City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Public Works Department
Transportation Development Services Section

July 11, 2002

Tim Gratten for Steven J. Perich, Registered Architect
6801 Jefferson N.E.
Albuquerque, NM 87109

Re: Certification Submittal for Final Building Certificate of Occupancy for International Programs, [M-21/D010]
10600 Research Rd. S.E.
Architect's Stamp Dated 07/09/02

Dear Mr. Gratten:

The TCL / Letter of Certification submitted on July 10, 2002 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to Building and Safety and final C.O. has been logged in by Vicki Chavez in the Building Safety Section downstairs.

Sincerely,

Mike Zamora, Commercial Plan Checker
Development and Building Services
Planning Department

c: Hydrology file
Mike Zamora

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/11/2002)

M-21/D10

PROJECT TITLE: INTERNATIONAL PROGRAMS ZONE MAP/DRG. FILE #: M21
DRB #: 1001253 EPC#: Z-98-89 WORK ORDER#: N/A

LEGAL DESCRIPTION: TRACT A-2, LANDS OF SHAW, MITCHELL, MALLORY PARTNERSHIP
CITY ADDRESS: 10600 RESEARCH RD. SE

ENGINEERING FIRM: BRASHER AND LORENZ, INC. CONTACT: PAUL BRASHER
ADDRESS: 2201 SAN PEDRO NE, BLDG 1, STE. 1200 PHONE: 888-6088
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87110

OWNER: AMELANG PARTNERS, INC. CONTACT: BRENT REDUS
ADDRESS: 952 ECHO LANE, STE. 100 PHONE: (713) 468-6700
CITY, STATE: HOUSTON, TX ZIP CODE: 77024

ARCHITECT: DEKKER/PERICH/SABATINI, LTD. CONTACT: TIM GRATTAN
ADDRESS: 6801 JEFFERSON, NE PHONE: 761-9700
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87109

SURVEYOR: ~~JA~~ CO. PRECISION SURVEYS CONTACT: LARRY MEDRANO
ADDRESS 8414-D JEFFERSON ST. NE PHONE: 856-5700
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87113

CONTRACTOR: JAYNES CORPORATION CONTACT: JERRY LUCERO
ADDRESS: 2906 BROADWAY NE PHONE: 345-8591
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87125

CHECK TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- X ENGINEERS CERTIFICATION (TCL)
- ____ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANCIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
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- ____ SECTOR PLAN APPROVAL
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- ____ CERTIFICATE OF OCCUPANCY (TEMP.)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- ____ NO
- ____ COPY PROVIDED

RECEIVED
JUL 10 2002
HYDROLOGY SECTION

DATE SUBMITTED 7-10-02 BY: STEVE MORROW

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature , location and scope ot the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

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2. **Drainage Plans**: Required for building permits, grading permits, paving permits and site plans less than five (5)
3. **Drainage Report**: Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

7/11/02 - Appd. C.O., Cld Vicki L.M.M. ✓ - logged in; 7/12/02 - Sent letter dated 7/11/02)

BRASHER & LORENZ, INC.
CONSULTING ENGINEERS

2201 SAN PEDRO NE BUILDING 1 SUITE 210 ALBUQUERQUE, NM 87110 PHONE (505) 888-6088 FAX (505) 888-6188

City of Albuquerque
Public Works Department
Development and Building Services
P.O. Box 1293
Albuquerque, NM 87103

Attn: Mike Zamora, Commercial Plan Checker

Re: International Programs Building, 10600 Research Road SE

ENGINEER'S CERTIFICATION (TCL) FOR CERTIFICATE OF OCCUPANCY

I, the undersigned, being a Professional Engineer in the State of New Mexico, do hereby certify that the as-built information shown hereon is based on actual field measurements and visual inspections performed by Brasher and Lorenz, Inc.

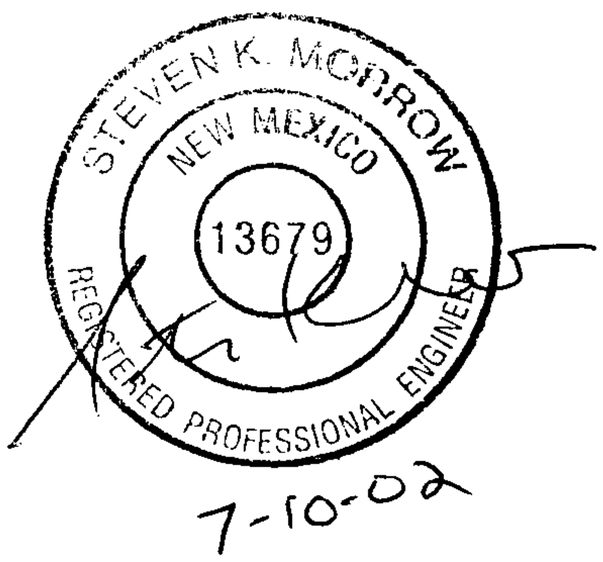
I further certify that the as-built condition of the site as of June 3, 2002 is in substantial compliance with the amended Master Development Plan prepared by Dekker/Perrich/Sabatini dated 2/4/02. Changes per Administrative Amendment are noted in green. Minor variations to the Master Development plan are noted in red.

I attached the following:

1) Approved, Amended DRB Site Plan 2/4/02 (with changes marked)
2) Architect's Certification of DRB Site Plan 7/9/02
3) Approved Original DRB Site Plan 5/15/01
4) Letter of Description for AA

Sincerely,

Steven K. Morrow NMPE 13679 — Date 7/10/02



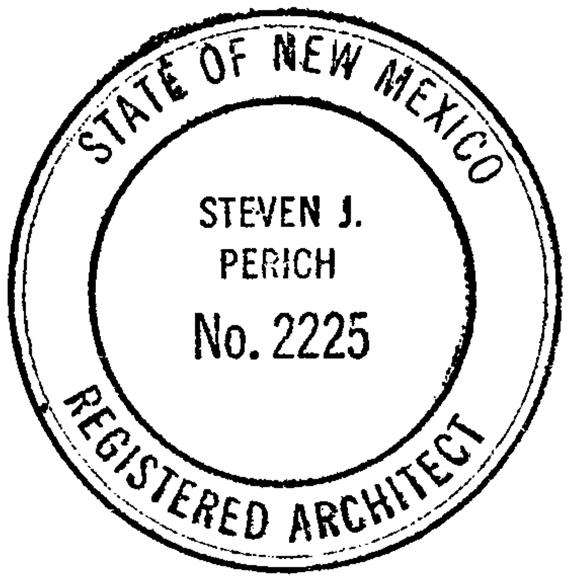
ARCHITECTS CERTIFICATION

I, Steven J Perich, licensed under the laws of the State of New Mexico, do hereby certify that this project was constructed in substantial compliance with the improvements shown on the approved DRB Architectural Site Plan and approved Administrative Amendment for the International Programs Building located at 10600 Research Road SE in Albuquerque. Minor adjustments to the approved DRB Site Plan are noted on the attached copy of the approved Administrative Amendment

Steven J Perich

7/9/02

Date



May 23, 2002

Dekker/Perich/Sabatini
architecture
interiors
planning
engineering

Ms. Cynthia Borrego
Senior Planner
Albuqueque Planning Department
600 2nd Street NW Plaza del Sol
Albuquerque, NM 87102

Re: International Programs Building
10520 Research Rd. SE

Request for Administrative Amendment Number 1 to:
Approved Site Development Plan for building Permit
DRB Agenda Item # 4 – June 13, 2001
Project Number 1001253

Dear Ms. Borrego

Dekker/Perich/Sabatini, acting as Agents for Union Pension Transaction Trust 2000-7, respectfully request an Administrative Amendment to the previously approved Site Development Plan for Building Permit for this project. This site plan was approved on 11/28/01 by DRB.

The revisions we are requesting involve the Site Plan itself. During construction, it was discovered that the site boundaries used to locate the building on the site were not correct. This necessitated that the actual building location on the site be adjusted to the West to reflect the real property lines. In effect, the building location on the property shifts to the West by 3.58 feet (3' – 7") In order to do this, it was necessary to adjust the site plan in several ways:

1. The landscape area to the East of the building, which is in fact a pedestrian access route to the commons area of the Sandia Science and Technology Park, was increased in width by 3.58 feet. We feel this is actually a benefit to the overall SS & TP plan as it increases the access to the commons through this property. The additional width of this strip is all taken up with additional landscaping .
2. The concrete sidewalk on the East side of the building was decreased in width by 1.75 feet from 15 feet to 13.25 feet. We feel that this reduction in width does not adversely affect the site plan or overall pedestrian circulation. In fact, we believe that the original 15 foot wide sidewalk was probably excessive. Also, the landscaping along this sidewalk remains the same as required by the previously approved site plan.
3. The wide landscape medium in the West parking lot will be reduced by 1.833 feet from 12 feet to 10.166 feet. We feel that this reduction in width does not have any significant impact on the overall site plan. The landscaping in this area has been redesigned and consolidated so that we do not lose any real landscaping. Also, the medium still meets the original intent, which is to separate the parking lot into areas with less than 100spaces.

These revisions to the site plan have some minimal affect on parking arranged in East-West direction. Some parking spaces located to the North of the building are reduced in width from the original to accommodate the changes. These are minimal in nature and still meet all DPM Standards for parking spaces. Drive widths are not affected anywhere on the site. Therefore, vehicular access to the site and site vehicular circulation, including service

6801 Jefferson NE
Suite 100
Albuquerque NM
87109
505 761-9700
fax 761.4222
dps@dpsabq.com

vehicles and emergency vehicle access, is not affected in any way. Pedestrian access paths through the site are not affected by these revisions.

Dekker/Perich/Sabatini
architecture
interiors
planning
engineering

We have modified the site plans, including the civil engineering and landscape plans to show the changes from the originally approved site plans. The changes are clouded and noted to show the changes made. Copies of the originally approved Site Development Plan for Building permit and copies of the revised site plans are attached.

The revised site plans have been submitted to the Architectural Review Committee of the Sandia Science and Technology Park. Attached is a copy of their approval of these changes.

If you or any of the planning staff have any questions regarding this submittal, please call me. We will be glad to meet with you to discuss this if necessary. We appreciate your consideration in this matter.

Very truly yours,

Dekker/Perich/Sabatini Ltd.

Tim Grattan
Principal

cc: Jim Trump – Union Pension Transaction Trust 2000-7
Brent Redus – Amelang Partners

6801 Jefferson NE
Suite 100
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City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 11, 2002

Steve Morrow, P.E.
Brasher & Lorenz Consult. Engineers
2201 San Pedro NE Bldg. 1 Suite 220
Albuquerque, New Mexico 87110

RE: INTERNATIONAL PROGRAMS BLDG. (M-21/D10)
(10600 Research Rd SE)
ENGINEERS CERTIFICATION FOR CERTIFICATE OF OCCUPANCY
ENGINEERS STAMP DATED 12/18/2001

Dear Mr. Morrow:

Based upon the information provided in your Engineers Certification submittal dated 7/2/2002, the above referenced site is approved for a Permanent Certificate of Occupancy for the above referenced site.

