City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 25, 1995

CERTIFICATE OF COMPLETION AND ACCEPTANCE

*****REVISED*****

Vista Hills Partners
1600 University N.E.
Albuquerque, NM 87191

RE: PROJECT NO. CONEJOS BUSINESS PARK PROJECT NO. 4807.81 (MAP E-17)/D43

Dear Sir:

This is to certify that the City of Albuquerque accepts Project No. 4807.81 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 curb and gutter, wheel chair ramp, asphalt, waterline, and a fire hydrant for Conejos Business Park. The contractor tied into existing waterline on Osuna and ran the waterline to the south side of the business park. The contractor also removed and replaced existing curb and gutter and asphalt for a deceleration lane. The work also included removal and replacement of asphalt curb and asphalt for construction of a turning lane on eastbound Osuna. Also included in this project was sanitary sewerline.

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

RECEIVED
MAY 30 1995

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 31, 1995

James Topmiller
Bohannan-Huston
7500 Jefferson NE
Albuquerque, NM 87109

RE: REVISED MASTER DRAINAGE PLAN FOR CONEJOS BUSINESS PARK (E17-D43) REVISION DATED 1/12/95.

Dear Mr. Topmiller:

Based on the information provided on your January 17, 1995 resubmittal, the above referenced site is approved for Final Plat approval.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 12, 1995

James Topmiller
Bohannan-Huston, Inc.
7500 Jefferson NE
Albuquerque, NM 87109

RE: ENGINEER CERTIFICATION FOR PHASE II, ERNEST THOMPSON BUILDING @ CONEJOS BUSINESS PARK (E17-D43) STATEMENT DATED 12/21/94.

Dear Mr. Topmiller:

Based on the information provided on your December 22, 1994 submittal, Engineer Certification for the above referenced site is acceptable.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 7, 1994

James Topmiller
Bohannan-Huston, Inc.
7500 Jefferson NE
Albuquerque, NM 87109

RE: DRAINAGE PLAN FOR PHASE II, TRACT A-2 ACADEMY INDUSTRIAL PARK (E17-D43) ENGINEER'S STAMP DATED 8/19/94.

Dear Mr. Topmiller:

Based on the information provided on your August 19, 1994 submittal, the above referenced site is approved for Building Permit.

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

Also, prior to Certificate of Occupancy release, Engineer Certification per the D.P.M. checklist will be required.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sinerely,

Bernie J. Montoya

Bernie J. Montoya, CE
Engineering Associate

BJM/dl/WPHYD/8460

c: Andrew Garcia
File

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

DRAINAGE REPORT FOR
ULTIMATE & PHASE I DEVELOPMENT
CONEJOS BUSINESS PARK, TRACT A-2
ACADEMY INDUSTRIAL PARK

JUNE 1994

DRAINAGE REPORT
ULTIMATE & PHASE I DEVELOPMENT
CONEJOS BUSINESS PARK
TRACT A-2, ACADEMY INDUSTRIAL PARK

Prepared for:

KNIGHT SEAVEY DESIGN
1608 UNIVERSITY BOULEVARD NE
ALBUQUERQUE, NM 87102

RECEIVED
JUN 17 1994
DIVISION

Prepared by:

BOHANNAN-HUSTON INC.
ENGINEERS ARCHITECTS PHOTOGRAMMETRISTS SURVEYORS

COURTYARD I, 7500 JEFFERSON NE ALBUQUERQUE, NM 87109 TEL (505) 823-1000 FAX (505) 821-0892

Job No. 93283.42

DRAINAGE REPORT FOR
ULTIMATE AND PHASE I DEVELOPMENT
CONEJOS BUSINESS PARK
TRACT A-2, ACADEMY INDUSTRIAL PARK

JUNE 1994

Prepared for:

KNIGHT SEAVEY DESIGN
1608 UNIVERSITY BOULEVARD NE
ALBUQUERQUE, NM 87102

PREPARED BY:

