5409.01	2.105	0.28
20.95	0.27	5409.01	2.105	0.27
21.12	0.27	5409.01	2.105	0.27
21.28	0.27	5409.01	2.105	0.27
21.45	0.27	5409.01	2.105	0.27
21.61	0.27	5409.01	2.105	0.27
21.78	0.27	5409.01	2.105	0.27
21.94	0.26	5409.01	2.105	0.27
22.11	0.26	5409.01	2.105	0.26
22.27	0.26	5409.01	2.105	0.26
22.44	0.26	5409.01	2.105	0.26
22.60	0.26	5409.01	2.105	0.26

			AHYMO.OUT	
22.77	0.26	5409.01	2.105	0.26
22.93	0.25	5409.01	2.105	0.26
23.10	0.26	5409.01	2.105	0.26
23.26	0.25	5409.01	2.105	0.26
23.43	0.25	5409.01	2.105	0.25
23.59	0.25	5409.01	2.105	0.25
23.76	0.25	5409.01	2.105	0.25
23.92	0.25	5409.01	2.105	0.25
24.09	0.18	5409.01	2.105	0.24
24.25	0.04	5409.00	2.103	0.16
24.42	0.02	5409.00	2.102	0.10
24.58	0.01	5409.00	2.101	0.05
24.75	0.00	5409.00	2.100	0.03
24.91	0.00	5409.00	2.100	0.01
25.08	0.00	5409.00	2.100	0.01
25.24	0.00	5409.00	2.100	0.01
25.41	0.00	5409.00	2.100	0.01
25.58	0.00	5409.00	2.100	0.01
25.74	0.00	5409.00	2.100	0.01
25.91	0.00	5409.00	2.100	0.01
26.07	0.00	5409.00	2.100	0.01
26.24	0.00	5409.00	2.100	0.01
26.40	0.00	5409.00	2.100	0.01
26.57	0.00	5409.00	2.100	0.01
26.73	0.00	5409.00	2.100	0.01
26.90	0.00	5409.00	2.100	0.01
27.06	0.00	5409.00	2.100	0.01
27.23	0.00	5409.00	2.100	0.01
27.39	0.00	5409.00	2.100	0.01
27.56	0.00	5409.00	2.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
27.72	0.00	5409.00	2.100	0.01
27.89	0.00	5409.00	2.100	0.01
28.05	0.00	5409.00	2.100	0.01
28.22	0.00	5409.00	2.100	0.01
28.38	0.00	5409.00	2.100	0.01
28.55	0.00	5409.00	2.100	0.01
28.71	0.00	5409.00	2.100	0.01
28.88	0.00	5409.00	2.100	0.01
29.04	0.00	5409.00	2.100	0.01
29.20	0.00	5409.00	2.100	0.01
29.37	0.00	5409.00	2.100	0.01
29.53	0.00	5409.00	2.100	0.01
29.70	0.00	5409.00	2.100	0.01
29.86	0.00	5409.00	2.100	0.01