Please note: As per your note regarding the temporary retention pond not being constructed due to the construction of the storm drain in Research road, (which has not yet been accepted by the City), it appears that this omission will not impact the site, allowing a permanent of Certificate of Occupancy to be issued..

If I can be of further assistance, please contact me at 924-3981.

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department

BLB

C: Vickie Chavez, COA
drainage file
approval file

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/11/2002)

M-21/D10

PROJECT TITLE: INTERNATIONAL PROGRAMS ZONE MAP/DRG. FILE #: M21
DRB #: 1001253 EPC#: Z-98-89 WORK ORDER#: N/A

LEGAL DESCRIPTION: TRACT A-2, LANDS OF SHAW, MITCHELL, MALLORY PARTNERSHIP
CITY ADDRESS: 10600 RESEARCH RD. SE

ENGINEERING FIRM: BRASHER AND LORENZ, INC. CONTACT: PAUL BRASHER
ADDRESS: 2201 SAN PEDRO NE, BLDG 1, STE. 1200 PHONE: 888-6088
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87110

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ADDRESS: 952 ECHO LANE, STE. 100 PHONE: (713) 468-6700
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ARCHITECT: DEKKER/PERICH/SABATINI, LTD. CONTACT: TIM GRATTAN
ADDRESS: 6801 JEFFERSON, NE PHONE: 761-9700
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87109

SURVEYOR: ~~JAYNES CORP~~ PRECISION SURVEYS CONTACT: LARRY MEDRANO
ADDRESS 8414-D JEFFERSON ST. NE PHONE: 856-5700
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87113

CONTRACTOR: JAYNES CORPORATION CONTACT: JERRY LUCERO
ADDRESS: 2906 BROADWAY NE PHONE: 345-8591
CITY, STATE: ALBUQUERQUE, NM ZIP CODE: 87125

CHECK TYPE OF SUBMITTAL:

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- ___ DRAINAGE PLAN
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- ___ GRADING PLAN
- ___ EROSION CONTROL PLAN
- X ENGINEER'S CERTIFICATION (HYDROLOGY)
- ___ CLOMR/LOMR
- ___ TRAFFIC CIRCULATION LAYOUT (TCL)
- ___ ENGINEERS CERTIFICATION (TCL)
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- ___ CERTIFICATE OF OCCUPANCY (TEMP.)
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- ___ PAVING PERMIT APPROVAL
- ___ WORK ORDER APPROVAL
- ___ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ___ YES
- ___ NO
- ___ COPY PROVIDED

RECEIVED
JUL 03 2002
HYDROLOGY SECTION

DATE SUBMITTED: 7-3-02 BY: STEVE MORROW

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1. **Conceptual Grading and Drainage Plan**: Required for approval of Site Development Plans greater than five
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City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 3, 2001

Paul Brasher, PE
Brasher & Lorenz, Inc.
2201 San Pedro NE, Bldg. 1
Albuquerque, NM 87110

Re: International Programs Grading Plan
Engineer's Stamp dated 11-2-01 (M21/D10)

Dear Mr. Brasher,

Based upon the information provided in your submittal dated 12-3-01, the above referenced Grading Plan 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 DPM checklist will be required.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Sr. Engineer, PWD
Development and Building Services

C: file

DRAINAGE INFORMATION SHEET
(REV. 11/01/2001)

PROJECT TITLE: INTERNATIONAL PROGRAMS ZONE MAP/DRG. FILE #: M-21 D-10
DRB #: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: TRACT A-2 LANDS OF SHAW, MITCHELL, MALLORY
CITY ADDRESS: 10600 RESEARCH RD. SE

ENGINEERING FIRM: BRASHER & LORENZ, INC. CONTACT: PAUL BRASHER
ADDRESS: 2201 SAN PEDRO NE BLDG 1, STE 220 PHONE: 888-6088
CITY, STATE: ALBUQ. NM 87110 ZIP CODE: _____

OWNER: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

ARCHITECT: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: _____ CONTACT: _____
ADDRESS _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:
- ____ DRAINAGE REPORT
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- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
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- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:
- X YES
- ____ NO
- ____ COPY PROVIDED

RECEIVED
DEC 03 2001
HYDROLOGY SECTION

RECEIVED
NOV 30 2001
HYDROLOGY SECTION

DATE SUBMITTED: 29 Nov 2001 BY: PAUL BRASHER

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature , location and scope ot the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

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BRASHER & LORENZ, INC.
CONSULTING ENGINEERS
2201 San Pedro NE Bldg 1 Suite 220 • Albuquerque, NM 87110 • Phone (505) 888-6088 • Fax (505) 888-6188 • www.brasherlorenz.com

November 28, 2001

Brad Bingham
City of Albuquerque Public Works
PO Box 1293
Albuquerque, New Mexico 87103

RE: INTERNATIONAL PROGRAMS BUILDING

Dear Mr. Bingham:

Attached is a copy of the letter we have received from Loren Meinz dated August 2, 2001 approving the grading and drainage plan for the International Programs Building. Since that plan was prepared, the design grades for Research Road have been revised by Bohannan-Huston, and we have revised the grading plan for the building site accordingly. Transmitted herewith is that revised grading plan.

In his letter, Mr. Meinz stated the requirement that the pond(s) and storm drains be sized based on calculations limiting discharge from the site at 1.3 cfs per acre. The drainage calculations included in that original drainage report (attached here)are based on this rate. The pond outflow is controlled by installation of a 10" drainline, as shown on the attached drawing. The outfall storm drain is being designed by Bohannan Huston, and is being routed through DRC currently.

We are requesting building permit approval. Anything you would do to expedite this will be appreciated. If you have any questions, please contact me. Thank you for your help.

Sincerely,

Paul Brasher, PE

```
 AHYMO PROGRAM (AHYMO_97) -                    - Version:  1997.02d
    RUN DATE (MON/DAY/YR) = 10/16/2001
    START TIME (HR:MIN:SEC) = 14:05:34     USER NO.= AHYMO-I-9702c01000T35-AH
    INPUT FILE = C:\PROGRA~1\AHYMO_97\INTPR.TXT

**********************************************************************************
*                    INTERNATIONAL PROGRAMS
*                     PROJECT HYDROLOGY
**********************************************************************************
START            TIME=0.0  PUNCH CODE=0
RAINFALL          TYPE=1  RAIN QUARTER=0.0  RAIN ONE=2.14
             RAIN SIX=2.60  RAIN DAY=3.10  DT=0.03333 HRS
                  COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40
HR.

                  DT =   .033330 HOURS      END TIME =    5.999400 HOURS
                    .0000  .0027  .0055  .0084  .0113  .0143  .0173
                    .0204  .0236  .0269  .0302  .0337  .0372  .0408
                    .0445  .0484  .0523  .0564  .0606  .0649  .0694
                    .0741  .0789  .0839  .0892  .0946  .1003  .1063
                    .1126  .1192  .1262  .1322  .1385  .1452  .1597
                    .1922  .2422  .3139  .4119  .5407  .7049  .9093
                   1.1588 1.3904 1.4871 1.5687 1.6414 1.7074 1.7683
                   1.8247 1.8775 1.9270 1.9735 2.0174 2.0589 2.0982
                   2.1354 2.1707 2.2041 2.2359 2.2661 2.2737 2.2807
                   2.2875 2.2939 2.3001 2.3060 2.3117 2.3172 2.3226
                   2.3277 2.3328 2.3376 2.3423 2.3470 2.3514 2.3558
                   2.3601 2.3643 2.3683 2.3723 2.3762 2.3801 2.3838
                   2.3875 2.3911 2.3947 2.3982 2.4016 2.4050 2.4083
                   2.4115 2.4147 2.4179 2.4210 2.4241 2.4271 2.4301
                   2.4330 2.4359 2.4388 2.4416 2.4444 2.4472 2.4499
                   2.4526 2.4553 2.4579 2.4605 2.4631 2.4656 2.4681
                   2.4706 2.4731 2.4755 2.4779 2.4803 2.4827 2.4850
                   2.4873 2.4896 2.4919 2.4942 2.4964 2.4986 2.5008
                   2.5030 2.5052 2.5073 2.5094 2.5115 2.5136 2.5157
                   2.5177 2.5198 2.5218 2.5238 2.5258 2.5277 2.5297
                   2.5317 2.5336 2.5355 2.5374 2.5393 2.5412 2.5430
                   2.5449 2.5467 2.5486 2.5504 2.5522 2.5540 2.5557
                   2.5575 2.5593 2.5610 2.5627 2.5645 2.5662 2.5679
                   2.5696 2.5713 2.5729 2.5746 2.5762 2.5779 2.5795
                   2.5811 2.5828 2.5844 2.5860 2.5876 2.5891 2.5907
                   2.5923 2.5938 2.5954 2.5969 2.5984 2.6000

 * UNDEVELOPED SITE - 4.12 ACRES
 COMPUTE NM HYD     ID=1  HYD NO=101.0  DA=0.006438 SQ MI
                PER A=100  PER B=0  PER C=0  PER D=0
                TP=0.1333 HR  MASS RAIN=-1

      K =   .158399HR    TP =   .133300HR    K/TP RATIO =  1.188293     SHAPE CONSTANT, N =
2.988024
      UNIT PEAK =   13.564    CFS   UNIT VOLUME =    .9987      B =   280.84      P60 = 2.1400
      AREA =      .006438 SQ MI    IA =    .65000 INCHES    INF =   1.67000 INCHES PER HOUR
```

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=1 CODE=20

PARTIAL HYDROGRAPH 101.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	1.333	.1	2.666	.2	4.000	.0		
.667	.0	2.000	.8	3.333	.0				

RUNOFF VOLUME = .65514 INCHES = .2249 ACRE-FEET
PEAK DISCHARGE RATE = 7.72 CFS AT 1.533 HOURS BASIN AREA = .0064 SQ. MI.

* DEVELOPED SITE - 4.12 ACRES
COMPUTE NM HYD ID=2 HYD NO=101.1 DA=0.006438 SQ MI
PER A=0.00 PER B=2.000 PER C=18.200 PER D=79.800
TP=0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
UNIT PEAK = 20.283 CFS UNIT VOLUME = .9988 B = 526.28 P60 = 2.1400
AREA = .005138 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .111362HR TP = .133300HR K/TP RATIO = .835425 SHAPE CONSTANT, N = 4.267851
UNIT PEAK = 3.6356 CFS UNIT VOLUME = .9968 B = 372.65 P60 = 2.1400
AREA = .001300 SQ MI IA = .36485 INCHES INF = .87158 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=2 CODE=20

PARTIAL HYDROGRAPH 101.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	2.000	4.5	4.000	.1	5.999	.1		
.667	.0	2.666	.5	4.666	.1	6.666	.0		
1.333	5.6	3.333	.2	5.333	.1				

RUNOFF VOLUME = 2.13165 INCHES = .7319 ACRE-FEET
PEAK DISCHARGE RATE = 19.31 CFS AT 1.500 HOURS BASIN AREA = .0064 SQ. MI.

