City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 8, 1995

CERTIFICATE OF COMPLETION AND ACCEPTANCE

John L. Rust
4000 Osuna N.E.
Albuquerque, NM 87109

RE: NATIONAL DISTRIBUTION COMPANY PROJECT NO. 4579.80
(MAP E-17)

Dear Sir:

This is to certify that the City of Albuquerque accepts Project No. 4579.80 as being completed according to approved plans and construction specifications.
Please be advised this certificate of completion and acceptance shall only become effective upon final plat approval and filing in the office of the Bernalillo County Clerk's Office.

The project is described as follows:

The project consisted of installation of 10" water line and 2" water service. The 10" waterline was tied-in to the existing waterline for fire protection.

The contractor's correction period begins the date of this letter and will be effective for a period of one (1) year.

JUL 4 1995

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 18, 1993

James R. Topmiller, P.E.
Bohannan-Huston Inc.
7500 Jefferson NE
Albuquerque, N.M. 87109

RE: ENGINEER'S CERTIFICATION FOR NATIONAL DIST. CO WAREHOUSE (E-17/D34B)
RECEIVED OCTOBER 13, 1993 FOR CERTIFICATE OF OCCUPANCY APPROVAL
STAMPED & DATED 10-12-93.

Dear Mr. Topmiller:

Based on the information included in the submittal referenced above, City Hydrology releases the Permanent Certificate of Occupancy for this Project.

If you have any questions about this project, you may contact me at 768-2727.

Sincerely,

John P. Curtin

John P. Curtin, P.E.
Civil Engineer/Hydrology

xc: Alan Martinez
Sanford Epsten; Sanford Epsten Assoc.
3333 Sandy Springs; Atlanta, GA
Paul Edwards, Klinger Constructors Inc.
8701 Washington NE; Albuquerque, N.M.
File

WPHYD/3742/jpc

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 12, 1993

James R. Topmiller, P.E.
Bohannan Huston, Inc.
7500 Jefferson NE
Albuquerque, N.M. 87109

RE: DRAINAGE REPORT & GRADING PLAN FOR NATIONAL DIST CO WAREHOUSE (E-17/D34B)
RECEIVED DECEMBER 30, 1992 FOR BUILDING PERMIT APPROVAL
STAMPED & DATED 12-28-92

Dear Mr. Topmiller:

Based on the information included in submittal referenced above, City Hydrology approves this project for Building Permit approval.

The Drainage & Grading plan must be included in the set of construction document that you submit for Building Permit.

A separate permit is required for construction within City right of way. A copy of this letter must be on hand when applying for the excavation permit.

Certification of grades in accordance with the DPM checklist will be required before any Certificate of Occupancy is released.

If you have any questions about this project, you may contact me at 768-2727.

Sincerely,

John P. Curtin

John P. Curtin, P.E.
PWD/Hydrology

xc: Alan Martinez
Darlene Saavedra

WPHYD+3742

RECEIVED
DEC 30 1992
CITY

8" x 18" WEIR @ POND A-1 (northwest corner of property)

weir equation

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

$H = 18" = 1.5'$ by plan submitted previously

$C = 3.0$

$L = 0.6[6]' =$ width of weir opening

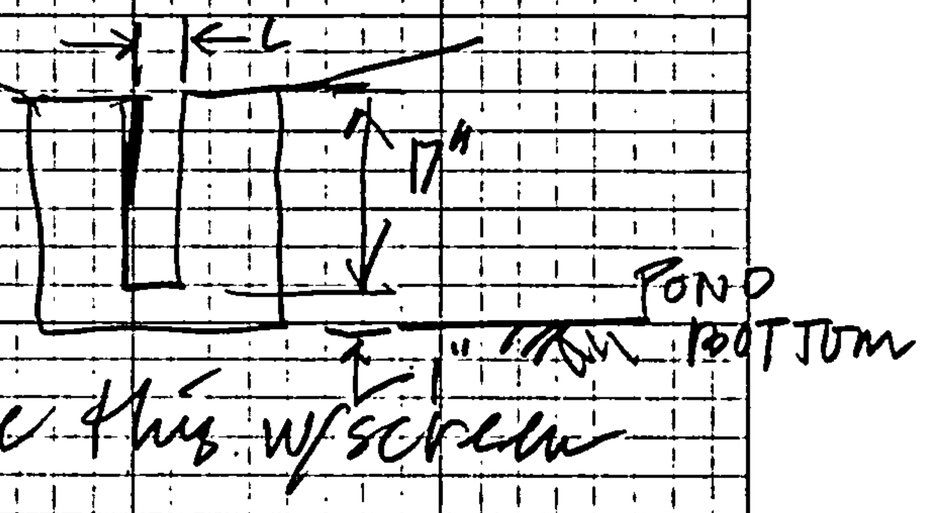
$Q = (3)\ 0.6\ (1.5)^{3/2}$

$= 3.7$ cfs N.G. redesign!