AHYMO.OUT				
30.03	0.00	5409.00	2.100	0.01
30.19	0.00	5409.00	2.100	0.01
30.36	0.00	5409.00	2.100	0.01
30.52	0.00	5409.00	2.100	0.01
30.69	0.00	5409.00	2.100	0.01
30.85	0.00	5409.00	2.100	0.01
31.02	0.00	5409.00	2.100	0.01
31.18	0.00	5409.00	2.100	0.01
31.35	0.00	5409.00	2.100	0.01
31.51	0.00	5409.00	2.100	0.01
31.68	0.00	5409.00	2.100	0.01
31.84	0.00	5409.00	2.100	0.01
32.01	0.00	5409.00	2.100	0.01
32.17	0.00	5409.00	2.100	0.01
32.34	0.00	5409.00	2.100	0.01
32.51	0.00	5409.00	2.100	0.01
32.67	0.00	5409.00	2.100	0.01
32.83	0.00	5409.00	2.100	0.01
33.00	0.00	5409.00	2.100	0.01
33.17	0.00	5409.00	2.100	0.01
33.33	0.00	5409.00	2.100	0.01
33.49	0.00	5409.00	2.100	0.01
33.66	0.00	5409.00	2.100	0.01
33.83	0.00	5409.00	2.100	0.01
33.99	0.00	5409.00	2.100	0.01
34.15	0.00	5409.00	2.100	0.01
34.32	0.00	5409.00	2.100	0.01
34.49	0.00	5409.00	2.100	0.01
34.65	0.00	5409.00	2.100	0.01
34.81	0.00	5409.00	2.100	0.01
34.98	0.00	5409.00	2.100	0.01
35.15	0.00	5409.00	2.100	0.01
35.31	0.00	5409.00	2.100	0.01
35.47	0.00	5409.00	2.100	0.01
35.64	0.00	5409.00	2.100	0.01
35.81	0.00	5409.00	2.100	0.01
35.97	0.00	5409.00	2.100	0.01
36.13	0.00	5409.00	2.100	0.01
36.30	0.00	5409.00	2.100	0.01
36.47	0.00	5409.00	2.100	0.01
36.63	0.00	5409.00	2.100	0.01
36.79	0.00	5409.00	2.100	0.01
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
36.96	0.00	5409.00	2.100	0.01
37.12	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
37.29	0.00	5409.00	2.100	0.01
37.45	0.00	5409.00	2.100	0.01
37.62	0.00	5409.00	2.100	0.01
37.78	0.00	5409.00	2.100	0.01
37.95	0.00	5409.00	2.100	0.01
38.12	0.00	5409.00	2.100	0.01
38.28	0.00	5409.00	2.100	0.01
38.44	0.00	5409.00	2.100	0.01
38.61	0.00	5409.00	2.100	0.01
38.78	0.00	5409.00	2.100	0.01
38.94	0.00	5409.00	2.100	0.01
39.10	0.00	5409.00	2.100	0.01
39.27	0.00	5409.00	2.100	0.01
39.44	0.00	5409.00	2.100	0.01
39.60	0.00	5409.00	2.100	0.01
39.76	0.00	5409.00	2.100	0.01
39.93	0.00	5409.00	2.100	0.01
40.10	0.00	5409.00	2.100	0.01
40.26	0.00	5409.00	2.100	0.01
40.42	0.00	5409.00	2.100	0.01
40.59	0.00	5409.00	2.100	0.01
40.76	0.00	5409.00	2.100	0.01
40.92	0.00	5409.00	2.100	0.01
41.08	0.00	5409.00	2.100	0.01
41.25	0.00	5409.00	2.100	0.01
41.42	0.00	5409.00	2.100	0.01
41.58	0.00	5409.00	2.100	0.01
41.74	0.00	5409.00	2.100	0.01
41.91	0.00	5409.00	2.100	0.01
42.08	0.00	5409.00	2.100	0.01
42.24	0.00	5409.00	2.100	0.01
42.40	0.00	5409.00	2.100	0.01
42.57	0.00	5409.00	2.100	0.01
42.74	0.00	5409.00	2.100	0.01
42.90	0.00	5409.00	2.100	0.01
43.06	0.00	5409.00	2.100	0.01
43.23	0.00	5409.00	2.100	0.01
43.40	0.00	5409.00	2.100	0.01
43.56	0.00	5409.00	2.100	0.01
43.72	0.00	5409.00	2.100	0.01
43.89	0.00	5409.00	2.100	0.01
44.06	0.00	5409.00	2.100	0.01
44.22	0.00	5409.00	2.100	0.01
44.38	0.00	5409.00	2.100	0.01
44.55	0.00	5409.00	2.100	0.01
44.72	0.00	5409.00	2.100	0.01
44.88	0.00	5409.00	2.100	0.01
45.04	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
45.21	0.00	5409.00	2.100	0.01
45.38	0.00	5409.00	2.100	0.01
45.54	0.00	5409.00	2.100	0.01
45.70	0.00	5409.00	2.100	0.01
45.87	0.00	5409.00	2.100	0.01
46.03	0.00	5409.00	2.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
46.20	0.00	5409.00	2.100	0.01
46.36	0.00	5409.00	2.100	0.01
46.53	0.00	5409.00	2.100	0.01
46.69	0.00	5409.00	2.100	0.01
46.86	0.00	5409.00	2.100	0.01
47.03	0.00	5409.00	2.100	0.01
47.19	0.00	5409.00	2.100	0.01
47.35	0.00	5409.00	2.100	0.01
47.52	0.00	5409.00	2.100	0.01
47.69	0.00	5409.00	2.100	0.01
47.85	0.00	5409.00	2.100	0.01
48.01	0.00	5409.00	2.100	0.01
48.18	0.00	5409.00	2.100	0.01
48.35	0.00	5409.00	2.100	0.01
48.51	0.00	5409.00	2.100	0.01
48.67	0.00	5409.00	2.100	0.01
48.84	0.00	5409.00	2.100	0.01
49.01	0.00	5409.00	2.100	0.01
49.17	0.00	5409.00	2.100	0.01
49.33	0.00	5409.00	2.100	0.01
49.50	0.00	5409.00	2.100	0.01
49.67	0.00	5409.00	2.100	0.01
49.83	0.00	5409.00	2.100	0.01
49.99	0.00	5409.00	2.100	0.01
50.16	0.00	5409.00	2.100	0.01
50.33	0.00	5409.00	2.100	0.01
50.49	0.00	5409.00	2.100	0.01
50.65	0.00	5409.00	2.100	0.01
50.82	0.00	5409.00	2.100	0.01
50.99	0.00	5409.00	2.100	0.01
51.15	0.00	5409.00	2.100	0.01
51.31	0.00	5409.00	2.100	0.01
51.48	0.00	5409.00	2.100	0.01
51.65	0.00	5409.00	2.100	0.01
51.81	0.00	5409.00	2.100	0.01
51.97	0.00	5409.00	2.100	0.01
52.14	0.00	5409.00	2.100	0.01
52.31	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
52.47	0.00	5409.00	2.100	0.01
52.63	0.00	5409.00	2.100	0.01
52.80	0.00	5409.00	2.100	0.01
52.97	0.00	5409.00	2.100	0.01
53.13	0.00	5409.00	2.100	0.01
53.29	0.00	5409.00	2.100	0.01
53.46	0.00	5409.00	2.100	0.01
53.62	0.00	5409.00	2.100	0.01
53.79	0.00	5409.00	2.100	0.01
53.95	0.00	5409.00	2.100	0.01
54.12	0.00	5409.00	2.100	0.01
54.28	0.00	5409.00	2.100	0.01
54.45	0.00	5409.00	2.100	0.01
54.61	0.00	5409.00	2.100	0.01
54.78	0.00	5409.00	2.100	0.01
54.94	0.00	5409.00	2.100	0.01
55.11	0.00	5409.00	2.100	0.01
55.28	0.00	5409.00	2.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
55.44	0.00	5409.00	2.100	0.01
55.60	0.00	5409.00	2.100	0.01
55.77	0.00	5409.00	2.100	0.01
55.94	0.00	5409.00	2.100	0.01
56.10	0.00	5409.00	2.100	0.01
56.26	0.00	5409.00	2.100	0.01
56.43	0.00	5409.00	2.100	0.01
56.60	0.00	5409.00	2.100	0.01
56.76	0.00	5409.00	2.100	0.01
56.92	0.00	5409.00	2.100	0.01
57.09	0.00	5409.00	2.100	0.01
57.26	0.00	5409.00	2.100	0.01
57.42	0.00	5409.00	2.100	0.01
57.58	0.00	5409.00	2.100	0.01
57.75	0.00	5409.00	2.100	0.01
57.92	0.00	5409.00	2.100	0.01
58.08	0.00	5409.00	2.100	0.01
58.24	0.00	5409.00	2.100	0.01
58.41	0.00	5409.00	2.100	0.01
58.58	0.00	5409.00	2.100	0.01
58.74	0.00	5409.00	2.100	0.01
58.90	0.00	5409.00	2.100	0.01
59.07	0.00	5409.00	2.100	0.01
59.24	0.00	5409.00	2.100	0.01
59.40	0.00	5409.00	2.100	0.01
59.56	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
59.73	0.00	5409.00	2.100	0.01
59.90	0.00	5409.00	2.100	0.01
60.06	0.00	5409.00	2.100	0.01
60.22	0.00	5409.00	2.100	0.01
60.39	0.00	5409.00	2.100	0.01
60.56	0.00	5409.00	2.100	0.01
60.72	0.00	5409.00	2.100	0.01
60.88	0.00	5409.00	2.100	0.01
61.05	0.00	5409.00	2.100	0.01
61.22	0.00	5409.00	2.100	0.01
61.38	0.00	5409.00	2.100	0.01
61.54	0.00	5409.00	2.100	0.01
61.71	0.00	5409.00	2.100	0.01
61.88	0.00	5409.00	2.100	0.01
62.04	0.00	5409.00	2.100	0.01
62.20	0.00	5409.00	2.100	0.01
62.37	0.00	5409.00	2.100	0.01
62.53	0.00	5409.00	2.100	0.01
62.70	0.00	5409.00	2.100	0.01
62.86	0.00	5409.00	2.100	0.01
63.03	0.00	5409.00	2.100	0.01
63.19	0.00	5409.00	2.100	0.01
63.36	0.00	5409.00	2.100	0.01
63.53	0.00	5409.00	2.100	0.01
63.69	0.00	5409.00	2.100	0.01
63.85	0.00	5409.00	2.100	0.01
64.02	0.00	5409.00	2.100	0.01
64.18	0.00	5409.00	2.100	0.01
64.35	0.00	5409.00	2.100	0.01
64.51	0.00	5409.00	2.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
64.68	0.00	5409.00	2.100	0.01
64.85	0.00	5409.00	2.100	0.01
65.01	0.00	5409.00	2.100	0.01
65.18	0.00	5409.00	2.100	0.01
65.34	0.00	5409.00	2.100	0.01
65.50	0.00	5409.00	2.100	0.01
65.67	0.00	5409.00	2.100	0.01
65.83	0.00	5409.00	2.100	0.01
66.00	0.00	5409.00	2.100	0.01
66.17	0.00	5409.00	2.100	0.01
66.33	0.00	5409.00	2.100	0.01
66.50	0.00	5409.00	2.100	0.01
66.66	0.00	5409.00	2.100	0.01
66.82	0.00	5409.00	2.100	0.01