* SEND FLOW THROUGH THE POND
ROUTE RESERVOIR ID=3 HYD NO=POND INFLOW ID=2 CODE=10

OUTLFLOW (CFS)	STORAGE (AC FT)	ELEV (FT)
0	0	5479.00
.3	.0141	5479.7772
0.6	.0181	5479.9313
0.9	.0202	5480.0461
1.2	.0240	5480.1902
1.5	.0279	5480.3154
1.8	.0321	5480.4605
2.1	.0363	5480.6
2.4	.0416	5480.7806
2.7	.0482	5480.9854
3.0	.0576	5481.2124
3.3	.0687	5481.4671
3.6	.0809	5481.7441
3.9	.0924	5482.0451
4.2	.1137	5482.3703
4.5	.1342	5482.7196
4.8	.1819	5483.0929
5.1	.2504	5483.4903
5.36	.3310	5483.8542
6.00	.3582	5484.83
6.1	.3604	5485.00

* * * * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5479.00	.000	.00
.33	.00	5479.00	.000	.00
.67	.00	5479.00	.000	.00
1.00	.21	5479.04	.001	.01
1.33	5.58	5480.36	.029	1.60
1.67	9.87	5483.68	.293	5.24
2.00	4.53	5483.83	.327	5.35
2.33	1.03	5483.48	.250	5.10
2.67	.46	5482.73	.135	4.51
3.00	.26	5480.89	.045	2.55
3.33	.19	5479.85	.016	.45
3.67	.16	5479.67	.012	.26
4.00	.15	5479.55	.010	.21
4.33	.14	5479.47	.008	.18
4.67	.13	5479.42	.008	.16
5.00	.14	5479.39	.007	.15
5.33	.14	5479.37	.007	.14
5.67	.14	5479.37	.007	.14
6.00	.15	5479.37	.007	.14
6.33	.02	5479.28	.005	.11
6.67	.00	5479.17	.003	.06
7.00	.00	5479.09	.002	.04
7.33	.00	5479.05	.001	.02
7.67	.00	5479.03	.001	.01

8.00 .00 5479.02 .000 .01
8.33 .00 5479.01 .000 .00
PEAK DISCHARGE = 5.356 CFS - PEAK OCCURS AT HOUR 1.90
MAXIMUM WATER SURFACE ELEVATION = 5483.848
MAXIMUM STORAGE = .3297 AC-FT INCREMENTAL TIME= .033330HRS

PRINT HYD ID=3 CODE=10

HYDROGRAPH FROM AREA POND

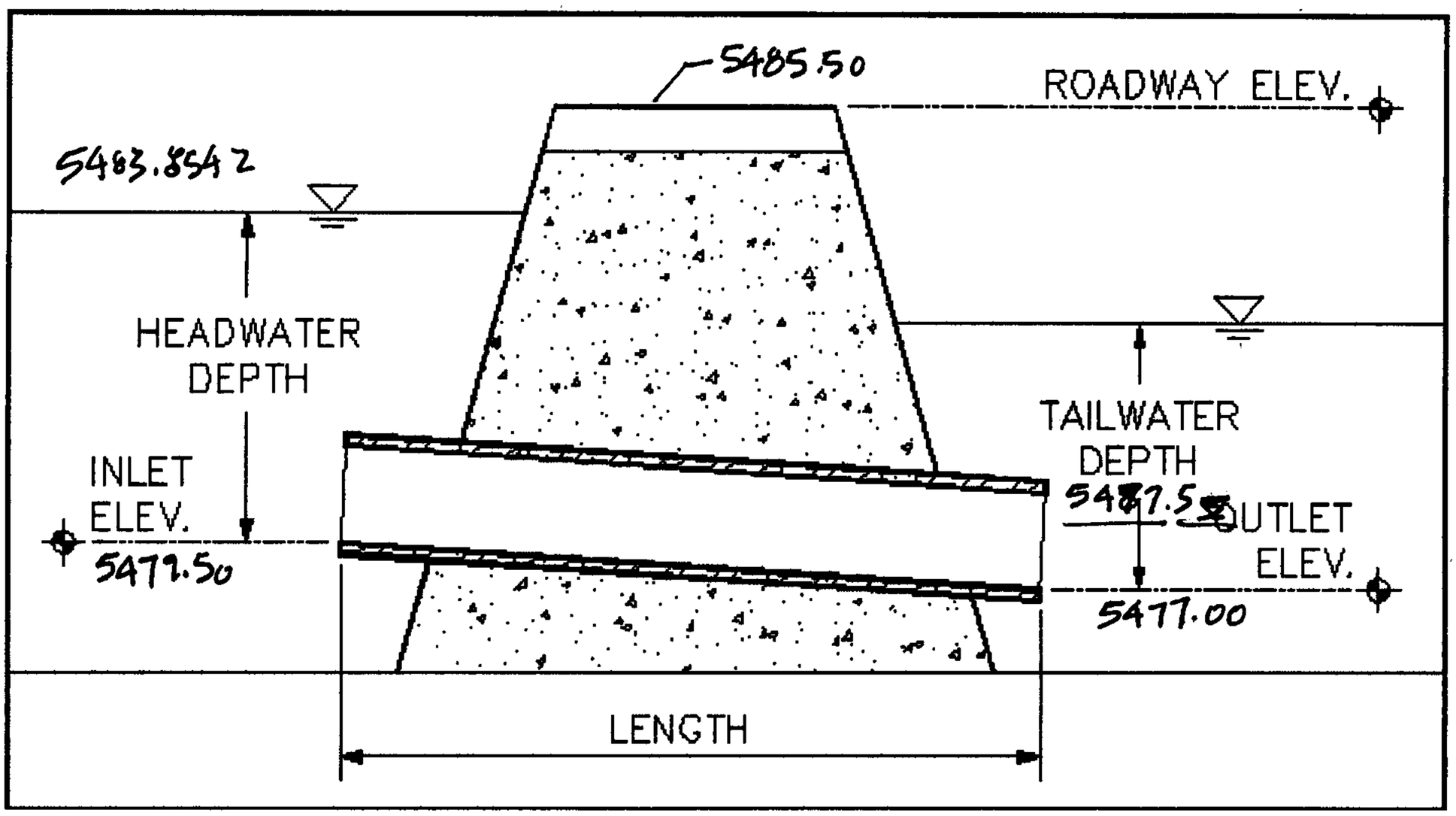
TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	2.000	5.3	4.000	.2	5.999	.1	7.999	.0
.333	.0	2.333	5.1	4.333	.2	6.333	.1	8.333	.0
.667	.0	2.666	4.5	4.666	.2	6.666	.1	8.666	.0
1.000	.0	3.000	2.6	5.000	.1	6.999	.0	8.999	.0
1.333	1.6	3.333	.5	5.333	.1	7.333	.0		
1.666	5.2	3.666	.3	5.666	.1	7.666	.0		

RUNOFF VOLUME = 2.13160 INCHES = .7319 ACRE-FEET
PEAK DISCHARGE RATE = 5.36 CFS AT 1.900 HOURS BASIN AREA = .0064 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 14:05:34

Culvert Values Illustration



01520
INTERNATIONAL
PROGRAMS

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Aug 2, 2001

Paul Brasher, P.E.
Brasher & Lorenz, Engineers
2201 San Pedro NE, Bldg. 1, Ste 220
Albuquerque, NM 87110

RE: Grading and Drainage Plan for International Programs Bldg., (M-21/D10), Engineer stamp dated 7/30/2001.

Dear Mr. Brasher,

The referenced plan is approved for Site Plan for Building Permit action by the DRB.

Prior to issuance of Building Permit, please address the following comments.

1. Provide drainage calculations for the permanent pond and storm drains. Max. runoff must provide for Q = 1.3 cfs/acre.

2. Temporary pond volume should be 1.32 ac-ft for the impervious area of 3.11 acres.

3. Show the pond outflow control design and sizing for the max. controlled discharge.

The storm drain and ponding system will require DRC approval.

If you have questions, contact me at 924-3980.

Sincerely,

Loren D. Meinz, P.E.
Hydrology Division

c: Terri Martin
File

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

Aug 2, 2001

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Brasher & Lorenz, Engineers
2201 San Pedro NE, Bldg. 1, Ste 220
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Loren D. Meinz, P.E.
Hydrology Division

c: Terri Martin
File

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 22, 2001

Paul Brasher, P.E.
Brasher & Lorenz, Engineers
2201 San Pedro NE, Bldg. 1, Ste 220
Albuquerque, NM 87110

RE: Grading and Drainage Plan for International Programs Bldg., (M-21/D10), Engineer stamp dated 5/15/2001.

Dear Mr. Brasher,

The referenced plan is not approved as submitted for Site Plan action by the DRB. Please address the following comments.

1. The drainage calculations for the site are yielding flows that appear to be higher Q's that normal AHYMO results. Please recheck the AHYMO calculations. Also make sure that the hydrograph for the site runoff is routed through the pond area to calculate the proper pond volume required.

2. The pond area is located on top of an existing sanitary sewer. Profiles are needed to show that the sanitary sewer has enough cover to allow the pond construction.

3. Show a 30 foot wide storm sewer easement for the storm drain pipe on the site plan and the plat.

4. Show roof drain slopes/locations.

5. The downstream public storm drain easements must be completed prior to approval of this site plan. This plan must show the complete downstream system, including preliminary plan and profiles, that will be required to provide a functioning drainage system for fully developed conditions.

If you have questions, contact me at 924-3980.

Sincerely,

Loren D. Meinz, P.E.
Hydrology Division

c: Terri Martin
File

DRAINAGE INFORMATION SHEET

PROJECT TITLE: INTERNATIONAL PROGRAMS ZONE ATLAS/DRNG. FILE#: M-21 / D10

DRB #: _____ EPC#: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TRACT A-2, LANDS OF SHAW, MITCHELL, MALLORY PARTNERSHIP

CITY ADDRESS: 10600 RESEARCH RD SE

ENGINEERING FIRM: Brasher & Lorenz, Inc. CONTACT: PAUL BRASHER
ADDRESS: 2201 San Pedro NE Bldg. 1 Ste. 220 Albuquerque, New Mexico 87110 PHONE: 888-6088 888-6188 (fax)

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

X DRAINAGE REPORT
_____ DRAINAGE PLAN
_____ CONCEPTUAL GRADING & DRAINAGE PLAN
X GRADING PLAN
_____ EROSION CONTROL PLAN
_____ ENGINEER'S CERTIFICATION
_____ OTHER _____

PRE-DESIGN MEETING:

X YES
_____ NO
_____ COPY PROVIDED

DATE SUBMITTED: 5-17-01

BY: PAUL BRASHER

CHECK TYPE OF APPROVAL SOUGHT:

_____ SKETCH PLAT APPROVAL
X PRELIMINARY PLAT APPROVAL
_____ S. DEV. PLAN FOR SUB'D. APPROVAL
_____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
_____ SECTOR PLAN APPROVAL
_____ FINAL PLAT APPROVAL
_____ FOUNDATION PERMIT APPROVAL
_____ BUILDING PERMIT APPROVAL
_____ CERTIFICATE OF OCCUPANCY APPROVAL
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ S.A.D. DRAINAGE REPORT
_____ DRAINAGE REQUIREMENTS
_____ OTHER _____ (SPECIFY)