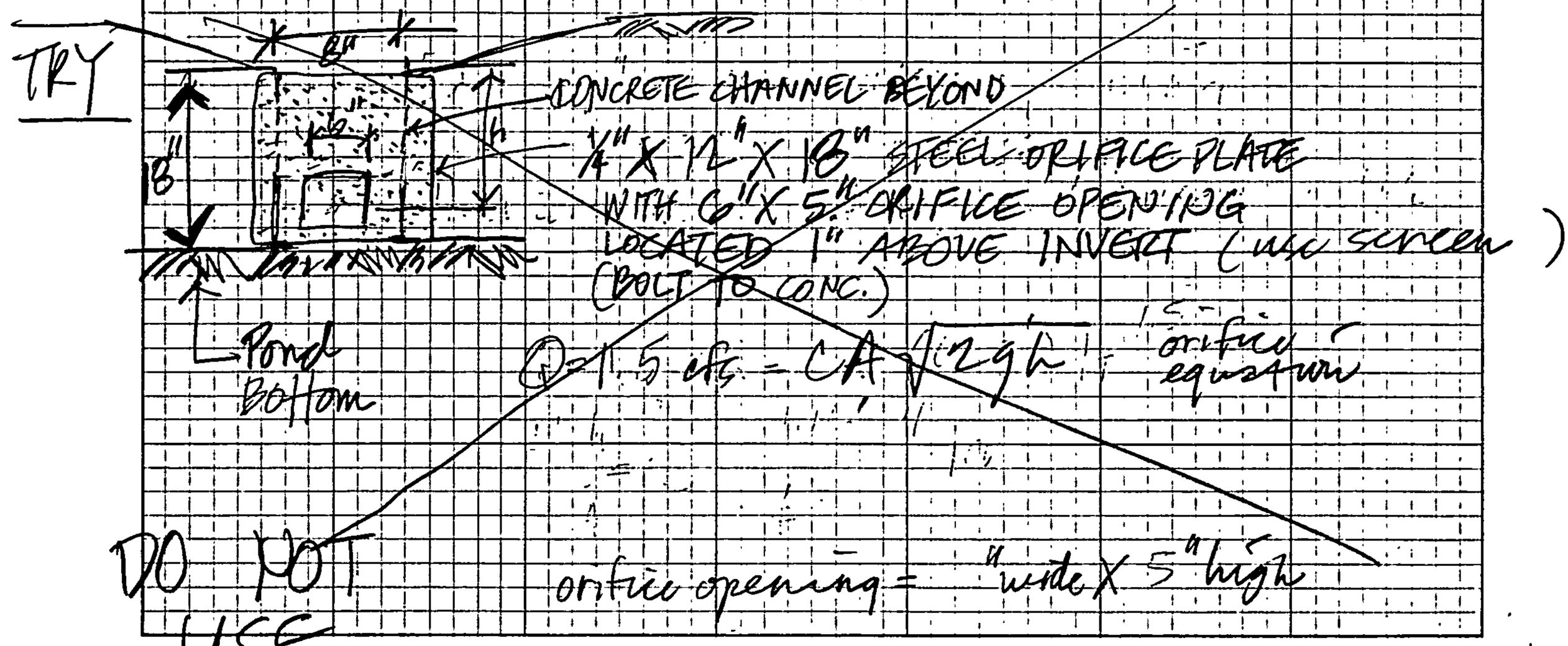
TRY design for $Q = 1.6$ cfs

$Q = 3(L)\ 1.4^{1.5} = 1.5$ cfs

$L = 0.302' = 3.6"$ OK use this w/screen



TRY



1/4" x 12" x 18" STEEL ORIFICE PLATE WITH 6" x 5" ORIFICE OPENING LOCATED 1" ABOVE INVERT (use screen) (BOLT TO CONC.)

$Q = 1.5$ cfs $= CA\sqrt{2gh}$; orifice equation

orifice opening = " wide x 5" high

DO NOT USE

BOHANNAN-HUSTON INC.

PROJECT NAME _____ SHEET 1 OF _____

PROJECT NO. _____ BY JAMT DATE 12/22/92

SUBJECT _____ CH'D _____ DATE _____

WEIR on Pond "A-2"

8" x 7.5' dimensions

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

$H = 8" = 0.67'$

$L = 7.5'$

$C = 3.0$

$Q = 12.3$ cfs NG. redesign

$Q = 7.5$ cfs $= 3 (L) (8/12)^{1.5}$

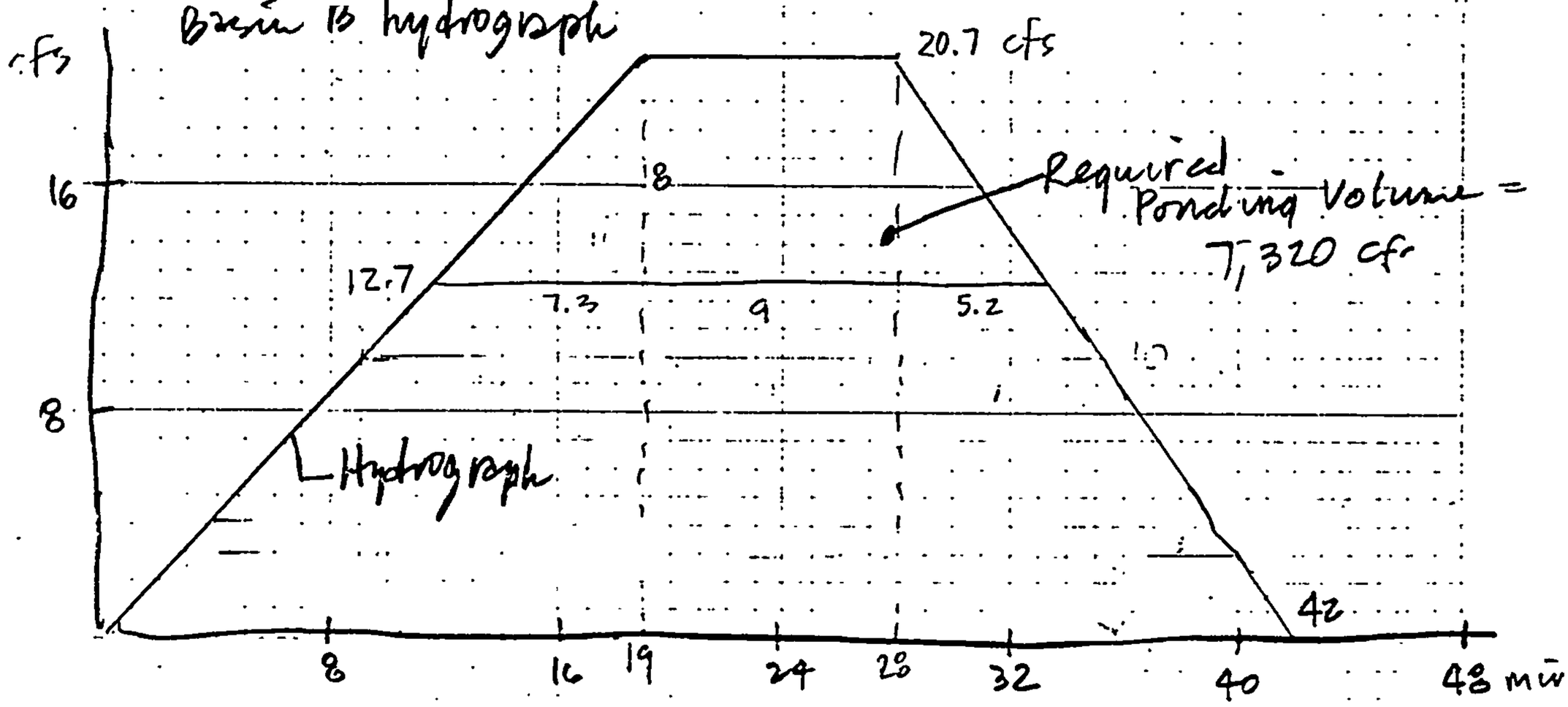
$L = 4.6'$ OK use this

BOHANNAN-HUSTON INC.

PROJECT NAME _____ SHEET 2 OF _____

PROJECT NO. _____ BY JAMET DATE 12/22/92

SUBJECT _____ CH'D _____ DATE _____



ADDITIONAL HYDROLOGY

Basin B-1 (not identified on plan but is the basin that is fire truck drive from office to gateway)

Detention Pond Area = 0.44 ac
(not incl. culvert flow)

$Q_{100} = 0.49(2.3\ cfs/ac) = 1.0\ cfs$

Pg 11

B Design culvert entrance for $Q_{100} = 7$ cfs using orifice

$Q = CA\sqrt{2gh}$, req'd A = 18"

$Q = 7$ cfs

$A = 2$, $h = 1.9' \approx 2.0$

added 12/23/92 jmf. Spillway, analyze as weir

$Q = 12.7\ cfs = CLH^{3/2} = 3.0(5)(H)^{3/2}$

$L = 7.5'$

$H = 0.7'$

BOHANNAN-HUSTON INC.

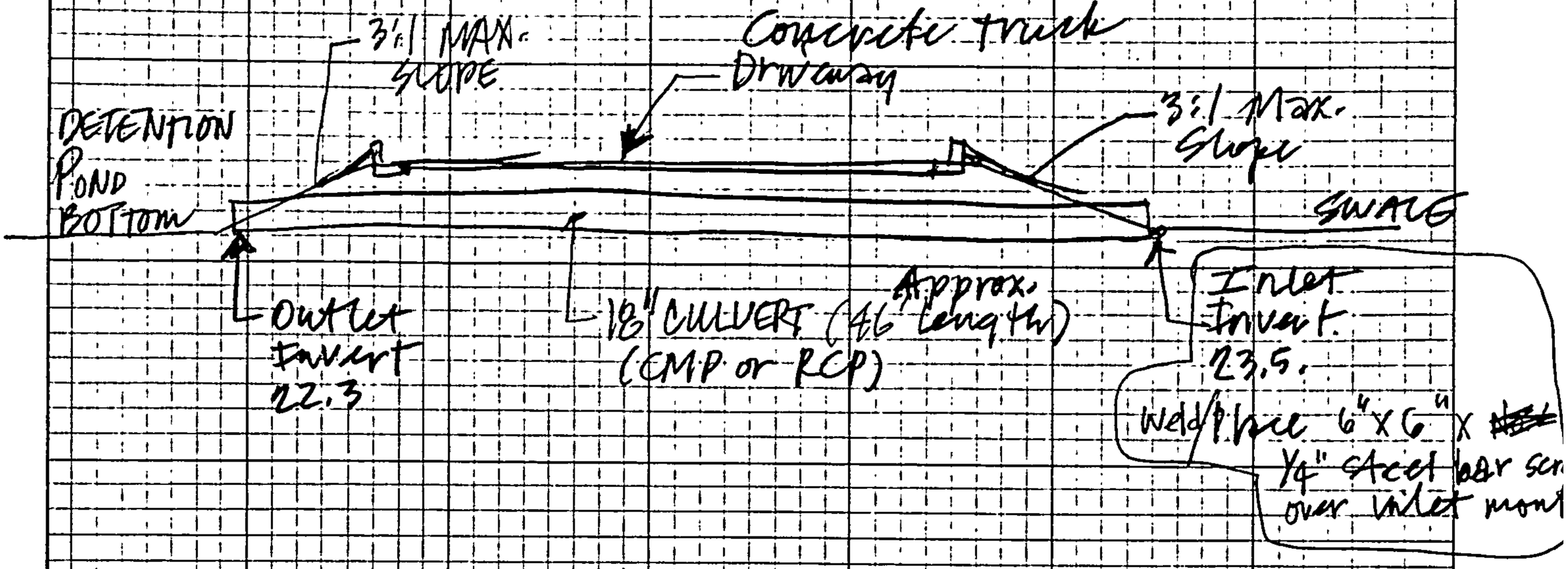
PROJECT NAME _____ SHEET 4 OF _____

PROJECT NO. _____ BY James F. DATE _____

SUBJECT _____ CH'D _____ DATE _____

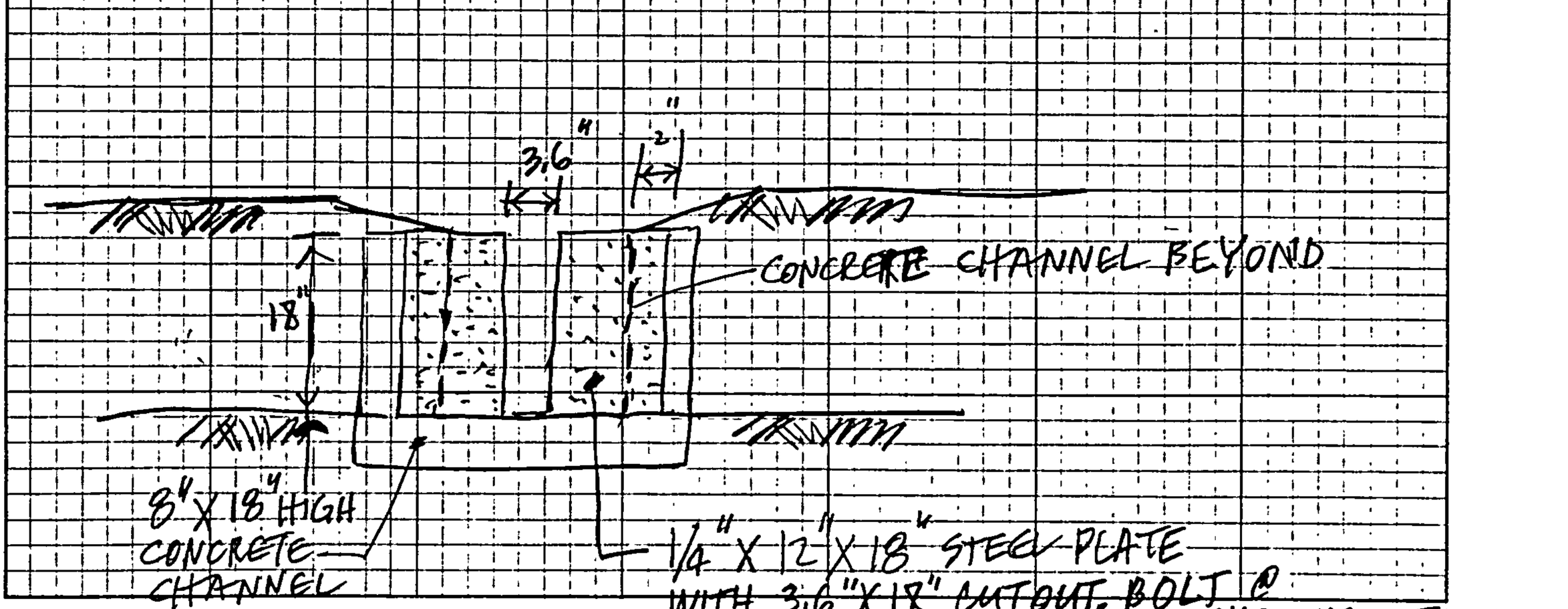
SECTION J-J

NO SCALE



SECTION K-K

NO SCALE



PLACE DEENAH GRATE AND CONCRETE PAD @ CHANNEL/STEEL PLATE PER SECTION G-G.