AHYMO.OUT				
66.99	0.00	5409.00	2.100	0.01
67.15	0.00	5409.00	2.100	0.01
67.32	0.00	5409.00	2.100	0.01
67.49	0.00	5409.00	2.100	0.01
67.65	0.00	5409.00	2.100	0.01
67.82	0.00	5409.00	2.100	0.01
67.98	0.00	5409.00	2.100	0.01
68.14	0.00	5409.00	2.100	0.01
68.31	0.00	5409.00	2.100	0.01
68.47	0.00	5409.00	2.100	0.01
68.64	0.00	5409.00	2.100	0.01
68.81	0.00	5409.00	2.100	0.01
68.97	0.00	5409.00	2.100	0.01
69.14	0.00	5409.00	2.100	0.01
69.30	0.00	5409.00	2.100	0.01
69.46	0.00	5409.00	2.100	0.01
69.63	0.00	5409.00	2.100	0.01
69.79	0.00	5409.00	2.100	0.01
69.96	0.00	5409.00	2.100	0.01
70.12	0.00	5409.00	2.100	0.01
70.29	0.00	5409.00	2.100	0.01
70.46	0.00	5409.00	2.100	0.01
70.62	0.00	5409.00	2.100	0.01
70.78	0.00	5409.00	2.100	0.01
70.95	0.00	5409.00	2.100	0.01
71.11	0.00	5409.00	2.100	0.01
71.28	0.00	5409.00	2.100	0.01
71.44	0.00	5409.00	2.100	0.01
71.61	0.00	5409.00	2.100	0.01
71.78	0.00	5409.00	2.100	0.01
71.94	0.00	5409.00	2.100	0.01
72.11	0.00	5409.00	2.100	0.01
72.27	0.00	5409.00	2.100	0.01
72.43	0.00	5409.00	2.100	0.01
72.60	0.00	5409.00	2.100	0.01
72.76	0.00	5409.00	2.100	0.01
72.93	0.00	5409.00	2.100	0.01
73.10	0.00	5409.00	2.100	0.01
73.26	0.00	5409.00	2.100	0.01
73.43	0.00	5409.00	2.100	0.01
73.59	0.00	5409.00	2.100	0.01
73.75	0.00	5409.00	2.100	0.01
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
73.92	0.00	5409.00	2.100	0.01
74.08	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
74.25	0.00	5409.00	2.100	0.01
74.42	0.00	5409.00	2.100	0.01
74.58	0.00	5409.00	2.100	0.01
74.75	0.00	5409.00	2.100	0.01
74.91	0.00	5409.00	2.100	0.01
75.07	0.00	5409.00	2.100	0.01
75.24	0.00	5409.00	2.100	0.01
75.40	0.00	5409.00	2.100	0.01
75.57	0.00	5409.00	2.100	0.01
75.74	0.00	5409.00	2.100	0.01
75.90	0.00	5409.00	2.100	0.01
76.07	0.00	5409.00	2.100	0.01
76.23	0.00	5409.00	2.100	0.01
76.39	0.00	5409.00	2.100	0.01
76.56	0.00	5409.00	2.100	0.01
76.72	0.00	5409.00	2.100	0.01
76.89	0.00	5409.00	2.100	0.01
77.06	0.00	5409.00	2.100	0.01
77.22	0.00	5409.00	2.100	0.01
77.39	0.00	5409.00	2.100	0.01
77.55	0.00	5409.00	2.100	0.01
77.71	0.00	5409.00	2.100	0.01
77.88	0.00	5409.00	2.100	0.01
78.04	0.00	5409.00	2.100	0.01
78.21	0.00	5409.00	2.100	0.01
78.38	0.00	5409.00	2.100	0.01
78.54	0.00	5409.00	2.100	0.01
78.71	0.00	5409.00	2.100	0.01
78.87	0.00	5409.00	2.100	0.01
79.03	0.00	5409.00	2.100	0.01
79.20	0.00	5409.00	2.100	0.01
79.36	0.00	5409.00	2.100	0.01
79.53	0.00	5409.00	2.100	0.01
79.69	0.00	5409.00	2.100	0.01
79.86	0.00	5409.00	2.100	0.01
80.03	0.00	5409.00	2.100	0.01
80.19	0.00	5409.00	2.100	0.01
80.36	0.00	5409.00	2.100	0.01
80.52	0.00	5409.00	2.100	0.01
80.68	0.00	5409.00	2.100	0.01
80.85	0.00	5409.00	2.100	0.01
81.01	0.00	5409.00	2.100	0.01
81.18	0.00	5409.00	2.100	0.01
81.35	0.00	5409.00	2.100	0.01
81.51	0.00	5409.00	2.100	0.01
81.68	0.00	5409.00	2.100	0.01
81.84	0.00	5409.00	2.100	0.01
82.00	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
82.17	0.00	5409.00	2.100	0.01
82.33	0.00	5409.00	2.100	0.01
82.50	0.00	5409.00	2.100	0.01
82.67	0.00	5409.00	2.100	0.01
82.83	0.00	5409.00	2.100	0.01
83.00	0.00	5409.00	2.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
83.16	0.00	5409.00	2.100	0.01
83.32	0.00	5409.00	2.100	0.01
83.49	0.00	5409.00	2.100	0.01
83.65	0.00	5409.00	2.100	0.01
83.82	0.00	5409.00	2.100	0.01
83.99	0.00	5409.00	2.100	0.01
84.15	0.00	5409.00	2.100	0.01
84.32	0.00	5409.00	2.100	0.01
84.48	0.00	5409.00	2.100	0.01
84.64	0.00	5409.00	2.100	0.01
84.81	0.00	5409.00	2.100	0.01
84.97	0.00	5409.00	2.100	0.01
85.14	0.00	5409.00	2.100	0.01
85.31	0.00	5409.00	2.100	0.01
85.47	0.00	5409.00	2.100	0.01
85.64	0.00	5409.00	2.100	0.01
85.80	0.00	5409.00	2.100	0.01
85.96	0.00	5409.00	2.100	0.01
86.13	0.00	5409.00	2.100	0.01
86.29	0.00	5409.00	2.100	0.01
86.46	0.00	5409.00	2.100	0.01
86.62	0.00	5409.00	2.100	0.01
86.79	0.00	5409.00	2.100	0.01
86.96	0.00	5409.00	2.100	0.01
87.12	0.00	5409.00	2.100	0.01
87.28	0.00	5409.00	2.100	0.01
87.45	0.00	5409.00	2.100	0.01
87.61	0.00	5409.00	2.100	0.01
87.78	0.00	5409.00	2.100	0.01
87.94	0.00	5409.00	2.100	0.01
88.11	0.00	5409.00	2.100	0.01
88.28	0.00	5409.00	2.100	0.01
88.44	0.00	5409.00	2.100	0.01
88.60	0.00	5409.00	2.100	0.01
88.77	0.00	5409.00	2.100	0.01
88.93	0.00	5409.00	2.100	0.01
89.10	0.00	5409.00	2.100	0.01
89.26	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
89.43	0.00	5409.00	2.100	0.01
89.60	0.00	5409.00	2.100	0.01
89.76	0.00	5409.00	2.100	0.01
89.93	0.00	5409.00	2.100	0.01
90.09	0.00	5409.00	2.100	0.01
90.25	0.00	5409.00	2.100	0.01
90.42	0.00	5409.00	2.100	0.01
90.58	0.00	5409.00	2.100	0.01
90.75	0.00	5409.00	2.100	0.01
90.92	0.00	5409.00	2.100	0.01
91.08	0.00	5409.00	2.100	0.01
91.25	0.00	5409.00	2.100	0.01
91.41	0.00	5409.00	2.100	0.01
91.57	0.00	5409.00	2.100	0.01
91.74	0.00	5409.00	2.100	0.01
91.90	0.00	5409.00	2.100	0.01
92.07	0.00	5409.00	2.100	0.01
92.24	0.00	5409.00	2.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
92.40	0.00	5409.00	2.100	0.01
92.57	0.00	5409.00	2.100	0.01
92.73	0.00	5409.00	2.100	0.01
92.89	0.00	5409.00	2.100	0.01
93.06	0.00	5409.00	2.100	0.01
93.22	0.00	5409.00	2.100	0.01
93.39	0.00	5409.00	2.100	0.01
93.56	0.00	5409.00	2.100	0.01
93.72	0.00	5409.00	2.100	0.01
93.89	0.00	5409.00	2.100	0.01
94.05	0.00	5409.00	2.100	0.01
94.21	0.00	5409.00	2.100	0.01
94.38	0.00	5409.00	2.100	0.01
94.54	0.00	5409.00	2.100	0.01
94.71	0.00	5409.00	2.100	0.01
94.88	0.00	5409.00	2.100	0.01
95.04	0.00	5409.00	2.100	0.01
95.21	0.00	5409.00	2.100	0.01
95.37	0.00	5409.00	2.100	0.01
95.53	0.00	5409.00	2.100	0.01
95.70	0.00	5409.00	2.100	0.01
95.86	0.00	5409.00	2.100	0.01
96.03	0.00	5409.00	2.100	0.01
96.19	0.00	5409.00	2.100	0.01
96.36	0.00	5409.00	2.100	0.01
96.53	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
96.69	0.00	5409.00	2.100	0.01
96.85	0.00	5409.00	2.100	0.01
97.02	0.00	5409.00	2.100	0.01
97.18	0.00	5409.00	2.100	0.01
97.35	0.00	5409.00	2.100	0.01
97.51	0.00	5409.00	2.100	0.01
97.68	0.00	5409.00	2.100	0.01
97.85	0.00	5409.00	2.100	0.01
98.01	0.00	5409.00	2.100	0.01
98.18	0.00	5409.00	2.100	0.01
98.34	0.00	5409.00	2.100	0.01
98.50	0.00	5409.00	2.100	0.01
98.67	0.00	5409.00	2.100	0.01
98.83	0.00	5409.00	2.100	0.01
99.00	0.00	5409.00	2.100	0.01
99.17	0.00	5409.00	2.100	0.01
99.33	0.00	5409.00	2.100	0.01
99.50	0.00	5409.00	2.100	0.01
99.66	0.00	5409.00	2.100	0.01
99.82	0.00	5409.00	2.100	0.01
99.99	0.00	5409.00	2.100	0.01
100.15	0.00	5409.00	2.100	0.01
100.32	0.00	5409.00	2.100	0.01
100.49	0.00	5409.00	2.100	0.01
100.65	0.00	5409.00	2.100	0.01
100.82	0.00	5409.00	2.100	0.01
100.98	0.00	5409.00	2.100	0.01
101.14	0.00	5409.00	2.100	0.01
101.31	0.00	5409.00	2.100	0.01
101.47	0.00	5409.00	2.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
101.64	0.00	5409.00	2.100	0.01
101.81	0.00	5409.00	2.100	0.01
101.97	0.00	5409.00	2.100	0.01
102.14	0.00	5409.00	2.100	0.01
102.30	0.00	5409.00	2.100	0.01
102.46	0.00	5409.00	2.100	0.01
102.63	0.00	5409.00	2.100	0.01
102.79	0.00	5409.00	2.100	0.01
102.96	0.00	5409.00	2.100	0.01
103.12	0.00	5409.00	2.100	0.01
103.29	0.00	5409.00	2.100	0.01
103.46	0.00	5409.00	2.100	0.01
103.62	0.00	5409.00	2.100	0.01
103.78	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
103.95	0.00	5409.00	2.100	0.01
104.11	0.00	5409.00	2.100	0.01
104.28	0.00	5409.00	2.100	0.01
104.44	0.00	5409.00	2.100	0.01
104.61	0.00	5409.00	2.100	0.01
104.78	0.00	5409.00	2.100	0.01
104.94	0.00	5409.00	2.100	0.01
105.10	0.00	5409.00	2.100	0.01
105.27	0.00	5409.00	2.100	0.01
105.43	0.00	5409.00	2.100	0.01
105.60	0.00	5409.00	2.100	0.01
105.76	0.00	5409.00	2.100	0.01
105.93	0.00	5409.00	2.100	0.01
106.10	0.00	5409.00	2.100	0.01
106.26	0.00	5409.00	2.100	0.01
106.43	0.00	5409.00	2.100	0.01
106.59	0.00	5409.00	2.100	0.01
106.75	0.00	5409.00	2.100	0.01
106.92	0.00	5409.00	2.100	0.01
107.08	0.00	5409.00	2.100	0.01
107.25	0.00	5409.00	2.100	0.01
107.42	0.00	5409.00	2.100	0.01
107.58	0.00	5409.00	2.100	0.01
107.75	0.00	5409.00	2.100	0.01
107.91	0.00	5409.00	2.100	0.01
108.07	0.00	5409.00	2.100	0.01
108.24	0.00	5409.00	2.100	0.01
108.40	0.00	5409.00	2.100	0.01
108.57	0.00	5409.00	2.100	0.01
108.74	0.00	5409.00	2.100	0.01
108.90	0.00	5409.00	2.100	0.01
109.07	0.00	5409.00	2.100	0.01
109.23	0.00	5409.00	2.100	0.01
109.39	0.00	5409.00	2.100	0.01
109.56	0.00	5409.00	2.100	0.01
109.72	0.00	5409.00	2.100	0.01
109.89	0.00	5409.00	2.100	0.01
110.06	0.00	5409.00	2.100	0.01
110.22	0.00	5409.00	2.100	0.01
110.39	0.00	5409.00	2.100	0.01
110.55	0.00	5409.00	2.100	0.01
110.71	0.00	5409.00	2.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
110.88	0.00	5409.00	2.100	0.01
111.04	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
111.21	0.00	5409.00	2.100	0.01
111.38	0.00	5409.00	2.100	0.01
111.54	0.00	5409.00	2.100	0.01
111.71	0.00	5409.00	2.100	0.01
111.87	0.00	5409.00	2.100	0.01
112.03	0.00	5409.00	2.100	0.01
112.20	0.00	5409.00	2.100	0.01
112.36	0.00	5409.00	2.100	0.01
112.53	0.00	5409.00	2.100	0.01
112.69	0.00	5409.00	2.100	0.01
112.86	0.00	5409.00	2.100	0.01
113.03	0.00	5409.00	2.100	0.01
113.19	0.00	5409.00	2.100	0.01
113.35	0.00	5409.00	2.100	0.01
113.52	0.00	5409.00	2.100	0.01
113.68	0.00	5409.00	2.100	0.01
113.85	0.00	5409.00	2.100	0.01
114.01	0.00	5409.00	2.100	0.01
114.18	0.00	5409.00	2.100	0.01
114.35	0.00	5409.00	2.100	0.01
114.51	0.00	5409.00	2.100	0.01
114.68	0.00	5409.00	2.100	0.01
114.84	0.00	5409.00	2.100	0.01
115.00	0.00	5409.00	2.100	0.01
115.17	0.00	5409.00	2.100	0.01
115.33	0.00	5409.00	2.100	0.01
115.50	0.00	5409.00	2.100	0.01
115.67	0.00	5409.00	2.100	0.01
115.83	0.00	5409.00	2.100	0.01
116.00	0.00	5409.00	2.100	0.01
116.16	0.00	5409.00	2.100	0.01
116.32	0.00	5409.00	2.100	0.01
116.49	0.00	5409.00	2.100	0.01
116.65	0.00	5409.00	2.100	0.01
116.82	0.00	5409.00	2.100	0.01
116.99	0.00	5409.00	2.100	0.01
117.15	0.00	5409.00	2.100	0.01
117.32	0.00	5409.00	2.100	0.01
117.48	0.00	5409.00	2.100	0.01
117.64	0.00	5409.00	2.100	0.01
117.81	0.00	5409.00	2.100	0.01
117.97	0.00	5409.00	2.100	0.01
118.14	0.00	5409.00	2.100	0.01
118.31	0.00	5409.00	2.100	0.01
118.47	0.00	5409.00	2.100	0.01
118.64	0.00	5409.00	2.100	0.01
118.80	0.00	5409.00	2.100	0.01
118.96	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
119.13	0.00	5409.00	2.100	0.01
119.29	0.00	5409.00	2.100	0.01
119.46	0.00	5409.00	2.100	0.01
119.62	0.00	5409.00	2.100	0.01
119.79	0.00	5409.00	2.100	0.01
119.96	0.00	5409.00	2.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
120.12	0.00	5409.00	2.100	0.01
120.28	0.00	5409.00	2.100	0.01
120.45	0.00	5409.00	2.100	0.01
120.61	0.00	5409.00	2.100	0.01
120.78	0.00	5409.00	2.100	0.01
120.94	0.00	5409.00	2.100	0.01
121.11	0.00	5409.00	2.100	0.01
121.28	0.00	5409.00	2.100	0.01
121.44	0.00	5409.00	2.100	0.01
121.60	0.00	5409.00	2.100	0.01
121.77	0.00	5409.00	2.100	0.01
121.93	0.00	5409.00	2.100	0.01
122.10	0.00	5409.00	2.100	0.01
122.26	0.00	5409.00	2.100	0.01
122.43	0.00	5409.00	2.100	0.01
122.60	0.00	5409.00	2.100	0.01
122.76	0.00	5409.00	2.100	0.01
122.93	0.00	5409.00	2.100	0.01
123.09	0.00	5409.00	2.100	0.01
123.25	0.00	5409.00	2.100	0.01
123.42	0.00	5409.00	2.100	0.01
123.58	0.00	5409.00	2.100	0.01
123.75	0.00	5409.00	2.100	0.01
123.92	0.00	5409.00	2.100	0.01
124.08	0.00	5409.00	2.100	0.01
124.25	0.00	5409.00	2.100	0.01
124.41	0.00	5409.00	2.100	0.01
124.57	0.00	5409.00	2.100	0.01
124.74	0.00	5409.00	2.100	0.01
124.90	0.00	5409.00	2.100	0.01
125.07	0.00	5409.00	2.100	0.01
125.24	0.00	5409.00	2.100	0.01
125.40	0.00	5409.00	2.100	0.01
125.57	0.00	5409.00	2.100	0.01
125.73	0.00	5409.00	2.100	0.01
125.89	0.00	5409.00	2.100	0.01
126.06	0.00	5409.00	2.100	0.01
126.22	0.00	5409.00	2.100	0.01

			AHYMO.OUT	
126.39	0.00	5409.00	2.100	0.01
126.56	0.00	5409.00	2.100	0.01
126.72	0.00	5409.00	2.100	0.01
126.89	0.00	5409.00	2.100	0.01
127.05	0.00	5409.00	2.100	0.01
127.21	0.00	5409.00	2.100	0.01
127.38	0.00	5409.00	2.100	0.01
127.54	0.00	5409.00	2.100	0.01
127.71	0.00	5409.00	2.100	0.01
127.88	0.00	5409.00	2.100	0.01
128.04	0.00	5409.00	2.100	0.01
128.21	0.00	5409.00	2.100	0.01
128.37	0.00	5409.00	2.100	0.01
128.54	0.00	5409.00	2.100	0.01
128.70	0.00	5409.00	2.100	0.01
128.87	0.00	5409.00	2.100	0.01
129.03	0.00	5409.00	2.100	0.01
129.19	0.00	5409.00	2.100	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)	
129.36	0.00	5409.00	2.100	0.01	
129.52	0.00	5409.00	2.100	0.01	
129.69	0.00	5409.00	2.100	0.01	
129.85	0.00	5409.00	2.100	0.01	
130.02	0.00	5409.00	2.100	0.01	
130.18	0.00	5409.00	2.100	0.01	
130.35	0.00	5409.00	2.100	0.01	
130.51	0.00	5409.00	2.100	0.01	
130.68	0.00	5409.00	2.100	0.01	
130.85	0.00	5409.00	2.100	0.01	
131.01	0.00	5409.00	2.100	0.01	
131.18	0.00	5409.00	2.100	0.01	
131.34	0.00	5409.00	2.100	0.01	
131.51	0.00	5409.00	2.100	0.01	
131.67	0.00	5409.00	2.100	0.01	
131.84	0.00	5409.00	2.100	0.01	
PEAK DISCHARGE =					11.340 CFS - PEAK OCCURS AT HOUR 2.11
MAXIMUM WATER SURFACE ELEVATION =					5409.337
MAXIMUM STORAGE =					2.3294 AC-FT INCREMENTAL TIME= 0.033000HRS