JAMES R. TOPMILLER
NEW MEXICO
9354
REGISTERED PROFESSIONAL ENGINEER

6/16/94

James Topmiller, P.E. Date

BOHANNAN-HUSTON INC.
ENGINEERS ARCHITECTS PHOTOGRAMMETRISTS SURVEYORS

I. PURPOSE

The purpose of this Drainage Report is to present historic and proposed drainage conditions for Conejos Business Park, Tract A-2, Academy Industrial Park. This report is intended to support phased and ultimate development review and approval of a proposed warehouse/office development on the tract. The zoning of the property (for manufacturing uses) requires building permit (Code Administration) review and approval only. Specifically, this report requests:

1. Approval of the overall drainage plan for the full, ultimate development.
2. Approval of rough grading and building permit for the Phase I development.
3. Approval of the bridge plans, details and notes.

II. METHODOLOGY

Undeveloped and developed site conditions will be analyzed for the 100-year, 6-hour storm event in accordance with the City of Albuquerque's revised Section 22.2, Hydrology of the Development Process Manual, January 1993 (DPM).

III. SITE DESCRIPTION AND CHARACTERISTICS

The site is currently undeveloped, vacant land located south of Pan American Avenue, opposite the intersection of Pan American Place and Gruber Avenue. The legal description of the property is Tract A-2, Academy Industrial Park, located within the City of Albuquerque. The site comprises approximately 8.7 acres of very lightly vegetated land. The southwestern boundary of the site is the Borealis Channel, a concrete-lined drainage channel, lying in a 60' wide drainage easement. Please reference the Vicinity Map identified on the enclosed Grading/Drainage Plan.

The site is not located within a FEMA floodplain. The nearest FEMA floodplain is identified by FEMA maps as being confined to the existing Borealis Channel on the southwest property line of the property.

IV. EXISTING HYDROLOGIC AND SITE DRAINAGE CONDITIONS

In its undeveloped condition, the site consists of two drainage basins with separate outfalls and accepts offsite flows from two separate basins to the east of the property. Basin 1, consisting of approximately 6.8 acres, drains southwesterly to an existing channel inlet located on the Borealis Channel. This inlet is a weir side channel inlet formed in the side of the channel. In the 100-year storm event, this basin generates approximately 10.6 cfs.

Another onsite basin, Basin 2, generates approximately 3 cfs in the 100-year storm event and discharges it to the Borealis Channel at the site's northwest corner in a sheet flow manner.

Immediately to the east of the property lies Offsite Basin 3, consisting of approximately 5 acres and generating a 21.7 cfs runoff in the 100-year storm event. This basin discharges in a sheet flow manner to the onsite Basin 1.

Offsite Basin 4 consists of approximately 3 acres and generates approximately 13 cfs in the 100-year storm event. It discharges in a southwesterly direction. Part of this discharge drains directly to the channel and the remainder drains, through recent erosion adjacent to the maintenance road, onto the site to Basin 1.

All offsite basins were analyzed as being fully developed. This is not their current condition, but anticipates future development.

Pan American Place and the existing 10' wide concrete channel on the north boundary of the property effectively cutoff the site from any offsite flows from the north.

V. PROPOSED (DEVELOPED) HYDROLOGIC AND HYDRAULIC CONDITIONS

Please refer to the proposed Grading/Drainage Plan enclosed in Appendix VII.

Site Drainage - Ultimate Development Drainage Conditions

The proposed Drainage Management Plan for the developed site will continue to utilize existing discharge points and follow drainage patterns of the existing site condition. Offsite flows from existing Basin 3 will continue to be accepted by the property.

Developed Flows

Basin A is an approximately 1.9 acre basin in the northwest corner of the property. In its developed condition, this basin generates approximately 7.8 cfs and discharges it to an outfall to the existing Borealis Channel side channel inlet in the northwest corner of the property. Drainage from this basin is prevented from directly entering the Borealis Channel by the use of a 12" curb along the northeast edge of the channel, which directs flow to the proposed outfall point.