BOHANNAN-HUSTON INC.

PROJECT NAME _____ SHEET 3 OF _____

PROJECT NO. _____ BY James T. DATE 12.22.92

SUBJECT _____ CH'D _____ DATE _____

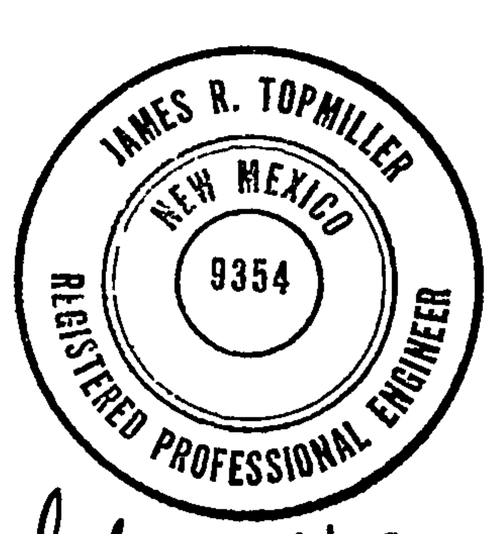
DRAINAGE REPORT AND GRADING PLAN for NATIONAL DISTRIBUTING COMPANY SITE

November 1992

PREPARED FOR:

SANFORD EPSTEIN AND ASSOCIATES
3333 SANDY SPRINGS CIRCLE, SUITE 230
ATLANTA, GEORGIA 33028

JOB NO. 92158.45



Prepared by:

11-30-92

JAMES R. TOPMILLER, P.E. DATE

BOHANNAN-HUSTON INC.
ENGINEERS ARCHITECTS PHOTOGRAMMETRISTS SURVEYORS
COURTYARD I, 7500 JEFFERSON NE ALBUQUERQUE, NM 87109 TEL (505) 823-1000 FAX (505) 821-0892

INTRODUCTION

This report analyzes the existing and proposed hydrological conditions of the development of the National Distributing Company site. It is prepared in order to obtain rough grading, site development plan, plat and building permit approvals.

EXISTING CONDITIONS AND SITE DESCRIPTION

This 10-acre site is located south of the southeast corner of Office Boulevard and Midway Place. The legal description is Lot B-1-B-1, Albuquerque Industrial Park Site. It is undeveloped although it is located within an area of moderately dense industrial and commercial development.

As stated above, this 10-acre site is part of a larger 20 acre lot (Lot B-1). A master drainage plan was prepared and approved by City of Albuquerque Hydrology which addresses in more detail the drainage characteristics of the entire 20-acre parcel, including this 10-acre tract. This is referenced for additional area drainage information.

The 10-acre site currently drains in a sheet flow manner in a northwesterly direction and discharges to Office Boulevard and eventually into the existing drop inlets located at the intersection of Office Boulevard and Midway Place.

The site is not located within any FEMA floodplain zones. Offsite flow onto the site is negligible.

The calculations in the rear of this report identify the 100-year and 10-year, 6-hour storm events as 22.8 cfs and 9.5 cfs respectively.
Existing

PROPOSED DRAINAGE CONDITIONS

A Warehouse/office development is proposed for the site with a 75,600 square feet warehouse expansion planned in the future. The roof of the proposed building will drain north/ south. The 100-year/6 hour storm and the City's proposed DPM revisions was used to calculate runoff.

A total of 21 cfs is permitted off the site. This is the permitted discharge as outlined in the master drainage plan of the original 20-acre parcel from which this National Distributing Company site is being created.

The site is divided into three (3) drainage subbasins. Basin "A" will be discharged controlled to restrict drainage from the site. This basin has the following characteristics:

Area: 3.2 acres
Flowrate: 12.2 cfs (100-yr)
Detention Pond "A"-1: 11000 cf
Detention Pond "A-2": 5500 cf
Controlled Discharge: 1.5 cfs
Control Structure: Weir (18" deep x 8")
Overflow: To Office Boulevard via short overland flow

Basin "B" will also utilize detention ponds to control flow from the site. Its characteristics are:

Area: 5.2 acres
Flowrate: 21.7 cfs (100-yr)
Detention Pond "B": 7320 cf
Uncontrolled Discharge: 12.7 cfs

Controlled Discharge from Pond "B": 0.5 cfs
Discharge Control Structure: 4" pipe drain (orifice)
Overflow: Directly to trunk drive via landscaped spillway

Basin "C" is the primary parking area of the site. It will free discharge all flows. its characteristics are:

Area: 1.6 acres
Flowrate: 6.3 cfs (100-yr)
No controlled discharges. Discharged directly to Office Boulevard.

Total flow from site: 1.5 cfs + 0.5 cfs + 6.3 cfs + 12.7 cfs = 21 cfs
(ok per drainage master plan)

EROSION CONTROL

During construction: An erosion control berm will be utilized on the downstream site of the project (adjacent to Office Boulevard)

Post-Construction: All non-building areas of the site will be paved, landscaped with sod or seeded for natural grasses growth.

CONCLUSION

The proposed drainage plan and grading concepts satisfy the previously approved Master Drainage Plan and City requirements for rough grading and building permit approval.

EXISTING HYDROLOGICAL CONDITIONS

Basin Area = Total Site of 10 acres, Assume Negligible Offsite flow
Assume land treatment B = 10 acres (Zone 2)
Using Rational Method from Revised DPM

$Q = CIA$

peak discharge per acre (100-yr) = 2.28 (Table 9)
" " " (10-yr) = 0.95

peak discharge (100-yr) = 22.8 cfs
peak discharge (10-yr) = 9.5 cfs

ALLOWABLE DISCHARGE PER MASTER PLAN

Allowable discharge per acre in 100-yr storm = 2.1 cfs per acre
(and all storm less than 100-yr)

Allowable discharge (100-yr) = 2.1 (10) = 21 cfs

PROPOSED DEVELOPMENT CONDITIONS

*Assume Future Parking Lane

Basin A: Total Area = 3.2 acres

Land treatment A = 0 acres
" B = 0.4 acres
" C = 1.2 acres
" D = 1.6 acres

$Q_{100} = 0.4(2.3) + 1.2(3.14) + 1.6(4.7) = 12.2$ cfs

BOHANNAN-HUSTON INC.

PROJECT NAME NATIONAL DIST. CO. SHEET 1 OF
PROJECT NO. 92158.42 BY JamieT. DATE 11.25.92
SUBJECT CH'D DATE

Basin B: Total Area 5.2 acres

Land treatment A = 0 acres
" B = 0.5 acres
" C = 1.0 acres
" D = 3.7 acres

$Q_{p_{100}} = 0.5(2.3) + 1.0(3.14) + 3.7(4.7) = 21.7$ cfs

Note: the truck road entrance free discharges approximately 1.0 cfs to Office

Basin C: Total Area = 1.6 acres

Land treatment A = 0 acres
B = 0.5 acres
C = 0 acres
D = 1.1 acres

$Q_{p_{100}} = 0.5(2.3) + 1.1(4.7) = 6.3$ cfs
Free Discharge Basin

TOTAL DEVELOPED FLOW: 12.2 + 20.7 + 6.3 = 39.2 cfs

HYDROGRAPHS: use hydrographs to estimate detention pond volumes and controlled discharge rates

Basin "A":

Weighted E (Uses precip) $= \dfrac{0.4(0.78) + 1.2(1.13) + 1.6(2.12)}{3.2} = 1.58$

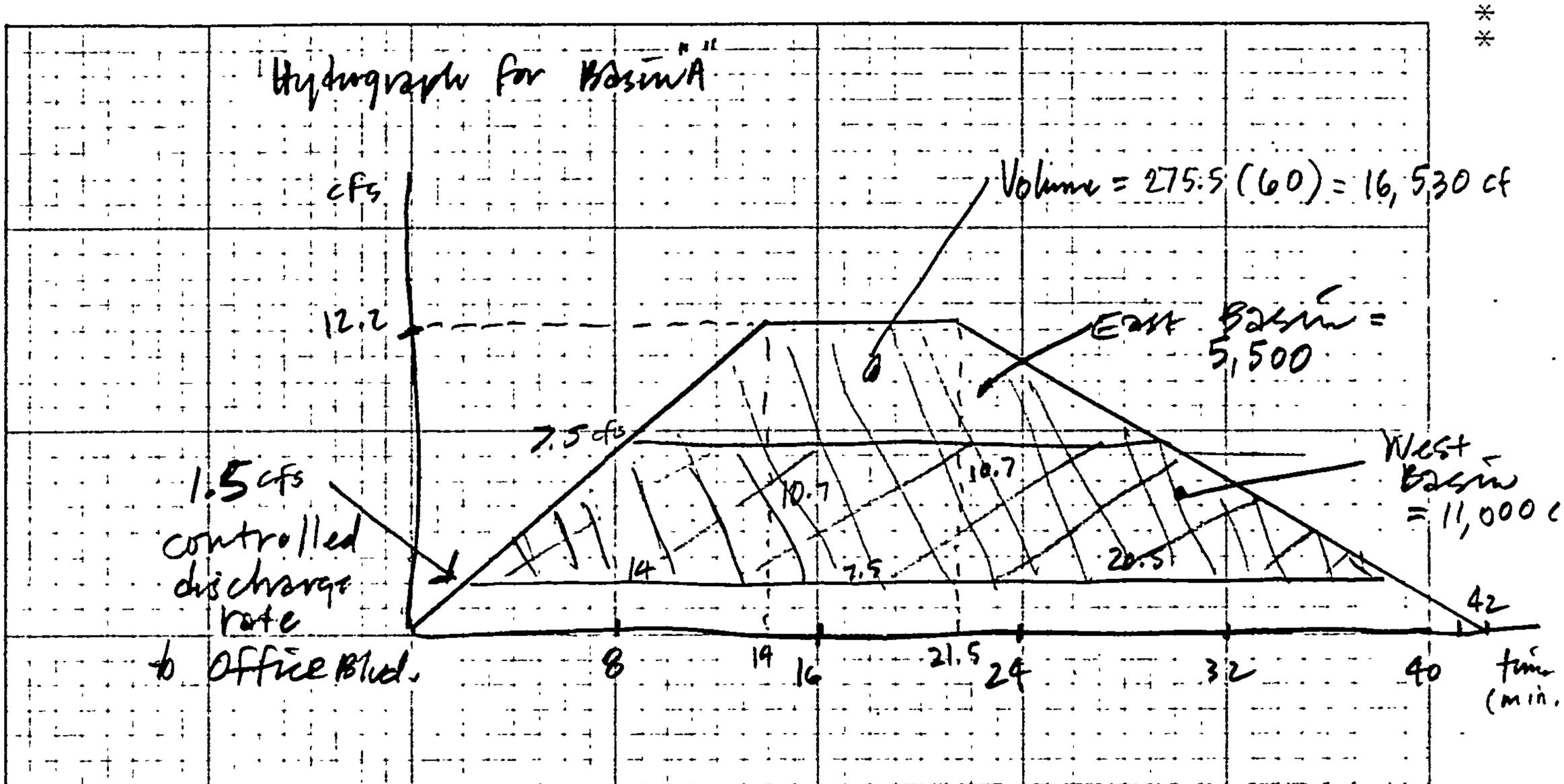
$A_T = 3.2$
$Q_p = 12.2$
$A_b = 1.6$

$t_b = \dfrac{121(1.58)3.2}{12.2} = 15\left(\dfrac{1.6}{3.2}\right) = 42$ min.

$t_p = 0.7(12 \text{ min}) + 8 - (5)\dfrac{1.6}{3.2} = 14$ min.

BOHANNAN-HUSTON INC.

PROJECT NAME NATIONAL DIST. CO. SHEET 2 OF
PROJECT NO. BY James T. DATE 11.25.92
SUBJECT CH'D DATE



Basin "B":

$$E(\text{weighted}) = \frac{0.5(0.78) + 1.6(1.13) + 3.1(2.12)}{5.2} = 1.69$$

$A_T = 5.2$

$A_D = 3.1$

$Q_p = 20.7$

$$t_b = \frac{121(1.69)5.2}{20.7} - 15\frac{3.1}{5.2} = 42 \text{ min}$$

$$t_p = 0.7(12) + 8 + 5\left(\frac{3.1}{5.2}\right) = 19 \text{ min}$$

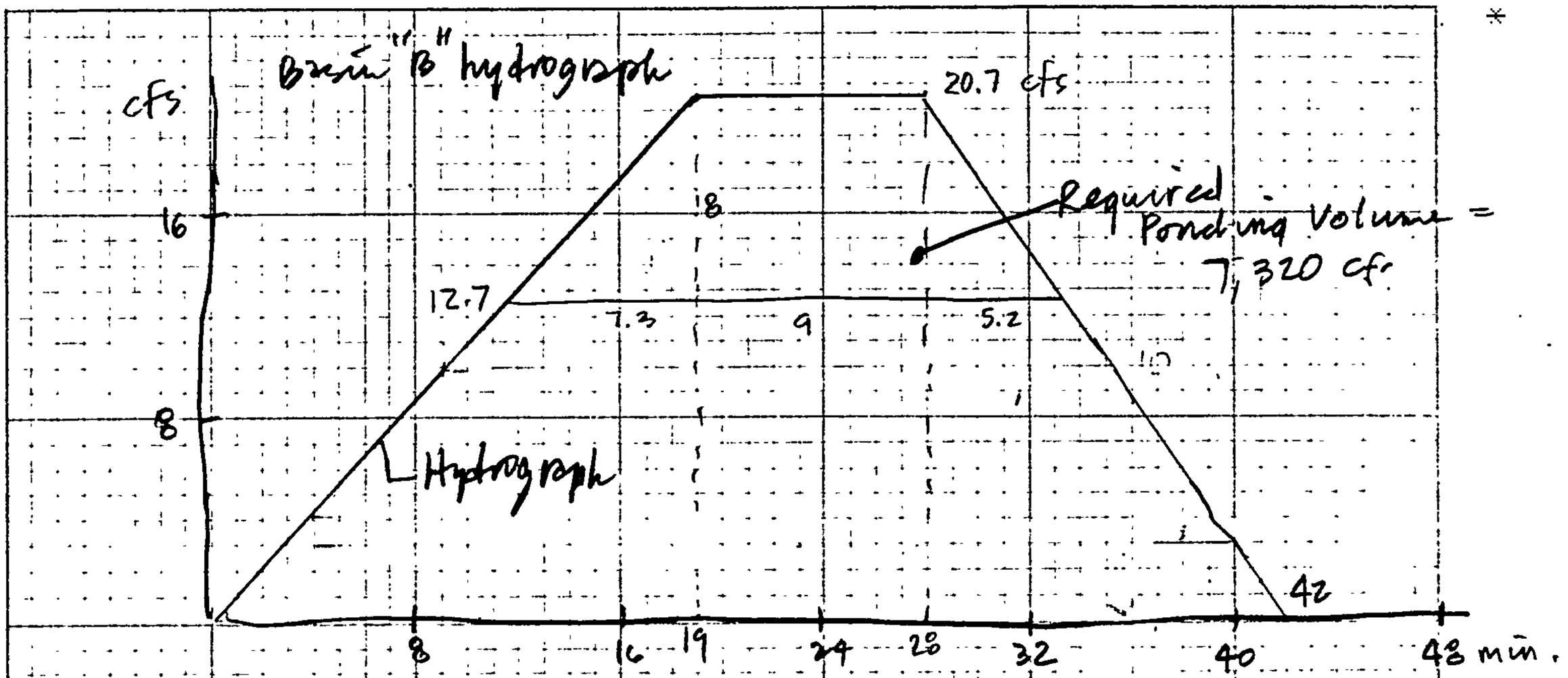
hyd. top = 8.94 min

BOHANNAN-HUSTON INC.

PROJECT NAME _____ SHEET 3 OF _____

PROJECT NO. _____ BY _____ DATE _____

SUBJECT _____ CH'D _____ DATE _____



ADDITIONAL HYDROLOGY

Basin B-1 (not identified on plan but is the basin that is the truck drive from office to gateway)

Detention Pond Area = 0.44 ac
(not incl. culvert flow)

$Q_{100} = 0.44(2.3\ cfs/ac) = 1.0\ cfs$

Pt "B" → (B) Design culvert entrance for $Q_{100} = 7$ cfs using orifice

$Q = CA\sqrt{2gh}$, req'd A = 18"

Q = 7 cfs

A = 2, h = 1.9'

BOHANNAN-HUSTON INC.

PROJECT NAME _____ SHEET 4 OF _____

PROJECT NO. _____ BY James T. DATE _____

SUBJECT _____ CH'D _____ DATE _____

DETENTION "A-1" POND

discharge structure —

design for 1.5 cfs discharge rate

by weir equation, set depth = 20" (= pond depth)

$Q = CLH^{3/2}$, $H = 1.5'$, $C = 3$

$Q = 3(.67)(1.5)^{3/2}$

$= 3.69$ cfs

$Q = 1.5$ cfs

solve $L = 8"$ 3"

use 18" deep by 8" wide

DETENTION "B" discharge structure

design for controlled discharge of 0.5 cfs.

use 4" drain pipe to curb

by orifice, $Q = CA\sqrt{2gh}$

$h = 1.5'$

$A = 0.08$ ☐

$C = 0.6$

then $Q = 0.5$ cfs OK

BOHANNAN-HUSTON INC.

PROJECT NAME NATIONAL DIST. CO. SHEET 5 OF

PROJECT NO. BY JAMES T. DATE 11.25.92

SUBJECT CH'D DATE

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 18, 2000

J. Arthur Blessen, P.E.
Claudio Vigil Architects
1305 Tijeras NW
Albuquerque, NM 87102-2882

RE: NATIONAL DISTRIBUTING COMPANY - PHASE 2 (E17-D34B). ENGINEER'S CERTIFICATION FOR CERTIFICATE OF OCCUPANCY APPROVAL. ENGINEER'S STAMP DATED DECEMBER 18, 2000.

Dear Mr.Blessen:

Based on the information provided on your December 18, 2000 submittal, the above referenced plan is approved for Certificate of Occupancy.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

John P. Murray, P.E.
Hydrology

c: Whitney Reierson
File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 19, 2000

J. Arthur Blessen, P.E.
Claudio Vigil Architects
1305 Tijeras NW
Albuquerque, NM 87102-2882

RE: NATIONAL DISTRIBUTING COMPANY - PHASE 2 (E17-D34B). GRADING AND DRAINAGE PLAN FOR SITE DEVELOPMENT PLAN FOR BUILDING PERMIT, AND FOR BUILDING APPROVALS. ENGINEER'S STAMP DATED MARCH 31, 2000.

Dear Mr.Blessen:

Based on the information provided on your March 31, 2000 submittal, the above referenced plan is approved for Site Development Plan for Building Permit and for Building Permit.

On the Drainage Information Sheet, please use Project Name, e.g., Nat'l Dist. Co., rather than the Consultant's for Applicant's Name.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Prior to Certificate of Occupancy approval, aan Engineer's Certification per the DPM will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

John P. Murray, P.E.
Hydrology

c: Whitney Reierson
File