*

PRINT HYD ID=50 CODE=10

HYDROGRAPH FROM AREA POND.A

AHYMO.OUT

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
	FLOW			FLOW			
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
	0.000	0.0		26.400	0.0	52.800	0.0
79.200	0.0	105.600		0.0			
	0.330	0.0	26.730	0.0	53.130	0.0	
79.530	0.0	105.930		0.0			
	0.660	0.0	27.060	0.0	53.460	0.0	
79.860	0.0	106.260		0.0			
	0.990	0.0	27.390	0.0	53.790	0.0	
80.190	0.0	106.590		0.0			
	1.320	0.0	27.720	0.0	54.120	0.0	
80.520	0.0	106.920		0.0			
	1.650	0.0	28.050	0.0	54.450	0.0	
80.850	0.0	107.250		0.0			
	1.980	9.0	28.380	0.0	54.780	0.0	
81.180	0.0	107.580		0.0			
	2.310	8.5	28.710	0.0	55.110	0.0	
81.510	0.0	107.910		0.0			
	2.640	4.0	29.040	0.0	55.440	0.0	
81.840	0.0	108.240		0.0			
	2.970	1.9	29.370	0.0	55.770	0.0	
82.170	0.0	108.570		0.0			
	3.300	1.0	29.700	0.0	56.100	0.0	
82.500	0.0	108.900		0.0			
	3.630	0.6	30.030	0.0	56.430	0.0	
82.830	0.0	109.230		0.0			
	3.960	0.5	30.360	0.0	56.760	0.0	
83.160	0.0	109.560		0.0			
	4.290	0.4	30.690	0.0	57.090	0.0	
83.490	0.0	109.890		0.0			
	4.620	0.4	31.020	0.0	57.420	0.0	
83.820	0.0	110.220		0.0			
	4.950	0.4	31.350	0.0	57.750	0.0	
84.150	0.0	110.550		0.0			
	5.280	0.4	31.680	0.0	58.080	0.0	
84.480	0.0	110.880		0.0			
	5.610	0.4	32.010	0.0	58.410	0.0	
84.810	0.0	111.210		0.0			
	5.940	0.4	32.340	0.0	58.740	0.0	
85.140	0.0	111.540		0.0			
	6.270	0.5	32.670	0.0	59.070	0.0	
85.470	0.0	111.870		0.0			
	6.600	0.5	33.000	0.0	59.400	0.0	
85.800	0.0	112.200		0.0			

			AHYMO.OUT			
	6.930	0.5	33.330	0.0	59.730	0.0
86.130	0.0	112.530	0.0			
	7.260	0.5	33.660	0.0	60.060	0.0
86.460	0.0	112.860	0.0			
	7.590	0.5	33.990	0.0	60.390	0.0
86.790	0.0	113.190	0.0			
	7.920	0.5	34.320	0.0	60.720	0.0
87.120	0.0	113.520	0.0			
	8.250	0.5	34.650	0.0	61.050	0.0
87.450	0.0	113.850	0.0			
	8.580	0.5	34.980	0.0	61.380	0.0
87.780	0.0	114.180	0.0			
	8.910	0.5	35.310	0.0	61.710	0.0
88.110	0.0	114.510	0.0			
	9.240	0.5	35.640	0.0	62.040	0.0
88.440	0.0	114.840	0.0			
	9.570	0.4	35.970	0.0	62.370	0.0
88.770	0.0	115.170	0.0			
	9.900	0.4	36.300	0.0	62.700	0.0
89.100	0.0	115.500	0.0			
	10.230	0.4	36.630	0.0	63.030	0.0
89.430	0.0	115.830	0.0			
	10.560	0.4	36.960	0.0	63.360	0.0
89.760	0.0	116.160	0.0			
	10.890	0.4	37.290	0.0	63.690	0.0
90.090	0.0	116.490	0.0			
	11.220	0.4	37.620	0.0	64.020	0.0
90.420	0.0	116.820	0.0			
	11.550	0.4	37.950	0.0	64.350	0.0
90.750	0.0	117.150	0.0			
	11.880	0.4	38.280	0.0	64.680	0.0
91.080	0.0	117.480	0.0			
	12.210	0.4	38.610	0.0	65.010	0.0
91.410	0.0	117.810	0.0			
	12.540	0.4	38.940	0.0	65.340	0.0
91.740	0.0	118.140	0.0			
	12.870	0.4	39.270	0.0	65.670	0.0
92.070	0.0	118.470	0.0			
	13.200	0.4	39.600	0.0	66.000	0.0
92.400	0.0	118.800	0.0			
	13.530	0.4	39.930	0.0	66.330	0.0
92.730	0.0	119.130	0.0			
	13.860	0.4	40.260	0.0	66.660	0.0
93.060	0.0	119.460	0.0			
	14.190	0.4	40.590	0.0	66.990	0.0
93.390	0.0	119.790	0.0			
	14.520	0.3	40.920	0.0	67.320	0.0
93.720	0.0	120.120	0.0			