Basin B, approximately 6.8 acres, generates 29.6 cfs in the 100-year storm event. Basin B also accepts the offsite flow from Offsite Basin 3 (existing Basin Map), approximately 21.7 cfs. The total combined flow of approximately 51.3 cfs, is discharged at the existing side channel inlet located midway along the property. Offsite flows from Basin 3 will continue to be accepted in a sheet flow manner for as long as Basin 3 remains largely undeveloped. Future development of that basin should direct concentrated flows to the outlet structure constructed by this project in the retaining wall on the east boundary.

Modifications to Existing Side Channel Inlet

The existing side channel inlet, which will drain Basin B to the channel, will be modified to permit vehicular (large truck) access along the channel and provide circulation among the site buildings and parking lots. This proposed modification is identified on the detail sheet enclosed in Appendix IV. The modification includes a rectangular weir opening that will be constructed behind the channel wall in the proposed retaining wall. The capacity of the 12' x 1.5' deep weir inlet is analyzed to be approximately 66 cfs. Per agreements with City staff in an earlier meeting, the side channel inlet (as modified to a weir) will not be required to provide freeboard within the City drainage easement, with the following justification:

- The existing inlet does not provide freeboard
- The adjacent building's finish floor is substantially higher than the main channel's top edge and is thus protected
- Freeboard is provided only 10' outside the easement by the proposed building stemwall. All potential surfaces of impact by channel spillage (between the stemwall and the channel) are hardened improvements.

Entrances

At both proposed entrances off Pan American Place, City standard drive pads shall be constructed. Drive pad construction provides a positive water block to street flows. An additional entrance is proposed off Osuna Road to the south of the property. A water block will be constructed at the entrance road's connection to Osuna to prevent street flows from entering the entrance road.

Bridge Structures

Entrance to the site from Osuna Road will require crossing the Borealis Channel, utilizing a bridge structure. See Appendix IX for design details of this structure. The extension of this proposed entrance south of the channel will generate a small, negligible flow rate which will be discharged westerly onto the property lying immediately to the west as it has historically been discharged.

Encroachment Agreement

A revised encroachment agreement for the proposed bridge structure and other impacts in the City easement will be provided for City review by separate document.

Master Site Plan

Enclosed in Appendix VIII is the Master Site Plan. This plan was prepared at the request of City staff and identifies the following key elements of site construction:

- A "No-parking" zone adjacent to the channel at the rear of the building, with sign.
- Construction notes for access gates and locks (2 locations).
- Note requiring Contractor notification of Sonny Jurgensen 24 hours prior to concrete work.
- Authorization block and note for private facilities in City right-of-way.
- 12' wide curb cut on the south side of the driveway, and at the east end of the site/channel, for City access to channel.

VI. PHASING

The development of Conejos Business Park is proposed to be phased. Phase I development has been identified and is detailed within this report. Future phase limits are unknown.

Accordingly, enclosed in Appendix VII is the Phase I Drainage/Grading Plan which identifies the required construction efforts of the Phase I development.

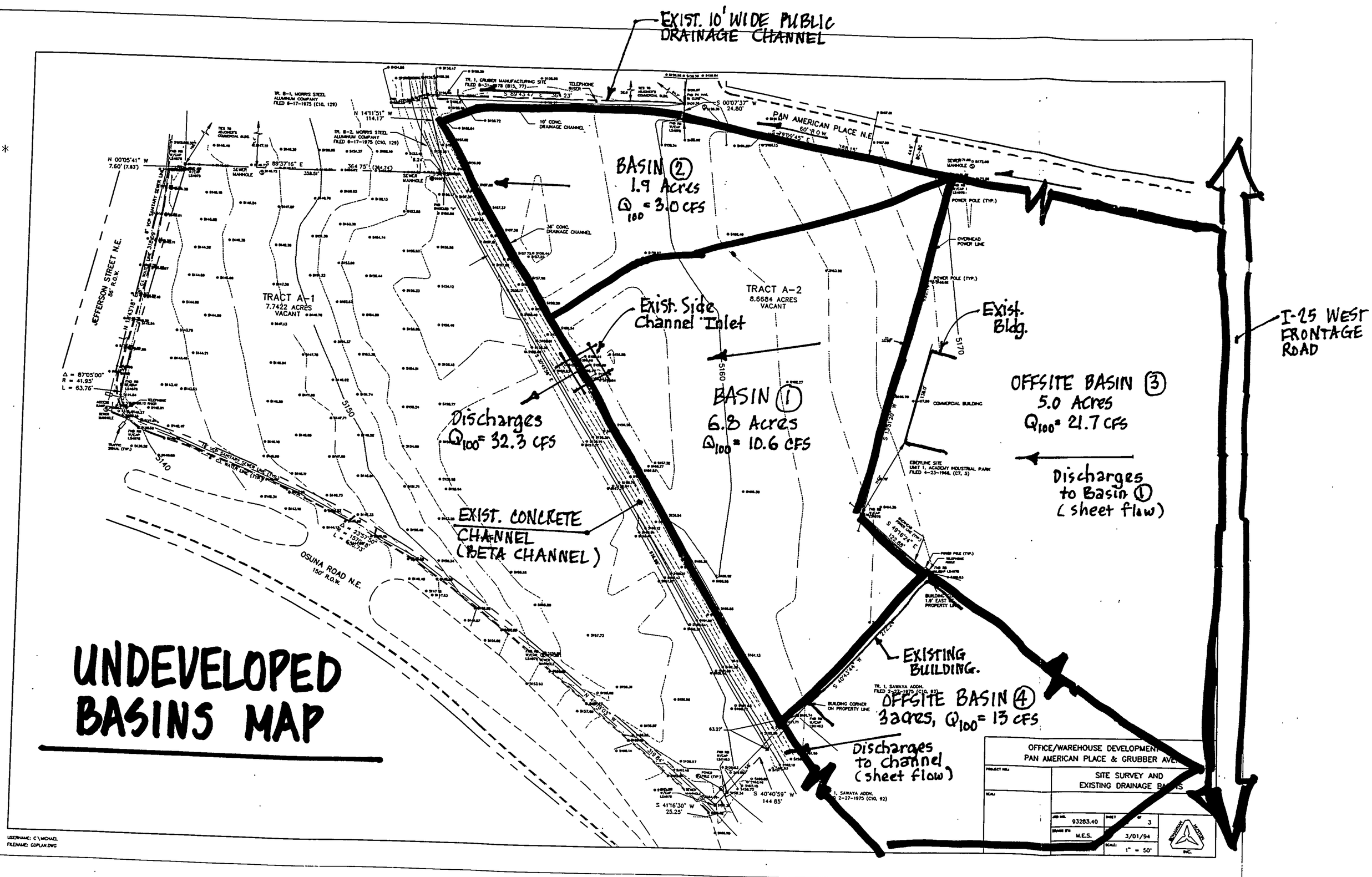
The bridge structure is not proposed under Phase I, but its review and approval is requested with this submittal. Future phases will be required to submit individual phased plans to the City's Hydrology Division for review and approval prior to building permit and rough grading.

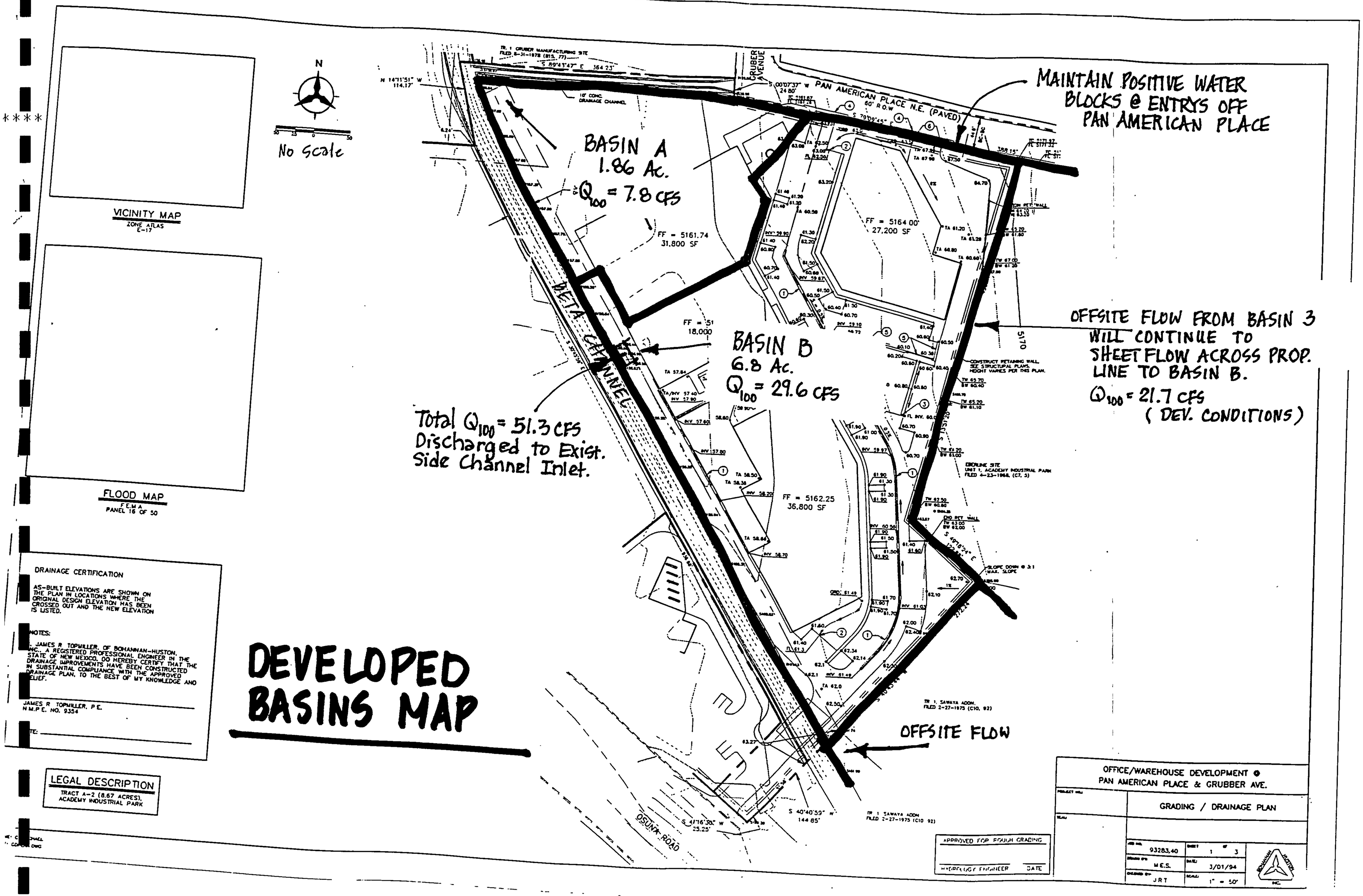
VII. EARTH BALANCE

Mass grading of the site to the grading plan herein will create a shortage of available onsite dirt. Import of dirt to meet the site's fill requirements will need to occur. The plan entitled "Borrow Site," enclosed in Appendix V, identifies the location of the dirt source, and the grading limits of the borrow effort.

VIII. CONCLUSION

This report has presented a drainage management plan for the proposed warehouse/office facility, called Conejos Business Park, on Tract A-2, Academy Industrial Park and a Phase I Grading/Drainage Plan. The plan provides safe and adequate drainage protection for the proposed development. It is requested these plans be approved as presented, and rough grading and building permit be approved for Phase I.


EXIST. 10' WIDE PUBLIC DRAINAGE CHANNEL
PAN AMERICAN PLACE N.E.
60' R.O.W.
JEFFERSON STREET N.E.
86' R.O.W.
OSUNA ROAD N.E.
150' R.O.W.
TRACT A-1
7.7422 ACRES
VACANT
TRACT A-2
8.6684 ACRES
VACANT
BASIN (2)
1.9 Acres
Q_{100} = 3.0 CFS
BASIN (1)
6.8 Acres
Q_{100} = 10.6 CFS
Discharges
Q_{100} = 32.3 CFS
Exist. Side Channel Inlet
EXIST. CONCRETE CHANNEL (BETA CHANNEL)
Exist. Bldg.
I-25 WEST FRONTAGE ROAD
OFFSITE BASIN (3)
5.0 Acres
Q_{100} = 21.7 CFS
Discharges to Basin (1) (sheet flow)
EXISTING BUILDING.
OFFSITE BASIN (4)
3 acres, Q_{100} = 13 CFS
Discharges to channel (sheet flow)
UNDEVELOPED BASINS MAP
OFFICE/WAREHOUSE DEVELOPMENT
PAN AMERICAN PLACE & GRUBBER AVE.
SITE SURVEY AND
EXISTING DRAINAGE BASINS
93283.40
M.E.S.
3/01/94
1" = 50'
3


N
No Scale
VICINITY MAP
ZONE ATLAS
E-17
FLOOD MAP
F.E.M.A.
PANEL 16 OF 50
DRAINAGE CERTIFICATION
AS-BUILT ELEVATIONS ARE SHOWN ON THE PLAN IN LOCATIONS WHERE THE ORIGINAL DESIGN ELEVATION HAS BEEN CROSSED OUT AND THE NEW ELEVATION IS LISTED.
NOTES:
I, JAMES R TOPMILLER, OF BOHANNAN-HUSTON, INC., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE DRAINAGE IMPROVEMENTS HAVE BEEN CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED DRAINAGE PLAN, TO THE BEST OF MY KNOWLEDGE AND BELIEF.
JAMES R TOPMILLER, P.E.
N.M.P.E. NO. 9354
DATE:
LEGAL DESCRIPTION
TRACT A-2 (8.67 ACRES).
ACADEMY INDUSTRIAL PARK
DEVELOPED BASINS MAP
BASIN A
1.86 Ac.
Q_{100} = 7.8 CFS
FF = 5161.74
31,800 SF
BASIN B
6.8 Ac.
Q_{100} = 29.6 CFS
FF = 5164.00
27,200 SF
FF = 5162.25
36,800 SF
Total Q_{100} = 51.3 CFS
Discharged to Exist.
Side Channel Inlet.
MAINTAIN POSITIVE WATER BLOCKS @ ENTRYS OFF PAN AMERICAN PLACE
OFFSITE FLOW FROM BASIN 3 WILL CONTINUE TO SHEET FLOW ACROSS PROP. LINE TO BASIN B.
Q_{100} = 21.7 CFS
(DEV. CONDITIONS)
OFFSITE FLOW
PAN AMERICAN PLACE N.E. (PAVED)
GRUBER AVENUE
BETA CHANNEL
OSUNA ROAD
OFFICE/WAREHOUSE DEVELOPMENT @
PAN AMERICAN PLACE & GRUBBER AVE.
GRADING / DRAINAGE PLAN
APPROVED FOR ROUGH GRADING
HYDROLOGY ENGINEER
DATE
93283.40
M.E.S.
J.R.T
3/01/94
1" = 50'
BOHANNAN HUSTON INC.

DEVELOPED CONDITIONS

Hydrology, DPM Chap 12
*Refer to Basin Map

BASIN A

Basin discharges to Rundown @ NW SDE corner

Total Area = 1.86 acres

Zone 2

Land treatment "B" = 0.20 acres

Land treatment "D" = 1.66 acres

$Q_{100_B} = 0.20(2.28 \text{ cfs/ac}) = 0.46 \text{ cfs}$

$Q_{100_D} = 1.66(4.70) = \underline{7.8 \text{ cfs}}$

$Q_{100_{total}} = 8.3 \text{ cfs}$

Outlet to Existing Channel

analyze as a weir

$Q_T = CLH^{3/2}$, $h = 0.5'$, $Q = 8.3$ cfs, $C = 3.0$.

solve for L, length of weir:

$L = \frac{Q}{CH^{3/2}} = 7.8'$, USE 12' WIDE WEIR OPENING TO PERMIT MAINT. ACCESS ALONG CHANNEL

BOHANNAN-HUSTON INC.

PROJECT NAME Industrial Park @ SHEET 1 OF

PROJECT NO. BY JamesT. DATE 3/7/94

SUBJECT Gruber & Pan Amer. CH'D DATE

DEVELOPED CONDITIONS (cont.)

BASIN "B":

Land Type "B" = 1.0 acre
Land Type "D" = 5.8 acres

Q_{100_B} = 1.0 ac. (2.28) = 2.3 cfs

Q_{100_D} = 5.8 ac. (4.70) = 27.3 cfs

Q_{100} = 29.6 cfs total

SIZE outlet structure from offsite Basin (3) to onsite Basin "B"

by weir: $Q = CLH^{3/2}$, Q = 21.7 cfs

@ 6" deep, L = 20.5' wide
@ 12" deep, L = 7.2' wide
@ 18" deep, L = 4' wide

BOHANNAN-HUSTON INC.

PROJECT NAME INDUSTRIAL PARK SHEET 2 OF
PROJECT NO. BY James T DATE 3/7/94
SUBJECT CH'D DATE

UNDEVELOPED CONDITIONS

BASIN (1) onsite

6.8 acres, bare earth, zone 2, Land type "A"
from table 9, DPM

$Q_{100} = 6.8\ ac.\ (1.56\ \frac{cfs}{ac}) = 10.6\ cfs$

BASIN (2) onsite

1.9 ac. (characteristics like (1))

$Q_{100} = 1.9(1.56\ \frac{cfs}{ac}) = 3.0\ cfs$

OFSITE BASIN (3)

5.0 ac., partially dev. (but treat as fully developed)

15% Land type "B" = 0.15(5.0) = 0.75 ac.
85% " " "D" = 0.85(5.0) = 4.25 ac.
from table 9, DPM

$Q_{100_B} = 0.75(2.28) = 1.7\ cfs$

$Q_{100_D} = 4.25(4.70) = 20.0\ cfs$

Q_{100} total — 21.7 cfs

BOHANNAN-HUSTON INC.

PROJECT NAME INDUSTRIAL PARK SHEET 3 OF
PROJECT NO. BY James T DATE 3/7/94
SUBJECT CH'D DATE

OFFSITE BASIN (4)

3 acres (treat as fully developed)

Land Type "B" = 0.15(3.0) = 0.45 acres

" " "D" = 0.85(3.0) = 2.55 acres

Q_{100_B} = 0.45(2.28) = 1.0 cfs

Q_{100_D} = 2.55(4.70) = 12 cfs

Q_{100} = 13 cfs total

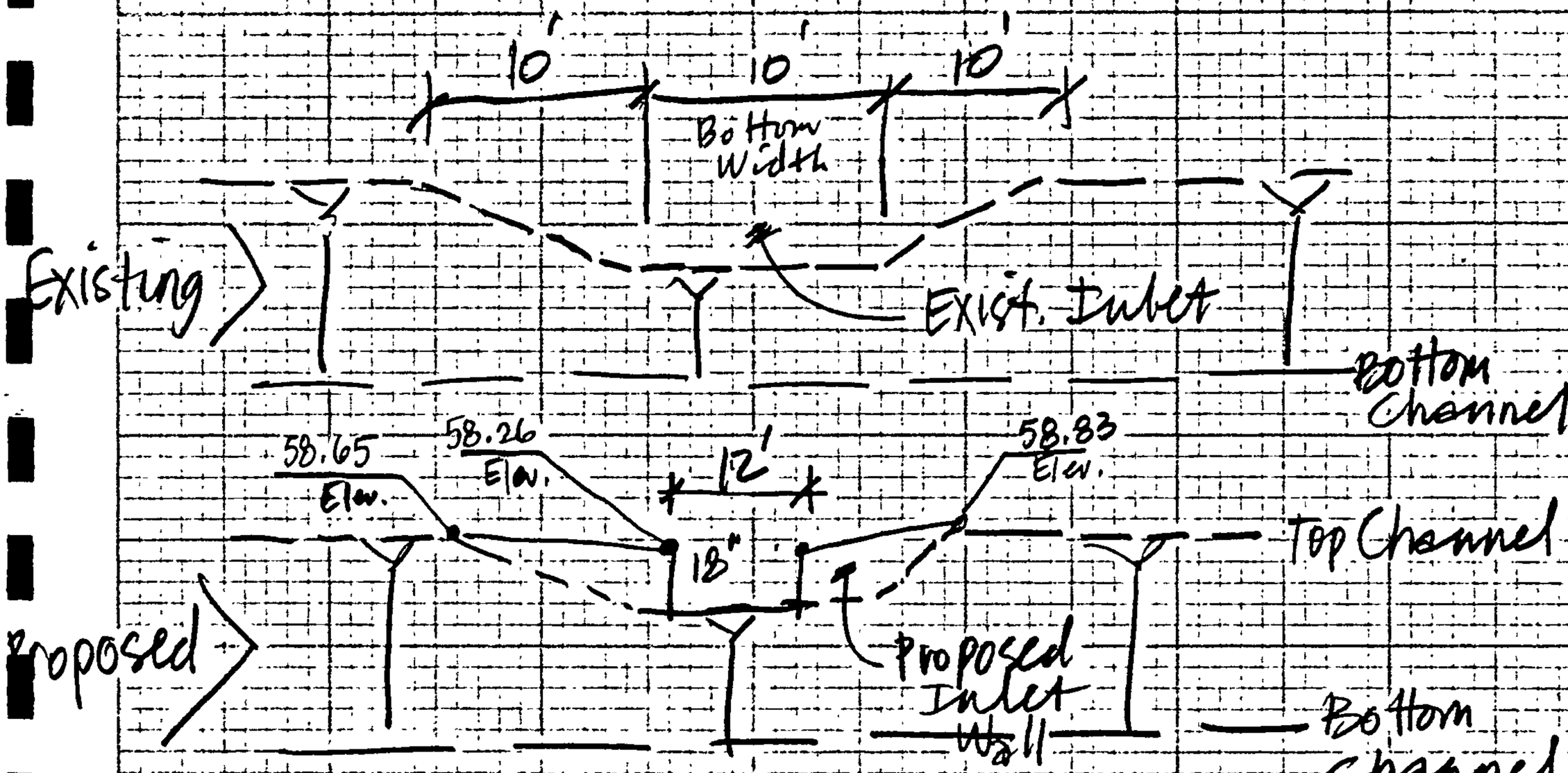
BOHANNAN-HUSTON INC.

PROJECT NAME INDUSTRIAL PARK SHEET 4 OF

PROJECT NO. BY JMeT DATE 3/7/94

SUBJECT CH'D DATE

DETERMINE CAPACITY OF MODIFIED WEIR INLET TO VETA CHANNEL



by weir $Q = CLH^{3/2}$

$Q = 3.0\,(12')(1.5')^{3/2}$

$Q = 67$ cfs $>$ 51.7 cfs OK

from Basin A

BOHANNAN-HUSTON INC.

PROJECT NAME INDUSTRIAL PARK SHEET 5 OF

PROJECT NO. BY JAMES DATE 3/7/94

SUBJECT TRACT A-2 CH'D DATE

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 14, 1996

James Topmiller
Bohannan-Huston
7500 Jefferson NE
Albuquerque, NM 87109

RE: ENGINEER CERTIFICATION FOR PHASE III, CONEJOS BUSINESS PARK (E17-D43) CERTIFICATION STATEMENT DATED 2/28/96.

Dear Mr. Topmiller:

Based on the information provided on your March 5, 1996 submittal, Engineer Certification for the above referenced site is acceptable.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 31, 1995

James Topmiller
Bohannan-Huston, Inc.
7500 Jefferson NE
Albuquerque, NM 87109

RE: MASTER DRAINAGE PLAN & PHASE III SITE SPECIFIC PLAN FOR CONEJOS BUSINESS PARK (E17-D43) ENGINEER'S STAMP DATED 10/24/95.

Dear Mr. Topmiller:

Based on the information provided on your October 24, 1995 submittal, the above referenced sites are approved for Master Plan and Building Permit.

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

Also, prior to Certificate of Occupancy release for Phase III, Engineer Certification per the D.P.M. checklist will be required.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,

Bernie J. Montoya

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER