DESIGN REPORT
FOR
AMOLE DEL NORTE
STORM DIVERSION FACILITIES
TIERRA BAYITA DRAINAGE FACILITIES

PHASE IIIC

Greiner

STATE OF NEW MEXICO
STATE ENGINEER OFFICE
SANTA FE

THOMAS C. TURNEY
State Engineer

BATAAN MEMORIAL BUILDING, ROOM 101
POST OFFICE BOX 25102
SANTA FE, NEW MEXICO 87504-5102
(505) 827-6175
FAX: (505) 827-6188

June 26, 1995

Mark S. Holstad, P.E.
Project Manager
Greiner, Inc.
5971 Jefferson Blvd., NE
Albuquerque, NM 87109

RE: File No. 4629

Dear Mr. Holstad:

Enclosed find the above referenced Application for Permit to Construct a Flood Control Dam which has been approved.

If our office can be of further assistance, please feel free to contact us.

Sincerely,

Thomas C. Turney
State Engineer

by: Kent Breese
Kent Breese
Water Rights Division

KB:egr

Enclosure

cc: District I

IMPORTANT - READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM

APPLICATION FOR PERMIT TO CONSTRUCT A FLOOD CONTROL DAM

Sheet 2 of 2

'95 JUN 2 PM 1 16

File No. May 5, 1995 — ...ER OFFICE ... NEW MEXICO — Date of receipt 4629

~~1. Name of applicant~~
Address
City and State — Zip code

2. Dam hazard classification (SCS criteria)

3. Dam is to be located on: (a) Name of stream or watercourse

(b) Which is a tributary of

4. Location of the intake structure of the principal spillway conduit from detention storage:
County. (a) ¼ ¼ ¼ of Section,
Township, Range, N.M.P.M. or (b) within feet of
X= feet, Y= feet, N.M.C.S., zone, within
Grant.

South Pond Data

5. Drainage area characteristics: (a) drainage area 679.2 (Includes North Pond Area) acres; (b) 100-year, 6 hour precipitation 2.2 inches; (c) probable maximum precipitation (PMP), 6 hour storm 16.0 inches; (d) volume of run-off from the 100-year, 6 hour storm 103.4* acre-feet. (e) volume of run-off from the PMP, 6 hour storm 388.9* acre-feet. *Information is for the 100 yr, 24 hour and 1/2 PMP, 24 hour storms.

6. Properties of detention dam: (a) maximum height above foundation at downstream toe 7.5 feet; (b) length of crest 632 feet; (c) width of crest 10 feet; (d) maximum width at base 55 feet; (e) slope of upstream face 3H:1V; (f) slope of downstream face 3H:1V; (g) elevation at crest of dam 5215.50 feet; (h) elevation of emergency spillway crest 5212.0 feet; (i) elevation of flow line of the intake structure of the principal spillway conduit 5201.0 feet; (j) characteristics of emergency spillway, (1) location East Side of South Pond, (2) width 10 feet, (3) maximum capacity 7096 cubic feet per second, (4) freeboard above maximum high water line 0.6 feet, (5) cross-sectional area at maximum flow 1436.75 square feet; (k) characteristics of principal spillway conduit, (1) size, type and numer of gates 1 - 36" RCP, (2) dimension 3 feet, (3) length 262 feet, (4) slope 0.0032 ft/ft, (5) Manning coefficient 0.013, (6) maximum discharge capacity 98 cubic feet per second, time to empty the detention reservoir 19.83/64.4** hours, (96 hours maximum unless prior approval has been obtained); (l) construction material, etc. principal spill way is 36" RCP; emergency spill way is earthen berm lined with soil cement

(m) approximate volume of material in dam (see previous sheet) cubic yards, (n) type of construction earth and soil cement

7.

Height Above Flow Line of Intake Structure	Area of Water Surface, Acres	**with orifice plate Storage Capacity, Acre Feet	Remarks and Critical Points
0	0	0	Flow line of intake structure - 5201
2.0	2.67	3.359	Elev 5203
5.0	2.97	11.813	Elev 5206
9.0	3.38	24.492	Elev 5210
11.0	3.60	31.465	@ Spillway - Elev 5212

8. Additional data or explanations 5 & 6 & 7 - this system consists of two interconnected ponds - the South pond data is shown on this sheet and North pond data is shown on attached first page.

9. Estimated costs: Detention dam and appurtenances . . . $ 869,400.00
Other constructed works . . . . . $ 181,940.00
Total cost $ 1,051,340.00

10. Estimated date to begin construction July 1995
Estimated date to complete construction May 1996

11. Dam will be constructed under supervision of City of Albuquerque

12. Signature of Applicant Steve Boberg

ACTION OF STATE ENGINEER

This application to construct a flood control dam is approved provided it is not exercised to the detriment of any others having prior, valid and existing rights to the use of waters of this stream system and further provided that

PLEASE SEE ATTACHED CONDITIONS OF APPROVAL.

Witness my hand and seal this 26 day of June, A.D., 19 95.

Thomas C. Turney, State Engineer

By: Kent Breese

Kent Breese
Water Rights Division

Instructions

This form shall be filed in triplicate and accompanied by maps, plans, specifications, etc.

Section 1 - Fill in all blanks

Section 2 - Class (a). — Dams located in rural or agricultural areas where failure may damage farm buildings, agricultural land, or township and country roads.

Class (b).— Dams located in predominantly rural or agricultural areas were failure may damage isolated homes, main highways or minor railroads or cause interruption of use or service of relatively important public utilities.

Class (c). — Dams located where failure may cause loss of life, serious damage to homes, industrial and commercial buildings, important public utilities, main highways, or railroads.

Section 3 - Fill in all blanks

Section 4 - Fill in either part a or b

Sections 5, 6, 7 - Fill in all blanks

Section 8 - Fill in if necessary

Section 9. 10 - Fill in all blanks

Section 11 - Construction must be under supervision of registered engineer, consulting engineer firm or government agency.

Section 12 - Signature

FILING FEE - $10.00

IMPORTANT - READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM

APPLICATION FOR PERMIT TO CONSTRUCT A FLOOD CONTROL DAM

Sheet 1 of 2

'95 JUN 2 PM 1 46

File No. May 5, 1995 Date of receipt 4629

ARMY CORPS OF ENGINEER OFFICE

1. Name of applicant City of Albuquerque
   Address P. O. Box 1293
   City and State Albuquerque, New Mexico Zip code 87103

2. Dam hazard classification (SCS criteria) Class C

3. Dam is to be located on: (a) Name of stream or watercourse Amole Del Norte Storm Diversion Facilities Tierra Bayita Drainage Facilities
   (b) Which is a tributary of Rio Grande

4. Location of the intake structure of the principal spillway conduit from detention storage: Bernalillo County. (a) ____ ¼ ____ ¼ ____ ¼ of Section ____, Township ____, Range ____, N.M.P.M. or (b) within 330 feet of X = 352,792.376 feet, Y = 1,482,085.203 feet, N.M.C.S., Central zone, within Town of Atrisco Grant. within City of Albuquerque

North Pond Data

5. Drainage area characteristics: (a) drainage area 510.1 acres; (b) 100-year, 6 hour precipitation 2.2 inches; (c) probable maximum precipitation (PMP), 6 hour storm 16.0 inches; (d) volume of run-off from the 100-year, 6 hour storm 72.4* acre-feet. (e) volume of run-off from the PMP, 6 hour storm 279.8* acre-feet. *Information is for the 100 yr, 24 hour and 1/2 PMP, 24 hr storms.

6. Properties of detention dam: (a) maximum height above foundation at downstream toe 9 feet; (b) length of crest 460 feet; (c) width of crest 12 feet; (d) maximum width at base 136.95 feet; (e) slope of upstream face 3H:1V; (f) slope of downstream face 3H:1V; (g) elevation at crest of dam 5226 feet; (h) elevation of emergency spillway crest 5223 feet; (i) elevation of flow line of the intake structure of the principal spillway conduit 5204.21 feet; (j) characteristics of emergency spillway, (1) location South Side of Pond, (2) width 18 feet, (3) maximum capacity 4715 cubic feet per second, (4) freeboard above maximum high water line 0.5 feet, (5) cross-sectional area at maximum flow 1023 square feet; (k) characteristics of principal spillway conduit, (1) size, type and numer of gates 1 - 30" RCP, (2) dimension 2.5 feet, (3) length 135.45 feet, (4) slope 0.0116 ft/ft, (5) Manning coefficient .013, (6) maximum discharge capacity 70 cubic feet per second, time to empty the detention reservoir 19.33 hours, (96 hours maximum unless prior approval has been obtained); (l) construction material, etc. principal spill way is RCP; emergency spill way is earthen berm lined with soil cement

(m) approximate volume of material in dam 52,821 cubic yards, (n) type of construction earth and soil cement (total for both North & South Ponds).

7.

Height Above Flow Line of Intake Structure	Area of Water Surface, Acres	Storage Capacity, Acre Feet	Remarks and Critical Points
0	0	0	Flow line of intake structure-5204.21
4.79	2.11	7.543	Elev 5209
10.79	2.65	21.805	Elev 5215
14.79	3.04	33.189	Elev 5219
18.79	3.46	46.197	@ Spill way - Elev 5223

8. Additional data or explanations This sheet supplies information for items 5, 6 and 7 for the North Pond. See Sheet 2 for additional information.

~~9. Estimated costs: Detention dam and appurtenances . . . $~~
Other constructed works . . . . . $
Total cost $

10. Estimated date to begin construction
    Estimated date to complete construction

11. Dam will be constructed under supervision of

~~12. Signature of Applicant~~

ACTION OF STATE ENGINEE

This application to construct a flood control dam is approved provided it is not exercised to the detriment of any others having prior, valid and existing rights to the use of waters of this stream system and further provided that

PLEASE SEE ATTACHED CONDITIONS OF APPROVAL.

Witness my hand and seal this 26 day of June, A.D., 19 95.

Thomas C. Turney, State Engineer

By: Kent W Breese

Kent Breese
Water Rights Division

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This form shall be filed in triplicate and accompanied by maps, plans, specifications, etc.

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Class (b).— Dams located in predominantly rural or agricultural areas were failure may damage isolated homes, main highways or minor railroads or cause interruption of use or service of relatively important public utilities.

Class (c). — Dams located where failure may cause loss of life, serious damage to homes, industrial and commercial buildings, important public utilities, main highways, or railroads.

Section 3 - Fill in all blanks

Section 4 - Fill in either part a or b

Sections 5, 6, 7 - Fill in all blanks

Section 8 - Fill in if necessary

Section 9, 10 - Fill in all blanks

Section 11 - Construction must be under supervision of registered engineer, consulting engineer firm or government agency.

Section 12 - Signature

FILING FEE - $10.00

CONDITIONS OF APPROVAL

FILE NO.: 4629
APPLICANT: City of Albuquerque

1. The qualifications of a professional engineer registered in New Mexico who will supervise construction must be submitted to and approved by the state engineer prior to undertaking construction.

2. The professional engineer supervising construction shall submit a report to the state engineer by the 10th day of each month. The report shall include a summary of test results.

3. Construction shall be in accordance with approved plans and specifications. Any modifications to the approved plans and specifications or design changes must be approved in writing by the state engineer prior to undertaking the modifications.

4. During construction of the dam, the state engineer will be given a minimum of 72 hours notice to enable State Engineer Office staff to observe the following items:

   a. completed foundation preparations for center and perimeter embankment fill;

   b. completion of outlet pipe installation for north and south basins prior to commencement of backfill;

   c. embankment fill placement at 50% completion for both north and south basins; and

   d. completion of detention basin construction.

5. Upon completion of construction, the professional engineer supervising construction shall submit to the state engineer:

Conditions of Approval
File No. 4629

a. a completion report which shall include descriptions of problems encountered and their solutions;

b. a summary of materials test data and construction photographs;

c. as-built drawings (if any changes were made from the original drawings); and

d. a certificate that the dam as constructed is safe for the intended use.

DATED: June 26, 1995

Thomas C. Turney
State Engineer

by: Kent Breese
Kent Breese
Water Rights Division

STATE ENGINEER OFFICE/INTERSTATE STREAM COMMISSION - SANTA FE

OFFICIAL RECEIPT NUMBER 6-02232 DATE 5-5-95 FILE NO. 4629

TOTAL RECEIVED: $ 1750.00 RECEIVED: seventeen hundred fifty & 00/100 DOLLARS CHECK NO 924502 CASH: ☐

FROM: City of Albuq BANK NAME: First National Bank in Albuq

RECEIVED BY: (Signature) PS (TITLE)

INSTRUCTIONS: Indicate the number of actions to the left of the appropriate type of filing. Complete the receipt information. **Original** to payor; **pink** copy to MSD; **yellow** copy to Water Rights - Santa Fe, and **goldenrod** copy for District file. If you make a mistake, void original and all copies and submit to MSD along with valid receipts and the weekly report.

A. Ground Water Rights Filing Fees (411840)

____	1. Declaration of Water Right	$ 1.00
____	2. Application to Appropriate; Domestic, Stock, Other Use	$ 5.00
____	3. Application for Test, Exploratory, or Observation Well	$ 5.00
____	4. Application to Change Location Domestic Well	$ 5.00
____	5. Application to Repair or Deepen	$ 5.00
____	6. Application to Dewater	$ 5.00
____	7. Application to Appropriate Irrig., Mun., Ind., or Com. Use	$25.00
____	8. Application to Combine Wells and/or Use	$25.00
____	9. Application for Supplemental Well	$25.00
____	10. Application to Change Location of Non-72-12-1 Well	$25.00
____	11. Application to Change Place	$25.00
____	12. Application to Change Location of Well and Place and/or Purpose of Use	$50.00
____	13. Application for Extension of Time (Specify: _____)	$25.00
____	14. Certificate and License (for each permit therein) (VAR)	$25.00
____	15. Application for Plan of Replacement	$25.00
____	16. Other (As per Art. 6-2 of Rules and Regulations) Specify: _____ _____	$25.00 (VAR)
____	17. Application to Change Point of Diversion and Place and/or Purpose of Use from Surface to Ground Water	$50.00

B. Surface Water Rights Filing Fees (411840)

____	1. Declaration of Water Right	$ 1.00
____	2. Declaration of Livestock Dam	$ 1.00
____	3. Application to Change Point of Diversion	$25.00
____	4. Application to Change Place and/or Purpose of Use	$50.00
____	5. Application to Change Point of Diversion and Place and/or Purpose of Use	$50.00
____	6. Notice of Intent to Appropriate	$25.00
____	7. Application to Appropriate	$25.00
____	8. Application for Extension of Time	$50.00
____	9. Certificate of Construction	$25.00
____	10. License to Appropriate	$25.00
____	11. Application to Enlarge of Amend	$25.00
____	12. Other (As per 72-2-6.J NMSA 1978) (Specify: _____)	(VAR)
____	13. Application to Change Point of Diversion and Place and/or Purpose of Use from Ground to Surface Water	$50.00

C. Miscellaneous Fees (411840)

____	1. Application to Construct Flood-Control Dam. Same as #6 below	
____	2. Application for Well Driller's License	$50.00
____	3. Application for Renewal of Well Driller's License	$20.00
____	4. Application to Amend Well Driller's License	$ 5.00
____	5. Issue of Certified Letter	$ 5.00
X	6. Review of Plans for Safety of Dams ($10.00 + $2.00/$1,000 of estimated construction cost)	(VAR)

D. Hearing Deposit (411890) $ _____

E. Reproduction of Documents (419740) 20¢/copy, limit 10 copies of each document. $ _____

F. Water Right Determination $ _____

G. Certification $ _____

H. Other (Specify - Not for Filing Fees) $ _____

COMMENTS: AMOLE Del Norte Detention Basin

TABLE OF CONTENTS

PROJECT DESCRIPTION

This project provides for the design and construction of two interconnected ponds, the related piping and swales draining to the ponds and the outfall works. The project is located in northwest Albuquerque at the northwest corner of Central Avenue and 98th Street as shown in Exhibit One. The ponds are Hazard Class C per SCS TR-60 criteria. Size classification is small.

These two ponds are the upstream end of a larger drainage system called the Amole Del Norte Storm Diversion Facilities, Tierra Bayita Drainage Facilities, Phase III[(1)] owned by the City of Albuquerque (City). The ultimate system will consist of the following:

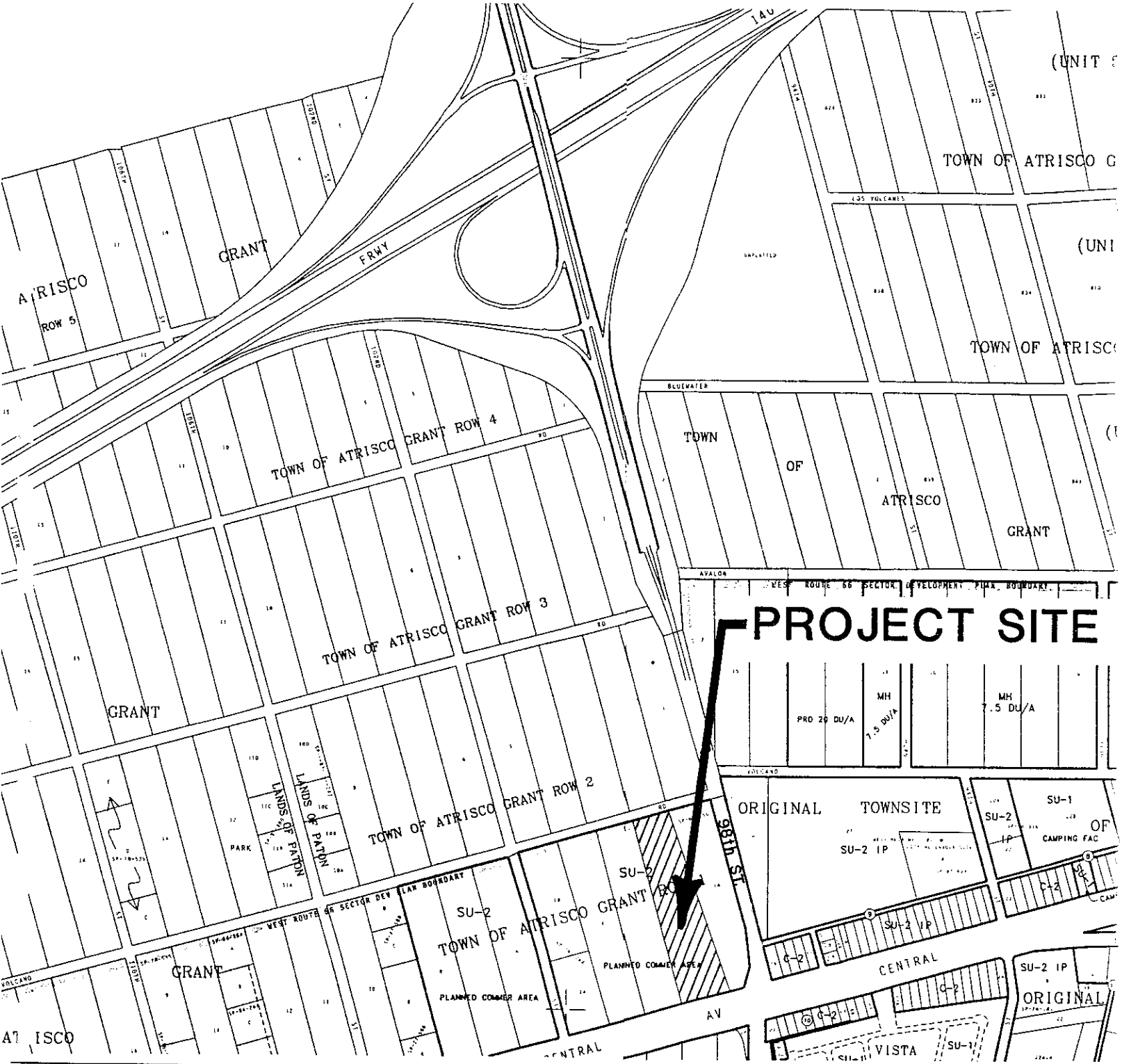
- The ponds constructed under this project, (Phase IIIC)
- A future storm drain line that will run east along Central Avenue from the South Pond to 90th Street where it will turn south on 90th Street to Bridge Boulevard, where is turns east along Bridge Blvd. (Phase IIID)
- At Bridge and Unser Blvd., the storm drain empties into an existing concrete channel which runs east parallel to Bridge (channel built under Phase IIIA).
- The channel empties into the existing North/South Coors Detention Pond at the southwest corner of Bridge and North/South Coors Connection.

The Phase IIIC ponds and outlet structure will tie temporarily into an existing 30 inch pipe under 98th Street. Flow during the interim will drain as it currently does, which is overland east along Central Avenue through a swale and culverts from the 30" pipe. An orifice plate will be installed on the outlet structure to reduce the pond outflow to the capacity of the existing downstream culverts. The future Phase IIID will provide a piped outlet and surface discharge will not be required for less than a 100 year storm or less. Upon construction of the Phase IIID, the orifice plate will be removed.

HYDROLOGY

The project is modeled for the 100 year storm which is required by the City and one half of the Probable Maximum Flood (PMF) as needed by the State Engineer's Office. Both existing conditions and ultimate development conditions were analyzed. Existing and developed basin maps are included in the map pockets.

Existing downstream structures are marginally sized for the 100 year storm and cannot carry a PMF. Currently, these structures are routinely flooded even during small storms. Future downstream improvements will not provide for a PMF. The one half PMF is therefore acceptable since the downstream area would be inundated during a full PMF.



K-9-Z

North

750 375 0

Scale: 1" = 750'

LOCATION MAP

mole Del Norte Storm Diversion
acilities Tierra Bayita Drainage Facilities

EXHIBIT 1

Significant drainage will be diverted along 98th Street and 102nd Street to the proposed ponds. These diversions will be sized for a 100 year storm. Therefore, greater flows will flow overland, typically out of the project. The hydrology model recognizes this overland flow. Specific adjustments made from the 100 year model to the half PMF model are listed below.

The developed half PMF analysis was modified at 102nd Street and Avalon Road which includes Basins 102 and 108.1. Under future conditions this flow will probably be collected in a storm drain and carried south on 102nd Street to the north pond. For our ultimate analysis it is assumed the storm drain will carry only the 100 year flow. Therefore the 100 year runoff was added to the capacity of a typical collector street and routed south to the pond site. The rest was assumed to flow overland and out of the study area.

The existing condition model is revised at the downstream end of Basin 108.1. One possible design option is to construct a ditch/berm to intercept the flow from 108.1 and carry it to the north pond. The ditch would have to be sized to carry the 100 year storm. A PMF or ½ PMF is assumed to overtop. For our analysis, flow in excess of the 100 year storm is routed out of the project.

The existing condition PMF analysis is modified at the intersection of Volcano and 98th Street including Basins 102 and 108. The structure to be built at this intersection is limited to the capacity of the 84" pipe. Flow in excess of the pipe capacity is assumed to drain out of the project.

Both the local storm and the general storm were considered for the half PMF analysis. The local storm gave the larger flow and so was used for this analysis.

The basins draining to the site are analyzed using the AHYMO computer model dated January 1994. Procedures used are as described in the City of Albuquerque Development Process Manual (DPM).

Tables showing undeveloped and developed contributing basins and their characteristics are shown below.

ULTIMATE DEVELOPMENT BASIN INFORMATION						
Basin	Area (Sq. Mi.)	Time of Concentration (hours)	Ultimate Land Treatment			
			A	B	C	D
			(percent)			
101	0.0260	0.20	0	100*	0	0
102	0.2810	0.30	15	30*	24	31
108.1	0.1713	0.20	0	17	13	70
108.2	0.1710	0.24	0	18	19	63
108.3	0.1478	0.26	0	21	22	57
108.4	0.1426	0.20	0	15	15	70
109	0.0720	0.21	0	5	13	82
109.1	0.0495	0.20	0	3	12	85**

* Undeveloped land with slopes steeper than 10%.
** Land treatments based on preliminary construction plans.

EXISTING BASIN INFORMATION						
Basin	Area (Sq. Mi.)	Time of Concentration (hours)	Existing Land Treatment			
			A	B	C	D
			(percent)			
101	0.0260	0.20	0	100*	0	0
102	0.2810	0.30	15	30*	24	31
108.1	0.1467	0.20	98	0	0	2
108.2	0.1631	0.20	98	0	0	2
108.3	0.1942	0.32	75	0	15	10
108.4	0.0644	0.20	55	0	30	15
109	0.1803	0.29	95	0	0	5

The models are based on an existing conditions model created by Resource Technology Inc. in a study for FEMA[2]. Developed basins are revised assuming construction of planned streets and developed land treatments. Land treatments are estimated based on existing zoning and Sector Development Plans[3] where available. They are applied as described in the DPM. DPM land treatment criteria is shown in the appendix.

Developed basins are delineated assuming the planned streets will be paved and act as the future drainage ways - possibly using surface drainage in the upstream portions and storm drains nearer the ponds. Albuquerque has generally been developed in this manner, and it is reasonable that this area will be the same. Exhibit 2 shows locations where future storm drain trunk lines will likely be required and are assumed for analysis purposes.

Developed basin routing is done in the AHYMO model using existing arroyo alignments with the cross section changed to a concrete channel using a ten foot bottom and 2:1 side slopes. Along 102nd Street a 72 inch diameter storm drain is assumed.

A bulking factor varying from 5 percent to 10 percent was used for ultimate development throughout the contributing area depending on the future land use planned in the basin. A bulking factor of 17 percent was used throughout the existing condition.

COLLECTION SYSTEM PROPOSED UNDER PHASE IIIC

An interim collection facility is planned for the intersection of Volcano and 98th Street to intercept existing Basins 102 and 109. Currently this flow crosses 98th Street in two 24 inch CMP's, or by overtopping 98th Street in larger storms. The CMP's will be plugged with construction of the flow collection facility.

The flow collection facility will be an interim measure until the surrounding land is developed and permanent systems are built in 102 Street. An 84 inch pipe will carry flow from the collection facility along Volcano to the south pond. The pipe can be extended up 98th Street or inlets added. This pipe will remain in the service after the flow collection facility is abandoned.

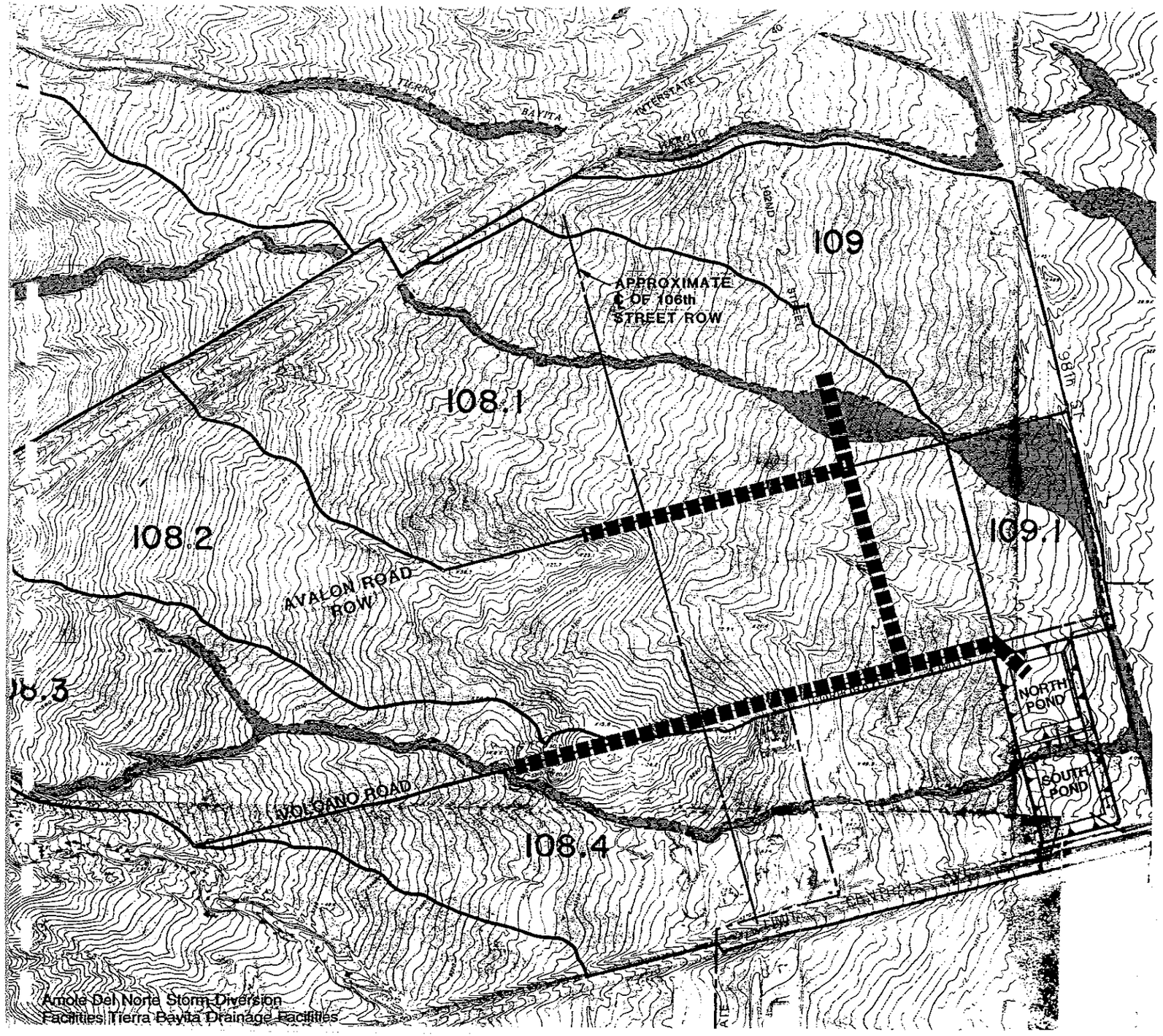
A truck stop is planned within Basin 109 along 98th Street between Bluewater Road and Avalon Road. The developer has expressed a desire to drain the Phase IIIC ponds. The land treatments in Basin 109 reflect this development which is almost entirely impervious.

Existing grades along 98th Street require that the 84 inch pipe drain to the south pond rather than the north pond. (The 100 year developed water surface in the north pond is at elevation 5223.23' which would backflow out the collection facility at elevation 5216'.)

If the project is phased and only the south pond is built, service to collection facility and the truck stop are still possible.

Flow will be diverted from the north side of Central to the south pond. Tentative design consists of rundown inlets and pipes to carry the flow into the pond. The City is considering closing the Frontage Road on the north side of Central and thereby permit routing this flow overland into the pond. Both methods are equivalent relative to the functioning of the pond.

The pipes paralleling Central Avenue will be stubbed out to the west. Future extensions are anticipated.



NORTH

SCALE: 1" 500'

LEGEND

- BASIN BOUNDARY (ULTIMATE)
- 109 — BASIN IDENTIFICATION
- FUTURE STORM DRAIN TRUNK LINES-ASSUMED FOR DESIGN (DESIGNED FOR Q100)

FUTURE STORM DRAIN LAYOUT

EXHIBIT 2

POND SYSTEM

The City required that runoff from 98th Street north of Volcano be drained to the project. As mentioned above, drainage from 98th Street severely limit the spillway elevation of a pond. The lower spillway of the south pond meets this requirement and is nearly a pit pond. The embankment necessary for the north pond provides maximum storage volume at this site. This volume permits the ultimate flow for a 100 year storm to be reduced from 1,353 cfs to approximately 292 cfs.

Two ponds versus one large pond were analyzed. One large pond had the advantage of not requiring a berm in the middle. However, the site has 25 feet of drop across it from the northwest corner to southeast corner requiring an extremely deep cut on the north side. Also, the necessity to drain runoff from 98th Street lowered the spillway elevation and severely restricted storage volume.