			AHYMO.OUT			
	14.850	0.3	41.250	0.0	67.650	0.0
94.050	0.0	120.450	0.0			
	15.180	0.3	41.580	0.0	67.980	0.0
94.380	0.0	120.780	0.0			
	15.510	0.3	41.910	0.0	68.310	0.0
94.710	0.0	121.110	0.0			
	15.840	0.3	42.240	0.0	68.640	0.0
95.040	0.0	121.440	0.0			
	16.170	0.3	42.570	0.0	68.970	0.0
95.370	0.0	121.770	0.0			
	16.500	0.3	42.900	0.0	69.300	0.0
95.700	0.0	122.100	0.0			
	16.830	0.3	43.230	0.0	69.630	0.0
96.030	0.0	122.430	0.0			
	17.160	0.3	43.560	0.0	69.960	0.0
96.360	0.0	122.760	0.0			
	17.490	0.3	43.890	0.0	70.290	0.0
96.690	0.0	123.090	0.0			
	17.820	0.3	44.220	0.0	70.620	0.0
97.020	0.0	123.421	0.0			
	18.150	0.3	44.550	0.0	70.950	0.0
97.350	0.0	123.751	0.0			
	18.480	0.3	44.880	0.0	71.280	0.0
97.680	0.0	124.081	0.0			
	18.810	0.3	45.210	0.0	71.610	0.0
98.010	0.0	124.411	0.0			
	19.140	0.3	45.540	0.0	71.940	0.0
98.340	0.0	124.741	0.0			
	19.470	0.3	45.870	0.0	72.270	0.0
98.670	0.0	125.071	0.0			
	19.800	0.3	46.200	0.0	72.600	0.0
99.000	0.0	125.401	0.0			
	20.130	0.3	46.530	0.0	72.930	0.0
99.330	0.0	125.731	0.0			
	20.460	0.3	46.860	0.0	73.260	0.0
99.660	0.0	126.061	0.0			
	20.790	0.3	47.190	0.0	73.590	0.0
99.990	0.0	126.391	0.0			
	21.120	0.3	47.520	0.0	73.920	0.0
100.320	0.0	126.721	0.0			
	21.450	0.3	47.850	0.0	74.250	0.0
100.650	0.0	127.051	0.0			
	21.780	0.3	48.180	0.0	74.580	0.0
100.980	0.0	127.381	0.0			
	22.110	0.3	48.510	0.0	74.910	0.0
101.310	0.0	127.711	0.0			
	22.440	0.3	48.840	0.0	75.240	0.0
101.640	0.0	128.041	0.0			

			AHYMO.OUT			
	22.770	0.3	49.170	0.0	75.570	0.0
101.970	0.0	128.371	0.0			
	23.100	0.3	49.500	0.0	75.900	0.0
102.300	0.0	128.701	0.0			
	23.430	0.3	49.830	0.0	76.230	0.0
102.630	0.0	129.031	0.0			
	23.760	0.2	50.160	0.0	76.560	0.0
102.960	0.0	129.361	0.0			
	24.090	0.2	50.490	0.0	76.890	0.0
103.290	0.0	129.691	0.0			
	24.420	0.1	50.820	0.0	77.220	0.0
103.620	0.0	130.021	0.0			
	24.750	0.0	51.150	0.0	77.550	0.0
103.950	0.0	130.351	0.0			
	25.080	0.0	51.480	0.0	77.880	0.0
104.280	0.0	130.681	0.0			
	25.410	0.0	51.810	0.0	78.210	0.0
104.610	0.0	131.011	0.0			
	25.740	0.0	52.140	0.0	78.540	0.0
104.940	0.0	131.341	0.0			
	26.070	0.0	52.470	0.0	78.870	0.0
105.270	0.0	131.671	0.0			

RUNOFF VOLUME = 0.61423 INCHES = 1.3549 ACRE-FEET
 PEAK DISCHARGE RATE = 11.34 CFS AT 2.112 HOURS BASIN AREA =
 0.0414 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 11:39:23

```
INPUT FILE = G Tools\ahymo-s4-r2\ahymo-s4-r2\DISK1\program files\AHYMO-S4\04022 Input.HMI USER NO.= AHYMO-S4TempUser05901704
```

		FROM	TO		PEAK	RUNOFF		TIME TO	CFS	PAGE =	1
COMMAND	HYDROGRAPH IDENTIFICATION	ID NO.	ID NO.	AREA (SQ MI)	DISCHARGE (CFS)	VOLUME (AC-FT)	RUNOFF (INCHES)	PEAK (HOURS)	PER ACRE	NOTATION	
RAINFALL TYPE=13										RAIN24=	2.660
*S EXISTING CONDITIONS											
*S COMPUTE HYD EXISTING BASIN A											
COMPUTE NM HYD	101.00	-	1	0.00804	6.88	0.188	0.43934	1.518	1.336	PER IMP=	0.00
*S COMPUTE HYD EXISTING BASIN B											
COMPUTE NM HYD	102.00	-	2	0.01428	12.21	0.335	0.43934	1.518	1.336	PER IMP=	0.00
*S COMPUTE HYD EXISTING BASIN C											
COMPUTE NM HYD	103.00	-	3	0.03350	28.63	0.785	0.43934	1.518	1.335	PER IMP=	0.00
ADD HYD	101T0102	1& 2	4	0.02232	19.08	0.523	0.43933	1.518	1.336		
ADD HYD	COMBINED101-	3& 4	5	0.05582	47.71	1.308	0.43934	1.518	1.336		
*S PROPOSED CONDITIONS											
*S COMPUTE HYD PROPOSED BASIN A											
COMPUTE NM HYD	104.00	-	6	0.00764	19.52	0.857	2.10390	1.485	3.993	PER IMP=	80.00
*S COMPUTE HYD PROPOSED BASIN B											
COMPUTE NM HYD	105.00	-	7	0.00463	11.84	0.520	2.10390	1.485	3.995	PER IMP=	80.00
*S COMPUTE HYD PROPOSED BASIN C											
COMPUTE NM HYD	106.00	-	8	0.00640	16.36	0.718	2.10390	1.485	3.993	PER IMP=	80.00
ADD HYD	BTOA	6& 7	10	0.01227	31.36	1.377	2.10385	1.485	3.993		
ADD HYD	B-CTOA	8&10	11	0.01867	47.71	2.095	2.10385	1.485	3.993		
*S COMPUTE HYD PROPOSED BASIN D											
COMPUTE NM HYD	107.00	-	12	0.01564	16.38	0.532	0.63801	1.518	1.637	PER IMP=	10.00
*S COMPUTE HYD PROPOSED BASIN E											
COMPUTE NM HYD	108.00	-	13	0.00096	1.54	0.042	0.81538	1.518	2.503	PER IMP=	0.00
*S COMPUTE HYD PROPOSED BASIN F											
COMPUTE NM HYD	109.00	-	14	0.00054	0.94	0.028	0.97645	1.518	2.721	PER IMP=	10.00
ADD HYD	DTOF	12&14	15	0.01618	17.32	0.559	0.64835	1.518	1.673		
ADD HYD	ETOF-D	13&15	16	0.01714	18.86	0.601	0.65770	1.518	1.719		
*S COMPUTE HYD PROPOSED BASIN G											
COMPUTE NM HYD	110.00	-	17	0.00555	14.88	0.670	2.26496	1.485	4.190	PER IMP=	90.00
*S COMPUTE HYD PROPOSED BASIN H											
COMPUTE NM HYD	111.00	-	18	0.00107	2.88	0.129	2.26496	1.485	4.210	PER IMP=	90.00
*S COMPUTE HYD PROPOSED BASIN I											
COMPUTE NM HYD	112.00	-	19	0.00074	2.00	0.089	2.26496	1.485	4.220	PER IMP=	90.00
ADD HYD	HTOI	18&19	20	0.00181	4.88	0.219	2.26462	1.485	4.214		
ADD HYD	A-CTOG	11&17	21	0.02422	62.60	2.765	2.14076	1.485	4.038		
ADD HYD	D-FTOA-DTOG	16&21	22	0.04136	81.07	3.367	1.52616	1.518	3.063		
ROUTE RESERVOIR	POND.A	22	50	0.04136	11.34	1.355	0.61423	2.112	0.428	AC-FT=	2.329
FINISH											

Water Quality:

Required Water Quality volume for first flush of 0.34"

Basin	Volume (cu. ft.)	Volume Provided (cu. ft.)
Total Onsite Impervious Area	13,064	122,383



APPENDIX B

HYDRAULIC CALCULATIONS



Manning Formula: Proposed 24" SD Max Flow

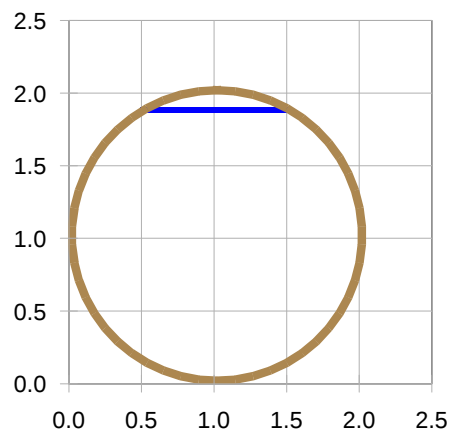
Circular Channel

Input

Flow	17.20 cfs
Slope	0.005 ft/ft
Manning's n	0.013
Diameter	24 in

Output

Depth	1.862 ft
Flow Area	3.05 sf
Velocity	5.65 fps
Velocity Head	0.495 ft
Top Width	1.01 ft
Froude Number	0.574
Critical Depth	1.495 ft
Critical Slope	0.00701 ft/ft



Manning Formula: Proposed 30" SD Max Flow

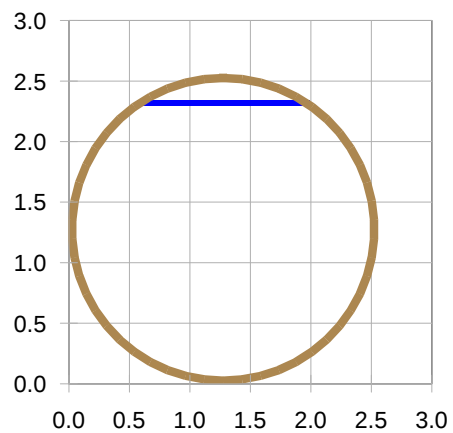
Circular Channel

Input

Flow	31.1 cfs
Slope	0.005 ft/ft
Manning's n	0.013
Diameter	30 in

Output

Depth	2.292 ft
Flow Area	4.71 sf
Velocity	6.60 fps
Velocity Head	0.677 ft
Top Width	1.38 ft
Froude Number	0.630
Critical Depth	1.900 ft
Critical Slope	0.00670 ft/ft



Manning Formula: Proposed 36" SD Max Flow

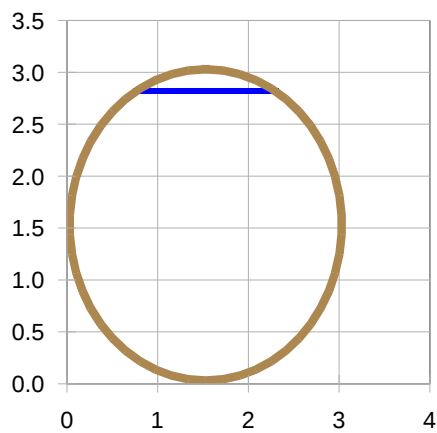
Circular Channel

Input

Flow	50.7 cfs
Slope	0.005 ft/ft
Manning's n	0.013
Diameter	36 in

Output

Depth	2.787 ft
Flow Area	6.85 sf
Velocity	7.41 fps
Velocity Head	0.852 ft
Top Width	1.54 ft
Froude Number	0.619
Critical Depth	2.317 ft
Critical Slope	0.00651 ft/ft



Manning Formula: Proposed 54" SD Max Flow

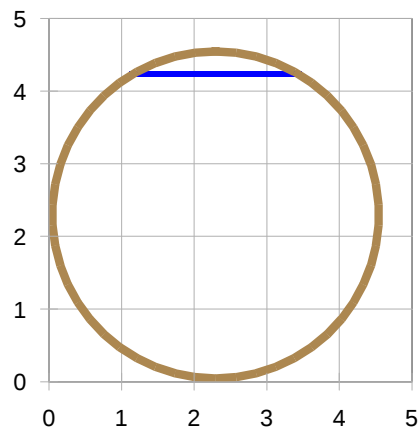
Circular Channel

Input

Flow	149.5 cfs
Slope	0.005 ft/ft
Manning's n	0.013
Diameter	54 in

Output

Depth	4.185 ft
Flow Area	15.4 sf
Velocity	9.70 fps
Velocity Head	1.46 ft
Top Width	2.30 ft
Froude Number	0.660
Critical Depth	3.588 ft
Critical Slope	0.00609 ft/ft



Manning Formula: Proposed 60" SD Max Flow

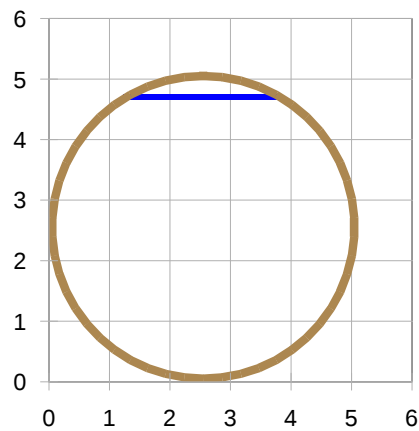
Circular Channel

Input

Flow	198.0 cfs
Slope	0.005 ft/ft
Manning's n	0.013
Diameter	60 in

Output

Depth	4.651 ft
Flow Area	19.0 sf
Velocity	10.4 fps
Velocity Head	1.68 ft
Top Width	2.55 ft
Froude Number	0.671
Critical Depth	4.019 ft
Critical Slope	0.00599 ft/ft



Basin A Type D Inlet Calculation

Orifice (Unknown Q)

Head Water Depth (h):	0.5	ft	User Enter Desired Value
Discharge Coeff. (C _d):	0.6		
Open Area (A):	4.6900	ft ²	
Gravity (g):	32.2	ft/s ²	
Flow (Q) = C · A · (2 · g · h) ^ (0.5)			
Flow (Q) =	16.0	cfs	

Weir (Unknown Q):

Discharge Coeff. (C _w):	3.367	
Length (L):	10.67	ft
Flow (Q) = C _w · L · h ^ (1.5)		
Flow (Q) =	12.7	cfs

GRATING CAPACITIES FOR TYPE "A", "C" AND "D"

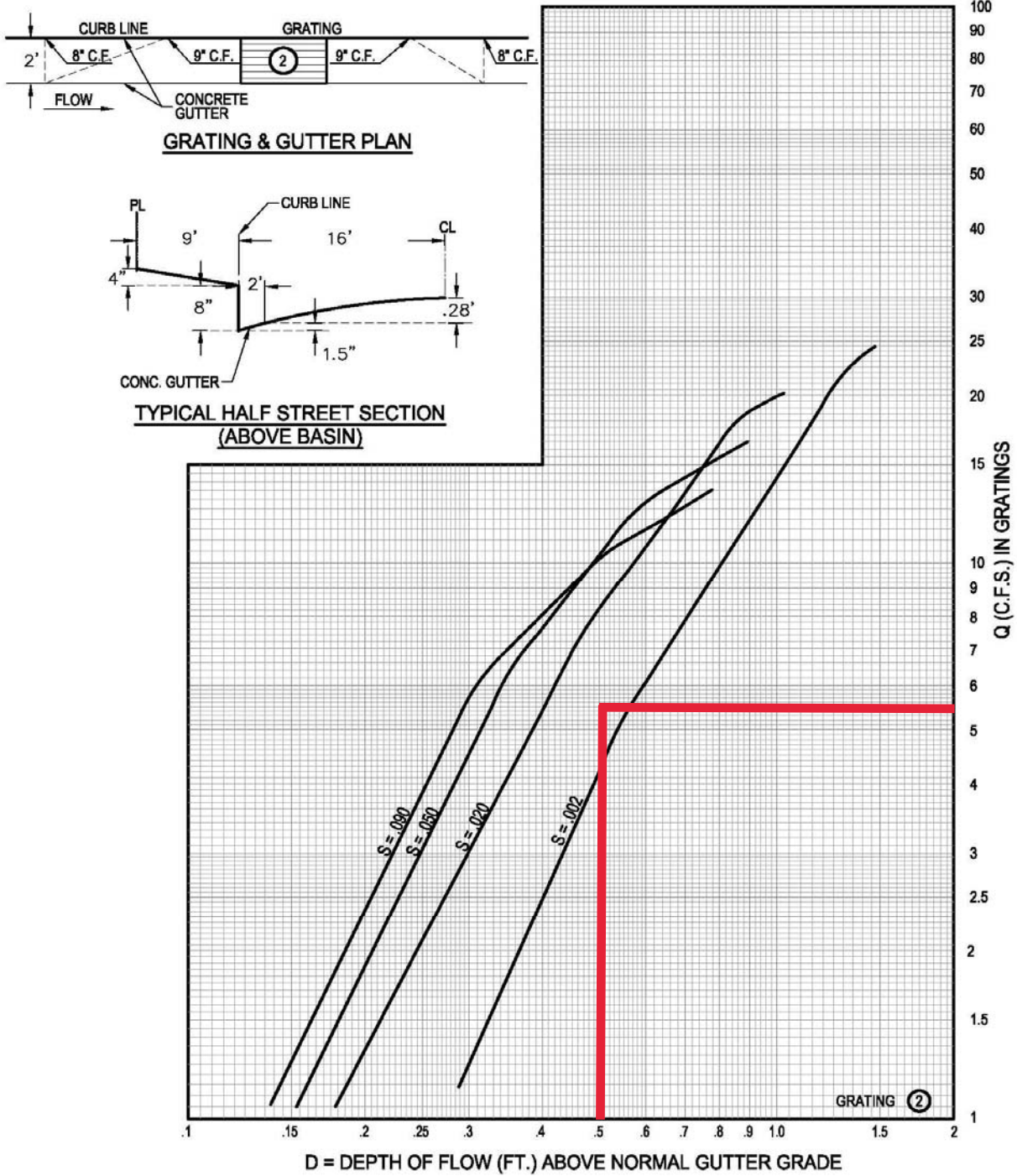


PLATE 22.3 D-5

GRATING CAPACITIES FOR TYPE "A", "C" AND "D"

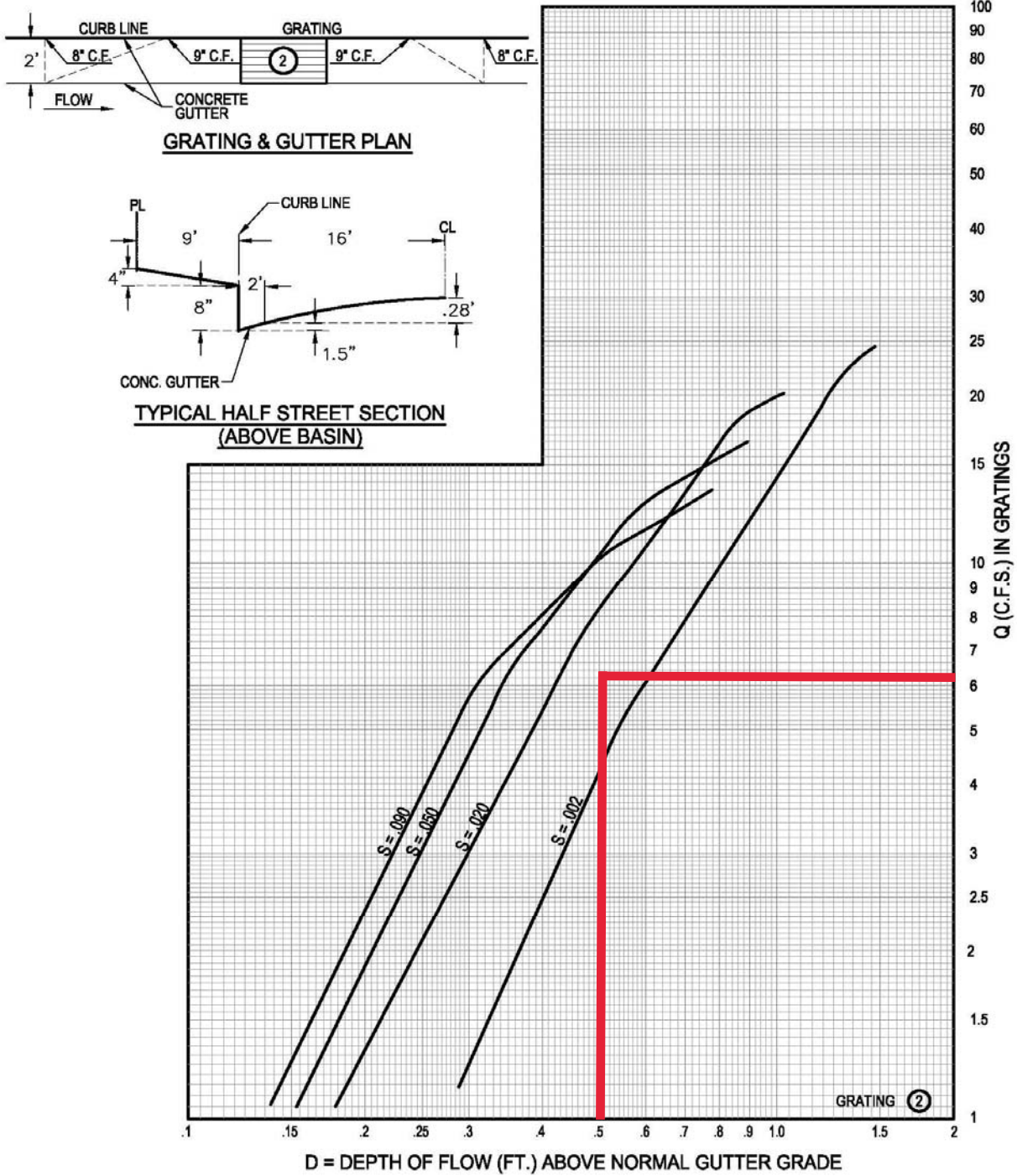


PLATE 22.3 D-5

Manning Formula: Proposed Internal Roadway Max Flow

Irregular Section

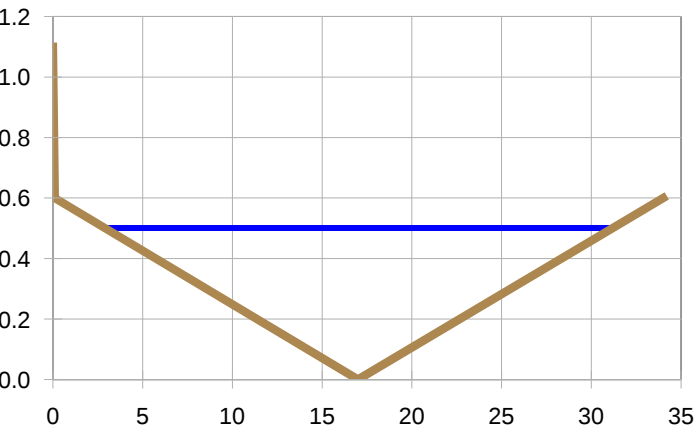
Input

Flow 17.3 cfs
Slope 0.005 ft/ft

Sta	Elev	n	Sta	Elev	n	Sta	Elev	n	Sta	Elev	n
0	1.1	0.017	0.1	0.6	0.017	17	0	0.017	34	0.6	0.017

Output

WSElev 0.500 ft
Flow Area 7.06 sf
Velocity 2.45 fps
Velocity Head 0.0934 ft
Top Width 28.2 ft
Froude Number 0.864
Critical WSElev 0.472 ft
Critical Slope ft/ft



Public Pond A Weir Calculation

Head Water Depth (h): 1 ft

User Enter Desired Value

Weir (Unknown Q):

Discharge Coeff. (C_w): 3.33

Length (L): 14.25 ft

Flow (Q) = C_w · L · h ^ (1.5)

Flow (Q) = 47.5 cfs

Head Water Depth (h): 0.5 ft

Weir (Unknown Q):

Discharge Coeff. (C_w): 3.33

Length (L): 14.25 ft

Flow (Q) = C_w · L · h ^ (1.5)

Flow (Q) = 16.8 cfs