RECEIVED
MAY 18 2001
HYDROLOGY SECTION

DRAINAGE REPORT

FOR

INTERNATIONAL PROGRAMS
BULK LAND DIVISION OF 35-ACRE TRACT

ALBUQUERQUE, NEW MEXICO

CITY FILE NO. M-21/D10

Prepared by:

BRASHER & LORENZ, INC.
Consulting Engineers
2201 San Pedro Blvd. NE
Albuquerque, New Mexico 87110

May 14, 2001

Rev'd
5/18/01
Hydrology

DRAINAGE REPORT

FOR

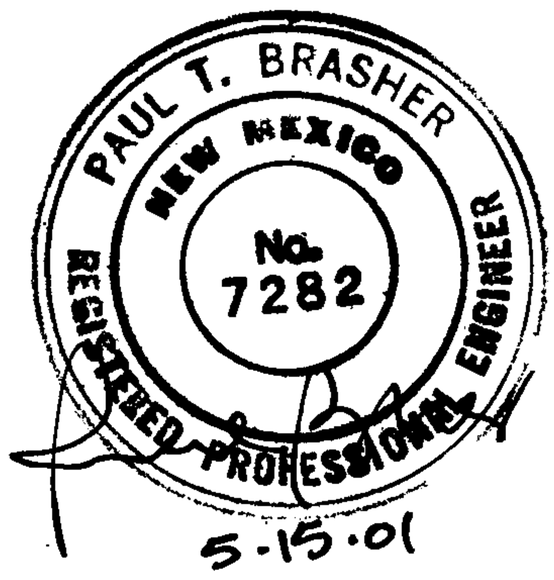
INTERNATIONAL PROGRAMS
BULK LAND DIVISION OF 35-ACRE TRACT

ALBUQUERQUE, NEW MEXICO

CITY FILE NO. M-21/D__

Prepared by:

BRASHER & LORENZ, INC.
Consulting Engineers
2201 San Pedro Blvd. NE
Albuquerque, New Mexico 87110



May 14, 2001

PURPOSE AND SCOPE

Pursuant to the established Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Drainage Report outlines the drainage management criteria for controlling developed runoff from the project site. The property is to be developed for an office building, to be called the International Programs Building, together with appurtenant paving, landscaping, utilities, grading and drainage improvements. The scope of this plan is to describe existing drainage conditions, and to provide drainage criteria for the management of excess runoff, for the grading, paving, and drainage improvements required to support the project.

LAND USE AND SUBDIVISION BACKGROUND

As shown on Figure 1, the project site is contained within a 35-acre parcel of land on the south side of Gibson, east of Eubank. In 1999, by bulk land variance, the 35-acre parcel was platted, and zoned IP, for industrial uses. At the same time, a master plan consisting of 13 IP lots was approved by the City Environmental Planning Commission (EPC). This master plan, called Sandia Technology Center, was never approved by the City Development Review Board (DRB), therefore the 35 acres was never subdivided. In order to construct this building, a tract of 4.1215 acres will be divided out of the 35 acres by bulk land variance. The tract to be divided out will be the combination of Lots 8 and 9 of the previous master plan.

The 35-acre parcel is included in Sandia Science and Technology Park (SSTP), a current master planning effort for 219 acres, in progress at the time of preparation of plans for this International Programs Building. The drainage element of the SSTB master plan provides for the redifinition of drainage basins in the plan area, including the 35 acre tract, and the construction of certain drainage improvements. Under the SSTB master plan, rights-of-way and easements will be dedicated for future streets and drainage corridors. As part of the master plan, upstream sanitary sewerlines will be re-routed such that the onsite sewer will eventually be abandoned. The SSTB master plan has been approved by the EPC, but has not been approved by DRB.

EXISTING CONDITIONS

The 35-acre tract containing the International Programs site shown hereon lies within the City of Albuquerque, and is presently vacant, having never been developed. The terrain slopes down toward the west at approximately 1.25%, and is covered with a moderate density of native grasses. On site soils consist mainly of Madurez-Wink (MWA), a fine sandy loam occurring on the east mesa on slopes between one and five percent in slope. The smaller tract is the southwest 4.1215 acres of the 35-acre tract. The 35 acres are bounded on the east by South Pointe Village Mobile Home Park, on the north by Gibson Blvd, a paved street. On the north side of Gibson, is Willowwood, a residential subdivision, and Manzano Mesa, undeveloped lands of the Board of Education. To the east, is South Pointe Village Mobile Home Park. On the south is a

aka Foothills

vacant 40-acre tract of the Board of Education. The property to the west is Sandia Research Park, a 40-acre industrial subdivision with developed streets, and developed and undeveloped lots. Research Road, which was constructed with Sandia Research Park, is paved up to its terminus at the west property line of the project site. There is an overhead power line along the south boundary of the tract, and existing City sanitary sewerlines along the south and west property lines in City easements.

South Pointe Village Mobile Home Park drains to its southwest corner, then due south across lands of the State of New Mexico to the Tijeras Arroyo. A small portion of the mobile home park in its southwesternmost corner drains toward the southwest across part of the 35-acre parcel. At the time of creation of the 35-acre parcel, a blanket drainage easement was granted over the entire site, to be refined with subsequent platting. At the same time, a drainage easement was granted within the mobile home park for the purpose of containing all runoff within the park property, and detaining it for release into a future downstream storm sewer interceptor. Otherwise, no offsite runoff enters the 35-acre tract. Under existing conditions, the entire 35-acre parcel drains in sheet flow overland to the west, and under conditions of extreme precipitation, flows may enter on to Sandia Research Park.

Figure 2, the Flood Insurance Rate Map panel, shows that 35-acre parcel does not lie within a designated floodplain. The City did not stipulate or enforce a requirement for the development of Sandia Research Park that upstream developed drainage conditions must be considered, and as a result, no provision was made with the development of Sandia Research Park for the management of runoff from the project tract. Figure 4 shows the topography of the site, and present drainage patterns.

The City of Albuquerque has constructed the South Eubank Storm Sewer Interceptor within Eubank across the west frontage of Sandia Research Park. The interceptor has not been designed with sufficient hydraulic capacity to accept the free discharge of fully developed flows from the undeveloped lands within the drainage basin it serves. As a result, the interceptor will accept only controlled flows from undeveloped lands such as this project.

PROPOSED CONDITIONS

The 35-acre tract is to be subdivided to create a 4.1215-acre tract on the south side of what will be the dedicated right-of-way extension of Research Road. This plat will be submitted to the City with a request for a bulk land variance. The proposed lot configuration is shown on Exhibit 3. Together with Research right-of-way, It is the 4-acre tract that is to be developed for International Programs at this time. Figure 7 is the site plan proposed for the 4.1215-acre tract. No disturbance or modification of the terrain or drainage patterns of the remaining 30 acres is intended.

Under the City's South Eubank Interceptor Storm Sewer Project, the available hydraulic capacity of the new interceptor has been allocated amongst the vacant lands

in the vicinity of this project, and South Pointe Village Mobile Home Park, to the east and north of the project site.. Accordingly, each tract is allowed to discharge to the interceptor at specified, limited rates. The allowed discharge rate has been established in Amendment #2 of the South Eubank Interceptor drainage report by Smith Engineering at 1.30 cfs per acre. This discharge limitation imposes the requirement to provide detention ponding on the site with a discharge at a controlled rate to a storm sewer. This rate was determined based on a number of assumptions, among which were that the mobile home park drainage would ultimately be detained and redirected west to the Eubank Interceptor, thereby encumbering some portion of its limited capacity. Figure 5 is a copy of the drainage management plan from the SSTP master plan which shows the planned configuration of streets and definition of drainage basins. While the drainage element of this plan has not yet been approved, it has received general acceptance by the City, and will be relied upon for alignment and sizing of facilities. That master plan provides that the mobile home park will continue to drain south across State Lands (landfill) toward the Tijeras Arroyo. Once constructed, the increase in available capacity in the Eubank Interceptor should allow for a higher discharge rate from each ponded upstream site. This higher discharge rate has been projected to be 1.56 cfs per acre. The line to convey this flow from the mobile home park and enable higher discharge rates is unfunded at present. Accordingly, this drainage plan for International Programs will be calculated to discharge at 1.30 cfs per acre. At such time as some higher discharge rate is allowed, the corresponding reduction in detention pond size will be reclaimed.

Figure 5 shows the outfall line which will drain this project to the Eubank Interceptor. The SSTP master plan plat will dedicate the required easements and the developer will construct this outfall line. ~~The City of Albuquerque has committed to funding a portion of the construction costs of this line (see Figure 6)~~. eliminate

The site will consist of a 65,000 square-foot building on the east side of the tract, with paving, and landscaping improvements. The grading plan, attached, shows grading details to convey onsite runoff to the northwest corner of the site to a detention pond. The pond is sized to detain the 100-year stormwater flows with a discharge rate of 5.38 cfs (1.30 cfs per acre). The pond will drain to a new 48" storm sewer running along the west property line of the site. This line is shown on Exhibit 5. The pond will be privately owned and maintained. In that Research Rd. downstream form this site does not have capacity to convey any runoff from east of Sandia Research Park, a sag vertical curve will be constructed in the Research Rd extension and provided with drop inlets and storm drain to convey street flows. These street flows have been determined by the SSTP master plan at approximately 16 cfs. All storm sewer flowrates shown on the drainage plan are taken from the SSTP master plan. The site will be protected from sheet flow runoff from the east by a shallow berm to be constructed along the east boundary of the site.

Once this drainage plan is approved, that portion of the 35-acre blanket drainage easement covering this site will be vacated.

EROSION CONTROL

Under present conditions, the site does not show signs of significant waterborne erosion. There has been minor sediment deposit from the existing site on to the paved dead end of Research Rd. Infrastructure required for the International Programs building project includes the extension of Research Rd paving. This paved extension will serve to alleviate what erosion is occurring there. Otherwise there are no well-defined arroyos on this site. The erosion characteristics of the MWA soil association are slow runoff and the hazard of blowing topsoil is moderate to severe. The cleared land will be subject to both wind and water borne erosion unless precautions are taken.

1. Temporary erosion control is required to limit the discharge of sediment into the public streets and storm drainage systems, and to protect adjacent properties from excess runoff during construction. After construction of the pond and berm, all disturbed areas wil be revegetated to mitigate erosion. Silt fencing may be required along the east and west property lines of the site.

2. The Contractor shall submit a Temporary Erosion Control Plan and obtain a Topsoil Disturbance Permit from the City Environmental Health Department prior to performing any earthwork and related operations.

3. After the initial clearing and grubbing, the Contractor shall install the temporary erosion control facilities.

4. It is the Contractor's responsibility to properly maintain all temporary erosion control features during the construction phase of the project.

CALCULATIONS

The calculations shown hereon define the 100-year/6-hour design storm falling within the project area under existing and developed conditions. The hydrology is per *Chapter 22, Development Process Manual, Vol. 2, 1997 Revision.* The ponding requirements shown reflect the anticipated pond volume requirements assuming detention releases not exceeding the allotted rates.

CALCULATIONS

PROJECT HYDROLOGY								
INTERNATIONAL PROGRAMS								
ZONE:	4							
P_{6HOUR}	2.90							
$P_{10\ DAY}$	5.95							
UNDEVELOPED (ALLOWED):								
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)
SITE	4.12	4.12	0.00	0.00	0.00	0.80	7.59	0.275
DEVELOPED (PROPOSED):								
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)
SITE	4.12	0.00	0.07	0.65	3.40	2.43	21.10	0.833

1% 16% 83%

```
        AHYMO PROGRAM (AHYMO_97) -                          - Version:  1997.02d
              RUN DATE (MON/DAY/YR) = 05/11/2001
              START TIME (HR:MIN:SEC) = 10:33:00     USER NO.= AHYMO-I-
9702c01000T35-AH
              INPUT FILE = C:\WINDOWS\DESKTOP\INTER.DAT

     START                        TIME=0.0 PUNCH CODE=0
     RAINFALL                     TYPE=1 RAIN QUARTER=0.0 RAIN ONE=1.87
                                  RAIN SIX=2.90 RAIN DAY=3.65 DT=0.03333

                    COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2
- PEAK AT 1.40 HR.
                    DT =     .033330 HOURS       END TIME =     5.999400 HOURS
                       .0000   .0146   .0294   .0445   .0598   .0755   .0914
                       .1077   .1242   .1412   .1585   .1761   .1942   .2126
                       .2315   .2509   .2708   .2912   .3121   .3337   .3559
                       .3787   .4023   .4267   .4520   .4781   .5053   .5336
                       .5630   .5938   .6262   .6314   .6369   .6428   .6555
                       .6839   .7276   .7903   .8759   .9884  1.1319  1.3105
                     1.5285  1.7309  1.8154  1.8867  1.9502  2.0079  2.0611
                     2.1104  2.1565  2.1998  2.2405  2.2788  2.3151  2.3494
                     2.3819  2.4127  2.4420  2.4697  2.4961  2.5013  2.5063
                     2.5111  2.5159  2.5206  2.5253  2.5299  2.5344  2.5388
                     2.5432  2.5475  2.5518  2.5561  2.5603  2.5644  2.5685
                     2.5726  2.5766  2.5806  2.5846  2.5885  2.5925  2.5963
                     2.6002  2.6040  2.6078  2.6115  2.6153  2.6190  2.6227
                     2.6263  2.6300  2.6336  2.6372  2.6408  2.6443  2.6479
                     2.6514  2.6549  2.6584  2.6618  2.6653  2.6687  2.6721
                     2.6755  2.6789  2.6823  2.6856  2.6890  2.6923  2.6956
                     2.6989  2.7022  2.7054  2.7087  2.7119  2.7152  2.7184
                     2.7216  2.7248  2.7280  2.7311  2.7343  2.7374  2.7406
                     2.7437  2.7468  2.7499  2.7530  2.7561  2.7592  2.7622
                     2.7653  2.7683  2.7714  2.7744  2.7774  2.7804  2.7834
                     2.7864  2.7894  2.7923  2.7953  2.7983  2.8012  2.8042
                     2.8071  2.8100  2.8129  2.8158  2.8187  2.8216  2.8245
                     2.8274  2.8303  2.8331  2.8360  2.8388  2.8417  2.8445
                     2.8474  2.8502  2.8530  2.8558  2.8586  2.8614  2.8642
                     2.8670  2.8698  2.8725  2.8753  2.8781  2.8808  2.8836
                     2.8863  2.8891  2.8918  2.8945  2.8972  2.9000

     *  UNDEVELOPED SITE BASIN A 101.0 4.12 ACRES
     COMPUTE NM HYD               ID=1 HYD NO=101.0 DA=0.00644 SQ MI
                                  PER A=100 PER B=0 PER C=0 PER D=0
                                  TP=0.13333 HR MASS RAIN=-1

          K =    .163721HR    TP =    .133330HR    K/TP RATIO =  1.227936
SHAPE CONSTANT, N =  2.899764
          UNIT PEAK =   13.213    CFS   UNIT VOLUME =    .9986       B =
273.54      P60 = 1.8700
          AREA =       .006440 SQ MI    IA =     .65000 INCHES    INF =  1.67000
INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
=    .033330

     PRINT HYD                    ID=1 CODE=20
```

```
                                          PARTIAL HYDROGRAPH   101.00

            TIME       FLOW              TIME       FLOW              TIME       FLOW
TIME        FLOW             TIME        FLOW
             HRS        CFS               HRS        CFS               HRS        CFS
HRS         CFS              HRS         CFS
             .000       .0               1.333       1.3              2.666        .2
4.000         .0
             .667       .0               2.000        .7              3.333        .0

           RUNOFF VOLUME =       .66803 INCHES      =         .2294 ACRE-FEET
           PEAK DISCHARGE RATE =        7.59 CFS  AT   1.500 HOURS   BASIN AREA =
.0064 SQ. MI.


        *   DEVELOPED SITE BASIN B 102.0 4.12 ACRES
        COMPUTE NM HYD            ID=2 HYD NO=102.0 DA=0.00644 SQ MI
                                  PER A=0 PER B=2 PER C=15 PER D=83
                                  TP=0.13333 HR MASS RAIN=-1

            K =   .072665HR    TP =   .133330HR   K/TP RATIO =   .545000
SHAPE CONSTANT, N =  7.106420
            UNIT PEAK =   21.098    CFS   UNIT VOLUME =    .9988        B =
526.28       P60 = 1.8700
            AREA =       .005345 SQ MI    IA =     .10000 INCHES    INF =    .04000
INCHES PER HOUR
            RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
=    .033330


            K =   .108847HR    TP =   .133330HR   K/TP RATIO =   .816374
SHAPE CONSTANT, N =  4.377955
            UNIT PEAK =   3.1172    CFS   UNIT VOLUME =    .9961        B =
379.63       P60 = 1.8700
            AREA =       .001095 SQ MI    IA =     .36765 INCHES    INF =    .87941
INCHES PER HOUR
            RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
=    .033330

        ******************************************************************
        * ROUTE DEVELOPED BASIN 102.0 THROUGH DETENTION POND
        * ALLOWABLE DISCHARGE 5.36 CFS FOR THE SITE
        ******************************************************************
        ROUTE RESERVOIR           ID=3 HYD NO=103.1A INFLOW ID=2 CODE=10
                                  OUT (CFS)    STORAGE (AC-FT)      ELEV (FT)
                                      0            0                 100.0
                                      1.68         0.0343            101.0
                                      2.71         0.0724            102.0
                                      3.45         0.1146            103.0
                                      4.05         0.1610            104.0
                                      4.57         0.2117            105.0
                                      5.05         0.2668            106.0
                                      5.48         0.3265            107.0

          *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *
```

4.12 ac x 1.3 cfs/ac = 5.36

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	100.00	.000	.00
.33	.51	100.04	.001	.06
.67	1.79	100.66	.023	1.11
1.00	2.60	101.16	.040	1.84
1.33	5.47	101.50	.053	2.20
1.67	8.69	106.29	.284	5.18
2.00	3.97	106.51	.297	5.27
2.33	.84	105.10	.217	4.62
2.67	.41	103.12	.120	3.52
3.00	.28	101.44	.051	2.13
3.33	.24	100.51	.018	.86
3.67	.24	100.24	.008	.40
4.00	.24	100.17	.006	.28
4.33	.24	100.15	.005	.25
4.67	.24	100.15	.005	.24
5.00	.25	100.15	.005	.25
5.33	.26	100.15	.005	.25
5.67	.27	100.16	.005	.26
6.00	.28	100.16	.006	.27
6.33	.03	100.09	.003	.15
6.67	.01	100.03	.001	.05
7.00	.00	100.01	.000	.01
7.33	.00	100.00	.000	.00

21.7

PEAK DISCHARGE = 5.331 CFS - PEAK OCCURS AT HOUR 1.87
MAXIMUM WATER SURFACE ELEVATION = 106.654
MAXIMUM STORAGE = .3058 AC-FT INCREMENTAL TIME= .033330HRS

PRINT HYD ID=3 CODE=20

HYDROGRAPH FROM AREA 103.1A

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	2.000	5.3	4.000	.3
.667	1.1	2.666	3.5	4.666	.2
1.333	2.2	3.333	.9	5.333	.3
5.999	.3				
6.666	.0				
7.333	.0				

RUNOFF VOLUME = 2.36742 INCHES = .8131 ACRE-FEET
PEAK DISCHARGE RATE = 5.33 CFS AT 1.866 HOURS BASIN AREA = .0064 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 10:33:00

POND INLET WEIR / /

$Q = 22.11$ CFS

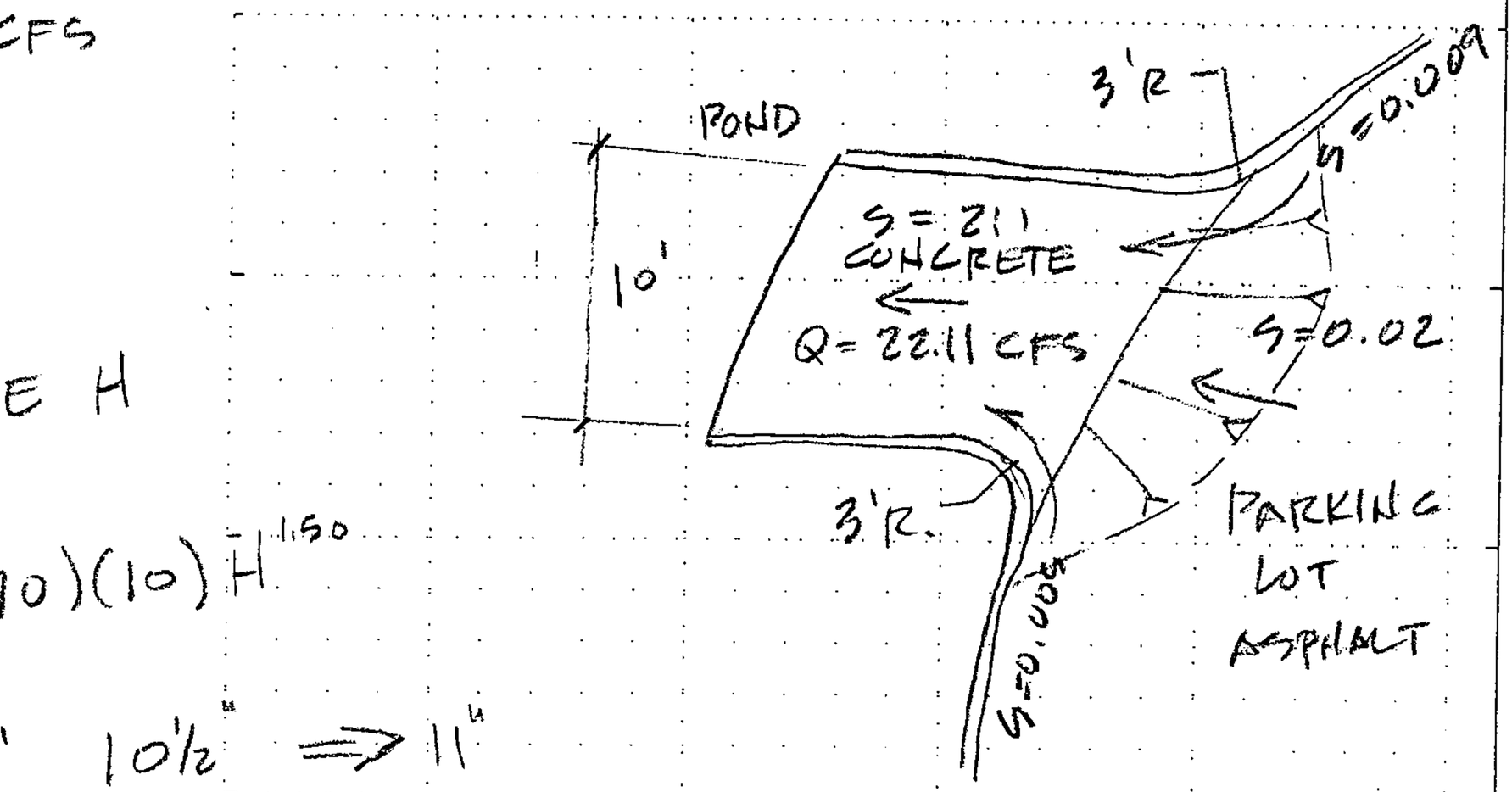
$C = 2.70$

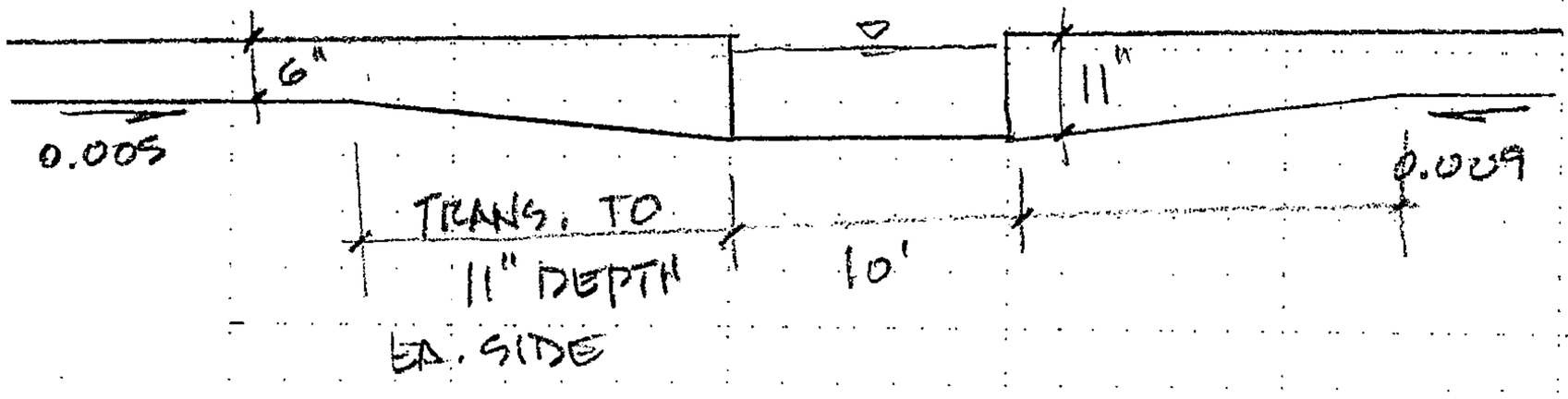
$L = 10'$

DETERMINE H

$22.11 = (2.70)(10) H^{1.50}$

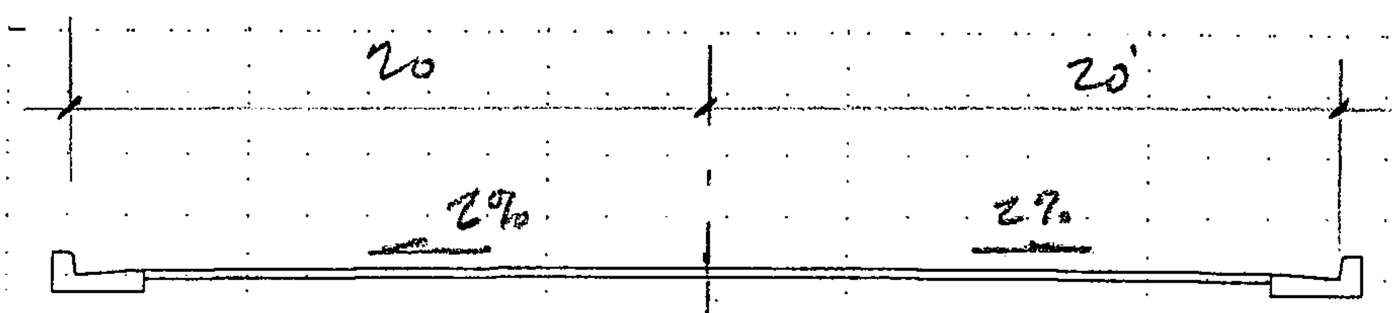
$H = 0.875'$ $10\frac{1}{2}"$ $\Rightarrow$ $11"$





BRASHER & LORENZ, INC.

FLOW RATE 15.95 CFS (FROM SANDIA SCI. / TECH PK)



SLOPE @ FULL DEPTH

$S = 0.00018$ FT/FT

$A = 18.80$ FT^2

$P = 41.35$ FT

$Y = 0.67'$

$F = 0.22 \Rightarrow$ SUBCR. (VC SAG SECTION)

CAPACITY @ $S = 0.005$:

$Q = 83.60$ CFS

$A = 18.80$ FT^2

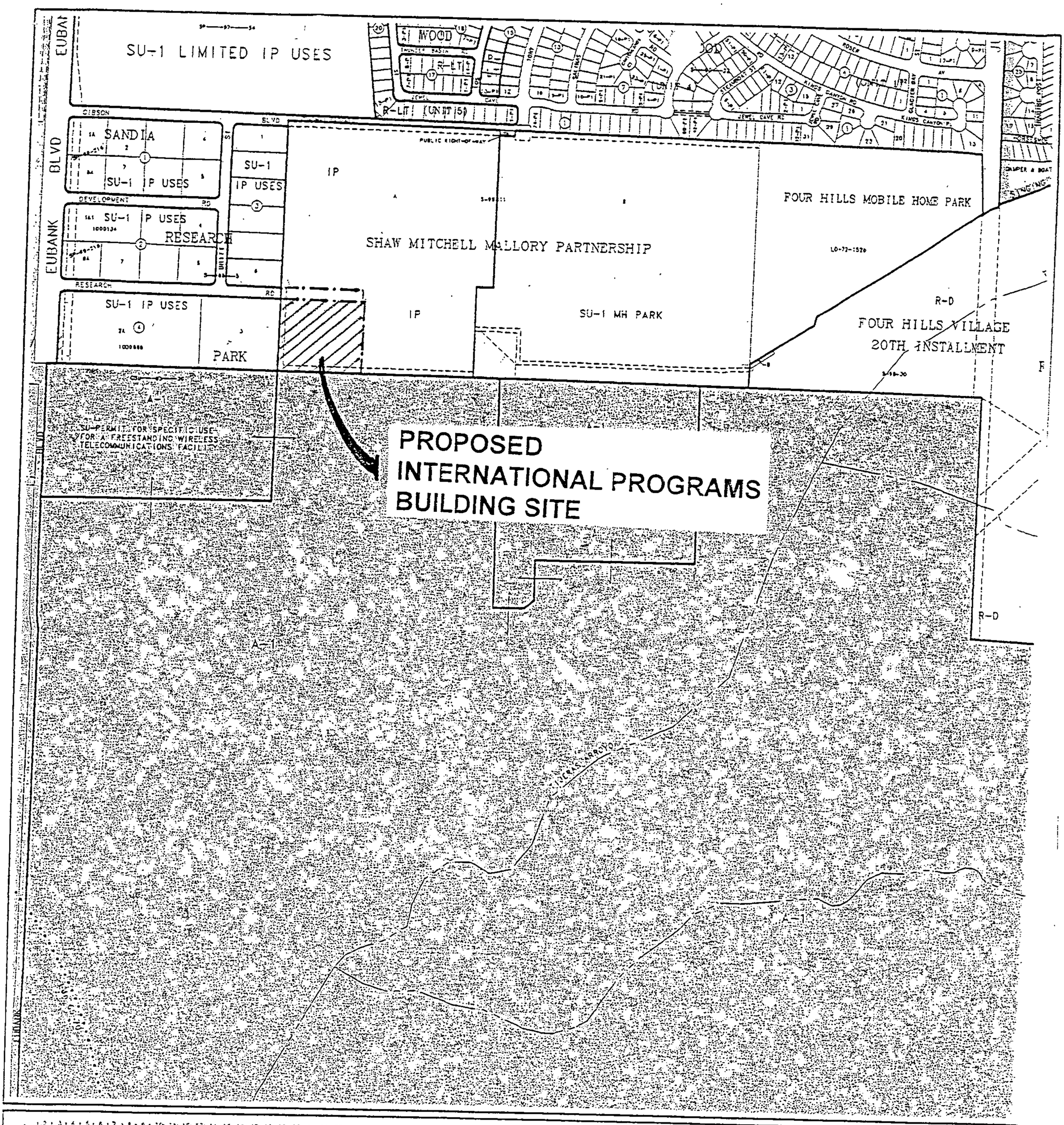
$P = 41.35$ FT

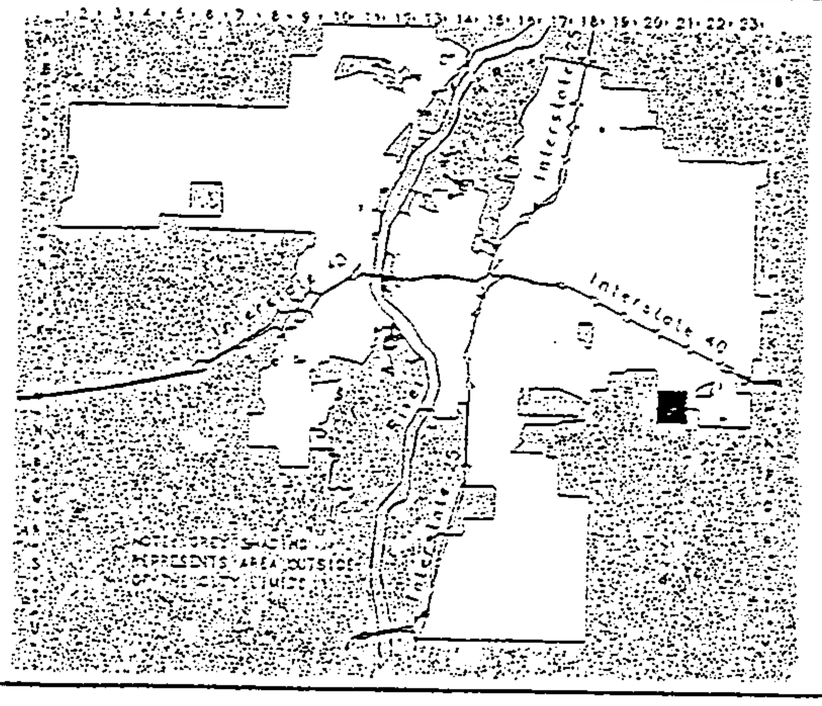
$V = 4.45$ FT/SEC

$F = 1.14$ SUPERCR.

$EGL = 0.31' + Y$

FIGURES





CITY OF
Albuquerque

A Business Geographic Information System

PLANNING DEPARTMENT

GRAPHIC SCALE IN FEET

250 0 750 1000

Zone Atlas Page

M-21-Z

Map Amended through August 15, 2000

FIGURE 1

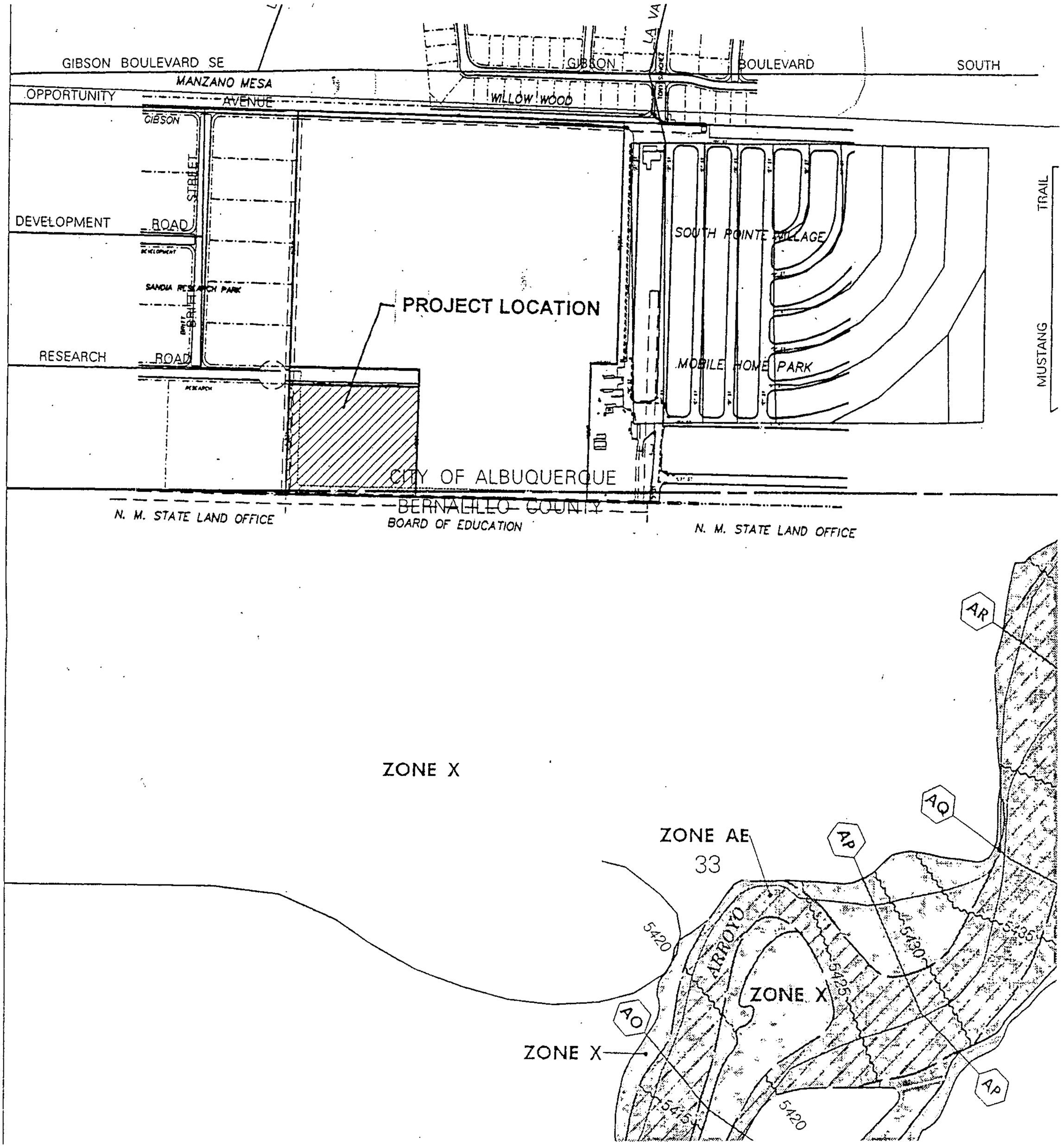

GIBSON BOULEVARD SE
MANZANO MESA
OPPORTUNITY
AVENUE
GIBSON
BOULEVARD
SOUTH
WILLOW WOOD
GIBSON
STREET
DEVELOPMENT
ROAD
SANDIA RESEARCH PARK
BRITT
RESEARCH
ROAD
PROJECT LOCATION
SOUTH POINTE VILLAGE
MOBILE HOME PARK
MUSTANG
TRAIL
CITY OF ALBUQUERQUE
BERNALILLO COUNTY
N. M. STATE LAND OFFICE
BOARD OF EDUCATION
N. M. STATE LAND OFFICE
ZONE X
ZONE AE
33
AR
AQ
AP
AO
5420
5430
5435
5425
5415
ARROYO
ZONE X
ZONE X
5420

FIGURE 2

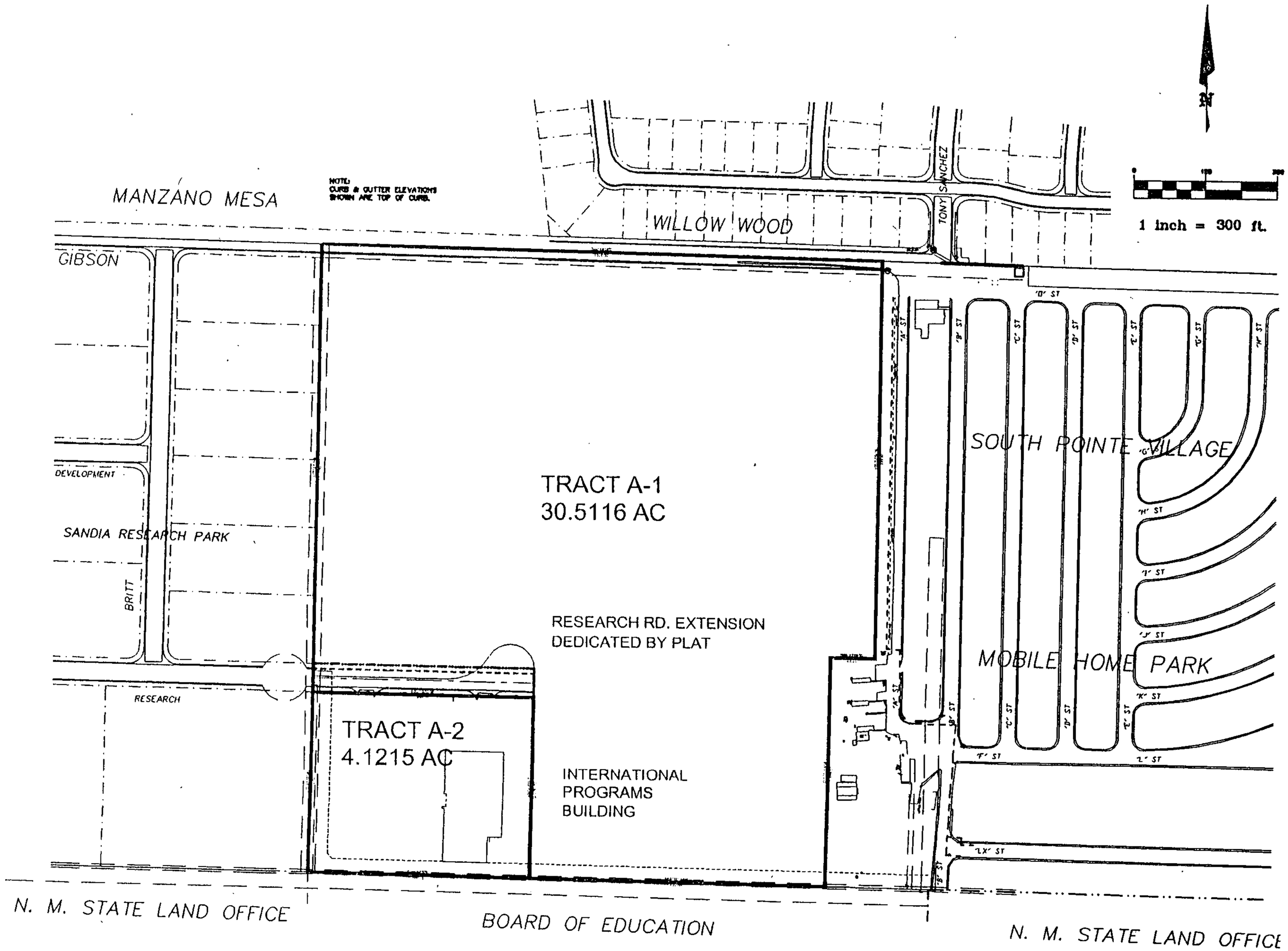

MANZANO MESA
NOTE:
CURB & GUTTER ELEVATIONS
SHOWN ARE TOP OF CURB.
WILLOW WOOD
SANCHEZ
TONY
1 inch = 300 ft.
GIBSON
DEVELOPMENT
SANDIA RESEARCH PARK
BRITT
RESEARCH
TRACT A-1
30.5116 AC
RESEARCH RD. EXTENSION
DEDICATED BY PLAT
TRACT A-2
4.1215 AC
INTERNATIONAL
PROGRAMS
BUILDING
SOUTH POINTE VILLAGE
MOBILE HOME PARK
N. M. STATE LAND OFFICE
BOARD OF EDUCATION
N. M. STATE LAND OFFICE

FIGURE 3

MANZANO MESA

GIBSON

WILLOW WOOD

8" SAS

DEVELOPMENT

SANDIA RESEARCH PARK

BRITT

RESEARCH

5486

5488

5490

5492

5494

5496

5498

5500

5502

TRACT A-1
30.5116 AC

55.16 CFS

R/W 0.6411 AC

15.95 CFS

21.19 CFS

POND VOL = 16,870 CF
24" INV=[illegible].00
5.36 CFS

TRACT A-2
4.1215 AC

INTERNATIONAL PROGRAMS BUILDING

71.11 CFS

1" = 200'

M. STATE LAND OFFICE

BOARD OF EDUCATION

4" ST

FIGURE 4

EXCERPT FROM DRAINAGE EXHIBIT FOR SANDIA SCIENCE AND TECHNOLOGY PARK

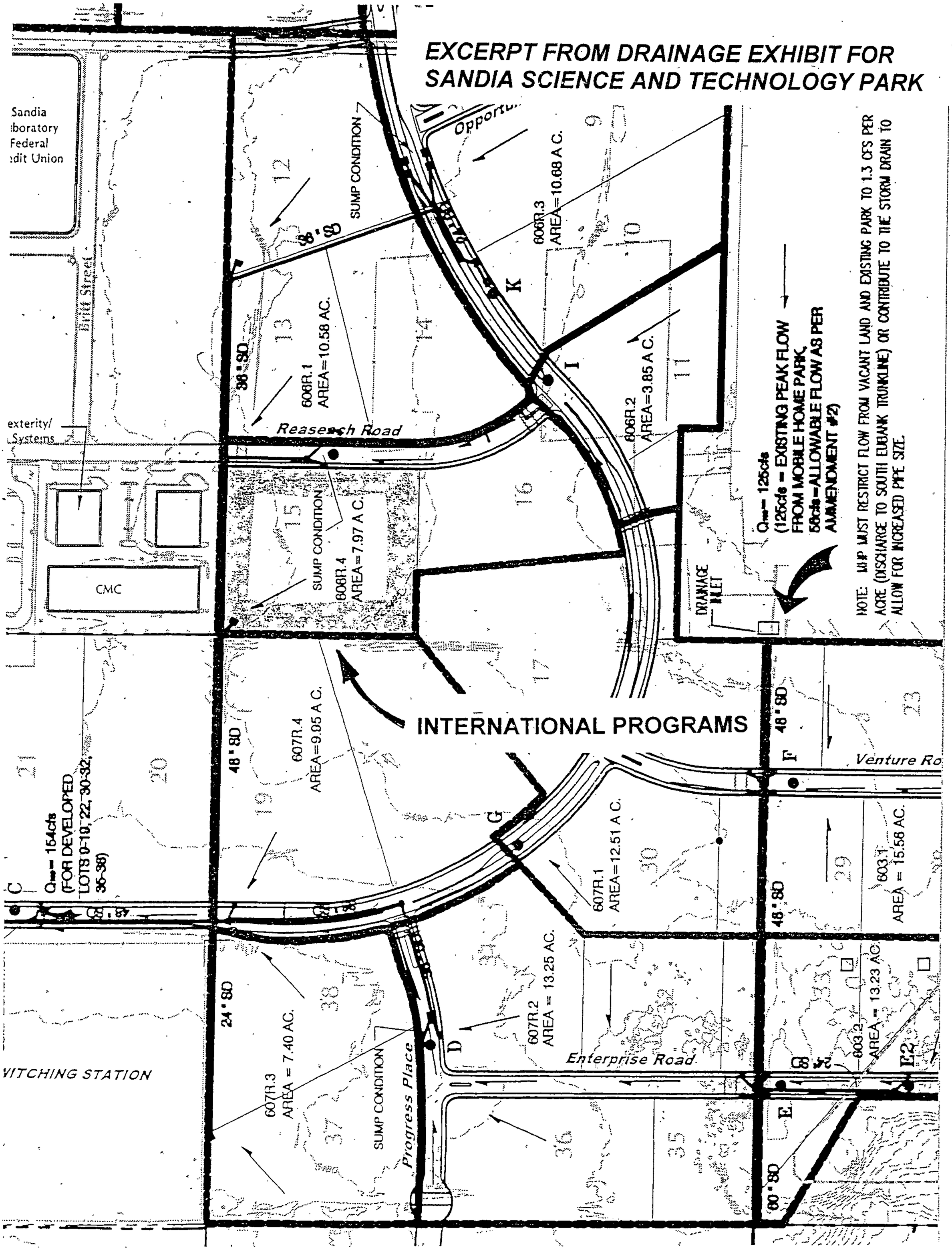


FIGURE 5

CITY OF ALBUQUERQUE

Office of Economic Development

Inter-Office Memo

February 25, 1999

TO: Larry Blair, Director, Public Works Department

FROM: Lawrence Rael, CAO

RE: Sandia Science and Technology Park/ South Eubank Interceptor Storm Drainage Project

I am directing CIP to release $375,000 from the Economic Development Fund to be added to the existing South Eubank Interceptor Storm Drainage Program. These funds will be used to enhance the drainage capabilities of the proposed Sandia Science and Technology Park, as well as the properties of South Pointe Village, Sandia Technology Center, APS, and the State of NM within this drainage basin. Solving current drainage problems will encourage development in this area, including construction of a 60,000 square foot facility to house an expansion of Sandia National Laboratories' Center for Cooperative Monitoring.

As part of a proposed public-private partnership to address drainage issues in the area, we understand that:

1) Land for on-site detention facilities, permanent or temporary, shall be provided by the developer, who shall construct and maintain them as necessary, unless otherwise determined by the Development Review Board (DRB) action, as follows (see attached map):

A. A permanent detention pond in the southwest corner of South Point Village to capture all generated runoff.

B. A temporary detention pond within a drainage easement dedicated by the developer in the southwest corner of the Sandia Technology Center site to capture the runoff generated by both Sandia Technology Center and South Pointe Village (This pond will be a temporary facility until an outfall is constructed to the South Eubank Interceptor).

2) The developer will secure the easements and the city will construct the storm sewer lines necessary to connect the ponds to the South Eubank Interceptor Storm Drain as part of the interceptor project in the following manner: approximately along the common lot line between the State Lands and the PNM land from the Eubank Interceptor to the APS lands; then North along the common lot line of APS and the State lands to the Sandia Technology Center detention Pond: then East along the common lot lines of APS and Sandia Technology Center to

(Continued)

FIGURE 6

the South Pointe Village pond.

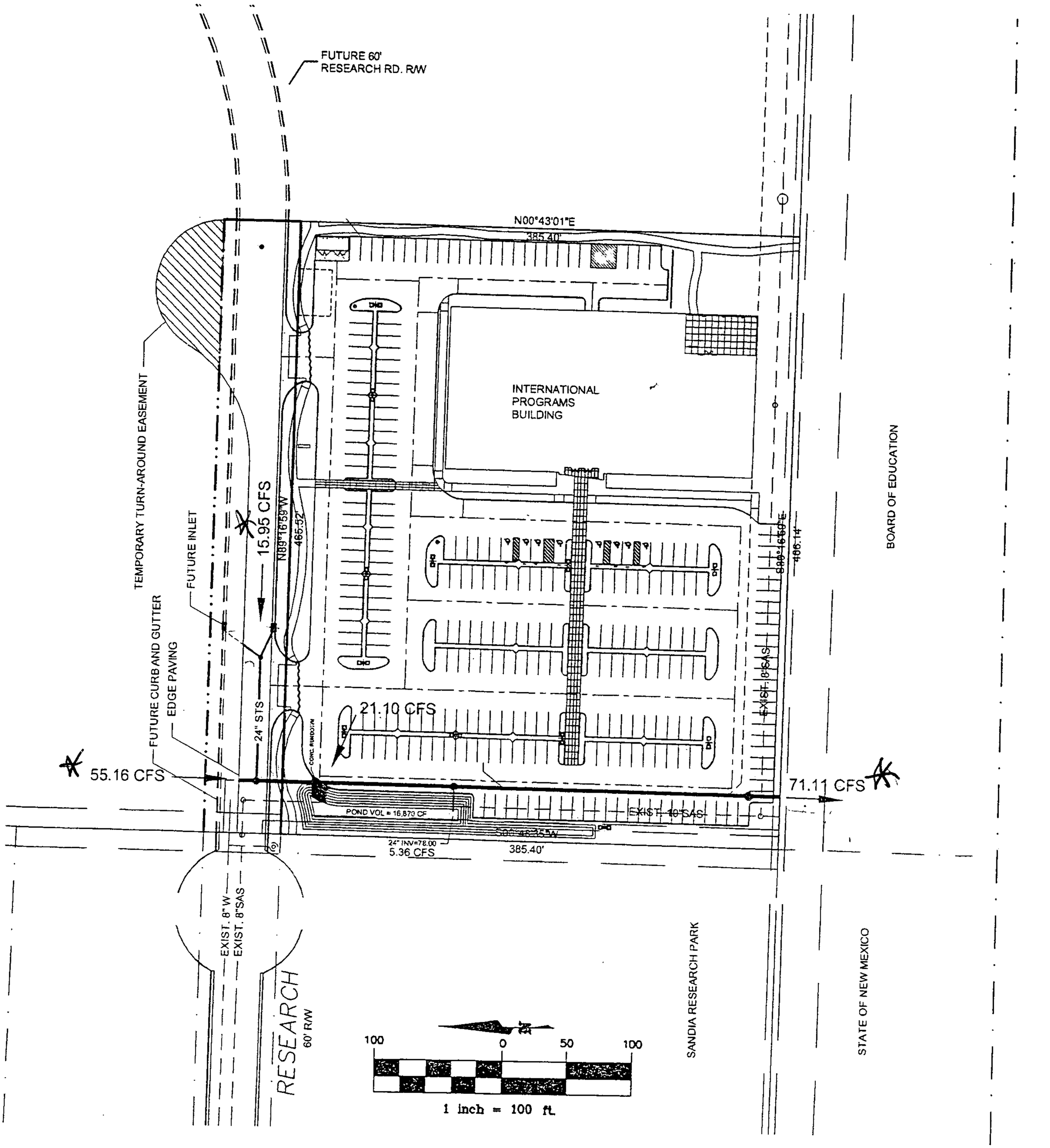
3) The lines should be sized and designed to serve the other currently undeveloped properties of APS and the State in the area in accordance with the South Eubank Drainage Analysis, Amendment No. 2 (Nov. 2, 1998).

4) All easements will be at least the minimum width required by the City, and will be dedicated to the City at no cost.

5) All work will be designed to city standards, and all plans will be provided to the City. All normal development processes will be followed and all city standards met.

If there are any further questions about this proposal, please call Erik Pfeiffer at 768-3270 or Victoria Prinz at 768-3283.

CC:
Pat Montoya
Fred Aguirre
Loren Meinz
Dan Hogan
Erik Pfeiffer



* from SSTP, DMP by BHI

FIGURE 7

DRAINAGE INFORMATION SHEET

PROJECT TITLE: INTERNATIONAL PROGRAMS ZONE ATLAS/DRNG. FILE#: M-21 / D10

DRB #: _____ EPC#: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TRACTS A-1, A-2, LANDS OF SHAW, MITCHELL, MALLORY PARTNERSHIP

CITY ADDRESS: 10600 RESEARCH RD SE.

ENGINEERING FIRM: Brasher & Lorenz, Inc. CONTACT: PAUL BRASHER
ADDRESS: 2201 San Pedro NE Bldg. 1 Ste. 220 Albuquerque, New Mexico 87110 PHONE: 888-6088 888-6188 (fax)

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

HYDROLOGY SECTION
RECEIVED
JUL 31 2001

TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT
_X_ DRAINAGE PLAN
_____ CONCEPTUAL GRADING & DRAINAGE PLAN
_X_ GRADING PLAN
_____ EROSION CONTROL PLAN
_____ ENGINEER'S CERTIFICATION
_____ OTHER _____

PRE-DESIGN MEETING:

_X_ YES
_____ NO
_____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

_____ SKETCH PLAT APPROVAL
_X_ PRELIMINARY PLAT APPROVAL
_____ S. DEV. PLAN FOR SUB'D. APPROVAL
_____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
_____ SECTOR PLAN APPROVAL
_____ FINAL PLAT APPROVAL
_____ FOUNDATION PERMIT APPROVAL
_X_ BUILDING PERMIT APPROVAL
_____ CERTIFICATE OF OCCUPANCY APPROVAL
_____ GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ S.A.D. DRAINAGE REPORT
_____ DRAINAGE REQUIREMENTS
_____ OTHER _____ (SPECIFY)

DATE SUBMITTED: 7.30.01

BY: PAUL BRASHER