The South Pond embankment along Central will be a maximum of 6' higher than existing grades and will not be imposing when viewed from Central.

A two pond arrangement will detain flows draining from the north pond to the south pond through the 30 inch pipe.

Two ponds could also be built in phases if required by funding. Phasing is a possibility where only the south pond would be built now.

EXISTING CONDITIONS

Under existing conditions, runoff will enter the north pond from the west side and the north side. A diversion from Basin 108.1 to the north side of the north pond is assumed under the existing conditions hydrology model. This diversion is assumed to be to the existing 100 year storm.

North pond under existing conditions reaches elevation 5208.7' in the 100 year storm and elevation 5223.4' in the PMF analysis.

The south pond will have an orifice plate installed at the outlet until such time as the downstream pipe system is built. The plate will reduce the flow out of the pipe outlet to 13 cfs which is the capacity of the downstream conveyance system.

Peak water surface elevation in the south pond under 100 year flooding is 5212.0' and under modified PMF conditions is 5213.3'. The 100 year storm therefore utilizes the full volume of the south pond but does not over top the spillway. During the half PMF, 1.3' of water will flow over the spillway.

ULTIMATE DEVELOPMENT

In the north pond under ultimate 100 year design the water surface reaches elevation 5223.23'. Some water will overtop the center embankment at elevation 5223'.

Under half PMF conditions, the north pond water surface will reach 5225.50'. The top of the east embankment is 5226'. One of the rundowns entering the pond on the west side is at elevation 5224.5' so some local flooding will occur. But the land is sloping to the southeast and any water that floods here drain to the south pond.

The full development conditions include construction of the downstream piping system (Amole Phase IIID) which includes removal of the orifice plate in the south pond.

Under ultimate conditions with the 36" outlet, the south pond reaches elevation 5211.1' in the 100 year storm and elevation 5214.9' in the modified PMF analysis.

A 36 inch outlet pipe will be built in the south pond which will extend to 98th Street and Central. At this point an inlet will be built which will tie to an existing 30" pipe. When the future outfall system is built (Phase IIID) it will tie to either the inlet or the 36" outlet pipe.

REFERENCES

1. Amole Del Norte Storm Diversion Facilities, Tierra Bayita Drainage Facilities - Phase III --by Greiner for City of Albuquerque, Public Works Department
   Project Numbers: 4076.90 Phase IIIA Existing
   4076.91 Phase IIIB Under Construction
   4076.92 Phase IIIC This Project
   4076.XX Phase IIID Future Construction

2. FEMA Restudy Areas A (2) and B (3) by Resource Technology Inc. Draft Version - July 1993

3. West Route 66 Sector Development Plan City of Albuquerque January 1988

   Tower/Unser Sector Development Plan City of Albuquerque September 1989

   City of Albuquerque Zone Atlas 1993

APPENDIX 1

AHYMO Summaries

Existing Conditions	-	100 Year
	-	½ PMF
Ultimate Development	-	100 Year
	-	½ PMF

REVISED W/ NEXT PHASE

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =04/30/1998
INPUT FILE = e:\ahymo\ab100.dat USER NO.= GREINRNM.STE

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
START										TIME= .00
RAINFALL TYPE= 2										RAIN24= 2.700
*s DIVIDE HYD IS USED TO SIMULATE A BULKING FACTOR										
COMPUTE NM HYD	108.40	-	5	.14260	363.67	15.466	2.03361	1.500	3.985	PER IMP= 70.00
DIVIDE HYD	108.40	5	5	.14260	381.85	16.240	2.13528	1.500	4.184	
	.00	AND	16	.14260	18.18	.773	.10168	1.500	.199	
COMPUTE NM HYD	101.00	-	1	.02600	34.91	.977	.70476	1.500	2.098	PER IMP= .00
DIVIDE HYD	101.00	1	1	.02600	38.40	1.075	.77523	1.500	2.308	
	.00	AND	16	.02600	3.49	.098	.07048	1.500	.210	
ROUTE	101.80	1	2	.02600	36.46	1.075	.77528	1.550	2.191	
COMPUTE NM HYD	108.30	-	1	.14780	312.33	14.570	1.84830	1.550	3.302	PER IMP= 57.00
DIVIDE HYD	108.30	1	1	.14780	327.95	15.298	1.94071	1.550	3.467	
	.00	AND	16	.14780	15.62	.728	.09241	1.550	.165	
ADD HYD	108.39	1& 2	3	.17380	364.41	16.373	1.76636	1.550	3.276	
ROUTE	108.38	3	2	.17380	357.91	16.373	1.76637	1.550	3.218	
COMPUTE NM HYD	108.20	-	7	.17100	376.60	17.296	1.89651	1.500	3.441	PER IMP= 61.17
DIVIDE HYD	108.20	7	7	.17100	395.43	18.161	1.99133	1.500	3.613	
	.00	AND	16	.17100	18.83	.865	.09483	1.500	.172	
*S COMBINE HYD'S 108.38 AND 108.2										
ADD HYD	108.29	7& 2	7	.34480	752.47	34.534	1.87793	1.550	3.410	
COMPUTE NM HYD	102.00	-	2	.28100	370.96	17.592	1.17382	1.550	2.063	PER IMP= 31.00
DIVIDE HYD	102.00	2	2	.28100	389.50	18.471	1.23250	1.550	2.166	
	.00	AND	16	.28100	18.55	.880	.05869	1.550	.103	
ROUTE	102.80	2	3	.28100	391.90	18.471	1.23251	1.600	2.179	
COMPUTE NM HYD	108.10	-	4	.17130	431.18	18.153	1.98693	1.500	3.933	PER IMP= 67.00
DIVIDE HYD	108.10	4	4	.17130	452.74	19.060	2.08627	1.500	4.130	
	.00	AND	16	.17130	21.56	.908	.09935	1.500	.197	
ADD HYD	108.17	4& 3	2	.45230	753.68	37.531	1.55585	1.550	2.604	
ROUTE	108.18	2	8	.45230	743.28	37.531	1.55585	1.550	2.568	
ADD HYD	108.90	7& 8	9	.79710	1495.75	72.065	1.69518	1.550	2.932	
ROUTE RESERVOIR	502.00	9	10	.79710	308.18	72.060	1.69506	2.100	.604	AC-FT= 46.636
COMPUTE NM HYD	109.00	-	1	.07200	188.50	8.466	2.20466	1.500	4.091	PER IMP= 82.00
DIVIDE HYD	109.00	1	1	.07200	197.93	8.889	2.31489	1.500	4.295	
	.00	AND	16	.07200	9.43	.423	.11023	1.500	.205	
ROUTE	109.19	1	6	.07200	194.20	8.889	2.31490	1.500	4.214	
COMPUTE NM HYD	109.10	-	1	.04950	134.34	5.954	2.25532	1.500	4.241	PER IMP= 85.00
DIVIDE HYD	109.10	1	1	.04950	141.06	6.252	2.36808	1.500	4.453	
	.00	AND	16	.04950	6.72	.298	.11277	1.500	.212	
ADD HYD	109.39	6& 1	6	.12150	335.26	15.141	2.33656	1.500	4.311	
ADD HYD	109.49	6& 5	6	.26410	717.11	31.380	2.22788	1.500	4.243	
ADD HYD	109.59	6&10	6	1.06120	765.45	103.441	1.82766	1.500	1.127	
ROUTE RESERVOIR	501.00	6	10	1.06120	100.43	101.931	1.80099	2.800	.148	AC-FT= 31.562
FINISH										

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =05/17/1994
INPUT FILE = AB100.DAT ULTIMATE CONDITION USER NO.= B_ORTIZ_.S94

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
START										TIME= .00
*S BASINS NORTH OF INTERSTATE 40										
RAINFALL TYPE= 2										RAIN24= 2.700
COMPUTE NM HYD	108.40	-	5	.14260	354.21	15.109	1.98662	1.500	3.881	PER IMP= 70.00
DIVIDE HYD	108.40	5	5	.14260	371.92	15.864	2.08595	1.500	4.075	
	.00	AND	16	.14260	17.71	.755	.09933	1.500	.194	
COMPUTE NM HYD	101.00	-	1	.02600	34.91	.977	.70476	1.500	2.098	PER IMP= .00
DIVIDE HYD	101.00	1	1	.02600	38.40	1.075	.77523	1.500	2.308	
	.00	AND	16	.02600	3.49	.098	.07048	1.500	.210	
ROUTE	101.80	1	2	.02600	27.31	1.075	.77528	1.600	1.641	
COMPUTE NM HYD	108.30	-	1	.14780	299.18	14.026	1.77930	1.550	3.163	PER IMP= 57.00
DIVIDE HYD	108.30	1	1	.14780	314.14	14.727	1.86826	1.550	3.321	
	.00	AND	16	.14780	14.96	.701	.08896	1.550	.158	
ADD HYD	108.39	1& 2	3	.17380	338.48	15.802	1.70475	1.550	3.043	
*S HYD 108.39 PARTIAL INFLOW TO POND FROM WEST										
ROUTE	108.38	3	2	.17380	315.77	15.802	1.70475	1.600	2.839	
COMPUTE NM HYD	108.20	-	7	.17100	368.81	17.107	1.87579	1.500	3.370	PER IMP= 63.00
DIVIDE HYD	108.20	7	7	.17100	387.25	17.963	1.96958	1.500	3.538	
	.00	AND	16	.17100	18.44	.855	.09379	1.500	.168	
*S HYD 108.2 IS INFLOW TO NORTHWEST CORNER OF NORTH POND										
*S COMBINE HYD'S 108.38 AND 108.2 INFLOW TO NORTH POND										
ADD HYD	108.29	7& 2	7	.34480	682.86	33.764	1.83609	1.550	3.094	
COMPUTE NM HYD	102.00	-	2	.28100	412.07	19.156	1.27819	1.550	2.291	PER IMP= 31.00
DIVIDE HYD	102.00	2	2	.28100	432.67	20.114	1.34210	1.550	2.406	
	.00	AND	16	.28100	20.60	.958	.06391	1.550	.115	
ROUTE	102.80	2	3	.28100	404.29	20.114	1.34210	1.650	2.248	
COMPUTE NM HYD	108.10	-	4	.17130	419.38	17.675	1.93467	1.500	3.825	PER IMP= 66.67
DIVIDE HYD	108.10	4	4	.17130	440.35	18.559	2.03141	1.500	4.017	
	.00	AND	16	.17130	20.97	.884	.09673	1.500	.191	
ADD HYD	108.17	4& 3	2	.45230	703.32	38.673	1.60316	1.550	2.430	
ROUTE	108.18	2	8	.45230	702.57	38.673	1.60316	1.600	2.427	
ADD HYD	108.90	7& 8	9	.79710	1353.03	72.437	1.70392	1.550	2.652	
ROUTE RESERVOIR	502.00	9	10	.79710	292.08	72.432	1.70380	2.150	.573	AC-FT= 47.004
COMPUTE NM HYD	109.00	-	1	.07200	187.34	8.423	2.19344	1.500	4.066	PER IMP= 82.00
DIVIDE HYD	109.00	1	1	.07200	196.71	8.844	2.30311	1.500	4.269	
	.00	AND	16	.07200	9.37	.421	.10967	1.500	.203	
ROUTE	109.19	1	6	.07200	192.98	8.844	2.30312	1.500	4.188	
COMPUTE NM HYD	109.10	-	1	.04950	133.52	5.923	2.24363	1.500	4.215	PER IMP= 85.00
DIVIDE HYD	109.10	1	1	.04950	140.20	6.219	2.35580	1.500	4.425	
	.00	AND	16	.04950	6.68	.296	.11218	1.500	.211	
ADD HYD	109.39	6& 1	6	.12150	333.18	15.063	2.32458	1.500	4.285	
*S ADD HYD 109.39 TO HYD 108.4										
ADD HYD	109.49	6& 5	6	.26410	705.10	30.928	2.19573	1.500	4.172	
ADD HYD	109.59	6&10	6	1.06120	750.97	103.360	1.82623	1.500	1.106	
ROUTE RESERVOIR	501.00	6	10	1.06120	97.62	103.358	1.82620	2.950	.144	AC-FT= 28.366

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) 04/30/1998
INPUT FILE = e:\ahymo\ab100.dat USER NO.= GREINRNM.STE

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION	
START										TIME=	.00
RAINFALL TYPE= 2										RAIN24=	2.700
*s DIVIDE HYD IS USED TO SIMULATE A BULKING FACTOR											
COMPUTE NM HYD	108.40	-	5	.14260	363.67	15.466	2.03361	1.500	3.985	PER IMP=	70.00
DIVIDE HYD	108.40	5	5	.14260	381.85	16.240	2.13528	1.500	4.184		
	.00	AND	16	.14260	18.18	.773	.10168	1.500	.199		
COMPUTE NM HYD	101.00	-	1	.02600	34.91	.977	.70476	1.500	2.098	PER IMP=	.00
DIVIDE HYD	101.00	1	1	.02600	38.40	1.075	.77523	1.500	2.308		
	.00	AND	16	.02600	3.49	.098	.07048	1.500	.210		
ROUTE	101.80	1	2	.02600	36.46	1.075	.77528	1.550	2.191		
COMPUTE NM HYD	108.30	-	1	.14780	312.33	14.570	1.84830	1.550	3.302	PER IMP=	57.00
DIVIDE HYD	108.30	1	1	.14780	327.95	15.298	1.94071	1.550	3.467		
	.00	AND	16	.14780	15.62	.728	.09241	1.550	.165		
ADD HYD	108.39	1& 2	3	.17380	364.41	16.373	1.76636	1.550	3.276		
ROUTE	108.38	3	2	.17380	357.91	16.373	1.76637	1.550	3.218		
COMPUTE NM HYD	108.20	-	7	.17100	376.60	17.296	1.89651	1.500	3.441	PER IMP=	61.17
DIVIDE HYD	108.20	7	7	.17100	395.43	18.161	1.99133	1.500	3.613		
	.00	AND	16	.17100	18.83	.865	.09483	1.500	.172		
*S COMBINE HYD'S 108.38 AND 108.2											
ADD HYD	108.29	7& 2	7	.34480	752.47	34.534	1.87793	1.550	3.410		
COMPUTE NM HYD	102.00	-	2	.28100	370.96	17.592	1.17382	1.550	2.063	PER IMP=	31.00
DIVIDE HYD	102.00	2	2	.28100	389.50	18.471	1.23250	1.550	2.166		
	.00	AND	16	.28100	18.55	.880	.05869	1.550	.103		
ROUTE	102.80	2	3	.28100	391.90	18.471	1.23251	1.600	2.179		
COMPUTE NM HYD	108.10	-	4	.17130	431.18	18.153	1.98693	1.500	3.933	PER IMP=	67.00
DIVIDE HYD	108.10	4	4	.17130	452.74	19.060	2.08627	1.500	4.130		
	.00	AND	16	.17130	21.56	.908	.09935	1.500	.197		
ADD HYD	108.17	4& 3	2	.45230	753.68	37.531	1.55585	1.550	2.604		
ROUTE	108.18	2	8	.45230	743.28	37.531	1.55585	1.550	2.568		
ADD HYD	108.90	7& 8	9	.79710	1495.75	72.065	1.69518	1.550	2.932		
ROUTE RESERVOIR	502.00	9	10	.79710	308.18	72.060	1.69506	2.100	.604	AC-FT=	46.636
COMPUTE NM HYD	109.00	-	1	.07200	188.50	8.466	2.20466	1.500	4.091	PER IMP=	82.00
DIVIDE HYD	109.00	1	1	.07200	197.93	8.889	2.31489	1.500	4.295		
	.00	AND	16	.07200	9.43	.423	.11023	1.500	.205		
ROUTE	109.19	1	6	.07200	194.20	8.889	2.31490	1.500	4.214		
COMPUTE NM HYD	109.10	-	1	.04950	134.34	5.954	2.25532	1.500	4.241	PER IMP=	85.00
DIVIDE HYD	109.10	1	1	.04950	141.06	6.252	2.36808	1.500	4.453		
	.00	AND	16	.04950	6.72	.298	.11277	1.500	.212		
ADD HYD	109.39	6& 1	6	.12150	335.26	15.141	2.33656	1.500	4.311		
ADD HYD	109.49	6& 5	6	.26410	717.11	31.380	2.22788	1.500	4.243		
ADD HYD	109.59	6&10	6	1.06120	765.45	103.441	1.82766	1.500	1.127		
ROUTE RESERVOIR	501.00	6	10	1.06120	100.43	101.931	1.80099	2.800	.148	AC-FT=	31.562
FINISH											

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
FOLLOWING BASINS ARE DOWNSTREAM OF PONDS										
COMPUTE NM HYD	103.00	-	1	.11800	263.31	10.223	1.62438	1.500	3.487	PER IMP= 46.00
DIVIDE HYD	103.00	1	1	.11800	276.48	10.734	1.70559	1.500	3.661	
	.00	AND	16	.11800	13.17	.511	.08122	1.500	.174	
ROUTE	103.80	1	2	.11800	252.18	10.734	1.70560	1.550	3.339	
COMPUTE NM HYD	110.00	-	3	.01500	38.88	1.675	2.09333	1.500	4.050	PER IMP= 75.00
DIVIDE HYD	110.00	3	3	.01500	40.82	1.758	2.19798	1.500	4.253	
	.00	AND	16	.01500	1.94	.084	.10467	1.500	.203	
ADD HYD	110.90	2& 3	3	.13300	288.05	12.492	1.76113	1.550	3.384	
ROUTE	110.80	3	6	.13300	262.85	12.492	1.76113	1.600	3.088	
COMPUTE NM HYD	104.00	-	1	.22300	490.45	21.403	1.79958	1.500	3.436	PER IMP= 57.00
DIVIDE HYD	104.00	1	1	.22300	514.97	22.473	1.88956	1.500	3.608	
	.00	AND	16	.22300	24.52	1.070	.08998	1.500	.172	
ROUTE	104.80	1	2	.22300	514.07	22.473	1.88956	1.550	3.602	
COMPUTE NM HYD	106.00	-	5	.05100	126.98	5.404	1.98662	1.500	3.890	PER IMP= 70.00
DIVIDE HYD	106.00	5	5	.05100	133.33	5.674	2.08595	1.500	4.085	
	.00	AND	16	.05100	6.35	.270	.09933	1.500	.195	
ROUTE	106.80	5	4	.05100	132.06	5.674	2.08596	1.500	4.046	
ADD HYD	106.88	2& 4	1	.27400	638.33	28.147	1.92611	1.550	3.640	
COMPUTE NM HYD	111.00	-	2	.04800	120.77	5.129	2.00365	1.500	3.931	PER IMP= 70.00
DIVIDE HYD	111.00	2	2	.04800	126.80	5.386	2.10383	1.500	4.128	
	.00	AND	16	.04800	6.04	.256	.10018	1.500	.197	
ADD HYD	111.90	1& 2	3	.32200	761.08	33.533	1.95260	1.500	3.693	
ROUTE	111.80	3	5	.32200	733.69	33.533	1.95261	1.550	3.560	
ADD HYD	111.90	6& 5	2	.45500	965.93	46.025	1.89663	1.600	3.317	
COMPUTE NM HYD	112.00	-	1	.22540	468.86	23.882	1.98662	1.550	3.250	PER IMP= 70.00
DIVIDE HYD	112.00	1	1	.22540	492.30	25.076	2.08595	1.550	3.413	
	.00	AND	16	.22540	23.44	1.194	.09933	1.550	.163	
ADD HYD	112.90	1& 2	5	.68040	1456.33	71.101	1.95935	1.550	3.344	
ROUTE	112.80	5	8	.68040	1448.40	71.101	1.95935	1.600	3.326	
COMPUTE NM HYD	119.00	-	5	.10050	240.49	11.089	2.06877	1.500	3.739	PER IMP= 75.00
DIVIDE HYD	119.00	5	5	.10050	252.52	11.643	2.17221	1.500	3.926	
	.00	AND	16	.10050	12.02	.554	.10344	1.500	.187	
ROUTE	109.80	10	3	1.06120	97.62	103.357	1.82619	2.950	.144	
ROUTE	109.81	3	7	1.06120	97.62	103.357	1.82618	2.950	.144	
ADD HYD	119.90	7& 5	10	1.16170	282.79	115.000	1.85612	1.550	.380	
ROUTE	119.80	10	4	1.16170	287.54	115.000	1.85611	1.550	.387	
ADD HYD	112.91	4& 8	8	1.84210	1725.21	186.100	1.89424	1.550	1.463	
COMPUTE NM HYD	113.00	-	1	.21330	347.98	23.534	2.06877	1.700	2.549	PER IMP= 75.00
DIVIDE HYD	113.00	1	1	.21330	396.70	26.829	2.35840	1.700	2.906	
	.00	AND	16	.21330	48.72	3.295	.28963	1.700	.357	
ROUTE	113.80	1	2	.21330	398.20	26.829	2.35840	1.700	2.917	
COMPUTE NM HYD	117.00	-	1	.15700	297.68	16.777	2.00366	1.600	2.963	PER IMP= 70.00
DIVIDE HYD	117.00	1	1	.15700	348.29	19.629	2.34427	1.600	3.466	
	.00	AND	16	.15700	50.61	2.852	.34062	1.600	.504	
DIVIDE HYD	117.40	1	4	.07693	170.66	9.618	2.34427	1.600	3.466	
	117.60	AND	6	.08007	177.63	10.011	2.34427	1.600	3.466	
COMPUTE NM HYD	116.00	-	1	.04100	97.00	3.992	1.82580	1.500	3.696	PER IMP= 60.00
DIVIDE HYD	116.00	1	1	.04100	101.85	4.192	1.91709	1.500	3.881	
	.00	AND	16	.04100	4.85	.200	.09129	1.500	.185	

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
ROUTE RESERVOIR	116.80	1	5	.04100	30.71	1.900	.86894	1.950	1.170	AC-FT= 2.813
ROUTE	116.88	5	3	.04100	12.79	1.891	.86491	2.150	.487	
COMPUTE NM HYD	121.20	-	1	.08100	165.35	8.656	2.00365	1.550	3.190	PER IMP= 70.00
DIVIDE HYD	121.20	1	1	.08100	173.62	9.089	2.10383	1.550	3.349	
	.00	AND	16	.08100	8.27	.433	.10018	1.550	.159	
ADD HYD	121.29	1& 3	5	.12200	173.72	10.980	1.68747	1.550	2.225	
ROUTE	112.88	8	3	1.84210	1728.00	186.100	1.89424	1.600	1.466	
ADD HYD	117.49	3& 4	7	1.91903	1898.66	195.718	1.91228	1.600	1.546	
ADD HYD	117.59	5& 7	7	2.04103	2068.25	206.698	1.89884	1.600	1.583	
COMPUTE NM HYD	121.30	-	11	.03930	99.77	4.200	2.00365	1.500	3.967	PER IMP= 70.00
DIVIDE HYD	121.30	11	11	.03930	104.76	4.410	2.10383	1.500	4.165	
	.00	AND	16	.03930	4.99	.210	.10018	1.500	.198	
*S TOTAL FLOW AT 86TH AND BRIDGE IN SD										
ADD HYD	121.39	11& 7	5	2.08033	2138.56	211.108	1.90271	1.600	1.606	
*S ROUTE HYD 121.39 TO 121.38 - 84" SD TO 90"SD										
ROUTE	121.38	5	4	2.08033	2125.95	211.105	1.90269	1.600	1.597	
*S ROUTE HYD 121.38 TO 121.48 - 90"SD TO STA 44+46										
ROUTE	121.48	4	3	2.08033	2078.97	211.102	1.90266	1.650	1.561	
DIVIDE HYD	117.60	6	6	.02002	44.41	2.503	2.34425	1.600	3.466	
	117.70	AND	7	.06005	133.22	7.508	2.34425	1.600	3.466	
ADD HYD	117.69	3& 6	6	2.10035	2120.96	213.604	1.90686	1.650	1.578	
ROUTE	117.68	6	5	2.10035	2134.33	213.603	1.90685	1.650	1.588	
COMPUTE NM HYD	120.00	-	12	.34100	618.14	34.636	1.90447	1.600	2.832	PER IMP= 65.00
DIVIDE HYD	120.00	12	12	.34100	649.05	36.368	1.99970	1.600	2.974	
	.00	AND	16	.34100	30.91	1.732	.09522	1.600	.142	
ADD HYD	120.90	12& 5	12	2.44135	2750.46	249.971	1.91982	1.650	1.760	
ADD HYD	113.90	2& 7	13	.27335	518.81	34.337	2.35529	1.650	2.966	
*S BEGINNING OF MIREHAVEN ARROYO										
STORE HYD	113.10	-	11	.67890	248.30	73.761	2.03715	1.600	.571	
COMPUTE NM HYD	113.20	-	2	.00580	15.89	.698	2.25532	1.500	4.282	PER IMP= 85.00
DIVIDE HYD	113.20	2	2	.00580	16.69	.733	2.36803	1.500	4.496	
	.00	AND	16	.00580	.79	.035	.11276	1.500	.214	
ADD HYD	113.29	2&11	3	.68470	259.34	74.493	2.03995	1.600	.592	
ROUTE	113.18	3	4	.68470	255.45	74.494	2.03996	1.600	.583	
ADD HYD	113.29	4&13	13	.95805	772.43	108.831	2.12993	1.650	1.260	
ROUTE	113.38	13	10	.95805	754.15	108.831	2.12993	1.700	1.230	
ADD HYD	117.78	10&12	10	3.39940	3481.06	358.802	1.97904	1.650	1.600	
ROUTE	117.68	10	2	3.39940	3489.89	358.798	1.97902	1.650	1.604	
COMPUTE NM HYD	120.10	-	1	.08110	151.76	7.835	1.81149	1.550	2.924	PER IMP= 61.82
DIVIDE HYD	120.10	1	1	.08110	159.35	8.227	1.90206	1.550	3.070	
	.00	AND	16	.08110	7.59	.392	.09057	1.550	.146	
ADD HYD	117.89	1& 2	5	3.48050	3625.55	367.025	1.97722	1.650	1.628	
COMPUTE NM HYD	118.20	-	1	.12400	296.36	12.287	1.85797	1.500	3.734	PER IMP= 62.00
DIVIDE HYD	118.20	1	1	.12400	311.18	12.902	1.95086	1.500	3.921	
	.00	AND	16	.12400	14.82	.614	.09290	1.500	.187	
ADD HYD	118.29	5& 1	6	3.60450	3795.89	379.927	1.97632	1.650	1.645	
ROUTE	118.28	6	2	3.60450	3809.36	379.924	1.97630	1.650	1.651	
COMPUTE NM HYD	121.10	-	1	.03990	99.35	4.228	1.98662	1.500	3.891	PER IMP= 70.00
DIVIDE HYD	121.10	1	1	.03990	104.32	4.439	2.08595	1.500	4.085	
	.00	AND	16	.03990	4.97	.211	.09933	1.500	.195	
ADD HYD	121.19	1& 2	9	3.64440	3866.05	384.363	1.97750	1.650	1.658	
COMPUTE NM HYD	114.10	-	2	.06600	168.21	7.270	2.06529	1.500	3.982	PER IMP= 75.00

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
DIVIDE HYD	114.10	2	2	.06600	176.62	7.633	2.16855	1.500	4.181	
	.00	AND	16	.06600	8.41	.363	.10326	1.500	.199	
ROUTE RESERVOIR	114.88	2	3	.06600	.20	.433	.12306	24.200	.005	AC-FT= 7.292
ROUTE	114.89	3	2	.06600	.20	.431	.12247	24.350	.005	
COMPUTE NM HYD	114.00	-	1	.10900	278.12	12.026	2.06877	1.500	3.987	PER IMP= 75.00
DIVIDE HYD	114.00	1	1	.10900	292.03	12.628	2.17221	1.500	4.186	
	.00	AND	16	.10900	13.91	.601	.10344	1.500	.199	
ADD HYD	114.90	1& 2	14	.17500	292.05	13.059	1.39916	1.500	2.608	
COMPUTE NM HYD	114.20	-	1	.14300	356.21	15.778	2.06877	1.500	3.892	PER IMP= 75.00
DIVIDE HYD	114.20	1	1	.14300	374.02	16.567	2.17221	1.500	4.087	
	.00	AND	16	.14300	17.81	.789	.10344	1.500	.195	
ROUTE RESERVOIR	114.28	1	7	.14300	216.31	12.946	1.69743	1.650	2.364	AC-FT= 5.645
COMPUTE NM HYD	114.30	-	1	.17300	430.55	19.088	2.06877	1.500	3.889	PER IMP= 75.00
DIVIDE HYD	114.30	1	1	.17300	452.08	20.042	2.17221	1.500	4.083	
	.00	AND	16	.17300	21.53	.954	.10344	1.500	.194	
ROUTE	114.38	1	2	.17300	435.61	20.042	2.17221	1.550	3.934	
COMPUTE NM HYD	114.40	-	1	.12900	277.14	13.668	1.98662	1.550	3.357	PER IMP= 70.00
DIVIDE HYD	114.40	1	1	.12900	291.00	14.351	2.08595	1.550	3.525	
	.00	AND	16	.12900	13.86	.683	.09933	1.550	.168	
ROUTE RESERVOIR	114.48	1	3	.12900	2.30	2.719	.39519	8.150	.028	AC-FT= 11.812
ADD HYD	114.49	2& 3	5	.30200	435.72	22.761	1.41315	1.550	2.254	
ADD HYD	114.58	7& 5	7	.44500	581.38	35.707	1.50450	1.600	2.041	
COMPUTE NM HYD	114.50	-	1	.04700	79.79	3.154	1.25811	1.500	2.653	PER IMP= 37.50
DIVIDE HYD	114.50	1	1	.04700	83.78	3.311	1.32101	1.500	2.785	
	.00	AND	16	.04700	3.99	.158	.06291	1.500	.133	
ADD HYD	114.59	1& 7	5	.49200	650.88	39.018	1.48698	1.550	2.067	
ROUTE RESERVOIR	114.68	5	6	.49200	638.37	32.360	1.23325	1.700	2.027	AC FT= 9.772
ADD HYD	114.81	6&14	5	.66700	769.81	45.419	1.27678	1.700	1.803	
ROUTE RESERVOIR	114.87	5	6	.66700	693.13	45.381	1.27570	1.700	1.624	AC-FT= 6.556
ROUTE	114.86	6	2	.66700	531.77	45.375	1.27555	1.800	1.246	
COMPUTE NM HYD	118.10	-	1	.14400	369.72	16.108	2.09746	1.500	4.012	PER IMP= 77.00
DIVIDE HYD	118.10	1	1	.14400	388.21	16.914	2.20233	1.500	4.212	
	.00	AND	16	.14400	18.49	.805	.10487	1.500	.201	
ADD HYD	118.19	1& 2	5	.81100	665.97	62.289	1.44010	1.800	1.283	
DIVIDE HYD	118.16	5	11	.63845	248.00	49.037	1.44010	1.450	.607	
	118.17	AND	12	.17255	417.97	13.253	1.44010	1.800	3.785	
*S THE FOLLOWING BEGINS THE STORM SEWER IN NEW COORS										
ROUTE	118.81	11	13	.63845	255.42	49.035	1.44006	1.450	.625	
ROUTE	118.82	13	11	.63845	250.26	49.028	1.43986	1.500	.612	
COMPUTE NM HYD	118.30	-	1	.04900	114.48	4.728	1.80914	1.500	3.650	PER IMP= 60.00
DIVIDE HYD	118.30	1	1	.04900	120.20	4.964	1.89959	1.500	3.833	
	.00	AND	16	.04900	5.72	.236	.09046	1.500	.183	
ADD HYD	118.39	1&12	5	.22155	457.82	18.217	1.54173	1.800	3.229	
DIVIDE HYD	118.61	5	15	.08623	81.00	7.090	1.54173	1.450	1.468	
	118.62	AND	14	.13532	376.82	11.127	1.54173	1.800	4.351	
ADD HYD	118.59	11&15	13	.72468	331.26	56.118	1.45198	1.500	.714	
ADD HYD	121.99	9&13	5	4.36908	4194.75	440.481	1.89034	1.650	1.500	
COMPUTE NM HYD	401.00	-	1	.10500	232.16	9.230	1.64821	1.500	3.455	PER IMP= 50.00
DIVIDE HYD	401.00	1	1	.10500	253.05	10.061	1.79654	1.500	3.766	
	.00	AND	16	.10500	20.89	.831	.14834	1.500	.311	

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
ADD HYD	401.90	1& 5	6	4.47408	4335.06	450.542	1.88813	1.650	1.514	
*S 401.9 IS THE TOTAL INFLOW HYD TO THE AMOLE DETENTION BASIN										
ROUTE RESERVOIR	401.80	6	5	4.47408	4405.50	446.160	1.86977	1.750	1.539	AC-FT= 75.157
FINISH										

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =06/03/1994
INPUT FILE = ABEX.DAT EXISTING UPSTREAM CONDITIONS USER NO.= B_ORTIZ_.S94

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION	
*S RAINFALL - 100 YR.											
RAINFALL TYPE= 2										RAIN24=	2.700
*S BASINS DRAINING TO NORTH POND											
COMPUTE NM HYD	108.20	-	7	.16310	157.17	4.424	.50855	1.500	1.506	PER IMP=	2.00
DIVIDE HYD	108.20	7	7	.16310	183.89	5.176	.59501	1.500	1.762		
	.00	AND	16	.16310	26.72	.752	.08645	1.500	.256		
COMPUTE NM HYD	108.10	-	4	.14670	140.17	3.979	.50855	1.500	1.493	PER IMP=	2.00
DIVIDE HYD	108.10	4	4	.14670	163.99	4.655	.59501	1.500	1.747		
	.00	AND	16	.14670	23.83	.676	.08645	1.500	.254		
ADD HYD	108.17	4& 7	5	.30980	347.89	9.831	.59501	1.500	1.755		
ROUTE RESERVOIR	502.00	5	10	.30980	39.52	9.831	.59500	1.950	.199	AC-FT=	6.951
*S BASINS DRAINING TO SOUTH POND											
COMPUTE NM HYD	102.00	-	2	.28100	198.25	7.022	.46854	1.600	1.102	PER IMP=	.00
DIVIDE HYD	102.00	2	2	.28100	231.95	8.216	.54820	1.600	1.290		
	.00	AND	16	.28100	33.70	1.194	.07965	1.600	.187		
ROUTE	102.80	2	3	.28100	153.44	8.216	.54820	1.750	.853		
COMPUTE NM HYD	109.00	-	4	.18030	139.00	5.467	.56857	1.550	1.205	PER IMP=	5.00
DIVIDE HYD	109.00	4	4	.18030	161.24	6.342	.65954	1.550	1.397		
	.00	AND	16	.18030	22.24	.875	.09097	1.550	.193		
ADD HYD	109.19	3& 4	4	.46130	281.96	14.558	.59172	1.650	.955		
ROUTE	109.18	2	3	.28100	231.28	8.216	.54820	1.600	1.286		
COMPUTE NM HYD	101.00	-	1	.02600	34.91	.977	.70476	1.500	2.098	PER IMP=	.00
DIVIDE HYD	101.00	1	1	.02600	40.84	1.143	.82457	1.500	2.454		
	.00	AND	16	.02600	5.93	.166	.11981	1.500	.357		
ROUTE	101.80	1	2	.02600	24.11	1.143	.82461	1.650	1.449		
COMPUTE NM HYD	108.30	-	1	.19420	174.36	7.570	.73088	1.600	1.403	PER IMP=	10.00
DIVIDE HYD	108.30	1	1	.19420	202.26	8.781	.84781	1.600	1.627		
	.00	AND	16	.19420	27.90	1.211	.11694	1.600	.224		
ADD HYD	108.39	1& 2	5	.22020	225.16	9.925	.84507	1.600	1.598		
COMPUTE NM HYD	108.40	-	1	.06439	91.99	3.099	.90230	1.500	2.232	PER IMP=	15.00
DIVIDE HYD	108.40	1	1	.06439	106.71	3.594	1.04666	1.500	2.589		
	.00	AND	16	.06439	14.72	.496	.14437	1.500	.357		
ADD HYD	108.49	1& 5	5	.28459	313.35	13.519	.89068	1.550	1.720		
ADD HYD	108.59	5& 3	5	.56559	537.96	21.735	.72053	1.600	1.486		
ADD HYD	108.59	5&10	6	.87539	568.02	31.566	.67610	1.600	1.014		
ROUTE RESERVOIR	501.00	6	10	.87539	75.09	31.566	.67610	2.400	.134	AC-FT=	16.978
ROUTE RESERVOIR	501.00	6	10	.87539	11.80	31.571	.67621	5.250	.021	AC-FT=	25.695
ROUTE RESERVOIR	501.00	6	10	.87539	23.29	31.469	.67404	4.050	.042	AC-FT=	22.887
FINISH											

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =06/03/1994
INPUT FILE = ABEX.DAT EXISTING UPSTREAM CONDITIONS USER NO.= B_ORTIZ_.S94

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
*S RAINFALL - PMF										
RAINFALL TYPE= 3										RAIN6= 16.000
*S BASINS DRAINING TO NORTH POND										
COMPUTE NM HYD	108.20	-	7	.16310	3138.34	92.512	10.63523	2.267	30.065	PER IMP= 2.00
DIVIDE HYD	108.20	7	7	.16310	3671.86	108.239	12.44322	2.267	35.176	
	.00	AND	16	.16310	533.52	15.727	1.80799	2.267	5.111	
DIVIDE HYD	108.29	7	7	.08155	1835.93	54.120	12.44322	2.267	35.176	
	108.99	AND	20	.08155	1835.93	54.120	12.44322	2.267	35.176	
COMPUTE NM HYD	108.10	-	4	.14670	2823.07	83.210	10.63523	2.267	30.068	PER IMP= 2.00
DIVIDE HYD	108.10	4	4	.14670	3302.99	97.356	12.44321	2.267	35.180	
	.00	AND	16	.14670	479.92	14.146	1.80799	2.267	5.112	
DIVIDE HYD	108.19	4	4	.03141	164.00	20.844	12.44322	2.100	8.158	
	108.99	AND	20	.11529	3138.99	76.511	12.44322	2.267	42.542	
ADD HYD	108.17	4& 7	5	.11296	1999.93	74.964	12.44322	2.267	27.664	
ROUTE RESERVOIR	502.00	5	10	.11296	430.05	74.959	12.44231	2.700	5.949	AC-FT= 47.557
*S BASINS DRAINING TO SOUTH POND										
COMPUTE NM HYD	102.00	-	2	.28100	4284.81	157.827	10.53113	2.333	23.826	PER IMP= DIVIDE
HYD	102.00	2	2	.28100	5013.23	184.657	12.32141	2.333	27.876	
	.00	AND	16	.28100	728.42	26.831	1.79029	2.333	4.050	
ROUTE	102.80	2	3	.28100	4063.84	184.656	12.32134	2.400	22.597	
COMPUTE NM HYD	109.00	-	4	.18030	2836.39	103.770	10.79139	2.300	24.580	PER IMP= 5.00
DIVIDE HYD	109.00	4	4	.18030	3290.21	120.373	12.51800	2.300	28.513	
	.00	AND	16	.18030	453.82	16.603	1.72662	2.300	3.933	
ADD HYD	109.19	3& 4	4	.46130	6808.39	305.027	12.39812	2.367	23.061	
DIVIDE HYD	109.29	4	2	.10241	436.00	67.719	12.39812	2.133	6.652	
	109.99	AND	20	.35889	6372.39	237.308	12.39812	2.367	27.744	
ROUTE	109.18	2	3	.10241	436.00	67.719	12.39812	2.567	6.652	
COMPUTE NM HYD	101.00	-	1	.02600	512.47	15.530	11.19942	2.267	30.798	PER IMP= .00
DIVIDE HYD	101.00	1	1	.02600	599.59	18.170	13.10332	2.267	36.033	
	.00	AND	16	.02600	87.12	2.640	1.90390	2.267	5.236	
ROUTE	101.80	1	2	.02600	332.27	18.167	13.10155	2.400	19.968	
COMPUTE NM HYD	108.30	-	1	.19420	2938.33	116.465	11.24470	2.333	23.641	PER IMP= 10.00
DIVIDE HYD	108.30	1	1	.19420	3408.47	135.100	13.04385	2.333	27.424	
	.00	AND	16	.19420	470.13	18.634	1.79915	2.333	3.783	
ADD HYD	108.39	1& 2	5	.22020	3725.09	153.267	13.05067	2.333	26.433	
COMPUTE NM HYD	108.40	-	1	.06439	1275.42	40.200	11.70603	2.267	30.949	PER IMP= 15.00
DIVIDE HYD	108.40	1	1	.06439	1479.48	46.632	13.57900	2.267	35.901	
	.00	AND	16	.06439	204.07	6.432	1.87297	2.267	4.952	
ADD HYD	108.49	1& 5	5	.28459	4868.94	199.899	13.17021	2.300	26.732	
DIVIDE HYD	109.39	5	5	.14230	2434.47	99.950	13.17021	2.300	26.732	
	109.49	AND	20	.14230	2434.47	99.950	13.17021	2.300	26.732	
ADD HYD	108.59	5& 3	5	.24471	2870.02	167.669	12.84708	2.300	18.326	
ADD HYD	108.59	5&10	6	.35767	2945.68	242.627	12.71924	2.300	12.868	
ROUTE RESERVOIR	501.00	6	10	.35767	2682.13	242.612	12.71843	2.400	11.717	AC-FT= 37.979
ROUTE RESERVOIR	501.00	6	10	.35767	1711.79	246.723	12.93396	2.567	7.478	AC-FT= 36.326
ROUTE RESERVOIR	501.00	6	10	.35767	2689.36	224.176	11.75198	2.400	11.749	AC-FT= 38.152
FINISH										

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =05/17/1994
INPUT FILE = AB100.DAT ULTIMATE CONDITION USER NO.= B_ORTIZ_.S94

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1 NOTATION
START										TIME= .00
*S BASINS NORTH OF INTERSTATE 40										
RAINFALL TYPE= 2										RAIN24= 2.700
COMPUTE NM HYD	108.40	-	5	.14260	354.21	15.109	1.98662	1.500	3.881	PER IMP= 70.00
DIVIDE HYD	108.40	5	5	.14260	371.92	15.864	2.08595	1.500	4.075	
	.00	AND	16	.14260	17.71	.755	.09933	1.500	.194	
COMPUTE NM HYD	101.00	-	1	.02600	34.91	.977	.70476	1.500	2.098	PER IMP= .00
DIVIDE HYD	101.00	1	1	.02600	38.40	1.075	.77523	1.500	2.308	
	.00	AND	16	.02600	3.49	.098	.07048	1.500	.210	
ROUTE	101.80	1	2	.02600	27.31	1.075	.77528	1.600	1.641	
COMPUTE NM HYD	108.30	-	1	.14780	299.18	14.026	1.77930	1.550	3.163	PER IMP= 57.00
DIVIDE HYD	108.30	1	1	.14780	314.14	14.727	1.86826	1.550	3.321	
	.00	AND	16	.14780	14.96	.701	.08896	1.550	.158	
ADD HYD	108.39	1& 2	3	.17380	338.48	15.802	1.70475	1.550	3.043	
*S HYD 108.39 PARTIAL INFLOW TO POND FROM WEST										
ROUTE	108.38	3	2	.17380	315.77	15.802	1.70475	1.600	2.839	
COMPUTE NM HYD	108.20	-	7	.17100	368.81	17.107	1.87579	1.500	3.370	PER IMP= 63.00
DIVIDE HYD	108.20	7	7	.17100	387.25	17.963	1.96958	1.500	3.538	
	.00	AND	16	.17100	18.44	.855	.09379	1.500	.168	
*S HYD 108.2 IS INFLOW TO NORTHWEST CORNER OF NORTH POND										
*S COMBINE HYD'S 108.38 AND 108.2 INFLOW TO NORTH POND										
ADD HYD	108.29	7& 2	7	.34480	682.86	33.764	1.83609	1.550	3.094	
COMPUTE NM HYD	102.00	-	2	.28100	412.07	19.156	1.27819	1.550	2.291	PER IMP= 31.00
DIVIDE HYD	102.00	2	2	.28100	432.67	20.114	1.34210	1.550	2.406	
	.00	AND	16	.28100	20.60	.958	.06391	1.550	.115	
ROUTE	102.80	2	3	.28100	404.29	20.114	1.34210	1.650	2.248	
COMPUTE NM HYD	108.10	-	4	.17130	419.38	17.675	1.93467	1.500	3.825	PER IMP= 66.67
DIVIDE HYD	108.10	4	4	.17130	440.35	18.559	2.03141	1.500	4.017	
	.00	AND	16	.17130	20.97	.884	.09673	1.500	.191	
ADD HYD	108.17	4& 3	2	.45230	703.32	38.673	1.60316	1.550	2.430	
ROUTE	108.18	2	8	.45230	702.57	38.673	1.60316	1.600	2.427	
ADD HYD	108.90	7& 8	9	.79710	1353.03	72.437	1.70392	1.550	2.652	
ROUTE RESERVOIR	502.00	9	10	.79710	292.08	72.432	1.70380	2.150	.573	AC-FT= 47.004
COMPUTE NM HYD	109.00	-	1	.07200	187.34	8.423	2.19344	1.500	4.066	PER IMP= 82.00
DIVIDE HYD	109.00	1	1	.07200	196.71	8.844	2.30311	1.500	4.269	
	.00	AND	16	.07200	9.37	.421	.10967	1.500	.203	
ROUTE	109.19	1	6	.07200	192.98	8.844	2.30312	1.500	4.188	
COMPUTE NM HYD	109.10	-	1	.04950	133.52	5.923	2.24363	1.500	4.215	PER IMP= 85.00
DIVIDE HYD	109.10	1	1	.04950	140.20	6.219	2.35580	1.500	4.425	
	.00	AND	16	.04950	6.68	.296	.11218	1.500	.211	
ADD HYD	109.39	6& 1	6	.12150	333.18	15.063	2.32458	1.500	4.285	
*S ADD HYD 109.39 TO HYD 108.4										
ADD HYD	109.49	6& 5	6	.26410	705.10	30.928	2.19573	1.500	4.172	
ADD HYD	109.59	6&10	6	1.06120	750.97	103.360	1.82623	1.500	1.106	
ROUTE RESERVOIR	501.00	6	10	1.06120	97.62	103.358	1.82620	2.950	.144	AC-FT= 28.366

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
FOLLOWING BASINS ARE DOWNSTREAM OF PONDS										
COMPUTE NM HYD	103.00	-	1	.11800	263.31	10.223	1.62438	1.500	3.487	PER IMP= 46.00
DIVIDE HYD	103.00	1	1	.11800	276.48	10.734	1.70559	1.500	3.661	
	.00	AND	16	.11800	13.17	.511	.08122	1.500	.174	
ROUTE	103.80	1	2	.11800	252.18	10.734	1.70560	1.550	3.339	
COMPUTE NM HYD	110.00	-	3	.01500	38.88	1.675	2.09333	1.500	4.050	PER IMP= 75.00
DIVIDE HYD	110.00	3	3	.01500	40.82	1.758	2.19798	1.500	4.253	
	.00	AND	16	.01500	1.94	.084	.10467	1.500	.203	
ADD HYD	110.90	2& 3	3	.13300	288.05	12.492	1.76113	1.550	3.384	
ROUTE	110.80	3	6	.13300	262.85	12.492	1.76113	1.600	3.088	
COMPUTE NM HYD	104.00	-	1	.22300	490.45	21.403	1.79958	1.500	3.436	PER IMP= 57.00
DIVIDE HYD	104.00	1	1	.22300	514.97	22.473	1.88956	1.500	3.608	
	.00	AND	16	.22300	24.52	1.070	.08998	1.500	.172	
ROUTE	104.80	1	2	.22300	514.07	22.473	1.88956	1.550	3.602	
COMPUTE NM HYD	106.00	-	5	.05100	126.98	5.404	1.98662	1.500	3.890	PER IMP= 70.00
DIVIDE HYD	106.00	5	5	.05100	133.33	5.674	2.08595	1.500	4.085	
	.00	AND	16	.05100	6.35	.270	.09933	1.500	.195	
ROUTE	106.80	5	4	.05100	132.06	5.674	2.08596	1.500	4.046	
ADD HYD	106.88	2& 4	1	.27400	638.33	28.147	1.92611	1.550	3.640	
COMPUTE NM HYD	111.00	-	2	.04800	120.77	5.129	2.00365	1.500	3.931	PER IMP= 70.00
DIVIDE HYD	111.00	2	2	.04800	126.80	5.386	2.10383	1.500	4.128	
	.00	AND	16	.04800	6.04	.256	.10018	1.500	.197	
ADD HYD	111.90	1& 2	3	.32200	761.08	33.533	1.95260	1.500	3.693	
ROUTE	111.80	3	5	.32200	733.69	33.533	1.95261	1.550	3.560	
ADD HYD	111.90	6& 5	2	.45500	965.93	46.025	1.89663	1.600	3.317	
COMPUTE NM HYD	112.00	-	1	.22540	468.86	23.882	1.98662	1.550	3.250	PER IMP= 70.00
DIVIDE HYD	112.00	1	1	.22540	492.30	25.076	2.08595	1.550	3.413	
	.00	AND	16	.22540	23.44	1.194	.09933	1.550	.163	
ADD HYD	112.90	1& 2	5	.68040	1456.33	71.101	1.95935	1.550	3.344	
ROUTE	112.80	5	8	.68040	1448.40	71.101	1.95935	1.600	3.326	
COMPUTE NM HYD	119.00	-	5	.10050	240.49	11.089	2.06877	1.500	3.739	PER IMP= 75.00
DIVIDE HYD	119.00	5	5	.10050	252.52	11.643	2.17221	1.500	3.926	
	.00	AND	16	.10050	12.02	.554	.10344	1.500	.187	
ROUTE	109.80	10	3	1.06120	97.62	103.357	1.82619	2.950	.144	
ROUTE	109.81	3	7	1.06120	97.62	103.357	1.82618	2.950	.144	
ADD HYD	119.90	7& 5	10	1.16170	282.79	115.000	1.85612	1.550	.380	
ROUTE	119.80	10	4	1.16170	287.54	115.000	1.85611	1.550	.387	
ADD HYD	112.91	4& 8	8	1.84210	1725.21	186.100	1.89424	1.550	1.463	
COMPUTE NM HYD	113.00	-	1	.21330	347.98	23.534	2.06877	1.700	2.549	PER IMP= 75.00
DIVIDE HYD	113.00	1	1	.21330	396.70	26.829	2.35840	1.700	2.906	
	.00	AND	16	.21330	48.72	3.295	.28963	1.700	.357	
ROUTE	113.80	1	2	.21330	398.20	26.829	2.35840	1.700	2.917	
COMPUTE NM HYD	117.00	-	1	.15700	297.68	16.777	2.00366	1.600	2.963	PER IMP= 70.00
DIVIDE HYD	117.00	1	1	.15700	348.29	19.629	2.34427	1.600	3.466	
	.00	AND	16	.15700	50.61	2.852	.34062	1.600	.504	
DIVIDE HYD	117.40	1	4	.07693	170.66	9.618	2.34427	1.600	3.466	
	117.60	AND	6	.08007	177.63	10.011	2.34427	1.600	3.466	
COMPUTE NM HYD	116.00	-	1	.04100	97.00	3.992	1.82580	1.500	3.696	PER IMP= 60.00
DIVIDE HYD	116.00	1	1	.04100	101.85	4.192	1.91709	1.500	3.881	
	.00	AND	16	.04100	4.85	.200	.09129	1.500	.185	

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
ROUTE RESERVOIR	116.80	1	5	.04100	30.71	1.900	.86894	1.950	1.170	AC-FT= 2.813
ROUTE	116.88	5	3	.04100	12.79	1.891	.86491	2.150	.487	
COMPUTE NM HYD	121.20	-	1	.08100	165.35	8.656	2.00365	1.550	3.190	PER IMP= 70.00
DIVIDE HYD	121.20	1	1	.08100	173.62	9.089	2.10383	1.550	3.349	
	.00	AND	16	.08100	8.27	.433	.10018	1.550	.159	
ADD HYD	121.29	1& 3	5	.12200	173.72	10.980	1.68747	1.550	2.225	
ROUTE	112.88	8	3	1.84210	1728.00	186.100	1.89424	1.600	1.466	
ADD HYD	117.49	3& 4	7	1.91903	1898.66	195.718	1.91228	1.600	1.546	
ADD HYD	117.59	5& 7	7	2.04103	2068.25	206.698	1.89884	1.600	1.583	
COMPUTE NM HYD	121.30	-	11	.03930	99.77	4.200	2.00365	1.500	3.967	PER IMP= 70.00
DIVIDE HYD	121.30	11	11	.03930	104.76	4.410	2.10383	1.500	4.165	
	.00	AND	16	.03930	4.99	.210	.10018	1.500	.198	
*S TOTAL FLOW AT 86TH AND BRIDGE IN SD										
ADD HYD	121.39	11& 7	5	2.08033	2138.56	211.108	1.90271	1.600	1.606	
*S ROUTE HYD 121.39 TO 121.38 - 84" SD TO 90"SD										
ROUTE	121.38	5	4	2.08033	2125.95	211.105	1.90269	1.600	1.597	
*S ROUTE HYD 121.38 TO 121.48 - 90"SD TO STA 44+46										
ROUTE	121.48	4	3	2.08033	2078.97	211.102	1.90266	1.650	1.561	
DIVIDE HYD	117.60	6	6	.02002	44.41	2.503	2.34425	1.600	3.466	
	117.70	AND	7	.06005	133.22	7.508	2.34425	1.600	3.466	
ADD HYD	117.69	3& 6	6	2.10035	2120.96	213.604	1.90686	1.650	1.578	
ROUTE	117.68	6	5	2.10035	2134.33	213.603	1.90685	1.650	1.588	
COMPUTE NM HYD	120.00	-	12	.34100	618.14	34.636	1.90447	1.600	2.832	PER IMP= 65.00
DIVIDE HYD	120.00	12	12	.34100	649.05	36.368	1.99970	1.600	2.974	
	.00	AND	16	.34100	30.91	1.732	.09522	1.600	.142	
ADD HYD	120.90	12& 5	12	2.44135	2750.46	249.971	1.91982	1.650	1.760	
ADD HYD	113.90	2& 7	13	.27335	518.81	34.337	2.35529	1.650	2.966	
*S BEGINNING OF MIREHAVEN ARROYO										
STORE HYD	113.10	-	11	.67890	248.30	73.761	2.03715	1.600	.571	
COMPUTE NM HYD	113.20	-	2	.00580	15.89	.698	2.25532	1.500	4.282	PER IMP= 85.00
DIVIDE HYD	113.20	2	2	.00580	16.69	.733	2.36803	1.500	4.496	
	.00	AND	16	.00580	.79	.035	.11276	1.500	.214	
ADD HYD	113.29	2&11	3	.68470	259.34	74.493	2.03995	1.600	.592	
ROUTE	113.18	3	4	.68470	255.45	74.494	2.03996	1.600	.583	
ADD HYD	113.29	4&13	13	.95805	772.43	108.831	2.12993	1.650	1.260	
ROUTE	113.38	13	10	.95805	754.15	108.831	2.12993	1.700	1.230	
ADD HYD	117.78	10&12	10	3.39940	3481.06	358.802	1.97904	1.650	1.600	
ROUTE	117.68	10	2	3.39940	3489.89	358.798	1.97902	1.650	1.604	
COMPUTE NM HYD	120.10	-	1	.08110	151.76	7.835	1.81149	1.550	2.924	PER IMP= 61.82
DIVIDE HYD	120.10	1	1	.08110	159.35	8.227	1.90206	1.550	3.070	
	.00	AND	16	.08110	7.59	.392	.09057	1.550	.146	
ADD HYD	117.89	1& 2	5	3.48050	3625.55	367.025	1.97722	1.650	1.628	
COMPUTE NM HYD	118.20	-	1	.12400	296.36	12.287	1.85797	1.500	3.734	PER IMP= 62.00
DIVIDE HYD	118.20	1	1	.12400	311.18	12.902	1.95086	1.500	3.921	
	.00	AND	16	.12400	14.82	.614	.09290	1.500	.187	
ADD HYD	118.29	5& 1	6	3.60450	3795.89	379.927	1.97632	1.650	1.645	
ROUTE	118.28	6	2	3.60450	3809.36	379.924	1.97630	1.650	1.651	
COMPUTE NM HYD	121.10	-	1	.03990	99.35	4.228	1.98662	1.500	3.891	PER IMP= 70.00
DIVIDE HYD	121.10	1	1	.03990	104.32	4.439	2.08595	1.500	4.085	
	.00	AND	16	.03990	4.97	.211	.09933	1.500	.195	
ADD HYD	121.19	1& 2	9	3.64440	3866.05	384.363	1.97750	1.650	1.658	
COMPUTE NM HYD	114.10	-	2	.06600	168.21	7.270	2.06529	1.500	3.982	PER IMP= 75.00

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION	
DIVIDE HYD	114.10	2	2	.06600	176.62	7.633	2.16855	1.500	4.181		
	.00	AND	16	.06600	8.41	.363	.10326	1.500	.199		
ROUTE RESERVOIR	114.88	2	3	.06600	.20	.433	.12306	24.200	.005	AC-FT=	7.292
ROUTE	114.89	3	2	.06600	.20	.431	.12247	24.350	.005		
COMPUTE NM HYD	114.00	-	1	.10900	278.12	12.026	2.06877	1.500	3.987	PER IMP=	75.00
DIVIDE HYD	114.00	1	1	.10900	292.03	12.628	2.17221	1.500	4.186		
	.00	AND	16	.10900	13.91	.601	.10344	1.500	.199		
ADD HYD	114.90	1& 2	14	.17500	292.05	13.059	1.39916	1.500	2.608		
COMPUTE NM HYD	114.20	-	1	.14300	356.21	15.778	2.06877	1.500	3.892	PER IMP=	75.00
DIVIDE HYD	114.20	1	1	.14300	374.02	16.567	2.17221	1.500	4.087		
	.00	AND	16	.14300	17.81	.789	.10344	1.500	.195		
ROUTE RESERVOIR	114.28	1	7	.14300	216.31	12.946	1.69743	1.650	2.364	AC-FT=	5.645
COMPUTE NM HYD	114.30	-	1	.17300	430.55	19.088	2.06877	1.500	3.889	PER IMP=	75.00
DIVIDE HYD	114.30	1	1	.17300	452.08	20.042	2.17221	1.500	4.083		
	.00	AND	16	.17300	21.53	.954	.10344	1.500	.194		
ROUTE	114.38	1	2	.17300	435.61	20.042	2.17221	1.550	3.934		
COMPUTE NM HYD	114.40	-	1	.12900	277.14	13.668	1.98662	1.550	3.357	PER IMP=	70.00
DIVIDE HYD	114.40	1	1	.12900	291.00	14.351	2.08595	1.550	3.525		
	.00	AND	16	.12900	13.86	.683	.09933	1.550	.168		
ROUTE RESERVOIR	114.48	1	3	.12900	2.30	2.719	.39519	8.150	.028	AC-FT=	11.812
ADD HYD	114.49	2& 3	5	.30200	435.72	22.761	1.41315	1.550	2.254		
ADD HYD	114.58	7& 5	7	.44500	581.38	35.707	1.50450	1.600	2.041		
COMPUTE NM HYD	114.50	-	1	.04700	79.79	3.154	1.25811	1.500	2.653	PER IMP=	37.50
DIVIDE HYD	114.50	1	1	.04700	83.78	3.311	1.32101	1.500	2.785		
	.00	AND	16	.04700	3.99	.158	.06291	1.500	.133		
ADD HYD	114.59	1& 7	5	.49200	650.88	39.018	1.48698	1.550	2.067		
ROUTE RESERVOIR	114.68	5	6	.49200	638.37	32.360	1.23325	1.700	2.027	AC-FT=	9.772
ADD HYD	114.81	6&14	5	.66700	769.81	45.419	1.27678	1.700	1.803		
ROUTE RESERVOIR	114.87	5	6	.66700	693.13	45.381	1.27570	1.700	1.624	AC-FT=	6.556
ROUTE	114.86	6	2	.66700	531.77	45.375	1.27555	1.800	1.246		
COMPUTE NM HYD	118.10	-	1	.14400	369.72	16.108	2.09746	1.500	4.012	PER IMP=	77.00
DIVIDE HYD	118.10	1	1	.14400	388.21	16.914	2.20233	1.500	4.212		
	.00	AND	16	.14400	18.49	.805	.10487	1.500	.201		
ADD HYD	118.19	1& 2	5	.81100	665.97	62.289	1.44010	1.800	1.283		
DIVIDE HYD	118.16	5	11	.63845	248.00	49.037	1.44010	1.450	.607		
	118.17	AND	12	.17255	417.97	13.253	1.44010	1.800	3.785		
*S THE FOLLOWING BEGINS THE STORM SEWER IN NEW COORS											
ROUTE	118.81	11	13	.63845	255.42	49.035	1.44006	1.450	.625		
ROUTE	118.82	13	11	.63845	250.26	49.028	1.43986	1.500	.612		
COMPUTE NM HYD	118.30	-	1	.04900	114.48	4.728	1.80914	1.500	3.650	PER IMP=	60.00
DIVIDE HYD	118.30	1	1	.04900	120.20	4.964	1.89959	1.500	3.833		
	.00	AND	16	.04900	5.72	.236	.09046	1.500	.183		
ADD HYD	118.39	1&12	5	.22155	457.82	18.217	1.54173	1.800	3.229		
DIVIDE HYD	118.61	5	15	.08623	81.00	7.090	1.54173	1.450	1.468		
	118.62	AND	14	.13532	376.82	11.127	1.54173	1.800	4.351		
ADD HYD	118.59	11&15	13	.72468	331.26	56.118	1.45198	1.500	.714		
ADD HYD	121.99	9&13	5	4.36908	4194.75	440.481	1.89034	1.650	1.500		
COMPUTE NM HYD	401.00	-	1	.10500	232.16	9.230	1.64821	1.500	3.455	PER IMP=	50.00
DIVIDE HYD	401.00	1	1	.10500	253.05	10.061	1.79654	1.500	3.766		
	.00	AND	16	.10500	20.89	.831	.14834	1.500	.311		

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
ADD HYD	401.90	1& 5	6	4.47408	4335.06	450.542	1.88813	1.650	1.514	
*S 401.9 IS THE TOTAL INFLOW HYD TO THE AMOLE DETENTION BASIN										
ROUTE RESERVOIR	401.80	6	5	4.47408	4405.50	446.160	1.86977	1.750	1.539	AC-FT= 75.157
FINISH										

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =05/17/1994
INPUT FILE = ABPMFLO.DAT ULTIMATE CONDITION USER NO.= B_ORTIZ_.S94

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
*S BASINS NORTH OF INTERSTATE 40										
RAINFALL TYPE= 3										RAIN6= 16.000
COMPUTE NM HYD	108.40	-	5	.14260	2967.28	110.200	14.48984	2.267	32.513	PER IMP= 70.00
DIVIDE HYD	108.40	5	5	.14260	3115.65	115.710	15.21433	2.267	34.139	
	.00	AND	16	.14260	148.36	5.510	.72449	2.267	1.626	
COMPUTE NM HYD	101.00	-	1	.02600	512.47	15.530	11.19942	2.267	30.798	PER IMP= .00
DIVIDE HYD	101.00	1	1	.02600	563.72	17.083	12.31936	2.267	33.877	
	.00	AND	16	.02600	51.25	1.553	1.11994	2.267	3.080	
ROUTE	101.80	1	2	.02600	489.72	17.083	12.31938	2.300	29.431	
COMPUTE NM HYD	108.30	-	1	.14780	2668.88	109.995	13.95398	2.300	28.215	PER IMP= 57.00
DIVIDE HYD	108.30	1	1	.14780	2802.33	115.494	14.65169	2.300	29.625	
	.00	AND	16	.14780	133.44	5.500	.69770	2.300	1.411	
ADD HYD	108.39	1& 2	3	.17380	3292.05	132.577	14.30278	2.300	29.596	
*S HYD 108.39 PARTIAL INFLOW TO POND FROM WEST										
ROUTE	108.38	3	2	.17380	2953.37	132.577	14.30277	2.367	26.551	
COMPUTE NM HYD	108.20	-	7	.17100	3233.12	129.534	14.20329	2.267	29.542	PER IMP= 63.00
DIVIDE HYD	108.20	7	7	.17100	3394.78	136.011	14.91346	2.267	31.020	
	.00	AND	16	.17100	161.66	6.477	.71016	2.267	1.477	
ADD HYD	108.29	7& 2	7	.34480	6060.63	268.588	14.60564	2.300	27.464	
DIVIDE HYD	108.39	7	7	.17240	3030.32	134.294	14.60564	2.300	27.464	
	108.49	AND	15	.17240	3030.32	134.294	14.60564	2.300	27.464	
COMPUTE NM HYD	102.00	-	2	.28100	4532.89	189.886	12.67031	2.333	25.205	PER IMP= 31.00
DIVIDE HYD	102.00	2	2	.28100	4759.54	199.380	13.30384	2.333	26.465	
	.00	AND	16	.28100	226.64	9.494	.63352	2.333	1.260	
ROUTE	102.80	2	3	.28100	4632.04	199.380	13.30383	2.367	25.756	
COMPUTE NM HYD	108.10	-	4	.17130	3555.12	131.151	14.35544	2.267	32.428	PER IMP= 66.67
DIVIDE HYD	108.10	4	4	.17130	3732.88	137.709	15.07322	2.267	34.049	
	.00	AND	16	.17130	177.76	6.558	.71777	2.267	1.621	
ADD HYD	108.17	4& 3	2	.45230	7441.74	337.089	13.97395	2.300	25.708	
DIVIDE HYD	108.27	2	2	.19527	873.00	145.534	13.97395	2.133	6.985	
	108.37	AND	15	.25703	6568.74	191.555	13.97396	2.300	39.932	
ROUTE	108.18	2	8	.19527	873.00	145.534	13.97394	2.533	6.985	
ADD HYD	108.90	7& 8	9	.36767	3903.08	279.828	14.27015	2.300	16.587	
ROUTE RESERVOIR	502.00	9	10	.36767	3706.40	279.780	14.26771	2.367	15.751	AC-FT= 55.203
COMPUTE NM HYD	109.00	-	1	.07200	1490.91	57.694	15.02458	2.267	32.355	PER IMP= 82.00
DIVIDE HYD	109.00	1	1	.07200	1565.45	60.579	15.77580	2.267	33.973	
	.00	AND	16	.07200	74.55	2.885	.75123	2.267	1.618	
ROUTE	109.19	1	6	.07200	1525.02	60.579	15.77582	2.267	33.095	
COMPUTE NM HYD	109.10	-	1	.04950	1045.09	40.008	15.15453	2.267	32.989	PER IMP= 85.00
DIVIDE HYD	109.10	1	1	.04950	1097.34	42.008	15.91224	2.267	34.638	
	.00	AND	16	.04950	52.25	2.000	.75773	2.267	1.649	
ADD HYD	109.39	6& 1	6	.12150	2622.37	102.588	15.83141	2.267	33.724	
*S ADD HYD 109.39 TO HYD 108.4										
ADD HYD	109.49	6& 5	6	.26410	5738.02	218.298	15.49822	2.267	33.948	
DIVIDE HYD	109.59	6	6	.13205	2869.01	109.149	15.49822	2.267	33.948	
	109.69	AND	15	.13205	2869.01	109.149	15.49822	2.267	33.948	
ADD HYD	109.59	6&10	6	.49972	5546.88	388.929	14.59286	2.333	17.344	
ROUTE RESERVOIR	501.00	6	10	.49972	5497.65	387.321	14.53254	2.367	17.190	AC-FT= 42.321
FINISH										

APPENDIX 2

Pond Output Hydrographs

North Pond

Existing Condition	-	100 Year
	-	½ PMF
Ultimate Development	-	100 Year
	-	½ PMF

South Pond

Existing Condition

- With Orifice Plate	-	100 Year
	-	½ PMF

Ultimate Development

- No Orifice Plate	-	100 Year
	-	½ PMF

INPUT FILE = ADEX.DAT

*S RAINFALL - 100 YR.

*
*
*ROUTE BASINS 108.2 & 108.1 THROUGH NORTH POND 30" OUTFLOW
ROUTE RESERVOIR ID=10 HYD=502 INFLOW ID=5 CODE=5

OUTFLOW	STORAGE	ELEV
0	0	5204.21
3	0.287	5205
13	1.582	5206
25	3.486	5207
42	7.543	5209
52	11.939	5211
64	16.689	5213
72	21.805	5215
80	27.301	5217
88	33.189	5219
90	39.483	5221
91	46.197	5223
969	49.715	5224
2615	53.343	5225
4809	57.082	5226

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5204.21	.000	.00
.25	.00	5204.21	.000	.00
.50	.00	5204.21	.000	.00
.75	.00	5204.21	.000	.00
1.00	.00	5204.21	.000	.00
1.25	1.43	5204.22	.004	.04
1.50	347.89	5206.33	2.218	17.01
1.75	109.58	5208.50	6.528	37.75
2.00	33.76	5208.70	6.936	39.46
2.25	17.65	5208.56	6.648	38.25
2.50	9.94	5208.32	6.155	36.18
2.75	5.66	5208.04	5.589	33.81
3.00	3.24	5207.75	5.005	31.37
3.25	1.88	5207.47	4.434	28.97
3.50	1.10	5207.20	3.889	26.69
3.75	.66	5206.94	3.378	24.32
4.00	.40	5206.70	2.917	21.41
4.25	.26	5206.49	2.508	18.84
4.50	.18	5206.30	2.148	16.57
4.75	.14	5206.13	1.830	14.56
5.00	.12	5205.98	1.550	12.75
5.25	.11	5205.79	1.309	10.89
5.50	.11	5205.63	1.103	9.30
5.75	.10	5205.49	.927	7.94
6.00	.11	5205.38	.778	6.79
6.25	.18	5205.28	.651	5.81
6.50	.19	5205.20	.543	4.98
6.75	.19	5205.13	.452	4.27
7.00	.19	5205.07	.374	3.67
7.25	.18	5205.02	.307	3.16

100 YEAR NORTH POND EXISTING 1 OF 3

7.50	.18	5204.90	.251	2.63
7.75	.18	5204.78	.206	2.15
8.00	.18	5204.68	.169	1.77
8.25	.17	5204.59	.139	1.46
8.50	.17	5204.53	.116	1.21
8.75	.17	5204.48	.096	1.01
9.00	.17	5204.43	.081	.84
9.25	.16	5204.40	.068	.71
9.50	.16	5204.37	.058	.60
9.75	.16	5204.35	.050	.52
10.00	.16	5204.33	.043	.45
10.25	.15	5204.31	.037	.39
10.50	.15	5204.30	.033	.35
10.75	.15	5204.29	.029	.31
11.00	.15	5204.28	.027	.28
11.25	.15	5204.28	.024	.25
11.50	.15	5204.27	.022	.23
11.75	.14	5204.27	.021	.21
12.00	.14	5204.26	.019	.20
12.25	.14	5204.26	.018	.19
12.50	.14	5204.26	.017	.18
12.75	.14	5204.25	.016	.17
13.00	.14	5204.25	.016	.16
13.25	.13	5204.25	.015	.16
13.50	.13	5204.25	.015	.15
13.75	.13	5204.25	.014	.15

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	.13	5204.25	.014	.15
14.25	.13	5204.25	.014	.14
14.50	.13	5204.25	.013	.14
14.75	.12	5204.25	.013	.14
15.00	.12	5204.25	.013	.13
15.25	.12	5204.24	.013	.13
15.50	.12	5204.24	.012	.13
15.75	.12	5204.24	.012	.13
16.00	.12	5204.24	.012	.13
16.25	.12	5204.24	.012	.13
16.50	.12	5204.24	.012	.12
16.75	.12	5204.24	.012	.12
17.00	.12	5204.24	.012	.12
17.25	.11	5204.24	.011	.12
17.50	.11	5204.24	.011	.12
17.75	.11	5204.24	.011	.12
18.00	.11	5204.24	.011	.12
18.25	.11	5204.24	.011	.11
18.50	.11	5204.24	.011	.11
18.75	.11	5204.24	.011	.11
19.00	.11	5204.24	.011	.11
19.25	.11	5204.24	.011	.11
19.50	.11	5204.24	.010	.11
19.75	.11	5204.24	.010	.11
20.00	.10	5204.24	.010	.11
20.25	.10	5204.24	.010	.11
20.50	.10	5204.24	.010	.11
20.75	.10	5204.24	.010	.10
21.00	.10	5204.24	.010	.10
21.25	.10	5204.24	.010	.10

100 YEAR
NORTH POND
EXISTING
2 OF 3

21.50	.10	5204.24	.010	.10
21.75	.10	5204.24	.010	.10
22.00	.10	5204.24	.010	.10
22.25	.10	5204.24	.010	.10
22.50	.10	5204.24	.009	.10
22.75	.09	5204.24	.009	.10
23.00	.09	5204.24	.009	.10
23.25	.09	5204.24	.009	.10
23.50	.09	5204.24	.009	.10
23.75	.09	5204.23	.009	.10
24.00	.09	5204.23	.009	.09
24.25	.02	5204.23	.008	.09
24.50	.00	5204.23	.007	.07
24.75	.00	5204.23	.006	.06
25.00	.00	5204.22	.004	.05
25.25	.00	5204.22	.004	.04
25.50	.00	5204.22	.003	.03
25.75	.00	5204.22	.002	.02
26.00	.00	5204.22	.002	.02
26.25	.00	5204.21	.002	.02
26.50	.00	5204.21	.001	.01
26.75	.00	5204.21	.001	.01
27.00	.00	5204.21	.001	.01
27.25	.00	5204.21	.001	.01
27.50	.00	5204.21	.001	.01
27.75	.00	5204.21	.000	.00

PEAK DISCHARGE = 39.518 CFS - PEAK OCCURS AT HOUR 1.95
MAXIMUM WATER SURFACE ELEVATION = 5208.708
MAXIMUM STORAGE = 6.9508 AC-FT INCREMENTAL TIME= .050000HRS

100 YEAR
NORTH POND
EXISTING
3 OF 3

INPUT FILE = ABEX.DAT

*S RAINFALL - PMF

*
*
*ROUTE BASINS 106.2 & 108.1 THROUGH NORTH POND 30" OUTFLOW
ROUTE RESERVOIR ID=10 HYD=502 INFLOW ID=5 CODE=5

OUTFLOW	STORAGE	ELEV
0	0	5204.21
3	0.287	5205
13	1.582	5206
25	3.486	5207
42	7.543	5209
52	11.939	5211
64	16.689	5213
72	21.805	5215
80	27.301	5217
88	33.189	5219
90	39.483	5221
91	46.197	5223
968	49.715	5224
2615	53.343	5225
4809	57.082	5226

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5204.21	.000	.00
.17	.00	5204.21	.000	.00
.33	.00	5204.21	.000	.00
.50	.28	5204.21	.001	.01
.67	.99	5204.24	.010	.10
.83	1.29	5204.27	.023	.24
1.00	1.58	5204.32	.038	.40
1.17	1.88	5204.36	.056	.58
1.33	2.18	5204.41	.074	.78
1.50	2.50	5204.47	.094	.99
1.67	2.82	5204.53	.116	1.21
1.83	3.16	5204.59	.139	1.45
2.00	3.50	5204.66	.163	1.70
2.17	1191.48	5207.96	5.430	33.14
2.33	1550.03	5217.49	28.744	81.96
2.50	728.33	5221.77	42.071	90.39
2.67	462.36	5223.37	47.491	413.52
2.83	337.30	5223.31	47.297	365.32
3.00	277.74	5223.23	47.006	292.57
3.17	296.92	5223.22	46.986	287.77
3.33	260.58	5223.21	46.931	274.03
3.50	136.99	5223.09	46.523	172.36
3.67	50.28	5222.96	46.074	90.98
3.83	24.49	5222.73	45.304	90.87
4.00	13.61	5222.44	44.308	90.72
4.17	7.98	5222.11	43.204	90.55
4.33	5.04	5221.76	42.046	90.38
4.50	3.46	5221.41	40.859	90.21
4.67	2.59	5221.05	39.659	90.03
4.83	2.17	5220.67	38.454	89.67

1/2 PMF
NORTH POND
EXISTING
1 OF 3

5.00	1.94	5220.29	37.249	89.29
5.17	1.82	5219.91	36.048	88.91
5.33	1.75	5219.53	34.851	88.53
5.50	1.72	5219.15	33.658	88.15
5.67	1.69	5218.76	32.473	87.03
5.83	1.69	5218.36	31.308	85.44
6.00	1.69	5217.97	30.165	83.89
6.17	.65	5217.59	29.039	82.36
6.33	.19	5217.21	27.919	80.84
6.50	.08	5216.82	26.818	79.30
6.67	.04	5216.43	25.738	77.72
6.83	.02	5216.05	24.678	76.18
7.00	.01	5215.67	23.639	74.67
7.17	.00	5215.30	22.621	73.19
7.33	.00	5214.93	21.623	71.72
7.50	.00	5214.55	20.646	70.19
7.67	.00	5214.17	19.689	68.69
7.83	.00	5213.81	18.753	67.23
8.00	.00	5213.45	17.837	65.80
8.17	.00	5213.10	16.941	64.39
8.33	.00	5212.74	16.066	62.43
8.50	.00	5212.38	15.221	60.29
8.67	.00	5212.04	14.405	58.23
8.83	.00	5211.71	13.617	56.24
9.00	.00	5211.39	12.855	54.31
9.17	.00	5211.08	12.120	52.46

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
9.33	.00	5210.76	11.409	50.79
9.50	.00	5210.45	10.720	49.23
9.67	.00	5210.14	10.053	47.71
9.83	.00	5209.85	9.406	46.24
10.00	.00	5209.56	8.779	44.81
10.17	.00	5209.29	8.171	43.43
10.33	.00	5209.02	7.582	42.09
10.50	.00	5208.74	7.018	39.80
10.67	.00	5208.48	6.485	37.57
10.83	.00	5208.23	5.983	35.46
11.00	.00	5208.00	5.508	33.47
11.17	.00	5207.78	5.060	31.60
11.33	.00	5207.57	4.637	29.82
11.50	.00	5207.37	4.238	28.15
11.67	.00	5207.19	3.861	26.57
11.83	.00	5207.01	3.506	25.08
12.00	.00	5206.84	3.174	23.03
12.17	.00	5206.68	2.870	21.12
12.33	.00	5206.53	2.592	19.36
12.50	.00	5206.40	2.336	17.75
12.67	.00	5206.27	2.102	16.28
12.83	.00	5206.16	1.887	14.92
13.00	.00	5206.06	1.690	13.68
13.17	.00	5205.94	1.510	12.44
13.33	.00	5205.82	1.347	11.19
13.50	.00	5205.71	1.201	10.06
13.67	.00	5205.60	1.070	9.04
13.83	.00	5205.51	.952	8.13
14.00	.00	5205.43	.845	7.31
14.17	.00	5205.36	.750	6.57

1/2 PMF
NORTH POND
EXISTING
2 OF 3

14.33	.00	5205.29	.664	5.91
14.50	.00	5205.23	.587	5.31
14.67	.00	5205.18	.517	4.78
14.83	.00	5205.13	.455	4.30
15.00	.00	5205.09	.399	3.86
15.17	.00	5205.05	.348	3.47
15.33	.00	5205.01	.303	3.12
15.50	.00	5204.93	.262	2.74
15.67	.00	5204.83	.227	2.37
15.83	.00	5204.75	.197	2.06
16.00	.00	5204.68	.170	1.78
16.17	.00	5204.62	.147	1.54
16.33	.00	5204.56	.129	1.33
16.50	.00	5204.51	.111	1.16
16.67	.00	5204.47	.096	1.00
16.83	.00	5204.44	.083	.87
17.00	.00	5204.41	.072	.75
17.17	.00	5204.38	.062	.65
17.33	.00	5204.36	.054	.56
17.50	.00	5204.34	.047	.49
17.67	.00	5204.32	.040	.42
17.83	.00	5204.31	.035	.37
18.00	.00	5204.29	.030	.32
18.17	.00	5204.28	.026	.27
18.33	.00	5204.27	.023	.24
18.50	.00	5204.26	.020	.21

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
18.67	.00	5204.26	.017	.18
18.83	.00	5204.25	.015	.15
19.00	.00	5204.25	.013	.13
19.17	.00	5204.24	.011	.12
19.33	.00	5204.24	.010	.10
19.50	.00	5204.23	.008	.09
19.67	.00	5204.23	.007	.07
19.83	.00	5204.23	.006	.06

PEAK DISCHARGE = 430.046 CFS - PEAK OCCURS AT HOUR 2.70
MAXIMUM WATER SURFACE ELEVATION = 5223.387
MAXIMUM STORAGE = 47.5570 AC-FT INCREMENTAL TIME= .033333HR

1/2 PMF
NORTH POND
EXISTING
3 OF 3

INPUT FILE = ab100.dat

*ROUTE HYD 108.? THROUGH NORTH POND 30" OUTFLOW
ROUTE RESERVOIR ID=10 HYD=502 INFLOW ID=9 CODE=5

OUTFLOW	STORAGE	ELEV
0	0	5204.21
3	0.287	5205
13	1.582	5206
25	3.486	5207
42	7.543	5209
52	11.939	5211
64	16.689	5213
72	21.805	5215
80	27.301	5217
88	33.189	5219
90	39.483	5221
91	46.197	5223
968	49.715	5224
2615	53.343	5225
4809	57.082	5226

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5204.21	.000	.00
.25	.00	5204.21	.000	.00
.50	.00	5204.21	.000	.00
.75	.00	5204.21	.000	.00
1.00	.00	5204.21	.000	.00
1.25	20.45	5204.34	.048	.50
1.50	1180.43	5209.77	9.243	45.87
1.75	939.17	5218.93	32.976	87.71
2.00	451.96	5222.51	44.540	90.75
2.25	188.53	5223.16	46.748	228.35
2.50	85.52	5223.01	46.231	99.55
2.75	45.58	5222.83	45.635	90.92
3.00	26.07	5222.49	44.476	90.74
3.25	15.60	5222.05	43.024	90.53
3.50	10.47	5221.58	41.420	90.29
3.75	7.59	5221.08	39.741	90.04
4.00	5.93	5220.54	38.024	89.54
4.25	5.01	5219.99	36.292	88.99
4.50	4.59	5219.44	34.558	88.43
4.75	4.47	5218.88	32.830	87.51
5.00	4.57	5218.30	31.139	85.21
5.25	4.84	5217.75	29.498	82.99
5.50	5.16	5217.21	27.909	80.83
5.75	5.65	5216.66	26.373	78.65
6.00	6.15	5216.12	24.893	76.49
6.25	8.65	5215.61	23.481	74.44
6.50	10.27	5215.13	22.162	72.52
6.75	10.67	5214.65	20.901	70.59
7.00	10.68	5214.17	19.683	68.68
7.25	10.59	5213.71	18.503	66.84
7.50	10.41	5213.26	17.357	65.05
7.75	10.29	5212.81	16.247	62.88
8.00	10.09	5212.37	15.186	60.20
8.25	9.97	5211.94	14.176	57.65

100 YEAR
NORTH POND
ULTIMATE
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8.50	9.82	5211.54	13.215	55.22
8.75	9.68	5211.15	12.299	52.91
9.00	9.52	5210.77	11.426	50.83
9.25	9.38	5210.39	10.591	48.93
9.50	9.28	5210.02	9.792	47.12
9.75	9.13	5209.67	9.026	45.37
10.00	9.01	5209.34	8.294	43.71
10.25	8.89	5209.02	7.592	42.11
10.50	8.76	5208.70	6.932	39.44
10.75	8.66	5208.40	6.324	36.89
11.00	8.57	5208.12	5.764	34.55
11.25	8.45	5207.87	5.248	32.38
11.50	8.33	5207.63	4.773	30.39
11.75	8.21	5207.42	4.336	28.56
12.00	8.12	5207.22	3.932	26.87
12.25	8.03	5207.04	3.560	25.31
12.50	7.93	5206.86	3.222	23.34
12.75	7.85	5206.70	2.923	21.45
13.00	7.77	5206.57	2.659	19.78
13.25	7.67	5206.44	2.425	18.31
13.50	7.60	5206.33	2.218	17.01
13.75	7.51	5206.24	2.035	15.85

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	7.40	5206.15	1.872	14.83
14.25	7.35	5206.08	1.728	13.92
14.50	7.25	5206.01	1.600	13.11
14.75	7.18	5205.93	1.487	12.26
15.00	7.10	5205.85	1.389	11.51
15.25	7.02	5205.79	1.304	10.86
15.50	6.96	5205.73	1.230	10.28
15.75	6.94	5205.68	1.166	9.79
16.00	6.86	5205.64	1.111	9.36
16.25	6.77	5205.60	1.062	8.99
16.50	6.70	5205.57	1.019	8.65
16.75	6.64	5205.54	.981	8.36
17.00	6.57	5205.51	.948	8.10
17.25	6.49	5205.49	.918	7.87
17.50	6.48	5205.47	.892	7.67
17.75	6.35	5205.45	.868	7.49
18.00	6.36	5205.43	.846	7.32
18.25	6.26	5205.42	.827	7.17
18.50	6.22	5205.40	.810	7.04
18.75	6.16	5205.39	.793	6.91
19.00	6.13	5205.38	.779	6.80
19.25	6.07	5205.37	.765	6.69
19.50	6.03	5205.36	.753	6.60
19.75	6.00	5205.35	.741	6.51
20.00	5.92	5205.34	.731	6.43
20.25	5.88	5205.33	.721	6.35
20.50	5.80	5205.33	.711	6.27
20.75	5.76	5205.32	.702	6.20
21.00	5.72	5205.31	.693	6.13
21.25	5.67	5205.31	.685	6.07
21.50	5.65	5205.30	.677	6.01
21.75	5.58	5205.29	.669	5.95
22.00	5.56	5205.29	.662	5.90
22.25	5.50	5205.28	.655	5.84

100 YEAR
NORTH POND
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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
22.50	5.49	5205.28	.648	5.79
22.75	5.39	5205.27	.642	5.74
23.00	5.41	5205.27	.635	5.69
23.25	5.36	5205.26	.629	5.64
23.50	5.27	5205.26	.623	5.59
23.75	5.27	5205.25	.617	5.55
24.00	5.24	5205.25	.611	5.50
24.25	2.97	5205.23	.589	5.33
24.50	1.06	5205.18	.521	4.81
24.75	.39	5205.12	.442	4.20
25.00	.16	5205.06	.367	3.62
25.25	.07	5205.01	.300	3.10
25.50	.03	5204.88	.242	2.53
25.75	.01	5204.75	.196	2.04
26.00	.01	5204.64	.158	1.65
26.25	.00	5204.56	.127	1.33
26.50	.00	5204.49	.102	1.07
26.75	.00	5204.44	.083	.86
27.00	.00	5204.39	.067	.70
27.25	.00	5204.36	.054	.56
27.50	.00	5204.33	.043	.45
27.75	.00	5204.31	.035	.36

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
28.00	.00	5204.29	.028	.29
28.25	.00	5204.27	.023	.24
28.50	.00	5204.26	.018	.19
28.75	.00	5204.25	.015	.15
29.00	.00	5204.24	.012	.12
29.25	.00	5204.24	.010	.10
29.50	.00	5204.23	.008	.08
29.75	.00	5204.23	.006	.06

PEAK DISCHARGE = 292.082 CFS - PEAK OCCURS AT HOUR 2.15
MAXIMUM WATER SURFACE ELEVATION = 5223.229
MAXIMUM STORAGE = 47.0036 AC-FT INCREMENTAL TIME= .05

100 YEAR
NORTH POND
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*ROUTE HYD 108.9 THROUGH NORTH POND 30" OUTFLOW

ROUTE RESERVOIR ID=10 HYD=502 INFLOW ID=9 CODE=5

OUTFLOW	STORAGE	ELEV
0	0	5204.21
3	0.287	5205
13	1.582	5206
25	3.486	5207
42	7.543	5209
52	11.939	5211
64	16.689	5213
72	21.805	5215
80	27.301	5217
88	33.189	5219
90	39.483	5221
91	46.197	5223
968	49.715	5224
2615	53.343	5225
4809	57.082	5226

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5204.21	.000	.00
.17	.00	5204.21	.000	.00
.33	.00	5204.21	.000	.00
.50	3.49	5204.23	.008	.08
.67	37.26	5204.93	.260	2.72
.83	61.80	5205.46	.883	7.60
1.00	80.69	5206.07	1.721	13.88
1.17	98.38	5206.60	2.721	20.18
1.33	115.95	5207.19	3.873	26.62
1.50	134.24	5207.84	5.191	32.15
1.67	153.00	5208.58	6.684	38.40
1.83	172.20	5209.37	8.351	43.84
2.00	194.62	5210.23	10.238	48.13
2.17	1815.41	5213.73	18.551	66.91
2.33	3864.05	5225.32	54.548	3321.86
2.50	2488.01	5225.01	53.396	2646.00
2.67	1744.41	5224.52	51.610	1828.36
2.83	1430.34	5224.30	50.818	1468.52
3.00	1278.31	5224.20	50.440	1297.26
3.17	1253.86	5224.17	50.333	1248.44
3.33	1227.58	5224.16	50.310	1238.19
3.50	992.00	5224.04	49.857	1032.52
3.67	718.83	5223.80	49.027	796.50
3.83	465.80	5223.50	47.943	526.29
4.00	329.28	5223.31	47.297	365.22
4.17	248.87	5223.20	46.914	269.84
4.33	198.97	5223.14	46.683	212.23
4.50	164.78	5223.09	46.530	173.89
4.67	141.62	5223.06	46.425	147.92
4.83	126.07	5223.04	46.354	130.18
5.00	115.92	5223.03	46.308	118.64
5.17	109.30	5223.02	46.277	111.06
5.33	104.95	5223.02	46.258	106.10
5.50	102.16	5223.01	46.245	102.86
5.67	100.47	5223.01	46.237	100.91
5.83	99.50	5223.01	46.232	99.75

1/2 PMF
NORTH POND
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6.00	99.00	5223.01	46.230	99.13
6.17	69.19	5222.99	46.154	90.99
6.33	29.67	5222.80	45.539	90.90
6.50	14.36	5222.52	44.578	90.76
6.67	7.50	5222.19	43.471	90.59
6.83	4.39	5221.84	42.305	90.42
7.00	2.60	5221.48	41.108	90.24
7.17	1.51	5221.12	39.894	90.06
7.33	.87	5220.74	38.671	89.74
7.50	.50	5220.35	37.447	89.35
7.67	.29	5219.96	36.224	88.96
7.83	.17	5219.58	35.005	88.58
8.00	.10	5219.19	33.789	88.19
8.17	.05	5218.79	32.580	87.17
8.33	.03	5218.39	31.391	85.56
8.50	.02	5217.99	30.224	83.97
8.67	.01	5217.60	29.078	82.41
8.83	.00	5217.22	27.954	80.89
9.00	.00	5216.84	26.850	79.34
9.17	.00	5216.44	25.768	77.77

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
9.33	.00	5216.04	24.708	76.23
9.50	.00	5215.68	23.668	74.71
9.67	.00	5215.31	22.649	73.23
9.83	.00	5214.94	21.651	71.76
10.00	.00	5214.56	20.673	70.23
10.17	.00	5214.18	19.716	68.73
10.33	.00	5213.82	18.779	67.27
10.50	.00	5213.46	17.863	65.84
10.67	.00	5213.11	16.966	64.43
10.83	.00	5212.75	16.090	62.49
11.00	.00	5212.39	15.244	60.35
11.17	.00	5212.05	14.427	58.29
11.33	.00	5211.72	13.638	56.29
11.50	.00	5211.39	12.876	54.37
11.67	.00	5211.08	12.140	52.51
11.83	.00	5210.77	11.429	50.84
12.00	.00	5210.45	10.739	49.27
12.17	.00	5210.15	10.071	47.75
12.33	.00	5209.86	9.424	46.28
12.50	.00	5209.57	8.796	44.85
12.67	.00	5209.29	8.188	43.47
12.83	.00	5209.03	7.599	42.13
13.00	.00	5208.75	7.034	39.87
13.17	.00	5208.49	6.500	37.63
13.33	.00	5208.24	5.996	35.52
13.50	.00	5208.00	5.521	33.53
13.67	.00	5207.78	5.072	31.65
13.83	.00	5207.57	4.649	29.87
14.00	.00	5207.38	4.249	28.20
14.17	.00	5207.19	3.871	26.62
14.33	.00	5207.01	3.515	25.12
14.50	.00	5206.84	3.183	23.09
14.67	.00	5206.68	2.878	21.17
14.83	.00	5206.53	2.599	19.41
15.00	.00	5206.40	2.343	17.80
15.17	.00	5206.28	2.108	16.32

1/2 PMF
NORTH POND
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15.33	.00	5206.16	1.893	14.96
15.50	.00	5206.06	1.696	13.72
15.67	.00	5205.95	1.515	12.48
15.83	.00	5205.82	1.352	11.22
16.00	.00	5205.71	1.205	10.09
16.17	.00	5205.61	1.073	9.07
16.33	.00	5205.52	.955	8.16
16.50	.00	5205.43	.848	7.33
16.67	.00	5205.36	.752	6.59
16.83	.00	5205.29	.666	5.93
17.00	.00	5205.23	.589	5.33
17.17	.00	5205.18	.519	4.79
17.33	.00	5205.13	.456	4.31
17.50	.00	5205.09	.400	3.87
17.67	.00	5205.05	.350	3.48
17.83	.00	5205.01	.304	3.13
18.00	.00	5204.94	.263	2.75
18.17	.00	5204.84	.228	2.38
18.33	.00	5204.75	.197	2.06
18.50	.00	5204.68	.171	1.79

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
18.67	.00	5204.62	.148	1.55
18.83	.00	5204.56	.128	1.34
19.00	.00	5204.52	.111	1.16
19.17	.00	5204.47	.096	1.00
19.33	.00	5204.44	.083	.87
19.50	.00	5204.41	.072	.75
19.67	.00	5204.38	.062	.65
19.83	.00	5204.36	.054	.56

PEAK DISCHARGE = 3706.398 CFS - PEAK OCCURS AT HOUR 2.37
MAXIMUM WATER SURFACE ELEVATION = 5225.498
MAXIMUM STORAGE = 55.2030 AC-FT INCREMENTAL TIME= .033

1/2 PMF
NORTH POND
ULTIMATE
3 OF 3

INPUT FILE = abex.dat

*EXISTING CONDITIONS - 100 YEAR & PMF ANALYSIS

*S RAINFALL - 100 YR.

*POND AT 98TH AND CENTRAL SOUTHERNMOST POND - ORIFICE (A=.86) 13CFS MAX OUT
ROUTE RESERVOIR ID=10 HYD=501 IN ID=6 CODE=5.7

OUTFLOW	STORAGE	ELEV
0	0	5201
1.5	0.195	5201.5
2.1	0.934	5202
3.6	3.359	5203
5.5	6.080	5204
6.9	8.897	5205
9.1	14.828	5207
10.8	21.167	5209
12.3	27.925	5211
13.0	31.465	5212
46.1	31.825	5212.1
1073.6	35.115	5213
3056.2	38.877	5214
5685.8	42.753	5215
8873.4	46.743	5216

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5201.00	.000	.00
.35	.00	5201.00	.000	.00
.70	.00	5201.00	.000	.00
1.05	.00	5201.00	.000	.00
1.40	107.71	5201.65	.411	1.60
1.75	489.11	5206.70	13.929	9.77
2.10	193.18	5209.51	22.905	11.19
2.45	94.06	5210.55	26.392	11.96
2.80	61.78	5211.09	28.234	12.36
3.15	45.35	5211.42	29.399	12.59
3.50	35.25	5211.64	30.186	12.75
3.85	28.19	5211.79	30.733	12.86
4.20	22.39	5211.89	31.087	12.93
4.55	18.09	5211.95	31.296	12.97
4.90	14.80	5211.98	31.394	12.99
5.25	11.89	5211.98	31.404	12.99
5.60	9.59	5211.96	31.337	12.97
5.95	7.82	5211.93	31.213	12.95
6.30	6.76	5211.88	31.048	12.92
6.65	5.74	5211.83	30.855	12.88
7.00	4.84	5211.77	30.636	12.84
7.35	4.10	5211.70	30.394	12.79
7.70	3.34	5211.62	30.132	12.74
8.05	2.78	5211.54	29.852	12.68
8.40	2.35	5211.46	29.560	12.62
8.75	2.04	5211.38	29.260	12.56
9.10	1.80	5211.29	28.952	12.50
9.45	1.62	5211.20	28.641	12.44
9.80	1.48	5211.11	28.326	12.38
10.15	1.37	5211.02	28.010	12.32

100 YEAR
SOUTH POND
EXISTING
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10.50	1.28	5210.93	27.693	12.25
10.85	1.21	5210.84	27.376	12.18
11.20	1.16	5210.74	27.059	12.11
11.55	1.12	5210.65	26.743	12.04
11.90	1.08	5210.56	26.427	11.97
12.25	1.05	5210.46	26.113	11.90
12.60	1.02	5210.37	25.800	11.83
12.95	1.00	5210.28	25.488	11.76
13.30	.97	5210.19	25.177	11.69
13.65	.96	5210.10	24.868	11.62
14.00	.94	5210.00	24.560	11.55
14.35	.92	5209.91	24.254	11.49
14.70	.91	5209.82	23.949	11.42
15.05	.89	5209.73	23.646	11.35
15.40	.88	5209.64	23.344	11.28
15.75	.87	5209.56	23.044	11.22
16.10	.85	5209.47	22.745	11.15
16.45	.84	5209.38	22.449	11.08
16.80	.83	5209.29	22.153	11.02
17.15	.82	5209.20	21.859	10.95
17.50	.81	5209.12	21.566	10.89
17.85	.79	5209.03	21.276	10.82
18.20	.78	5208.94	20.986	10.75
18.55	.78	5208.85	20.699	10.67
18.90	.77	5208.76	20.414	10.60
19.25	.76	5208.67	20.130	10.52

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
19.60	.75	5208.58	19.849	10.45
19.95	.74	5208.50	19.570	10.37
20.30	.73	5208.41	19.292	10.30
20.65	.72	5208.32	19.016	10.22
21.00	.71	5208.23	18.742	10.15
21.35	.71	5208.15	18.470	10.08
21.70	.70	5208.06	18.200	10.00
22.05	.69	5207.98	17.932	9.93
22.40	.68	5207.90	17.666	9.86
22.75	.67	5207.81	17.401	9.79
23.10	.67	5207.73	17.139	9.72
23.45	.66	5207.65	16.878	9.65
23.80	.65	5207.56	16.619	9.58
24.15	.50	5207.48	16.361	9.51
24.50	.14	5207.40	16.095	9.44
24.85	.07	5207.31	15.825	9.37
25.20	.05	5207.23	15.557	9.30
25.55	.03	5207.15	15.290	9.22
25.90	.02	5207.06	15.025	9.15
26.25	.02	5206.98	14.762	9.08
26.60	.01	5206.89	14.502	8.98
26.95	.01	5206.80	14.243	8.88
27.30	.01	5206.72	13.988	8.79
27.65	.00	5206.63	13.735	8.69
28.00	.00	5206.55	13.485	8.60
28.35	.00	5206.46	13.238	8.51
28.70	.00	5206.38	12.993	8.42
29.05	.00	5206.30	12.751	8.33
29.40	.00	5206.22	12.511	8.24
29.75	.00	5206.14	12.274	8.15

100 YEAR
SOUTH POND
EXISTING
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30.10	.00	5206.06	12.040	8.07
30.45	.00	5205.98	11.808	7.98
30.80	.00	5205.90	11.578	7.89
31.15	.00	5205.83	11.351	7.81
31.50	.00	5205.75	11.126	7.73
31.85	.00	5205.68	10.904	7.64
32.20	.00	5205.60	10.684	7.56
32.55	.00	5205.53	10.466	7.48
32.90	.00	5205.46	10.251	7.40
33.25	.00	5205.38	10.038	7.32
33.60	.00	5205.31	9.827	7.25
33.95	.00	5205.24	9.619	7.17
34.30	.00	5205.17	9.413	7.09
34.65	.00	5205.10	9.209	7.02
35.00	.00	5205.04	9.007	6.94
35.35	.00	5204.97	8.807	6.86
35.70	.00	5204.90	8.610	6.76
36.05	.00	5204.83	8.416	6.66
36.40	.00	5204.76	8.225	6.57
36.75	.00	5204.69	8.036	6.47
37.10	.00	5204.63	7.851	6.38
37.45	.00	5204.56	7.667	6.29
37.80	.00	5204.50	7.487	6.20
38.15	.00	5204.44	7.309	6.11
38.50	.00	5204.37	7.133	6.02
38.85	.00	5204.31	6.960	5.94

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
39.20	.00	5204.25	6.790	5.85
39.55	.00	5204.19	6.622	5.77
39.90	.00	5204.13	6.456	5.69
40.25	.00	5204.08	6.293	5.61
40.60	.00	5204.02	6.132	5.53
40.95	.00	5203.96	5.973	5.43
41.30	.00	5203.90	5.818	5.32
41.65	.00	5203.85	5.666	5.21
42.00	.00	5203.79	5.516	5.11
42.35	.00	5203.74	5.370	5.00
42.70	.00	5203.69	5.227	4.90
43.05	.00	5203.63	5.086	4.81
43.40	.00	5203.58	4.949	4.71
43.75	.00	5203.53	4.814	4.62
44.10	.00	5203.49	4.682	4.52
44.45	.00	5203.44	4.552	4.43
44.80	.00	5203.39	4.425	4.34
45.15	.00	5203.35	4.301	4.26
45.50	.00	5203.30	4.179	4.17
45.85	.00	5203.26	4.059	4.09
46.20	.00	5203.21	3.942	4.01
46.55	.00	5203.17	3.828	3.93
46.90	.00	5203.13	3.715	3.85
47.25	.00	5203.09	3.605	3.77
47.60	.00	5203.05	3.497	3.70
47.95	.00	5203.01	3.391	3.62
48.30	.00	5202.97	3.287	3.56
48.65	.00	5202.93	3.185	3.49
49.00	.00	5202.89	3.085	3.43
49.35	.00	5202.85	2.987	3.37

100 YEAR
SOUTH POND
EXISTING
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49.70	.00	5202.91	2.890	3.31
50.05	.00	5202.77	2.795	3.25
50.40	.00	5202.73	2.702	3.19
50.75	.00	5202.69	2.611	3.14
51.10	.00	5202.65	2.521	3.08
51.45	.00	5202.62	2.432	3.03
51.80	.00	5202.58	2.346	2.97
52.15	.00	5202.55	2.260	2.92
52.50	.00	5202.51	2.177	2.87
52.85	.00	5202.48	2.094	2.82
53.20	.00	5202.45	2.014	2.77
53.55	.00	5202.41	1.934	2.72
53.90	.00	5202.38	1.856	2.67
54.25	.00	5202.35	1.780	2.62
54.60	.00	5202.32	1.705	2.58
54.95	.00	5202.29	1.631	2.53
55.30	.00	5202.26	1.558	2.49
55.65	.00	5202.23	1.487	2.44
56.00	.00	5202.20	1.417	2.40
56.35	.00	5202.17	1.348	2.36
56.70	.00	5202.14	1.281	2.31
57.05	.00	5202.12	1.214	2.27
57.40	.00	5202.09	1.149	2.23
57.75	.00	5202.06	1.085	2.19
58.10	.00	5202.04	1.022	2.15
58.45	.00	5202.01	.960	2.12

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
58.80	.00	5201.98	.900	2.07
59.15	.00	5201.94	.840	2.02
59.50	.00	5201.90	.783	1.98
59.85	.00	5201.86	.726	1.93
60.20	.00	5201.82	.671	1.89
60.55	.00	5201.79	.617	1.84
60.90	.00	5201.75	.564	1.80
61.25	.00	5201.71	.513	1.76
61.60	.00	5201.68	.463	1.72
61.95	.00	5201.65	.413	1.68
62.30	.00	5201.62	.366	1.64
62.65	.00	5201.58	.319	1.60
63.00	.00	5201.55	.273	1.56
63.35	.00	5201.52	.228	1.53
63.70	.00	5201.47	.185	1.42
64.05	.00	5201.38	.148	1.14
64.40	.00	5201.30	.118	.91
64.75	.00	5201.24	.095	.73
65.10	.00	5201.19	.076	.58
65.45	.00	5201.16	.061	.47
65.80	.00	5201.12	.049	.37
66.15	.00	5201.10	.039	.30
66.50	.00	5201.08	.031	.24
66.85	.00	5201.06	.025	.19
67.20	.00	5201.05	.020	.15
67.55	.00	5201.04	.016	.12
67.90	.00	5201.03	.013	.10
68.25	.00	5201.03	.010	.08
68.60	.00	5201.02	.008	.06
68.95	.00	5201.02	.007	.05

100 YEAR
SOUTH POND
EXISTING
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69.30	.00	5201.01	.003	.04
69.65	.00	5201.01	.004	.03
70.00	.00	5201.01	.003	.03
70.35	.00	5201.01	.003	.02
70.70	.00	5201.01	.002	.02
71.05	.00	5201.00	.002	.01
71.40	.00	5201.00	.001	.01
71.75	.00	5201.00	.001	.01
72.10	.00	5201.00	.001	.01
72.45	.00	5201.00	.001	.01
72.80	.00	5201.00	.001	.00
73.15	.00	5201.00	.000	.00
73.50	.00	5201.00	.000	.00
73.85	.00	5201.00	.000	.00
74.20	.00	5201.00	.000	.00
74.55	.00	5201.00	.000	.00
74.90	.00	5201.00	.000	.00

PEAK DISCHARGE = 12.988 CFS - PEAK OCCURS AT HOUR 5.25
MAXIMUM WATER SURFACE ELEVATION = 5211.982
MAXIMUM STORAGE = 31.4035 AC-FT INCREMENTAL TIME= .350000HRS

100 YEAR
SOUTH POND
EXISTING
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*POND AT 98TH AND CENTRAL SOUTHERNMOST POND - ORIFICE (A=.86) 13CFS MAX CL
ROUTE RESERVOIR ID=10 HYD=501 IN ID=6 CODE=5.7

OUTFLOW	STORAGE	ELEV
0	0	5201
1.5	0.195	5201.5
2.1	0.934	5202
3.6	3.359	5203
5.5	6.080	5204
6.9	8.897	5205
9.1	14.828	5207
10.8	21.167	5209
12.3	27.925	5211
13.0	31.465	5212
46.1	31.825	5212.1
1073.6	35.115	5213
3056.2	38.877	5214
5685.8	42.753	5215
8873.4	46.743	5216

SOUTH 1/2 PMF

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5201.00	.000	.00
.23	.00	5201.00	.000	.00
.47	.14	5201.00	.000	.00
.70	3.94	5201.09	.035	.27
.93	6.77	5201.33	.129	.99
1.17	9.16	5201.54	.256	1.55
1.40	11.63	5201.66	.425	1.69
1.63	14.23	5201.80	.640	1.86
1.87	16.96	5201.98	.903	2.07
2.10	278.75	5202.33	1.730	2.59
2.33	2935.68	5213.31	36.277	1685.76
2.57	1602.81	5213.32	36.326	1711.79
2.80	1315.30	5213.15	35.663	1362.34
3.03	1011.58	5212.97	35.012	1041.53
3.27	999.34	5212.94	34.897	1005.42
3.50	778.93	5212.78	34.320	825.41
3.73	515.62	5212.57	33.533	579.38
3.97	286.16	5212.33	32.683	313.96
4.20	194.47	5212.24	32.339	206.49
4.43	148.02	5212.19	32.171	154.05
4.67	124.40	5212.17	32.085	127.45
4.90	111.57	5212.16	32.040	113.23
5.13	104.81	5212.15	32.016	105.73
5.37	100.68	5212.15	32.001	101.20
5.60	98.17	5212.15	31.993	98.67
5.83	95.00	5212.14	31.983	95.50
6.07	92.19	5212.14	31.974	92.71
6.30	84.33	5212.13	31.951	85.54
6.53	80.06	5212.13	31.936	80.62
6.77	77.27	5212.13	31.926	77.70
7.00	74.89	5212.13	31.918	75.27
7.23	72.70	5212.12	31.911	73.06
7.47	70.54	5212.12	31.904	70.90
7.70	68.42	5212.12	31.898	68.76
7.93	66.37	5212.12	31.891	66.71
8.17	64.40	5212.12	31.885	64.72

1/2 PMF SOUTH POND EXISTING 1 OF 7

8.40	61.56	5212.11	31.876	62.06
8.63	58.64	5212.11	31.867	59.11
8.87	55.95	5212.11	31.858	56.30
9.10	53.19	5212.11	31.849	53.63
9.33	50.79	5212.10	31.841	51.17
9.57	48.61	5212.10	31.834	48.97
9.80	46.53	5212.10	31.827	46.87
10.03	44.53	5212.10	31.817	45.39
10.27	42.62	5212.09	31.798	43.66
10.50	39.80	5212.09	31.774	41.40
10.73	36.71	5212.08	31.741	38.41
10.97	33.86	5212.07	31.709	35.47
11.20	31.23	5212.06	31.680	32.72
11.43	28.81	5212.05	31.652	30.18
11.67	26.57	5212.04	31.626	27.84
11.90	24.27	5212.04	31.602	25.63
12.13	21.49	5212.03	31.574	23.00
12.37	19.03	5212.02	31.546	20.42
12.60	16.85	5212.02	31.520	18.09
12.83	14.92	5212.01	31.498	16.02

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
13.07	13.22	5212.00	31.478	14.19
13.30	11.43	5212.00	31.457	13.00
13.53	9.85	5211.98	31.411	12.99
13.77	8.49	5211.96	31.337	12.97
14.00	7.31	5211.94	31.239	12.96
14.23	6.30	5211.90	31.121	12.93
14.47	5.43	5211.86	30.984	12.90
14.70	4.68	5211.82	30.833	12.86
14.93	4.03	5211.77	30.669	12.84
15.17	3.47	5211.73	30.494	12.81
15.40	2.99	5211.67	30.309	12.77
15.63	2.44	5211.62	30.116	12.73
15.87	2.00	5211.56	29.913	12.69
16.10	1.63	5211.50	29.704	12.65
16.33	1.33	5211.44	29.489	12.61
16.57	1.09	5211.38	29.269	12.57
16.80	.89	5211.32	29.046	12.52
17.03	.73	5211.25	28.821	12.48
17.27	.60	5211.19	28.593	12.43
17.50	.49	5211.12	28.365	12.39
17.73	.40	5211.06	28.135	12.34
17.97	.33	5210.99	27.904	12.30
18.20	.27	5210.93	27.673	12.24
18.43	.22	5210.86	27.442	12.19
18.67	.18	5210.79	27.211	12.14
18.90	.15	5210.72	26.981	12.09
19.13	.12	5210.65	26.751	12.04
19.37	.10	5210.58	26.521	11.99
19.60	.08	5210.52	26.292	11.94
19.83	.06	5210.45	26.064	11.89
20.07	.00	5210.38	25.836	11.84
20.30	.00	5210.31	25.608	11.79
20.53	.00	5210.25	25.381	11.74
20.77	.00	5210.18	25.155	11.69
21.00	.00	5210.11	24.931	11.64
21.23	.00	5210.05	24.707	11.59

1/2 PMF
SOUTH POND
EXISTING
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21.47	.00	5209.98	24.484	11.54
21.70	.00	5209.92	24.262	11.49
21.93	.00	5209.85	24.041	11.44
22.17	.00	5209.79	23.821	11.39
22.40	.00	5209.72	23.601	11.34
22.63	.00	5209.66	23.383	11.29
22.87	.00	5209.59	23.166	11.24
23.10	.00	5209.53	22.950	11.20
23.33	.00	5209.46	22.734	11.15
23.57	.00	5209.40	22.520	11.10
23.80	.00	5209.34	22.306	11.05
24.03	.00	5209.27	22.093	11.01
24.27	.00	5209.21	21.882	10.96
24.50	.00	5209.15	21.671	10.91
24.73	.00	5209.09	21.461	10.87
24.97	.00	5209.02	21.252	10.82
25.20	.00	5208.96	21.044	10.77
25.43	.00	5208.90	20.836	10.71
25.67	.00	5208.83	20.630	10.66
25.90	.00	5208.77	20.426	10.60

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
26.13	.00	5208.70	20.222	10.55
26.37	.00	5208.64	20.019	10.49
26.60	.00	5208.57	19.817	10.44
26.83	.00	5208.51	19.616	10.38
27.07	.00	5208.45	19.416	10.33
27.30	.00	5208.38	19.218	10.28
27.53	.00	5208.32	19.020	10.22
27.77	.00	5208.26	18.823	10.17
28.00	.00	5208.20	18.628	10.12
28.23	.00	5208.14	18.433	10.07
28.47	.00	5208.08	18.240	10.01
28.70	.00	5208.02	18.047	9.96
28.93	.00	5207.96	17.855	9.91
29.17	.00	5207.90	17.665	9.86
29.40	.00	5207.83	17.475	9.81
29.63	.00	5207.78	17.286	9.76
29.87	.00	5207.72	17.099	9.71
30.10	.00	5207.66	16.912	9.66
30.33	.00	5207.60	16.726	9.61
30.57	.00	5207.54	16.541	9.56
30.80	.00	5207.48	16.357	9.51
31.03	.00	5207.42	16.174	9.46
31.27	.00	5207.37	15.993	9.41
31.50	.00	5207.31	15.811	9.36
31.73	.00	5207.25	15.631	9.32
31.97	.00	5207.20	15.452	9.27
32.20	.00	5207.14	15.274	9.22
32.43	.00	5207.08	15.097	9.17
32.67	.00	5207.03	14.920	9.12
32.90	.00	5206.97	14.745	9.07
33.13	.00	5206.91	14.570	9.00
33.37	.00	5206.85	14.397	8.94
33.60	.00	5206.80	14.226	8.88
33.83	.00	5206.74	14.055	8.81
34.07	.00	5206.68	13.886	8.75
34.30	.00	5206.63	13.718	8.69

1/2 PMF
SOUTH POND
EXISTING
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34.53	.00	5206.57	13.531	8.63
34.77	.00	5206.51	13.385	8.56
35.00	.00	5206.46	13.220	8.50
35.23	.00	5206.40	13.057	8.44
35.47	.00	5206.35	12.895	8.38
35.70	.00	5206.29	12.734	8.32
35.93	.00	5206.24	12.574	8.26
36.17	.00	5206.19	12.415	8.20
36.40	.00	5206.13	12.257	8.15
36.63	.00	5206.08	12.101	8.09
36.87	.00	5206.03	11.945	8.03
37.10	.00	5205.98	11.791	7.97
37.33	.00	5205.92	11.638	7.92
37.57	.00	5205.87	11.486	7.86
37.80	.00	5205.82	11.335	7.80
38.03	.00	5205.77	11.185	7.75
38.27	.00	5205.72	11.036	7.69
38.50	.00	5205.67	10.888	7.64
38.73	.00	5205.62	10.741	7.58
38.97	.00	5205.57	10.596	7.53

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
39.20	.00	5205.52	10.451	7.48
39.43	.00	5205.48	10.307	7.42
39.67	.00	5205.43	10.165	7.37
39.90	.00	5205.38	10.023	7.32
40.13	.00	5205.33	9.882	7.27
40.37	.00	5205.29	9.743	7.21
40.60	.00	5205.24	9.604	7.16
40.83	.00	5205.19	9.466	7.11
41.07	.00	5205.15	9.330	7.06
41.30	.00	5205.10	9.194	7.01
41.53	.00	5205.05	9.059	6.96
41.77	.00	5205.01	8.926	6.91
42.00	.00	5204.96	8.793	6.85
42.23	.00	5204.92	8.662	6.78
42.47	.00	5204.87	8.531	6.72
42.70	.00	5204.82	8.403	6.65
42.93	.00	5204.78	8.275	6.59
43.17	.00	5204.73	8.148	6.53
43.40	.00	5204.69	8.023	6.47
43.63	.00	5204.65	7.899	6.40
43.87	.00	5204.60	7.776	6.34
44.10	.00	5204.56	7.654	6.28
44.33	.00	5204.52	7.534	6.22
44.57	.00	5204.47	7.414	6.16
44.80	.00	5204.43	7.296	6.10
45.03	.00	5204.39	7.179	6.05
45.27	.00	5204.35	7.063	5.99
45.50	.00	5204.31	6.948	5.93
45.73	.00	5204.27	6.834	5.87
45.97	.00	5204.23	6.721	5.82
46.20	.00	5204.19	6.610	5.76
46.43	.00	5204.15	6.499	5.71
46.67	.00	5204.11	6.390	5.65
46.90	.00	5204.07	6.281	5.60
47.13	.00	5204.03	6.174	5.55
47.37	.00	5204.00	6.067	5.49

1/2 PMF
SOUTH POND
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47.60	.00	5203.96	5.962	5.42
47.83	.00	5203.92	5.858	5.35
48.07	.00	5203.88	5.756	5.27
48.30	.00	5203.84	5.655	5.20
48.53	.00	5203.81	5.555	5.13
48.77	.00	5203.77	5.457	5.06
49.00	.00	5203.74	5.360	5.00
49.23	.00	5203.70	5.264	4.93
49.47	.00	5203.67	5.170	4.86
49.70	.00	5203.63	5.076	4.80
49.93	.00	5203.60	4.985	4.74
50.17	.00	5203.56	4.894	4.67
50.40	.00	5203.53	4.804	4.61
50.63	.00	5203.50	4.716	4.55
50.87	.00	5203.47	4.629	4.49
51.10	.00	5203.44	4.543	4.43
51.33	.00	5203.40	4.458	4.37
51.57	.00	5203.37	4.375	4.31
51.80	.00	5203.34	4.292	4.25
52.03	.00	5203.31	4.211	4.19

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
52.27	.00	5203.28	4.130	4.14
52.50	.00	5203.25	4.051	4.08
52.73	.00	5203.23	3.973	4.03
52.97	.00	5203.20	3.896	3.97
53.20	.00	5203.17	3.819	3.92
53.43	.00	5203.14	3.744	3.87
53.67	.00	5203.11	3.670	3.82
53.90	.00	5203.09	3.597	3.77
54.13	.00	5203.06	3.525	3.72
54.37	.00	5203.03	3.454	3.67
54.60	.00	5203.01	3.384	3.62
54.83	.00	5202.98	3.314	3.57
55.07	.00	5202.95	3.246	3.53
55.30	.00	5202.93	3.178	3.49
55.53	.00	5202.90	3.111	3.45
55.77	.00	5202.87	3.045	3.41
56.00	.00	5202.84	2.980	3.37
56.23	.00	5202.82	2.915	3.33
56.47	.00	5202.79	2.852	3.29
56.70	.00	5202.76	2.789	3.25
56.93	.00	5202.74	2.726	3.21
57.17	.00	5202.71	2.665	3.17
57.40	.00	5202.69	2.604	3.13
57.63	.00	5202.66	2.544	3.10
57.87	.00	5202.64	2.485	3.06
58.10	.00	5202.62	2.426	3.02
58.33	.00	5202.59	2.368	2.99
58.57	.00	5202.57	2.311	2.95
58.80	.00	5202.54	2.254	2.92
59.03	.00	5202.52	2.198	2.88
59.27	.00	5202.50	2.143	2.85
59.50	.00	5202.48	2.089	2.81
59.73	.00	5202.45	2.035	2.78
59.97	.00	5202.43	1.981	2.75
60.20	.00	5202.41	1.929	2.72
60.43	.00	5202.39	1.877	2.68

1/2 PMF
SOUTH POND
EXISTING
5 OF 7

60.67	.00	5202.37	1.825	2.65
60.90	.00	5202.35	1.774	2.62
61.13	.00	5202.33	1.724	2.59
61.37	.00	5202.31	1.674	2.56
61.60	.00	5202.29	1.625	2.53
61.83	.00	5202.27	1.577	2.50
62.07	.00	5202.25	1.529	2.47
62.30	.00	5202.23	1.482	2.44
62.53	.00	5202.21	1.435	2.41
62.77	.00	5202.19	1.389	2.38
63.00	.00	5202.17	1.343	2.35
63.23	.00	5202.15	1.298	2.33
63.47	.00	5202.13	1.254	2.30
63.70	.00	5202.11	1.209	2.27
63.93	.00	5202.10	1.166	2.24
64.17	.00	5202.08	1.123	2.22
64.40	.00	5202.06	1.080	2.19
64.63	.00	5202.04	1.038	2.16
64.87	.00	5202.03	.997	2.14
65.10	.00	5202.01	.956	2.11

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
65.33	.00	5201.99	.915	2.08
65.57	.00	5201.96	.876	2.05
65.80	.00	5201.93	.836	2.02
66.03	.00	5201.91	.798	1.99
66.27	.00	5201.88	.760	1.96
66.50	.00	5201.86	.722	1.93
66.73	.00	5201.83	.685	1.90
66.97	.00	5201.81	.649	1.87
67.20	.00	5201.78	.613	1.84
67.43	.00	5201.76	.578	1.81
67.67	.00	5201.74	.543	1.78
67.90	.00	5201.71	.509	1.76
68.13	.00	5201.69	.476	1.73
68.37	.00	5201.67	.443	1.70
68.60	.00	5201.65	.410	1.67
68.83	.00	5201.62	.378	1.65
69.07	.00	5201.60	.346	1.62
69.30	.00	5201.58	.315	1.60
69.53	.00	5201.56	.285	1.57
69.77	.00	5201.54	.255	1.55
70.00	.00	5201.52	.225	1.52
70.23	.00	5201.50	.196	1.50
70.47	.00	5201.43	.169	1.30
70.70	.00	5201.37	.146	1.12
70.93	.00	5201.32	.126	.97
71.17	.00	5201.28	.108	.83
71.40	.00	5201.24	.093	.72
71.63	.00	5201.21	.080	.62
71.87	.00	5201.18	.069	.53
72.10	.00	5201.15	.060	.46
72.33	.00	5201.13	.052	.40
72.57	.00	5201.11	.044	.34
72.80	.00	5201.10	.038	.29
73.03	.00	5201.08	.033	.25
73.27	.00	5201.07	.028	.22
73.50	.00	5201.06	.025	.19

1/2 PMF
SOUTH POND
EXISTING
6 OF 7

73.73	.00	5201.05	.021	.16
73.97	.00	5201.05	.018	.14
74.20	.00	5201.04	.016	.12
74.43	.00	5201.03	.014	.10
74.67	.00	5201.03	.012	.09
74.90	.00	5201.03	.010	.08
75.13	.00	5201.02	.009	.07
75.37	.00	5201.02	.007	.06
75.60	.00	5201.02	.006	.05
75.83	.00	5201.01	.006	.04
76.07	.00	5201.01	.005	.04
76.30	.00	5201.01	.004	.03
76.53	.00	5201.01	.004	.03
76.77	.00	5201.01	.003	.02
77.00	.00	5201.01	.003	.02
77.23	.00	5201.01	.002	.02
77.47	.00	5201.00	.002	.02
77.70	.00	5201.00	.002	.01
77.93	.00	5201.00	.001	.01
78.17	.00	5201.00	.001	.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
78.40	.00	5201.00	.001	.01
78.63	.00	5201.00	.001	.01
78.87	.00	5201.00	.001	.01
79.10	.00	5201.00	.001	.01
79.33	.00	5201.00	.001	.00
79.57	.00	5201.00	.001	.00
79.80	.00	5201.00	.000	.00
80.03	.00	5201.00	.000	.00
80.27	.00	5201.00	.000	.00
80.50	.00	5201.00	.000	.00
80.73	.00	5201.00	.000	.00
80.97	.00	5201.00	.000	.00
81.20	.00	5201.00	.000	.00
81.43	.00	5201.00	.000	.00
81.67	.00	5201.00	.000	.00

PEAK DISCHARGE = 1711.791 CFS - PEAK OCCURS AT HOUR 2.57
MAXIMUM WATER SURFACE ELEVATION = 5213.322
MAXIMUM STORAGE = 34.3260 AC-FT INCREMENTAL TIME= .233331

1/2 PMF
SOUTH POND
EXISTING
7 OF 7

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*POND AT 98TH AND CENTRAL SOUTHERNMOST POND - 36" OUTFALL
ROUTE RESERVOIR ID=10 HYD=501 IN ID=6 CODE=5

OUTFLOW	STORAGE	ELEV
0	0	5201
9	0.195	5201.5
10	0.934	5202
18	3.359	5203
35	6.080	5204
46	8.897	5205
70	14.828	5207
85	21.167	5209
97	27.925	5211
102	31.465	5212
135	31.825	5212.1
1168	35.115	5213
3157	38.877	5214
5791	42.753	5215
8980	46.743	5216

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5201.00	.000	.00
.25	.00	5201.00	.000	.00
.50	.00	5201.00	.000	.00
.75	.00	5201.00	.000	.00
1.00	.00	5201.00	.000	.00
1.25	33.35	5201.19	.075	3.47
1.50	750.97	5204.38	7.141	39.14
1.75	370.06	5207.71	17.091	75.36
2.00	255.82	5209.17	21.730	86.00
2.25	274.84	5210.53	26.347	94.20
2.50	119.63	5211.07	28.157	97.33
2.75	101.28	5211.12	28.341	97.59
3.00	96.60	5211.12	28.363	97.62
3.25	94.27	5211.11	28.316	97.55
3.50	93.03	5211.09	28.236	97.44
3.75	92.33	5211.06	28.138	97.30
4.00	91.62	5211.03	28.030	97.15
4.25	91.01	5211.00	27.911	96.97
4.50	90.51	5210.96	27.784	96.75
4.75	89.66	5210.92	27.652	96.51
5.00	87.52	5210.87	27.491	96.23
5.25	85.52	5210.81	27.293	95.88
5.50	83.56	5210.74	27.063	95.47
5.75	81.66	5210.67	26.802	95.01
6.00	79.78	5210.58	26.512	94.49
6.25	79.60	5210.49	26.210	93.95
6.50	78.02	5210.40	25.904	93.41
6.75	76.09	5210.30	25.573	92.82
7.00	74.13	5210.20	25.213	92.19
7.25	72.22	5210.08	24.828	91.50
7.50	70.32	5209.96	24.417	90.77
7.75	68.10	5209.83	23.982	90.00

100 YEAR SOUTH POND ULTIMATE 1 OF 3

8.00	65.33	5209.69	23.509	89.16
8.25	62.71	5209.54	22.999	88.25
8.50	60.22	5209.38	22.455	87.29
8.75	57.83	5209.21	21.881	86.27
9.00	55.65	5209.03	21.281	85.20
9.25	53.69	5208.84	20.664	83.81
9.50	51.82	5208.64	20.038	82.33
9.75	50.01	5208.44	19.404	80.83
10.00	48.27	5208.24	18.765	79.32
10.25	46.62	5208.04	18.122	77.80
10.50	43.88	5207.83	17.466	76.24
10.75	41.28	5207.62	16.787	74.64
11.00	38.90	5207.40	16.090	72.99
11.25	36.67	5207.17	15.380	71.31
11.50	34.63	5206.94	14.661	69.32
11.75	32.71	5206.71	13.954	66.46
12.00	30.98	5206.47	13.268	63.69
12.25	29.40	5206.25	12.603	61.00
12.50	27.35	5206.03	11.957	58.38
12.75	25.42	5205.82	11.323	55.82
13.00	23.74	5205.61	10.703	53.31
13.25	22.20	5205.41	10.101	50.87
13.50	20.86	5205.21	9.520	48.52
13.75	19.67	5205.02	8.959	46.25

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	18.59	5204.83	8.420	44.14
14.25	17.67	5204.65	7.904	42.12
14.50	16.79	5204.47	7.409	40.19
14.75	15.90	5204.30	6.936	38.34
15.00	15.13	5204.14	6.483	36.57
15.25	14.41	5203.99	6.050	34.81
15.50	13.83	5203.84	5.649	32.31
15.75	13.33	5203.71	5.285	30.04
16.00	12.86	5203.59	4.957	27.98
16.25	12.42	5203.48	4.659	26.12
16.50	12.06	5203.38	4.390	24.44
16.75	11.72	5203.29	4.147	22.92
17.00	11.45	5203.21	3.927	21.55
17.25	11.16	5203.14	3.728	20.31
17.50	10.96	5203.07	3.550	19.19
17.75	10.69	5203.01	3.388	18.18
18.00	10.57	5202.95	3.238	17.60
18.25	10.35	5202.89	3.095	17.13
18.50	10.19	5202.83	2.959	16.68
18.75	10.05	5202.78	2.828	16.25
19.00	9.92	5202.73	2.703	15.83
19.25	9.79	5202.68	2.583	15.44
19.50	9.68	5202.63	2.469	15.06
19.75	9.58	5202.59	2.360	14.70
20.00	9.43	5202.54	2.256	14.36
20.25	9.35	5202.50	2.156	14.03
20.50	9.24	5202.46	2.061	13.72
20.75	9.14	5202.43	1.971	13.42
21.00	9.04	5202.39	1.884	13.13
21.25	8.94	5202.36	1.802	12.86
21.50	8.88	5202.33	1.723	12.60
21.75	8.79	5202.29	1.648	12.35

100 YEAR
SOUTH POND
ULTIMATE
2 OF 3

22.00	8.71	5202.26	1.576	12.12
22.25	8.65	5202.24	1.507	11.89
22.50	8.60	5202.21	1.442	11.67
22.75	8.47	5202.18	1.379	11.47
23.00	8.44	5202.16	1.319	11.27
23.25	8.37	5202.14	1.262	11.08
23.50	8.29	5202.11	1.206	10.90
23.75	8.21	5202.09	1.154	10.73
24.00	8.16	5202.07	1.103	10.56
24.25	5.93	5202.04	1.035	10.33
24.50	4.97	5202.00	.937	10.01
24.75	4.25	5201.93	.826	9.85
25.00	3.63	5201.85	.706	9.69
25.25	3.10	5201.76	.577	9.52
25.50	2.53	5201.67	.440	9.33
25.75	2.04	5201.57	.297	9.14
26.00	1.65	5201.40	.154	7.13
26.25	1.33	5201.20	.079	3.64
26.50	1.07	5201.12	.046	2.12
26.75	.86	5201.08	.030	1.40
27.00	.70	5201.06	.022	1.01
27.25	.56	5201.04	.017	.77
27.50	.45	5201.03	.013	.60
27.75	.36	5201.03	.010	.48

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
28.00	.29	5201.02	.008	.38
28.25	.24	5201.02	.007	.31
28.50	.19	5201.01	.005	.25
28.75	.15	5201.01	.004	.20
29.00	.12	5201.01	.003	.16
29.25	.10	5201.01	.003	.13
29.50	.08	5201.01	.002	.10
29.75	.06	5201.00	.002	.08

PEAK DISCHARGE = 97.623 CFS - PEAK OCCURS AT HOUR 2.95
MAXIMUM WATER SURFACE ELEVATION = 5211.125
MAXIMUM STORAGE = 28.3659 AC-FT INCREMENTAL TIME= .0

100 YEAR
SOUTH POND
ULTIMATE
3 OF 3

INPUT FILE = abomflo.dat

*POND AT 9STH AND CENTRAL SOUTHERNMOST POND - 36" OUTFALL
ROUTE RESERVOIR ID=10 HYD=501 IN ID=6 CODE=5

OUTFLOW	STORAGE	ELEV
0	0	5201
9	0.195	5201.5
10	0.934	5202
18	3.359	5203
35	6.080	5204
44	8.897	5205
70	14.828	5207
85	21.167	5209
97	27.925	5211
102	31.465	5212
135	31.825	5212.1
1168	35.115	5213
3157	38.877	5214
5791	42.753	5215
8980	46.743	5216

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5201.00	.000	.00
.17	.00	5201.00	.000	.00
.33	.00	5201.00	.000	.00
.50	4.38	5201.03	.010	.46
.67	21.66	5201.39	.152	7.02
.83	32.72	5201.64	.404	9.28
1.00	44.79	5201.91	.806	9.83
1.17	56.94	5202.18	1.361	11.41
1.33	69.41	5202.46	2.061	13.72
1.50	81.06	5202.81	2.889	16.45
1.67	93.73	5203.18	3.839	21.00
1.83	106.04	5203.56	4.885	27.53
2.00	118.34	5203.97	6.001	34.51
2.17	1578.88	5206.19	12.414	60.23
2.33	5546.88	5214.48	40.740	4423.27
2.50	3598.69	5214.25	39.849	3817.30
2.67	2377.41	5213.67	37.635	2500.32
2.83	1833.06	5213.36	36.477	1888.26
3.00	1576.60	5213.22	35.938	1603.25
3.17	1559.12	5213.19	35.834	1548.39
3.33	1498.82	5213.18	35.774	1516.53
3.50	1224.42	5213.05	35.309	1270.64
3.67	936.75	5212.85	34.570	996.91
3.83	629.25	5212.59	33.600	692.42
4.00	442.86	5212.40	32.925	480.37
4.17	331.71	5212.29	32.522	353.89
4.33	264.08	5212.22	32.280	277.88
4.50	219.13	5212.18	32.123	228.47
4.67	188.72	5212.15	32.016	195.08
4.83	168.15	5212.13	31.944	172.36
5.00	154.73	5212.12	31.897	157.50
5.17	145.98	5212.11	31.866	147.77
5.33	140.26	5212.11	31.845	141.43
5.50	136.58	5212.10	31.832	137.30

1/2 PMF SOUTH POND ULTIMATE 1 OF 3

5.67	134.35	5212.10	31.824	134.93
5.83	133.08	5212.10	31.813	133.93
6.00	132.42	5212.09	31.803	133.01
6.17	105.65	5212.07	31.703	123.78
6.33	95.02	5212.01	31.498	104.99
6.50	92.66	5211.98	31.378	101.88
6.67	91.48	5211.94	31.243	101.69
6.83	90.83	5211.90	31.099	101.48
7.00	90.43	5211.85	30.951	101.27
7.17	90.15	5211.81	30.801	101.06
7.33	89.78	5211.77	30.650	100.85
7.50	89.37	5211.73	30.496	100.63
7.67	88.97	5211.68	30.340	100.41
7.83	88.58	5211.64	30.181	100.19
8.00	88.19	5211.59	30.020	99.96
8.17	87.17	5211.54	29.855	99.73
8.33	85.56	5211.49	29.672	99.47
8.50	83.97	5211.44	29.472	99.18
8.67	82.41	5211.38	29.253	98.88
8.83	80.89	5211.31	29.018	98.54
9.00	79.34	5211.24	28.767	98.19
9.17	77.77	5211.16	28.499	97.81

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
9.33	76.23	5211.08	28.215	97.41
9.50	74.71	5211.00	27.916	96.98
9.67	73.23	5210.90	27.603	96.43
9.83	71.76	5210.81	27.277	95.85
10.00	70.23	5210.71	26.939	95.25
10.17	68.73	5210.60	26.588	94.63
10.33	67.27	5210.50	26.226	93.98
10.50	65.84	5210.39	25.852	93.32
10.67	64.43	5210.27	25.469	92.64
10.83	62.49	5210.16	25.073	91.94
11.00	60.35	5210.03	24.657	91.20
11.17	58.29	5209.90	24.223	90.43
11.33	56.29	5209.77	23.772	89.63
11.50	54.37	5209.63	23.306	88.80
11.67	52.51	5209.49	22.824	87.94
11.83	50.84	5209.34	22.331	87.07
12.00	49.27	5209.20	21.827	86.17
12.17	47.75	5209.04	21.314	85.26
12.33	46.28	5208.88	20.795	84.12
12.50	44.85	5208.72	20.272	82.88
12.67	43.47	5208.55	19.747	81.64
12.83	42.13	5208.39	19.221	80.40
13.00	39.87	5208.22	18.687	79.13
13.17	37.63	5208.04	18.140	77.84
13.33	35.52	5207.87	17.580	76.51
13.50	33.53	5207.69	17.011	75.17
13.67	31.65	5207.51	16.434	73.80
13.83	29.87	5207.32	15.851	72.42
14.00	28.20	5207.14	15.262	71.03
14.17	26.62	5206.95	14.672	69.37
14.33	25.12	5206.75	14.089	67.01
14.50	23.09	5206.56	13.514	64.68
14.67	21.17	5206.36	12.944	62.37
14.83	19.41	5206.17	12.379	60.09

1/2 PMF
SOUTH POND
ULTIMATE
2 OF 3

15.00	17.80	5205.99	11.823	57.84
15.17	16.32	5205.80	11.277	55.63
15.33	14.96	5205.62	10.741	53.46
15.50	13.72	5205.44	10.216	51.34
15.67	12.48	5205.27	9.704	49.27
15.83	11.22	5205.10	9.203	47.24
16.00	10.09	5204.93	8.712	45.28
16.17	9.07	5204.76	8.234	43.41
16.33	8.16	5204.60	7.767	41.59
16.50	7.33	5204.44	7.313	39.81
16.67	6.59	5204.28	6.872	38.09
16.83	5.93	5204.13	6.445	36.43
17.00	5.33	5203.98	6.032	34.70
17.17	4.79	5203.84	5.641	32.26
17.33	4.31	5203.70	5.275	29.97
17.50	3.87	5203.58	4.933	27.84
17.67	3.48	5203.46	4.615	25.84
17.83	3.13	5203.35	4.317	23.99
18.00	2.75	5203.25	4.039	22.25
18.17	2.38	5203.15	3.780	20.63
18.33	2.06	5203.07	3.537	19.11
18.50	1.79	5202.98	3.309	17.84

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
18.67	1.55	5202.89	3.092	17.12
18.83	1.34	5202.80	2.881	16.42
19.00	1.16	5202.72	2.676	15.75
19.17	1.00	5202.64	2.479	15.10
19.33	.87	5202.56	2.288	14.47
19.50	.75	5202.48	2.104	13.86
19.67	.65	5202.41	1.927	13.28
19.83	.56	5202.34	1.756	12.71

PEAK DISCHARGE = 5497.650 CFS - PEAK OCCURS AT HOUR 2.37
MAXIMUM WATER SURFACE ELEVATION = 5214.889
MAXIMUM STORAGE = 42.3213 AC-FT INCREMENTAL TIME= .03

1/2 PMF
SOUTH POND
ULTIMATE
3 OF 3

APPENDIX 3

Calculations & Land Treatment Criteria

- PMP Data
- Freeboard Hydrograph Calculations
- Weir Calculations
- Land Treatment Criteria
- Basin Area Revisions and Time of Concentration

Greiner

Job AMOCE Project No. _____ Sheet _____ of _____

Description PMP NOTES Computed By [signature] Date 23 Dec 93

Checked By [signature] Date 5/24/94

USE DESIGN PARAMETERS BY STATE ENGINEER & COA
USE DPM Chapter 22.2 SECTION D. + Hydro model

Required both local + general storm

local storm section D.4

use Figures D-1 & D-2 to obtain rainfall
Zone K-9

D-1		D-2
11.63"	+	16"
1 hr		6 hr

Check w/ Eq. D-5 - use larger value for 6 hr PMP
D-2 vs Eq. D-5
$1.35(PMP_{60}) = 15.7$ — USE 16"

Total Area to ponds less than 1 Sq. mi.
so no adjustment per Figure D-3 is needed

GENERAL STORM section D.5

1-hr	6.0"	Figure	D-4
6-hr	12"	"	D-5
24 hr	19"	"	D-6

No area adjustments needed

Greiner

Job _____ Project No. _____ Sheet ____ of ____

Description _____ Computed By L Johnson Date 21 Dec 93

_____ Checked By [illegible] Date 1/24/94

Local Storm PMF to North Pond 13,237
" " to South Pond 6,332

General Storm PMF to North Pond 3493
to South Pond 2602

use Local Storm Values

Calculate the Spillway required to pass the PMF using the weir equation - 1st assume all PMF can get to pond

North Pond
length available - use whole len of embankment btwn. 2 ponds 280'

$Q = CLH^{3/2}$

$Q = 13,237$
$L = 280$
$C = 2.63$

$H = 6.86$ → NO WAY - look at upstream basin to see if all this flow will really get to pond at PMF

Lrqd if $H = 3'$ = 969'

South Pond - length available = ~~455'~~ 360' almost entire len of east side

$Q = 6332$
$L = 455$ ~~360~~
$C = 2.63$

$H = 3.04$ ~~3.55~~ - WON'T WORK - 3' Available H.

Lrqd if $H = 3'$ = 463

Greiner

Job _____ Project No. _____ Sheet _____ of _____

Description _____ Computed By _____ Date 21 Dec 93

_____ Checked By _____ Date 5/24/94

Reduce flow to north pond - since all drainage features we are assuming will be built in the future will probably not be built to carry PMF

Assumptions

102 + 108.1 → assume flow to pond is Q_{100} + assumed flow in 102nd St

Q_{100} = 703 cfs

Street flow 102nd St.

slope: $\frac{5250 - 5232}{1200} = 1.5\%$ (elev. info. from FEMA Flooding map)

assume street will be 48' wide + d = 0.87'

1/2 street Q = 85 per plate 22.3 D-3 DPM

total flow to pond = 703 + (2(85)) = 873

If this only is done Q = 6933

then H = 4.46 - too big

101 + 108.3 + 108.2 - assume Q to pond is 100yr + full street

Q_{100} = 683

street flow in Volcano -

slope = $\frac{5250 - 5230}{900} = 2.2\%$

assume street will be 48' wide + d = 0.87

1/2Q = 110

total flow = 683 + 220 = 903

Greiner

Job _____ Project No. G99110 Sheet ____ of ____

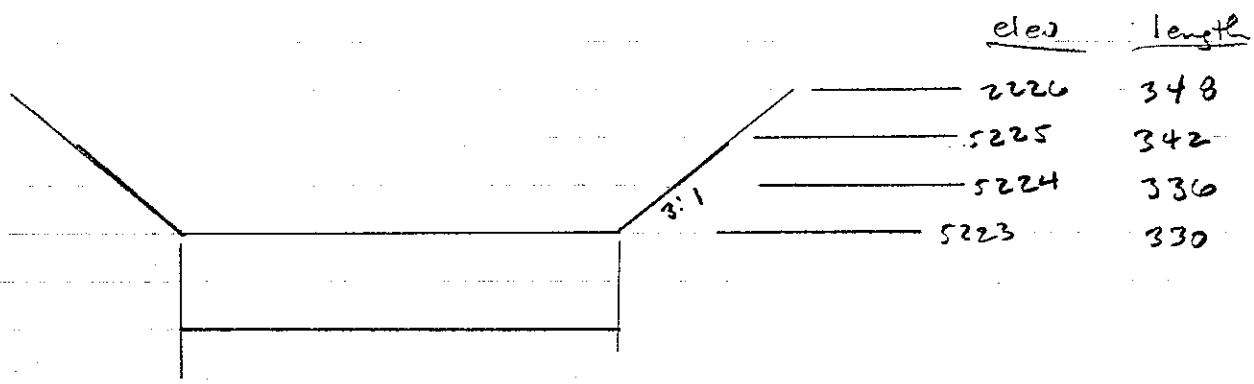
Description weir eq for Freeboard Hydrograph Computed By [signature] Date 4 Feb 94

Checked By [signature] Date 5-25-94

North Pond

Spillway elev = 5223

Elev	OUTFLOW (cfs)
5223	0
5224	876
5225	2522
5226	4715



Use weir equation $Q = CLH^{3/2}$

C = 2.63 per Brater + King 6th ed. 1976 p. 5-40 table 5-3

L	H	Q	elev
333*	1'	876	5224
336	2	2499	25
339	3	4633	26
330.3	0.1	27	23.1

* use average length

Greiner

Job _____ Project No. G000110 Sheet _____ of _____

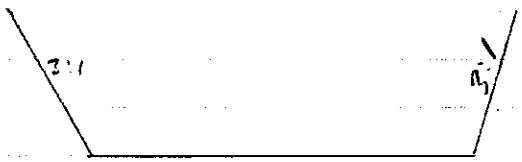
Description Weir eq. for Freeboard Hydrograph Computed By S Johnson Date 4 Feb 94

Checked By [signature] Date 5-25-94

SOUTH POND

Spillway elev = 5212

Elev	Outflow (cfs)
5212	0
5213	
5214	
5215	



	Length
5215	418
5214	412
5213	406
5212	400

use weir equation $Q = CLH^{3/2}$

C = 2.63 - Brater + King 6th ed. 1976 p. 5-40 Table 5-3

L*	H	Q	elev
403	1	1060	5213
409	2	3042	5214
415	3	5671	5215
400.3	.1	33	5112.1
421	4	8858	5216

*use average len.

Table 5-3. Values of C in the Formula $Q = CLH^{3/2}$ for Broad-crested Weirs

Measured head in feet, H	Breadth of crest of weir in feet										
	0.50	0.75	1.00	1.50	2.00	2.50	3.00	4.00	5.00	10.00	15.00
0.2	2.80	2.75	2.69	2.62	2.54	2.48	2.44	2.38	2.34	2.49	2.68
0.4	2.92	2.80	2.72	2.64	2.61	2.60	2.58	2.54	2.50	2.50	2.70
0.6	3.08	2.89	2.75	2.64	2.61	2.60	2.68	2.69	2.70	2.70	2.70
0.8	3.30	3.04	2.85	2.68	2.60	2.60	2.67	2.68	2.68	2.69	2.64
1.0	3.32	3.14	2.98	2.75	2.66	2.64	2.65	2.67	2.68	2.68	2.63
1.2	3.32	3.20	3.08	2.86	2.70	2.65	2.64	2.67	2.66	2.69	2.64
1.4	3.32	3.26	3.20	2.92	2.77	2.68	2.64	2.65	2.65	2.67	2.64
1.6	3.32	3.29	3.28	3.07	2.89	2.75	2.68	2.66	2.65	2.64	2.63
1.8	3.32	3.32	3.31	3.07	2.88	2.74	2.68	2.66	2.65	2.64	2.63
2.0	3.32	3.31	3.30	3.03	2.85	2.76	2.72	2.68	2.65	2.64	2.63
2.5	3.32	3.32	3.31	3.28	3.07	2.89	2.81	2.72	2.67	2.64	2.63
3.0	3.32	3.32	3.32	3.32	3.20	3.05	2.92	2.73	2.66	2.64	2.63
3.5	3.32	3.32	3.32	3.32	3.32	3.19	2.97	2.76	2.68	2.64	2.63
4.0	3.32	3.32	3.32	3.32	3.32	3.32	3.07	2.79	2.70	2.64	2.63
4.5	3.32	3.32	3.32	3.32	3.32	3.32	3.32	2.88	2.74	2.64	2.63
5.0	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.07	2.79	2.64	2.63
5.5	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	2.88	2.64	2.63

Table 5-4. Values of C in the Formula $Q = CLH^{3/2}$ for Models of Broad-crested Weirs with Rounded Upstream Corner

Name of experimenter	Radius of curve in feet	Breadth of weir in feet, B	Height of weir in feet, P	Head in feet, H									
				0.4	0.6	0.8	1.0	1.5	2.0	2.5	3.0	4.0	5.0
Bazin	0.33	2.62	2.46	2.93	2.97	2.98	3.01	3.04					
Bazin	0.33	6.56	2.46	2.70	2.82	2.87	2.89	2.92					
U. S. Deep Waterways	0.33	2.62	4.57	....	2.77	2.80	2.83	2.92	3.00	3.08	3.17	3.34	3.50
U. S. Deep Waterways	0.33	6.56	4.56	....	....	2.83	2.83	2.83	2.82	2.82	2.82	2.82	2.81

Table 5-5. Values of C in the Formula $Q = CLH^{3/2}$ for Broad-crested Weirs with Crests Inclined Slightly Downward

(a)

Crest	Energy head = H_e								
	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.5
Level	2.78	2.79	2.80	2.81	2.82	2.83	2.85	2.85	2.85
Slope = 0.001	2.95	2.94	2.93	2.92	2.91	2.90	2.88	2.87	2.87
Slope = 0.026	3.07	3.06	3.05	3.04	3.03	3.02	3.00	2.99	

(b)

Slope of crest	Length of weir in feet	Head in feet, H						
		0.1	0.2	0.3	0.4	0.5	0.6	0.7
12 to 1	3.0	2.58	2.87	2.57	2.60	2.84	2.81	2.70
18 to 1	3.0	2.91	2.92	2.53	2.60	2.80	2.74	2.62
18 to 1	10.0	2.52	2.68	2.73	2.80	2.90	2.80	2.68

Table 5-6. Values of C in the Formula $Q = CLH^{3/2}$ for Weirs of Triangular Cross Section with Vertical Upstream Face and Sloping Downstream Face

Slope of downstream face	Height of weir in feet, P	Head in feet, H										
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.5
Hor. Vert.												
1 to 1	2.46	3.88	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85
2 to 1	2.46	3.48	3.48	3.49	3.49	3.50	3.50	3.50	3.50	3.50	3.51	3.51
2 to 1	1.64	3.56	3.47	3.47	3.51	3.54	3.57	3.58	3.58	3.58	3.59	3.57
3 to 1	1.64	....	2.90	3.11	3.22	3.26	3.33	3.37	3.40	3.40	3.41	3.41
5 to 1	2.46	....	3.08	3.06	3.05	3.05	3.07	3.09	3.12	3.13	3.13	3.13
10 to 1	2.46	....	2.82	2.83	2.84	2.86	2.89	2.90	2.91	2.91	2.92	2.93

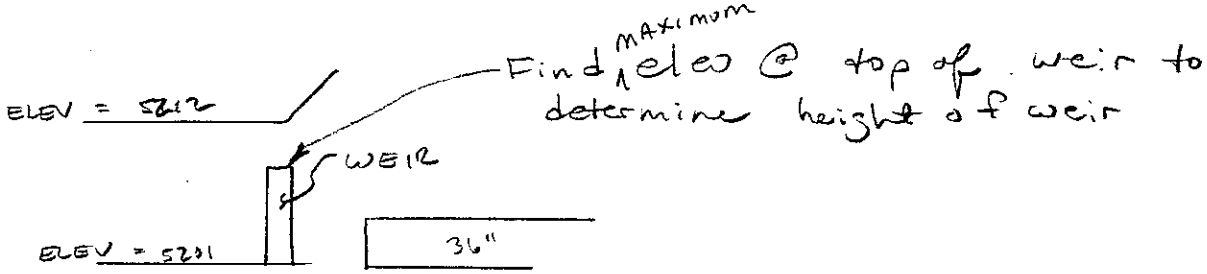
Greiner

Job AMOLE III C Project No. G000110 Sheet 1 of 2

Description WEIR CALCS - check to MAKE SURE WEIR CAN CARRY FLOW IN ULTIMATE CONDITION & Find Maximum height

Computed By Shila Johnson Date 26 MAY 94

Checked By [signature] Date 6/2/94



MAX Q thru 36" RCP w/ Water Surface at elev 5212 (spillway)

$\frac{HW}{D} = 3.67 \rightarrow$ 102 cfs per H.E.C. 5 charts

Find "H" required to pass 100 cfs over weir

$Q = C L H^{3/2}$

$C = 3.04$ (per Crater + King table 5-3 p. 5-40)
breadth of weir = 3"

$102 = 3.04 (50) H^{3/2}$

$H = .77'$

Required FB = 2'

MAXIMUM Height for weir = 5212 - 2' - .7 = 5209.23
use 5209

this would make the weir 8' tall (5209 - 5201)

use orifice criteria for height

Greiner

Job AMOCO III a | Project No. 6000110 | Sheet 2 of 2
Description Weir Calcs | Computed By [illegible] | Date 26 May 94
Size orifice in weir | Checked By [illegible] | Date 6/2/94

Size interim orifice for same out flow as capacity of downstream culverts

existing culverts 1st 24" CMP assume 2' HEAD (Equal to top of pipe ok-per site check
2nd 24" CMP

$\frac{HW}{D} = 1$ so $Q = 13$ cfs (per H.E.C. 5 charts)

Assume COA will replace these CMP's with new RCP's & improve pipe inlet conditions

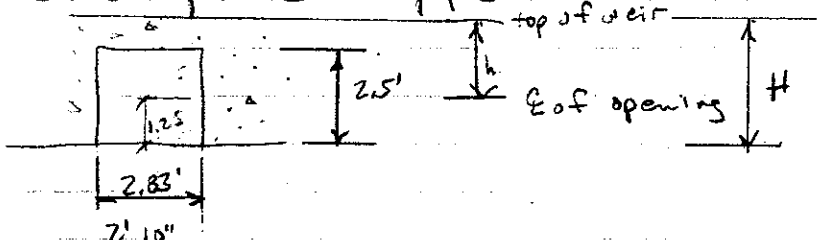
24" RCP w/ 2' cover $\frac{HW}{D} = 2$ so $Q = 25$ cfs

~~So size interim orifice to pass 25 cfs with water surface at top of weir~~

COA direction — use existing capacity if possible for outflow size for 13 cfs

ultimate orifice = area of 36" pipe

36" Area = 7.069 ft²



orifice equation $Q = C a \sqrt{2gh}$

C = discharge coef. =
a = area
g = 32.2
h = head
Q = ~~25~~ 13
H = height of weir

	H	h	C	a	Q	w
Flow at top of weir	3.5'	2.25	.602	3.45	25	1.4'
Flow at 11 days →	11.0	9.25	.602	0.86	13	0.35 (4.2") ★
↑ 13 cfs at top of weir	3.5	2.25	.602	1.79	13	0.72

← USED FOR DESIGN

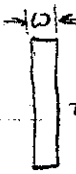


TABLE A-4. LAND TREATMENTS	
Treatment	**Land Condition**
A	Soil uncompacted by human activity with 0 to 10 percent slopes. Native grasses, weeds and shrubs in typical densities with minimal disturbance to grading, groundcover and infiltration capacity. Croplands. Unlined arroyos.
B	Irrigated lawns, parks and golf courses with 0 to 10 percent slopes. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes greater than 10 percent and less than 20 percent.
C	Soil compacted by human activity. Minimal vegetation. Unpaved parking, roads, trails. Most vacant lots. Gravel or rock on plastic (desert landscaping). Irrigated lawns and parks with slopes greater than 10 percent. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes at 20 percent or greater. Native grass, weed and shrub areas with clay or clay loam soils and other soils of very low permeability as classified by SCS Hydrologic Soil Group D.
D	Impervious areas, pavement and roofs.
Most watersheds contain a mix of land treatments. To determine proportional treatments, measure respective subareas. In lieu of specific measurement for treatment D, the areal percentages in TABLE A-5 may be employed.	

TABLE A-5. PERCENT TREATMENT D (Impervious)	
Land Use	**Percent**
Commercial*	90
Single Family Residential* N=units/acre, N≤6	$7*\sqrt{((N*N)+(5*N))}$ (a-4)
Multiple Unit Residential Detached* Attached*	 60 70
Industrial Light* Heavy*	 70 80
Parks, Cemeteries	7
Playgrounds	13
Schools	50
Collector & Arterial Streets	90
* Includes local streets	

TABLE A-5 does not provide areal percentages for land treatments A, B and C. Use of TABLE A-5 will require additional analysis to determine the appropriate areal percentages of these land treatments.

Backyard retention ponds, and other small on-site ponding, may have the effect of reducing runoff from impervious areas. Where it can be clearly demonstrated that backyard and small on-site retention ponding currently exist, impervious areas which drain to such ponds may be considered to be in land treatment A. Application of backyard ponding is not normally applicable to more than 35 percent of the area in land treatment D (impervious). Allowance for backyard ponding will not be considered for new developments and future development.

A.4 ABSTRACTIONS

Initial abstraction is the precipitation depth which must be exceeded before direct runoff begins. Initial abstraction may be intercepted by vegetation, retained in surface depressions, or absorbed on the watershed surface. Initial abstractions are shown in TABLE A-6.

Greiner

Job AMOLE POND REDESIGN Computed By [illegible] Date 19 Aug 93
Description Revise Basin Areas Checked By [illegible] Date 5-25-94
Sheet ___ of ___

MAP SCALE: 1" = 500'

BASIN	PLANIMETER		AREA ☐'	SM
109	9.03, 8.95	8.99	2,247,500	0.0806
108.1	13.14, 13.14	18.14	4,535,000	0.1627
108.2	12.23, 11.93	12.13 → 21.37	5 342 500	0.1916
	9.23, 9.25	9.24		
108.3	13.49, 13.64	13.52 → 24.65	6 162 500	0.2310
	11.10, 11.15	11.13		
Revise - subtract		8.17	-2042,500	= 4,120,000 = 0.1478
108.4	7.63, 7.85	7.73	1,932 500	0.1093
Revise-add		8.17	+2,042 500	= 3,975,000 = 0.1426

Time of Concentration

109 - reach len less than 4000'

$t_c = \frac{L/V_1}{3600}$ $\quad V = K\sqrt{S(100)}$

Len = 3700

$S = \frac{5340 - 5240}{3700} = .02702$

assume flow is in paved areas or streets

K = 3

V = 4.932

t_c = .21 hours 12.6 min

$t_p = 2/3(t_c) = 0.1400$

Greiner

Job _____ Computed By _____ Date 19 Aug 93

Description _____ Checked By _____ Date 5/25/94

_____ Sheet ____ of ____

108.1 - reach length 4000' - 12,000'

$$t_c = \left[(12000 - L) / 72000 (K) (S^{.5})\right] + (L - 4000)(K_N)(L_{CA}/L)^{.33} / (552 (S^{.165}))$$

Length = 4150

K = 3 Assume all flow is in paved areas or streets

L_{CA} = 2150

$S = \frac{5400 - 5248}{4150} = .0366$

$K_N = .021$

$t_c = 0.197 = 11.8$ min

use 12 min = .20

$t_p = .1333$

108.2 reach length 4,000 - 12,000'

SEE EQUATION ABOVE

L = 5700

K = 3

L_{CA} = 3000

$S = \frac{5454 - 5232}{5700} = .0389$

$K_N = .021$

$T_c = 0.2323$ hrs = 14.2 min

$T_p = 0.1582$

108.3 reach length 4000' - 12,000'

SEE EQUATION ABOVE

L = 6470

K = 3

L_{CA} = 3350

$S = \frac{5466 - 5224}{6470} = .0374$

$K_N = .021$

$t_c = .2624$ hrs.

$T_p = 0.1749$ ($2/3 T_c$)

Greiner

Job ANGLE POND REDESIGN Computed By [signature] Date 20 Aug 93

Description Revise Time of Concentration Checked By [signature] Date 5/25/94

Sheet ___ of ___

108.4 reach length less than 4000'

$t_c = \frac{L_1 / V_1}{3600}$ $V = K\sqrt{S(100)}$

Len = 3700

$S = \frac{5342 - 5220}{3700} = .0330$

K = 3 Assume all developed flow in streets or pavement

$t_c = .1887$ hrs = 11.3 min use 12 min

$t_c = .2$ $t_p = .1333$

109.1 Area = 700' x 1150 = 805000 □' = 0.0289 Sq. M.

$t_c = \frac{L_1 / V_1}{3600}$ $V = K\sqrt{S(100)}$ reach len less than 4000'

Len = 1500'

$S = \frac{5248 - 5218}{1500} = .02$

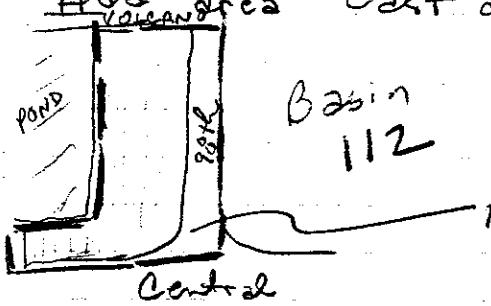
K = 3 - Assume all developed flow in streets or paved areas

V = 4.24

$t_c = .10$ hrs use 12 min

$t_c = .2$ $t_p = .1333$

Add area east of pond to Area 112



Approx Area 300' x 1050
200' x 700

.0163 Sq. M.

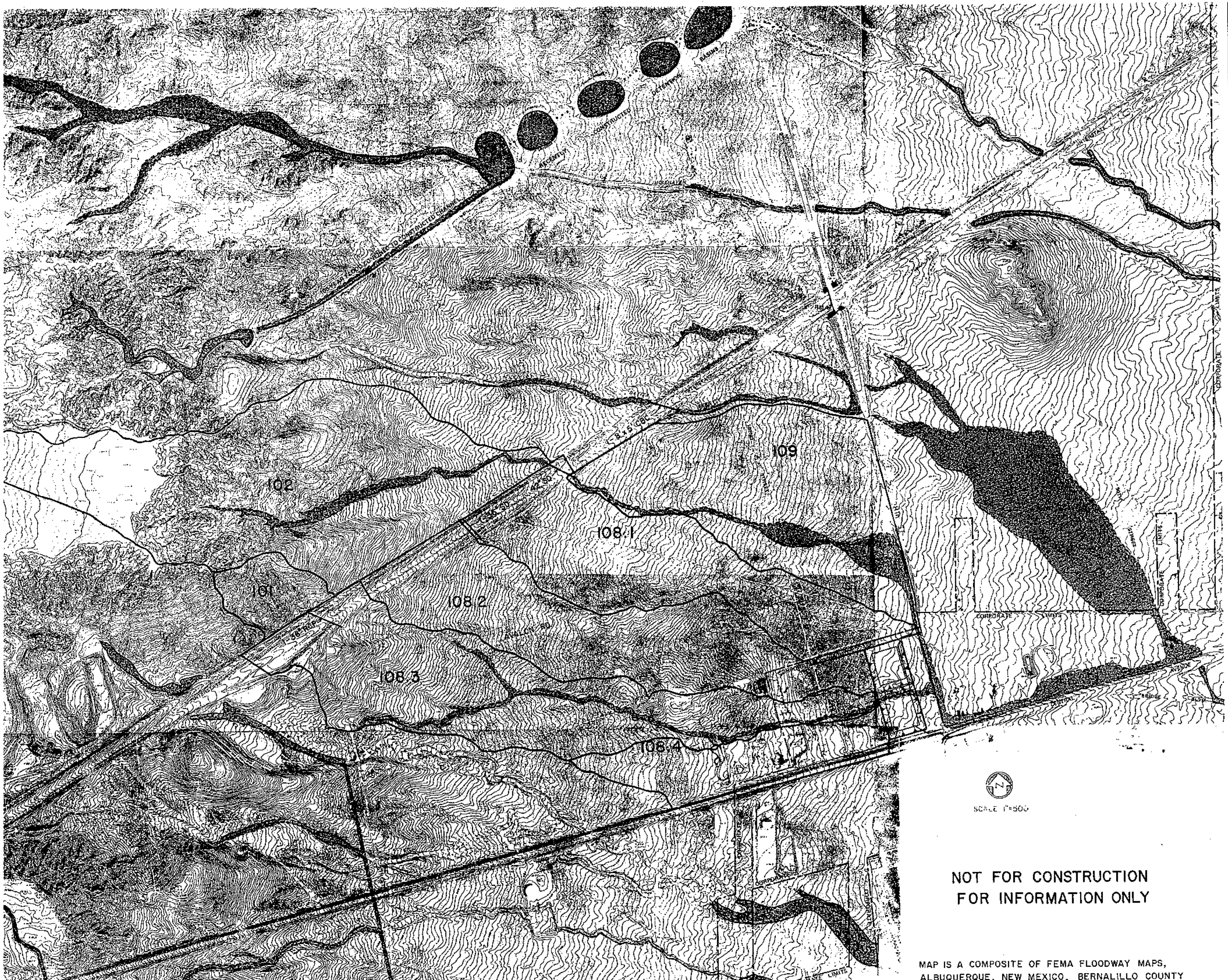
Greiner

Job ANGLE PH. IIIC — Computed By KUTZ — Date 5/20/94

Description — Checked By MMH — Date 5/25/94

SCALE 1"=500' — Sheet ___ of ___

BASIN NO.	PLAN. READING.	AREA (500^2)	
108.3	14.71 + 6.94 21.65 (x 500^2)	= 5,412,500^2	(0.19415 SQ.MI.)
108.2	11.29 + 6.90 18.19	4,547,500^2	(0.16312 SQ.MI)
108.1	16.35	4,087,500	(0.14662 SQ.MI.)
109	20.1	5,025,000	(0.18025 SQ.MI.)
108.4	7.18	1,795,000	(0.06439 SQ.MI.)



LEGEND

109 BASIN IDENTIFICATION

BASIN BOUNDARY

NOT FOR CONSTRUCTION
FOR INFORMATION ONLY

MAP IS A COMPOSITE OF FEMA FLOODWAY MAPS,
ALBUQUERQUE, NEW MEXICO, BERNALILLO COUNTY

AS BUILT INFORMATION

CONTRACTOR — DATE
WORK STAKED BY — DATE
INSPECTOR'S ACCEPTANCE BY — DATE
FIELD VERIFICATION BY — DATE
DRAWINGS CORRECTED BY — DATE

MICRO-FILM INFORMATION

RECORDED BY — DATE
NO

BENCH MARKS

ACS 10-L-9 ALUMINUM CAP SET IN CONCRETE CURB ON THE NORTHEASTERLY TURN ISLAND IN THE INTERSECTION OF 98th STREET AND CENTRAL AVENUE.
N = 1,482,085.203 E = 352,792.376
ELEV = 5204.425

SURVEY INFORMATION

FIELD NOTES		
NO.	BY	DATE

ENGINEER'S SEAL

NO.	DATE	REVISIONS	BY

REMARKS

DESIGN

DESIGNED BY SKJ DATE 3/94
DRAWN BY JAK, MLS DATE 5/94
CHECKED BY MSH DATE 5/94

Greiner, Inc.

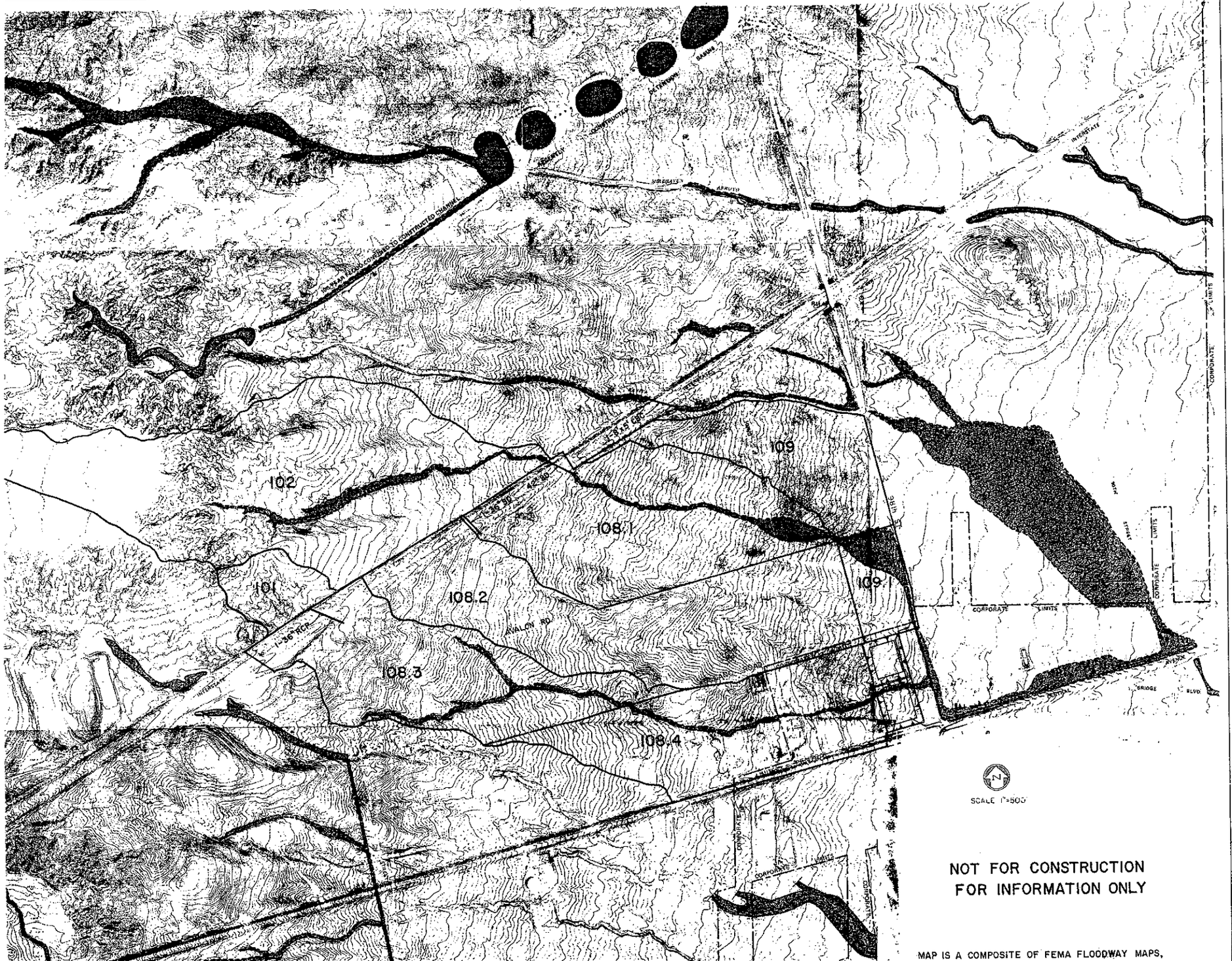
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: AMOLE DEL NORTE STORM DIVERSION FACILITIES–PHASE IIIC
TIERRA BAYITA DRAINAGE FACILITIES

DRAINAGE BASIN MAP – EXISTING

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY					

PROJECT | MAP | SHEET OF



LEGEND

109 BASIN IDENTIFICATION

BASIN BOUNDARY

NOT FOR CONSTRUCTION
FOR INFORMATION ONLY

MAP IS A COMPOSITE OF FEMA FLOODWAY MAPS,

AS BUILT INFORMATION

BENCH MARKS

ACS 10-L-9 ALUMINUM CAP SET IN CONCRETE CURB ON THE NORTHEASTERLY TURN ISLAND IN THE INTERSECTION OF 98th STREET AND CENTRAL AVENUE
N = 1,482,065.203 E = 382,792.376
ELEV = 5804.425

MICRO-FILM INFORMATION

SURVEY INFORMATION

FIELD NOTES

NO. DATE BY

ENGINEER'S SEAL

REVISIONS

NO. DATE REMARKS BY

DESIGNED BY SKJ DATE 3/94
DRAWN BY JAK, MLS DATE 5/94

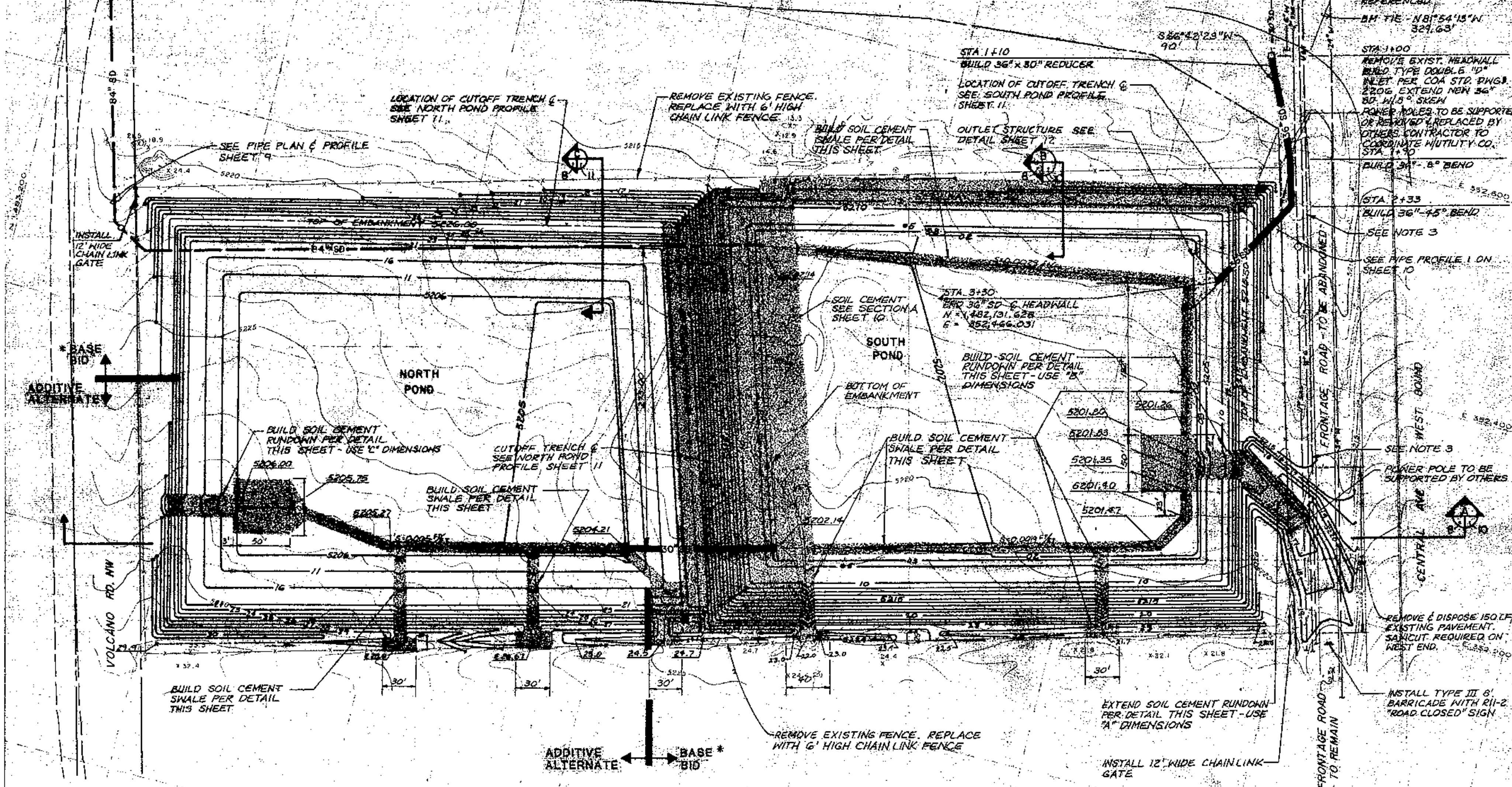
Greiner, Inc.

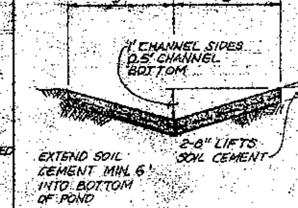
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE AMOLE DEL NORTE STORM DIVERSION FACILITIES-PHASE IIIC
TIERRA BAYITA DRAINAGE FACILITIES

DRAINAGE BASIN MAP-ULTIMATE

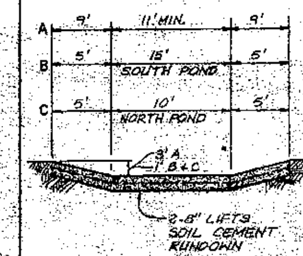
APPROVALS	ENGINEER	DATE
DRC CHAIRMAN		
TRANSPORTATION		
HYDROLOGY		





SOIL CEMENT SWALE

NTS



SOIL CEMENT RUNDOWN

NTS

NOTE:

1. STATIONING IS ALONG ℄ OF PIPES
2. EARTHWORK PROCEDURES ARE DESCRIBED IN SECTIONS 501 AND 601 OF THE SPECIFICATIONS
3. CONTRACTOR SHALL USE EXTREME CAUTION WHEN EXCAVATING IN AREA OF EXISTING FIBER OPTICS CABLE.

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT SHALL LOCATE A NEW PERMANENT MONUMENT AT NORTHEAST CORNER OF PROJECT. CONTRACTOR TO COORDINATE WITH CITY.

HAZARD CLASS: C-HIGH
SIZE: SMALL

ELEVATION/STORAGE/DISCHARGE TABLE

North Pond			South Pond		
Elevation (ft.)	Storage (Ac. ft.)	Outflow (cfs)	Elevation (ft.)	Storage (Ac. ft.)	Outflow (cfs)
5204.21	0	0	5201	0	0
5205	0.287	3	5202	0.934	5
5206	1.532	13	5203	3.359	6
5207	3.486	25	5204	6.080	27
5209	7.543	42	5206	11.813	43
5211	11.939	52	5208	17.946	55
5213	16.689	64	5210	24.492	64
5215	21.805	72	5212*	31.465	72
5217	27.301	80	5213	35.115	1137
5219	33.189	88	5214	39.677	3122
5221	39.483	90	**5215.50	44.733	7217
5223*	46.197	91			
5224	49.716	968			
5225	53.343	2615			
5226**	57.082	4809			

* SPILLWAY ELEVATION

** TOP OF DAM ELEVATION

***BASE BID**

THE BASE BID INCLUDES ALL ITEMS SHOWN ON THIS SHEET EXCEPT NORTH POND EXCAVATION TO ELEV. 5206. IF THE BASE BID ONLY IS CONSTRUCTED, AREAS WITHIN NORTH POND BELOW ELEV. 5223 SHALL BE FILLED PER SECTION 601 OF THE SPECIFICATIONS AND GRADED TO ALLOW DRAINAGE OVER THE CENTRAL EMBANKMENT AT ELEV. 5223. SEE SECTIONS A & C FOR CLARIFICATION.

Greiner

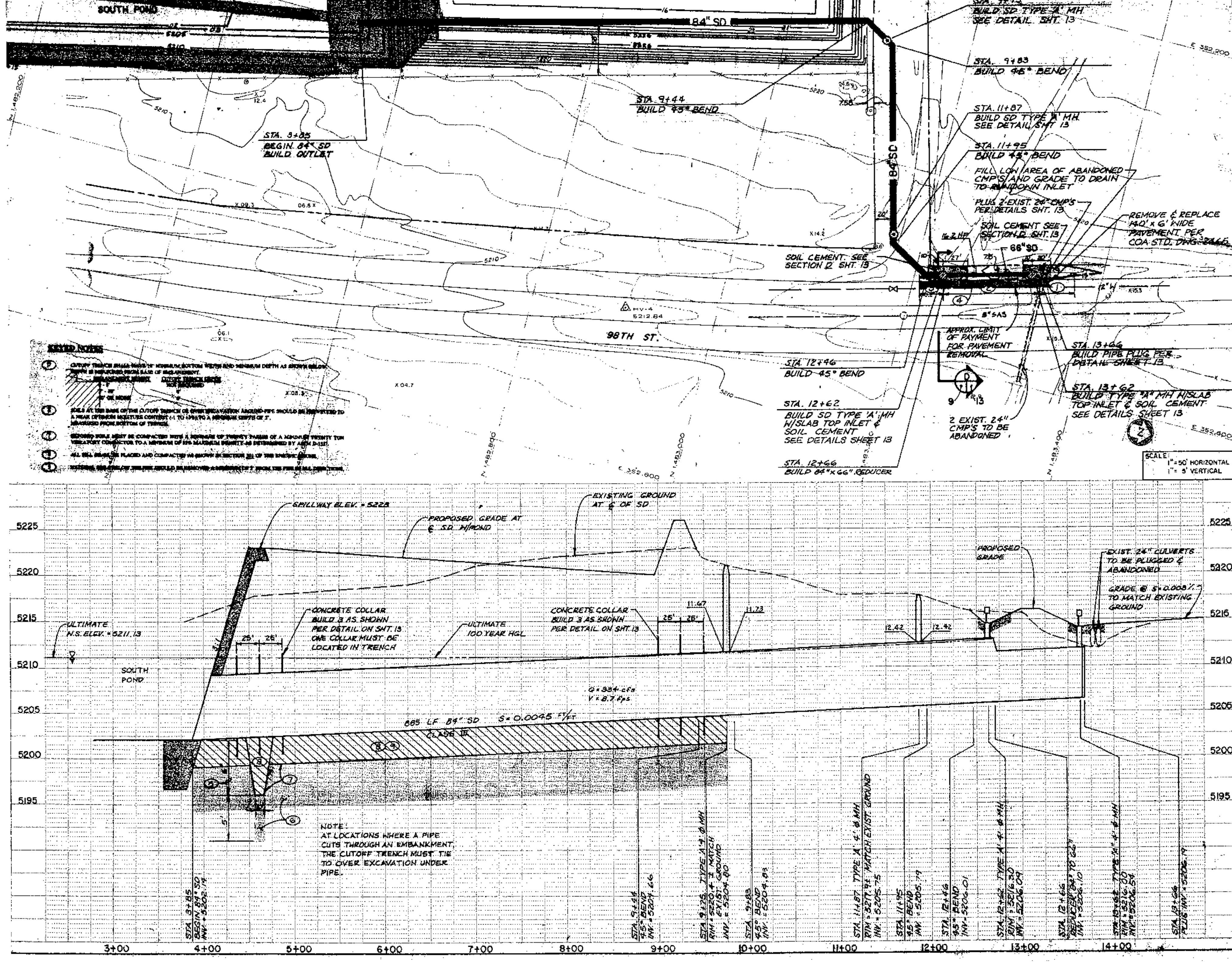
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: AMOLE DEL NORTE STORM DIVERSION FACILITIES - PHASE II C
TIERRA BAYITA DRAINAGE FACILITIES

POND SYSTEM PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER
DRC CHAIRMAN		5-12-95	WATER	
TRANSPORTATION		4-26-95	WASTE WATER	
HYDROLOGY	S. Bobey	4-24-95		

PROJECT NO. 4076.92 MAP NO. K-9 SHEET 8 OF 15



④ SEE GUARDRAIL/INLET PLACEMENT DETAIL ON SHEET 13.

Greiner Engineering

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: 98TH ST. STA. 3+85 TO STA. 13+66
STORM DRAIN

DRAWING NO. 4076.92 | MAP NO. K-9 | SHEET 9 OF 15

Plate 4

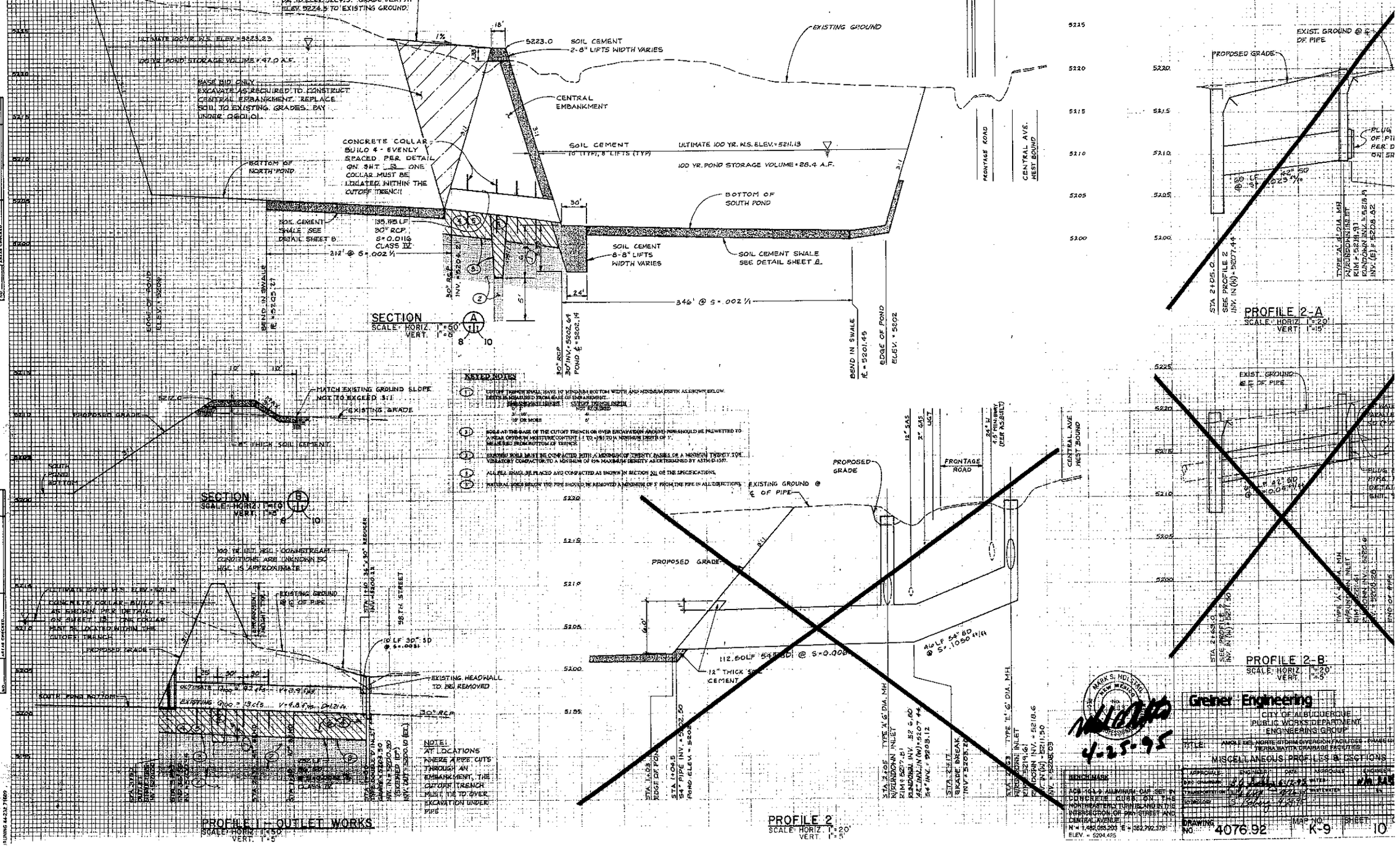
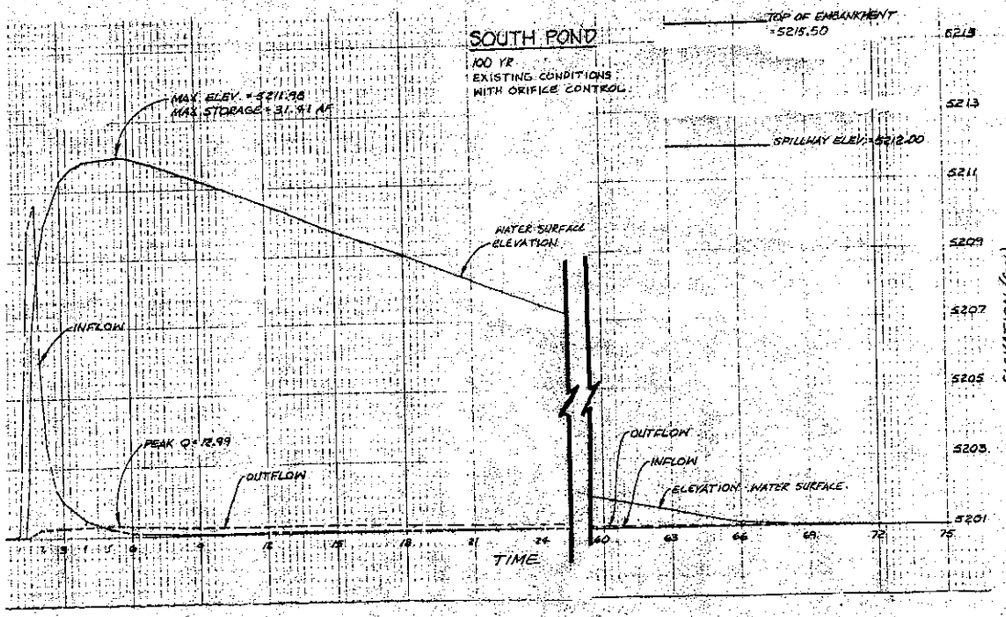
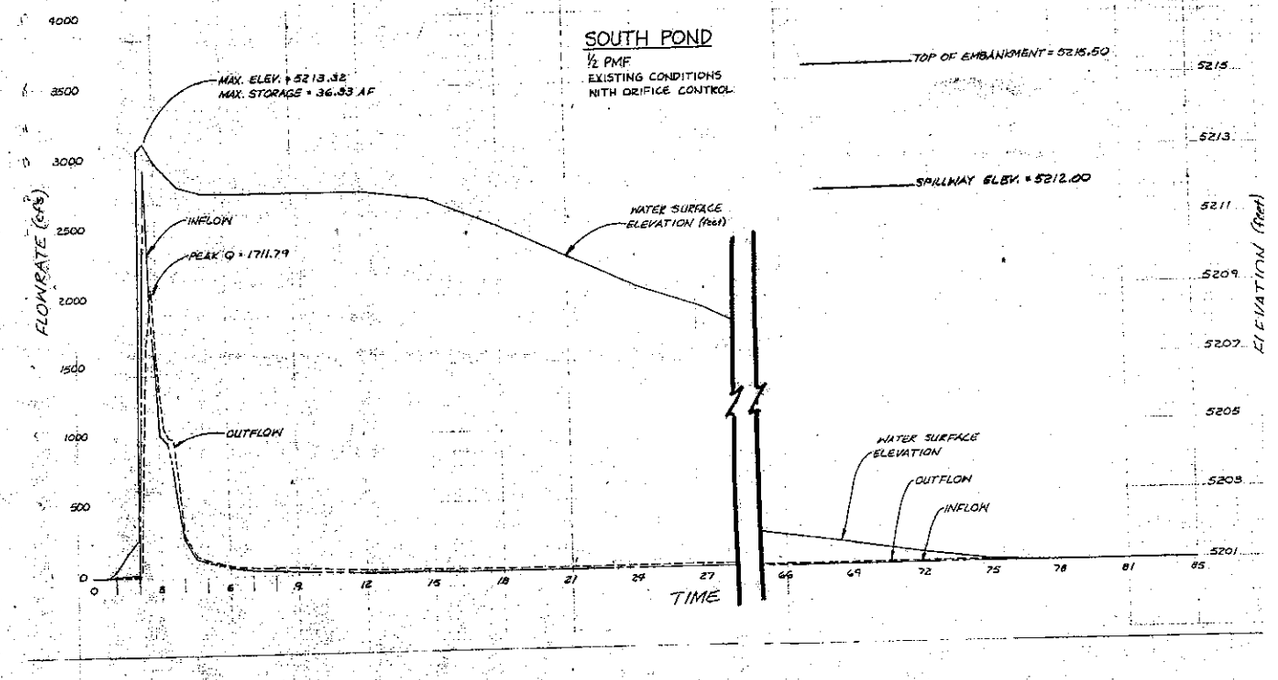
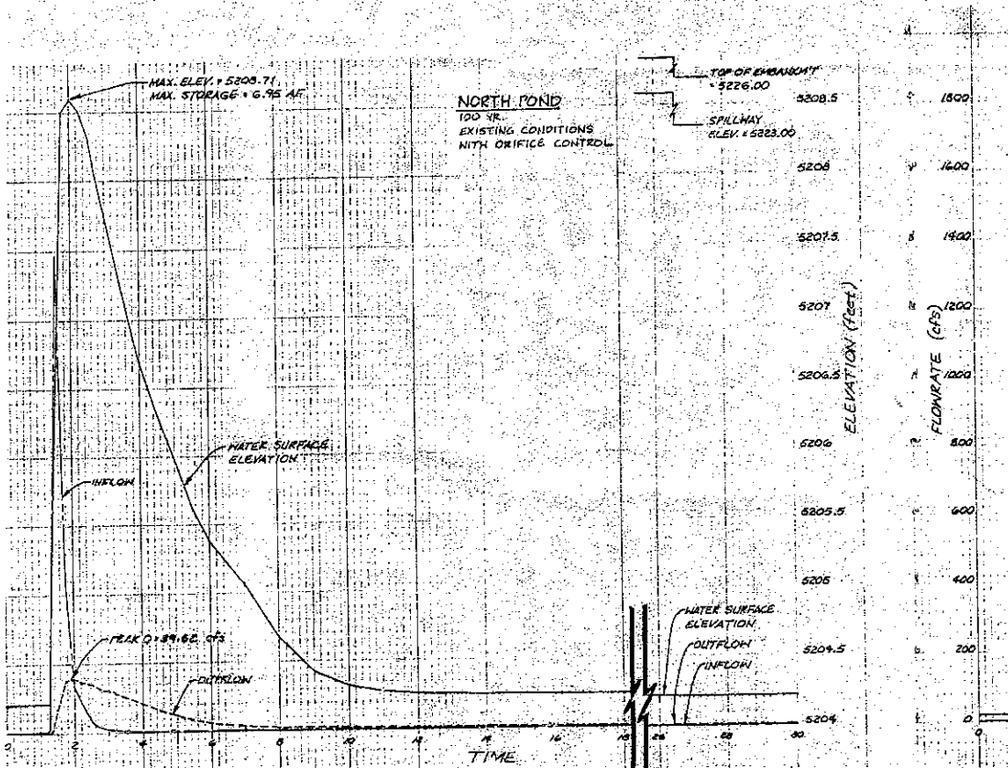
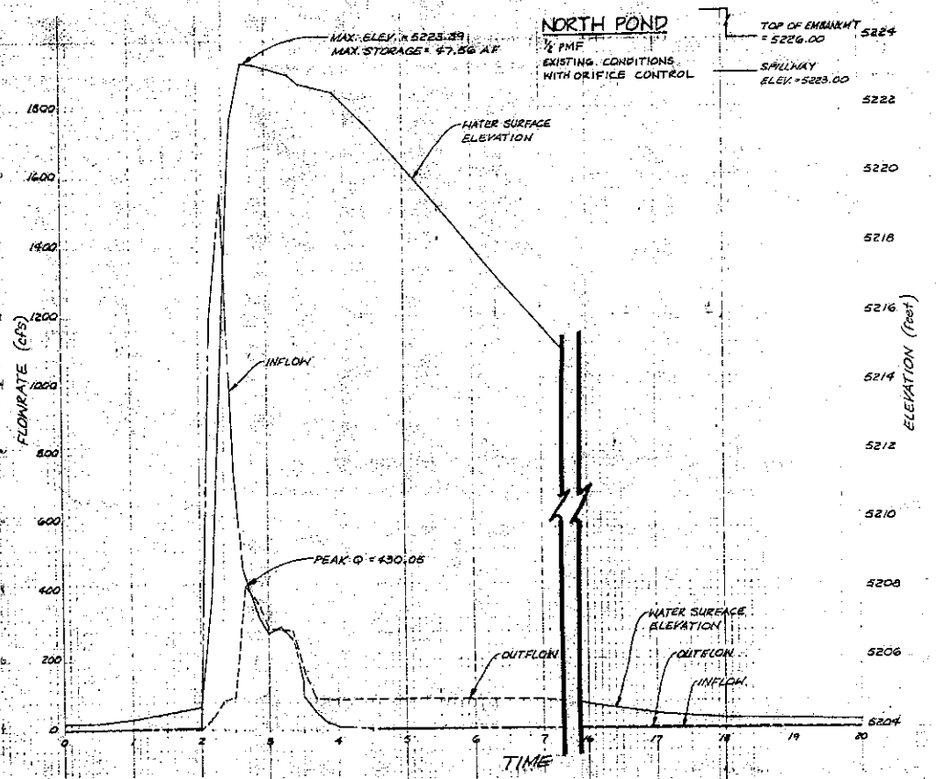

SECTION
SCALE: HORIZ. 1"=50'
VERT. 1"=5'
PROFILE 2-A
SCALE: HORIZ. 1"=20'
VERT. 1"=5'
PROFILE 2-B
SCALE: HORIZ. 1"=20'
VERT. 1"=5'
PROFILE 1 - OUTLET WORKS
SCALE: HORIZ. 1"=50'
VERT. 1"=5'
PROFILE 2
SCALE: HORIZ. 1"=20'
VERT. 1"=5'
KEYED NOTES
EXISTING GROUND
PROPOSED GRADE
FRONTAGE ROAD
CENTRAL AVE. WEST BOUND
SOIL CEMENT
CENTRAL EMBANKMENT
BOTTOM OF SOUTH POND
BOTTOM OF NORTH POND
SOIL CEMENT SWALE SEE DETAIL SHEET 8
EDGE OF POND ELEV. = 5202
BEND IN SWALE
EXISTING HEADWALL TO BE REMOVED
98TH STREET
SOUTH POND BOTTOM
EXISTING GROUND @ ℄ OF PIPE
MATCH EXISTING GROUND SLOPE NOT TO EXCEED 5:1
EXISTING GRADE
12" THICK SOIL CEMENT
NOTE: AT LOCATIONS WHERE APPR. CUTS THROUGH AN EMBANKMENT, THE CUTOFF TRENCH MUST TIE TO OVER-EXCAVATION UNDER PIPE
BENCHMARK
ACS 1103-3 ALUMINUM CAP SET IN CONCRETE CURB, ON THE NORTHEASTERLY TYPE 15 ISLAND IN THE INTERSECTION OF PAN STREET AND CENTRAL AVENUE
N = 1,480,088.203 E = 382,792.378
ELEV. = 5204.495
Greiner Engineering
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP
MISCELLANEOUS PROFILES & SECTIONS
DRAWING NO. 4076.92
MAP NO. K-9
SHEET 10
4-25-95

PLATE 5









MARK S. HOLLAND
NEW MEXICO
No. 7738
REGISTERED
4-25-95

Greiner, Inc.

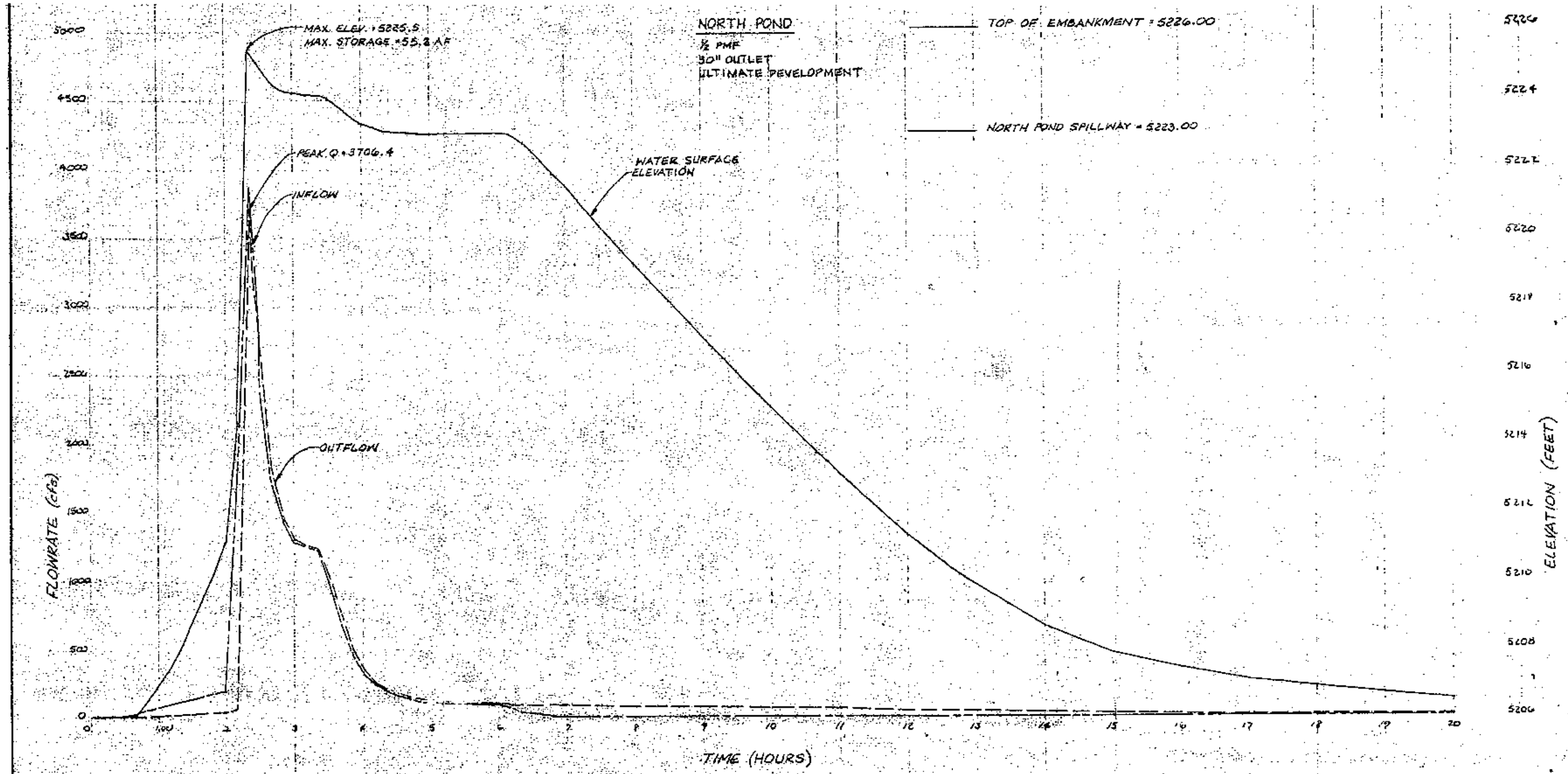
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

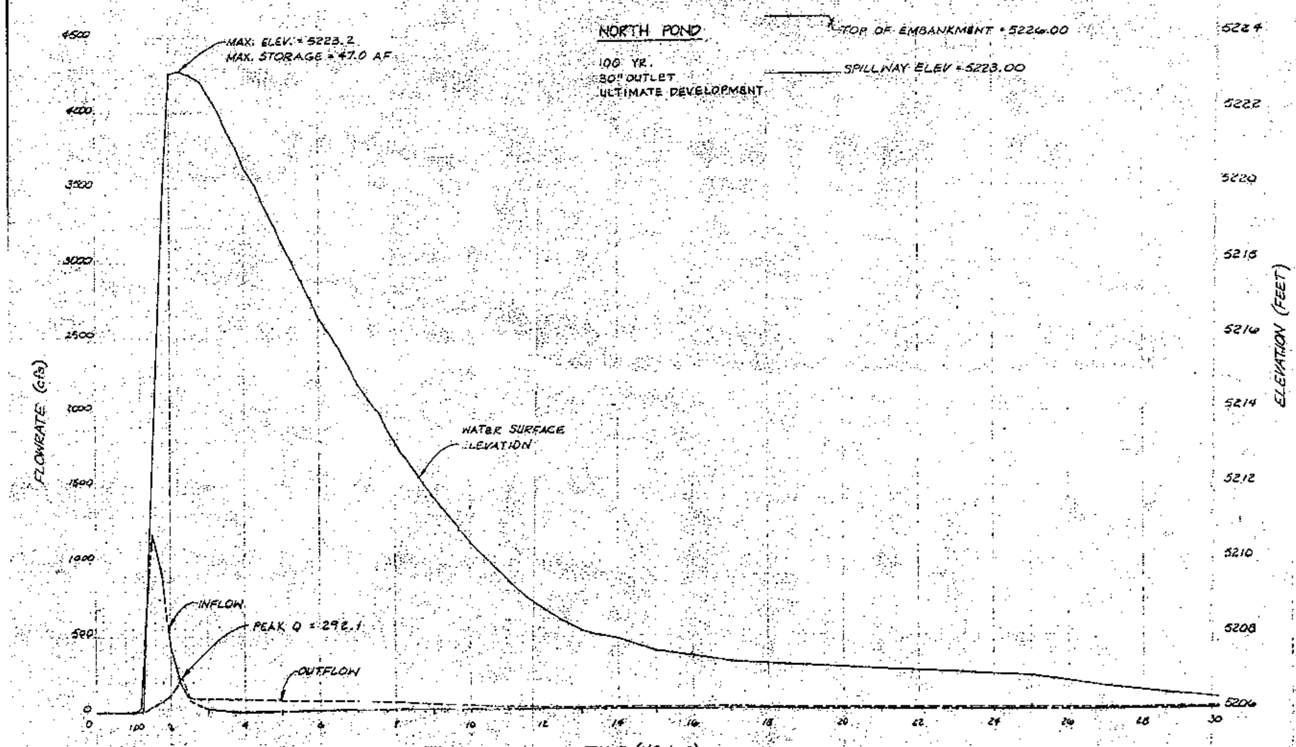
TITLE: AMOLE DEL NORTE STORM DIVERSION FACILITIES–PHASE IIIC
TIERRA BAYITA DRAINAGE FACILITIES

NORTH & SOUTH POND – EXISTING HYDROLOGY INFORMATION

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C Chairman		5-12-95	Water	N/A	
Transportation	N/A	4-26-95	Wastewater	N/A	
Hydrology	S. Bolling	4.24.95			

DRAWING | MAP NO. | SHEET 5 OF 15





AS BUILT INFORMATION

CONTRACTOR | DATE
WORK STAKED BY | DATE
INSPECTOR'S ACCEPTANCE BY | DATE
FIELD VERIFICATION BY | DATE
DRAWINGS CORRECTED BY | DATE

MICRO-FILM INFORMATION

RECORDED BY | DATE

BENCH MARKS

ACS 10-J-4 ALUMINUM CAP SET IN CONCRETE CURB ON THE NORTHEASTERLY TURN ISLAND IN THE INTERSECTION OF 98th STREET AND CENTRAL AVENUE
N = 1,482,065.203 E = 362,782.376
ELEV = 5204.426

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

MARK S. HOLSTAD
NEW MEXICO
No. 7288
REGISTERED PROFESSIONAL ENGINEER
4-25-95

NO.	DATE	REMARKS	BY

REVISIONS

DESIGN

DESIGNED BY: S.K.J. DATE: 3/94
DRAWN BY: J.A.K. DATE: 3/94

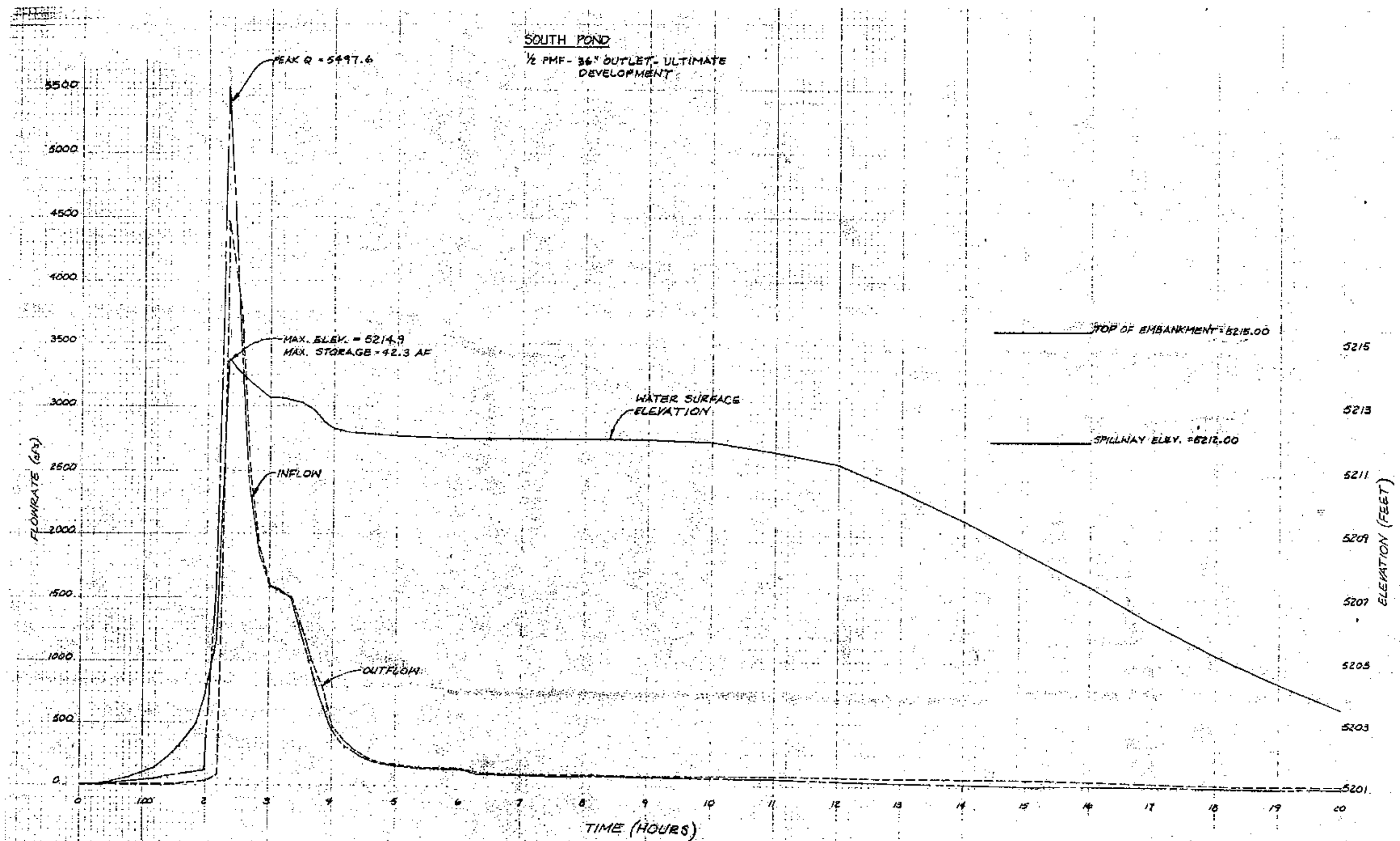
Greiner, Inc.

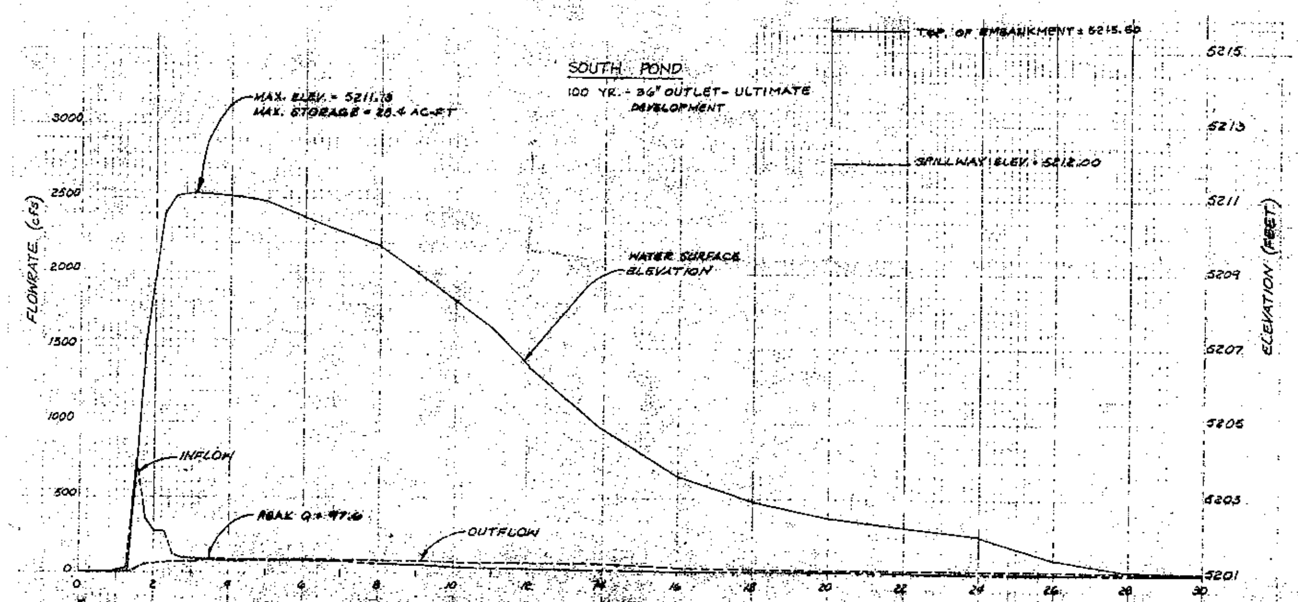
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

TITLE AMOLE DEL NORTE STORM DIVERSION FACILITIES–PHASE IIIC
TIERRA BAYITA DRAINAGE FACILITIES

NORTH POND – ULTIMATE DEVELOPEMENT HYDROLOGY INFORMATION

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C Chairman	B.J. Goolsby	5-12-95	Water	N/A	
Transportation		4-26-95	Wastewater	N/A	
Hydrology	S Bohrig	4-24-95			





AS BUILT INFORMATION

BENCH MARKS

SURVEY INFORMATION / FIELD NOTES

ENGINEER'S SEAL — MARK S. HOLSTAD, NEW MEXICO, No. 7262 — 4-25-95

REMARKS / REVISIONS / DESIGN

DESIGNED BY: S.K.J. DATE: 10/90
DRAWN BY: J.A.K. DATE:
CHECKED BY: DATE:

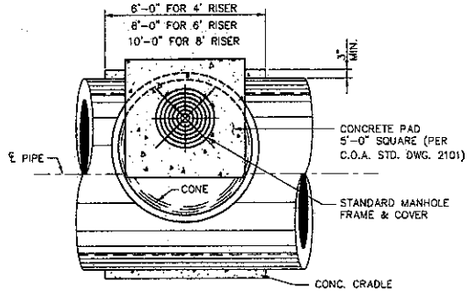
Greiner, Inc.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

TITLE AMOLE DEL NORTE STORM DIVERSION FACILITIES—PHASE IIIC
TIERRA BAYITA DRAINAGE FACILITIES

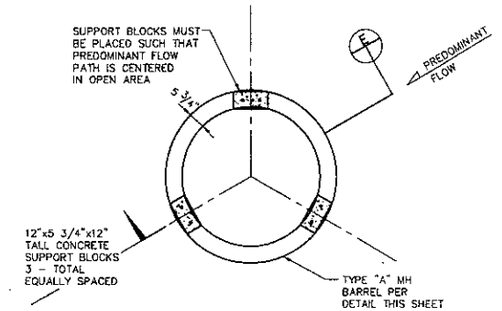
SOUTH POND – ULTIMATE DEVELOPEMENT HYDROLOGY INFORMATION

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chairman	[signature]	5-12-95	Water	[signature]	
Transportation	[signature]	4-26-95	Wastewater	[signature]	



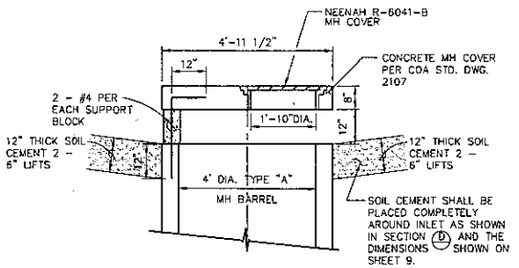
TYPE "A" MANHOLE PLAN

NOT TO SCALE



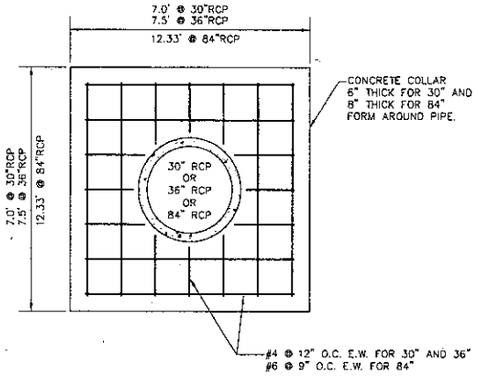
SLAB TOP INLET DETAIL

SCALE: 1" = 2'



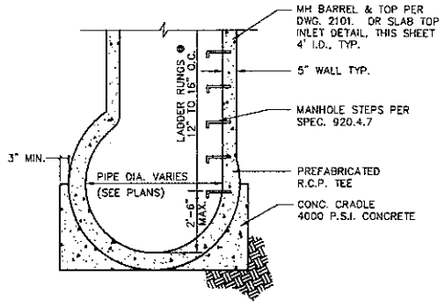
SECTION

SCALE: 1"=2'



CONCRETE COLLAR DETAIL

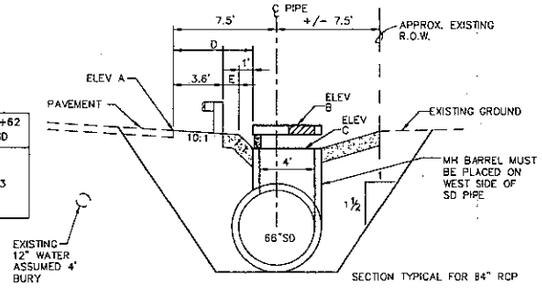
NOT TO SCALE



TYPE "A" MANHOLE PROFILE

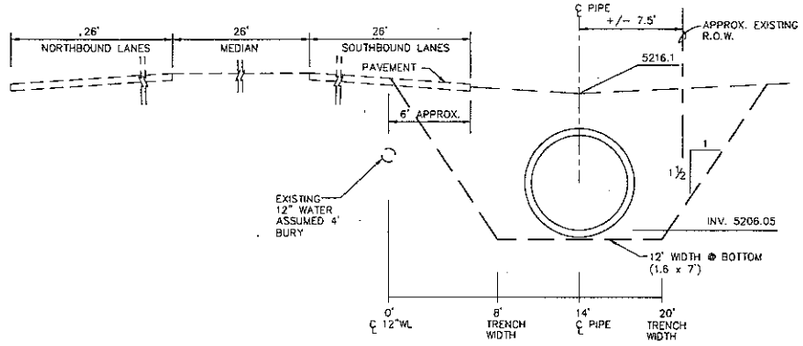
NOT TO SCALE

	STA. 12+62 @ 84"SD	STA 13+62 @ 66"SD
A	5216.1	5215.8
B	5216.3	5216.0
C	5214.63	5214.33
D	6.52'	5.77'
E	1.92'	1.17'



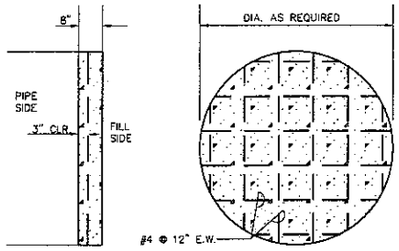
GUARDRAIL/INLET PLACEMENT

SCALE: HZ. 1"=5'
VT. 1"=5'



SECTION

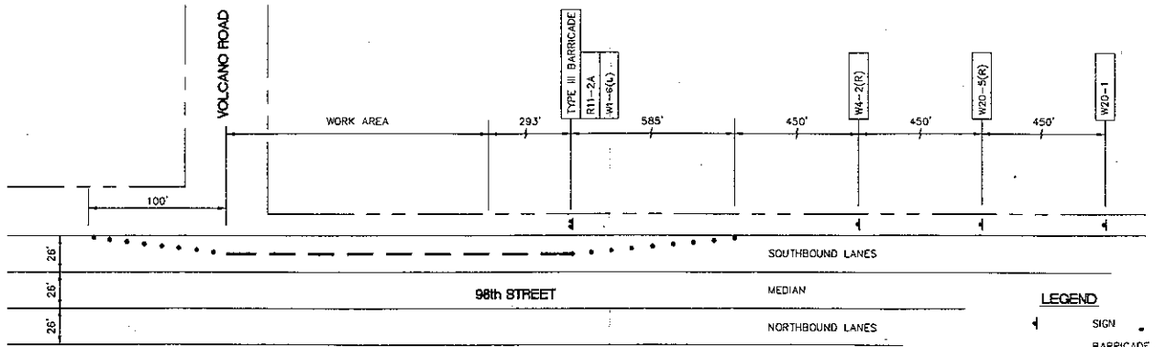
SCALE: 1"=5'



PIPE PLUG DETAIL

SCALE: 1/2" = 1'

NOTE: CONSTRUCTION REQUIRING LANE CLOSURE ON 98TH STREET SHALL BE DONE ON A 24 HOUR BASIS.



AS BUILT INFORMATION
CONTRACTOR
DATE
WORK STAKED BY
DATE
INSPECTED BY
DATE
FIELD VERIFICATION BY
DATE
DRAWINGS CORRECTED BY
DATE
RECORDED BY
DATE

MICRO-FILM INFORMATION

BENCH MARKS
ACS 10-L-9 ALUMINUM CAP SET IN CONCRETE CURB ON THE NORTHEASTERLY TURN ISLAND IN THE INTERSECTION OF 98th STREET AND CENTRAL AVENUE.
N = 1,482,085.203 E = 352,792.376
ELEV = 5204.425

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
MARK S. HOLSTAD
NEW MEXICO
No. 7288
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REMARKS / REVISIONS	DESIGN	BY
			DESIGNED BY: M.S.H.	DATE: 10/90
			DRAWN BY: J.L.R./P.J.R./P.D.S.	DATE: 3/94
			CHECKED BY: M.S.H./P.O.	DATE: 2/95

Greiner, Inc.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

TITLE AMOLE DEL NORTE STORM DIVERSION FACILITIES-PHASE IIIC
TIERRA BAYITA DRAINAGE FACILITIES

TRAFFIC CONTROL & MISCELLANEOUS DETAILS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE