CITY OF
Albuquerque

Martin J. Chávez, Mayor

August 7,1997

Tucker Green
Per Se Engineering
9109 La Barranca NE
Albuquerque, New Mexico 87111

RE: ENGINEER CERTIFICATION FOR NORWEST BANK IMPROVEMENTS (L22-D11A)
CERTIFICATION STATEMENT DATED 8/1/97

Dear Mr.Green:

Based on the information provided on your August 4,1997 submittal, Engineer Certification for the above referenced site is acceptable.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
File

Sincerely

Bernie J. Montoya

Bernie J. Montoya CE
Associate Engineer

DRAINAGE INFORMATION SHEET

NORWEST BANK IMPROVMTS

PROJECT TITLE: FRANKLIN PLAZA ZONE ATLAS/DRNG. FILE #: L-22/D11A

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

LEGAL DESCRIPTION: LOT H7 FRANKLIN SUBDIVISION

CITY ADDRESS: 156 JUAN TABO NE ALBQ 87123

ENGINEERING FIRM: PEIRSE ENGINEERING CONTACT: TUCKER GREEN

ADDRESS: 9109 LA BARRANCA NE PHONE: 275-0451 / 239-7855 mob

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: VAN H. GILBERT CONTACT: JOE MULHLBERGER

ADDRESS: 319 CENTRAL NE #201 PHONE: 247-9955

SURVEYOR: CLINT SHERRILL & ASSOC CONTACT: CLINT SHERRILL

ADDRESS: 730 SAN MATEO SE PHONE: 256-7364

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN
____ CONCEPTUAL GRADING & DRAINAGE PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
✓ ENGINEER'S CERTIFICATION
____ OTHER

PRE-DESIGN MEETING:

____ YES
____ NO
____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL
____ 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)

AUG 04 1997

GREEN TAG FOR SO19 FILED PREVIOUSLY

DATE SUBMITTED: 8-4-97

BY: TUCKER GREEN

PUBLIC WORKS DEPARTMENT

SIDEWALK & DRIVEPAD INSPECTION

SQ #19

APPROVED

Inspector

	Permits	Dispatch	Insp. Office
Phone:	768-2551	857-8025	857-8036

Date 7-22-97 Permit No. 992651

Contractor Henderson

Location Skyline & Juan Tabo NE

Time

DRAINAGE INFORMATION SHEET

NORWEST BANK REVISED

PROJECT TITLE: FRANKLIN PLAZA ZONE ATLAS/DRNG. FILE #: L22/D11A

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

LEGAL DESCRIPTION: LOT 1 FRANKLIN SUBDIVISION

CITY ADDRESS: 156 JUAN TABO NE ABQ 87123

ENGINEERING FIRM: PER SE ENGINEERING CONTACT: TUCKER GREEN

ADDRESS: 9109 LA BARRANCA NE 87111 PHONE: 275-0451/239-7885 mob

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: VAN H. GILBERT CONTACT: JOE MUHLBERGER

ADDRESS: 319 CENTRAL NW #201 PHONE: 247-9955

SURVEYOR: CLINT SHERRILL & ASSOC CONTACT: CLINT SHERRILL

ADDRESS: 730 SAN MATEO SE PHONE: _____

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____ DRAINAGE PLAN
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____ GRADING PLAN
____ EROSION CONTROL PLAN
✓ ENGINEER'S CERTIFICATION
____ OTHER _____

PRE-DESIGN MEETING:

____ YES
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____ COPY PROVIDED

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____ PAVING PERMIT APPROVAL
____ S.A.D. DRAINAGE REPORT
____ DRAINAGE REQUIREMENTS
____ SUBDIVISION CERTIFICATION
____ OTHER _____ (SPECIFY)

30 day Tem C.O. 7-22-97

DATE SUBMITTED: 7-22-97

BY: TUCKER GREEN

RECEIVED
JUL 22 1997
HYDROLOGY SECTION

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

March 14, 1997

INTEROFFICE CORRESPONDENCE HYDROLOGY DIVISION

TO: Desiderio Salas, Street Maintenance Division

FROM: Lisa Ann Manwill, P.E. Engineering Associate, PWD

SUBJECT: **PRIVATE DRAINAGE FACILITIES WITHIN PUBLIC RIGHT-OF-WAY DRAINAGE FILE NUMBER L22-D11A.**

Transmitted herewith, is a copy of the approved drainage plan for the referenced project incorporating the SO #19 design.

This plan is being submitted to you for permitting and inspection. Please provide this section with a signed-off copy per the signature block upon construction and acceptance by your office.

As you are aware, the signed off SO #19 is required by this office for Certificate of Occupancy release; therefore your expeditious processing of this plan would be greatly appreciated and would avoid any unnecessary delay in the release of the Certificate of Occupancy.

Thank you for your cooperation and if you should have any questions and/or comments, please feel free to call me at 924-3984.

Attachment

FYI

DRAINAGE INFORMATION SHEET RESPONSE TO COMMENTS

PROJECT TITLE: NORWEST BANK IMPRVMTS FRANKLIN PLAZA BRANCH ZONE ATLAS/DRNG. FILE #: L22-D11A

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

LEGAL DESCRIPTION: LOT H1 FRANKLIN SUBDIVISION

CITY ADDRESS: S.E. CORNER JUAN TABO & SKY LINE

ENGINEERING FIRM: PER SE ENGINEERING CONTACT: TUCKER GREEN

ADDRESS: 9109 LA BARRANCA NE 87111 PHONE: 275 2717, 275-0451

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: VAN H GILBERT CONTACT: JOE MUHLBERGER

ADDRESS: 319 CENTRAL NW STE 201 PHONE: 247-9955

SURVEYOR: CLINT SHERRILL & ASSOC CONTACT: BOLESLO ROMERO

ADDRESS: 730 SAN MATEO SE 87108 PHONE: 256-7364

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

- ✓ DRAINAGE REPORT
- ✓ DRAINAGE PLAN
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ✓ GRADING PLAN
- ___ EROSION CONTROL PLAN
- ___ ENGINEER'S CERTIFICATION
- ___ OTHER

PRE-DESIGN MEETING:

- ✓ YES SORT OF, UNOFFICIAL
- ___ NO
- ___ COPY PROVIDED

DUNN PER SE

RECEIVED MAR 06 1997 HYDROLOGY SECTION

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SKETCH PLAT APPROVAL
- ✓ PRELIMINARY PLAT APPROVAL
- ___ S. DEV. PLAN FOR SUB'D. APPROVAL
- ___ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
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- ___ GRADING PERMIT APPROVAL
- ___ PAVING PERMIT APPROVAL
- ___ S.A.D. DRAINAGE REPORT
- ___ DRAINAGE REQUIREMENTS
- ✓ OTHER SO19 (SPECIFY)

DATE SUBMITTED: 3-6-97

BY: TUCKER GREEN

PER SE ENGINEERING

9109 La Barranca NE Albuquerque NM 87111 (505) 275-0451 / 239-7855 mob

March 5, 1997

Lisa Ann Manwell, P E.
Engineering Assoc./Hydrology
City of Albuquerque Public Works Department
P O Box 1293
Albuquerque NM 87103

RECEIVED
MAR 06 1997
HYDROLOGY SECTION

Re: Norwest Bank at Juan Tabo NE & Skyline NE
Response to review comments

Drainage File L22-D11A

Dear Ms. Manwell:

Below, matching the numbering of your letter, are my responses to your review comments of March 3, 1997. It is Per Se's position that the plan and report as submitted on February 24 meet appropriate City standards, and indeed go beyond them in partly alleviating the existing problem area at the intersection of Juan Tabo and Skyline. Hopefully the responses below make that clear. No revision or resubmittal of the plan or the report is proposed at this time.

I appreciate the prompt turnaround of the review but wish you had taken the time to ask about any items that were unclear to you. If for some reason you do not at first find the responses below convincing, please, please call me so that the project not suffer any unnecessary delay.

1. No retaining is proposed for this pond. The last 0.3 ft of water above nominal bottom of pond (elevation 32.30 to 32.0) and water in the gravel " streambed" drain fairly slowly but they do drain. The AHYMO output file on page 14 of the report shows that the water level reaches elev 32.0 at about 3.5 hours after start of analysis, which is about 2.7 hours after the first inflow to the pond.

   The underdrain serves to provide an outflow slow enough to let the pond bottom get a soaking occasionally but still provides a positive drainage. This is the sense in which it provides water harvesting. If I were to lower the weir per your comment, as I understand it, then the gravel stream would not drain well and the pond bottom could tend to get boggy, as suggested on page 2 of the report. The architect was specifically concerned about the aesthetics of the pond area and the gravel stream is an appearance feature we'd like to keep. The underdrain system helps make it work.

   Before I prepared this design, I had an informal meeting with you at your office on January 31, 1997 At that meeting I showed you a sketch of generally what I proposed at that time. The sketch was for a somewhat different layout that the architect later decided was too ugly to use. The sketch included a ponding area receiving developed flows, with an underdrain draining to the same inlet as now. You told me to use a minimum 12-inch diameter pipe with orifice control to connect to the back of the existing inlet. I enclose a copy of part of that sketch to aid your memory.

2. The short (approximately 1-foot long) tube connecting the underdrain to the endcap on the 12-inch pipe acts as an orifice to control outflow from the underdrain. As shown on the plan the short tube will receive roughly half its flow from each side. With the relatively small flow in each sidepipe, some of which may be mostly parallel to the pipe rather than in it (at least until quite near the short tube), head losses in the underdrain pipe should not supplant the "orifice" as the limiting factor outflow. To get a feel for a worst case scenario for pond depth, completely discount the 0.4 cfs peak outflow from the underdrain. In that case the maximum pond depth increases by about 0.02 ft, based on linear interpolation of the first column of the "qweir.wq1" spreadsheet on page 15 of the report (cf. the flow rates at 0.90 and 1.00 ft depths).

   The underdrain and its connection to the existing catch basin (inlet) are appropriate and desirable as indicated above.

3. As noted on the plans, approximately 10.82 cfs peak leaves the pond through the spillway channel; the rest - approximately 0.4 cfs - of the total 11.22 cfs outflow (see AHYMO output, p.14) leaves via the underdrain. IF the water surface ever got to 1.20 ft deep, at elev 33.50, THEN per spreadsheet "qweir wq1" on p 15 the spillway would discharge approximately the 16.55 cfs you noted. But the water surface does not get that high; it peaks at 33.2. The 16.95 cfs outflow at elev 33.5 in the AHYMO Route Reservoir command (p.13) includes 16.55 cfs for the weir and 0.4 cfs for the underdrain. (When the water surface is at 33.2 ft, it is 0.9 ft above the invert of the spillway and 2.8 ft above the invert of the underdrain.)

4. Section D is correctly labeled. Section D is cut near the bottom of the rundown and is noted on the plan as "no scale". The purpose of Section D is to show typical dimensions for the concrete and to show that the rundown is set down into the bank. The section is not symmetrical about the low point at the entrance, at the top of the bank, because of the unequal approach slopes along the curb on opposite sides of the rundown. As shown on the plan in two places, however, top of curb (and thus also flowline) elevations at the curb returns along the paving area are equal. The distances of the curb returns from the low point are in proper proportion to the flowline slopes along the curb. Flowline at each return is 0.08 ft higher than at low point. The change takes place in 5 feet on the west and 7.5 feet on the east.

I hope these responses answer all your concerns and that you promptly approve the previously submitted plan and report. My understanding is that the project is scheduled for Development Review Board hearing on March 11 and I don't want to have to defer it.

Thanks for you cooperation. By the way, I note from your review letter that you are now a P.E. Congratulations.

Tucker Green, P.E.

SKYLINE DRIVE NE

PROJECT BENCHMARK
SET A CHISELED "X"
IN CONC. CURB.
ELEV.= 5531.80'

FL 31.69
ETBC 32.07
1.5
1.5

SD
RIM= 5532.05
INV= 5528.55

SD
RIM= 5532.37
INV= 5529.27

ETBC 33.37
FL 32.76

S 88°31'45" E
149.77

WM
SIGN

CONCRETE RAMP
TR
CURVE C1

6' UTILITY EASEMENT
AS PER PLAT FILED IN
MAP BK. C-10, FOLIO 21

3 or 4
SW CULVERTS

CON
APPROACH
CHANNEL

SIZE FOR
Δ VOL

6 HR?
1 DAY

PERF PIPE UNDERDRAIN
W/ FILTER FABRIC

LOT H

EG 35.18

EG 33.45

EG 35.36

37,486 SQ. FT ±
0.86 AC. ±

ETBC 34.70

FL 34.24

EX CONC

EXISTING ASPHALT

ETP 34.52

ETBC 34.41

ETR 33.71

OVERHEAD LINES

SIGN
LP

UNDERGROUND GAS LINE

• 9' PUBLIC ROADWAY AND BIKEPATH EASEMENT AS PER PLAT FILED IN VOL 96C, FOLIO 72 ON 02/15/96

CITY OF
Albuquerque
Public Works Department

March 3, 1997

Martin J. Chávez, Mayor

Robert E. Gurulé, Director

Tucker Green, P.E.
Per Se Engineering
9109 La Barranca NE
Albuquerque, NM 87111

RE: NORWEST BANK (L22-D11A). DRAINAGE REPORT FOR PRELIMINARY PLAT, FINAL PLAT, AND BUILDING PERMIT APPROVALS. ENGINEER'S STAMP DATED FEBRUARY 24, 1997.

Dear Mr. Green:

Based on the information provided on your February 24, 1997 submittal, City Hydrology has the following comments:

1. Landscaping ponds/water harvesting ponds are allowed only if no developed flow is routed to them. Since this is not the case with this project, please lower your weir to the very bottom of the pond. No retaining will be allowed in this pond.

2. I don't see an orifice plate called out on the 12-inch diameter pipe. Assuming you lower the weir, and the entire pond drains, is the connection to the existing catch basin necessary?

3. As I understand it, you are allowing 11.22 cfs out of the channel/sidewalk culvert. It appears that your channel weir calculations let a maximum of 16.55 cfs out the channel/sidewalk culvert.

4. Section "D" shows a concrete rundown. Should "Low Pt at Entrance" be labeled "High Point at Entrance?"

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

Sincerely,

Lisa Ann Manwill, P.E.
Engineering Assoc./Hyd.

c: Andrew Garcia
File

DRAINAGE INFORMATION SHEET REUSED SUBMITTAL

PROJECT TITLE: NORWEST BANK IMPRVMTS FRANKLIN PLAZA BRANCH ZONE ATLAS/DRNG. FILE #: L22-D11A

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

LEGAL DESCRIPTION: LOT H1 FRANKLIN SUBDIVISION

CITY ADDRESS: S.E. CORNER JUAN TABO & SKY LINE

ENGINEERING FIRM: PER SE ENGINEERING CONTACT: TUCKER GREEN

ADDRESS: 9109 LA BARRANCA NE 87111 PHONE: 275 2717, 275-0451

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: VAN H GILBERT CONTACT: JOE MUHLBERGER

ADDRESS: 319 CENTRAL NW STE 201 PHONE: 247-9955

SURVEYOR: CLINT SHERRILL & ASSOC CONTACT: BOLESLO ROMERO

ADDRESS: 730 SAN MATEO SE 87108 PHONE: 256-7364

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

✓ DRAINAGE REPORT
✓ DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
✓ GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION
___ OTHER

PRE-DESIGN MEETING:

✓ YES — SORT OF, UNOFFICIAL WRT PER SE
___ NO
___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL
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___ S. DEV. PLAN FOR SUB'D. APPROVAL
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___ GRADING PERMIT APPROVAL
___ PAVING PERMIT APPROVAL
___ S.A.D. DRAINAGE REPORT
___ DRAINAGE REQUIREMENTS
___ OTHER SO 19 (SPECIFY)

↳ 2 COPIES OF PLAN
1 COPY OF REPORT
IN THIS SUBMITTAL

RECEIVED FEB 24 1997 HYDROLOGY SECTION

RECEIVED FEB 2 1997 HYDROLOGY SECT

DATE SUBMITTED: 2-24-97

BY: TUCKER GREEN

Drainage Report and Calculations
for
Norwest Bank - Franklin Plaza Branch
Lot H1, Franklin Subdivision
S.E. Corner of Juan Tabo & Skyline - Map L-22
Albuquerque, New Mexico

Prepared by Per Se Engineering
February, 1997

TUCKER H. GREEN
10731
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER

2-24-94

RECEIVED
FEB 24 1997
HYDROLOGY SECTION

DRAINAGE INFORMATION SHEET REVISED SUBMITTAL

PROJECT TITLE: NORWEST BANK IMPRVMTS FRANKLIN PLAZA BRANCH ZONE ATLAS/DRNG. FILE #: L22-D11A

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

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- ___ S.A.D. DRAINAGE REPORT
- ___ DRAINAGE REQUIREMENTS
- ✓ OTHER SO19 (SPECIFY)

↳ 2 COPIES OF PLAN
1 COPY OF REPORT
IN THIS SUBMITTAL

DATE SUBMITTED: 2-24-97

BY: TUCKER GREEN

DRAINAGE REPORT FOR
NORWEST BANK - FRANKLIN PLAZA BRANCH

C.O.A. Drainage File: L22 - D11A Map L-22

LEGAL DESCRIPTION: Lot H1, Franklin Subdivision

FLOOD ZONE: Per Fema Firm Panel 359 (1996, copy enclosed) the site itself is not in a 100-year flood zone, but the intersection at the northwest corner of the site is in a local A0 (depth 1 ft) flood zone. This A0 zone extends approximately to the north end of the existing driveway, at which point the flowline elevation is 5531.62. The buildings onsite are not in danger from the flood zone. Finished floor of the existing bank is 5535.25, 3.63 ft higher than flowline. Top of curb at the lowest new drive-up island will be at least 5533.80+0.50=5534.30, or 2.62 ft higher.

RECENT REVIEW HISTORY: A drainage plan for the site was submitted by Mevatec, Inc. in early 1997 (Engineer's stamp 1-3-97). Mevatec's plan included an analysis of onsite and offsite flows, as well as proposed drainage solutions, including a sort of "French Drain-channel-pond, which mixed onsite and offsite waters. Apparently the ponding requirement is related to lack of capacity downstream, as evidenced by the flood zone in the street adjacent to the northwest corner of the site. In its review letter of Jan 15, 1997, the City made only 2 comments, one relating to not allowing French Drains and the other to not allowing private storm water to flow over sidewalks.

Mevatec apparently is not in a position to revise the plan within the client's required time frame. Further, Mevatec apparently is unwilling to allow Per Se Engineering to use such of its work as is applicable. Therefore Per Se has prepared a new plan from "scratch", including a new analysis of offsite flow.

GENERAL PROJECT DESCRIPTION: The site is located on the west (downhill) side of a shopping center approximately 1 block north of Central Avenue. An existing bank with drive-up banking islands occupies approximately the south half of the site, while the remainder is bare-dirt vacant. Flow from other parts of the shopping center enters a swale along the east property line about midway of the developed part of the site, is routed around the existing paving, flows in an unimproved channel across the vacant part of the site, and discharges across the sidewalk into Juan Tabo Blvd.

Proposed development primarily involves constructing additional drive-up banking islands, with a new canopy and associated paving, north of the existing development. The drainage plan routes all offsite and some onsite flows through a detention (delay) pond to decrease the combined peak flows slightly. The proposed pond decreases flows more than the new development increases them, which should help conditions at the intersection.

Because of the arrangement of the proposed improvements, the recently-created (1996) drainage easement cannot be used for offsite flow. This projects proposes to replace that easement with a blanket drainage easement for offsite flow.

OFFISTE FLOW: To calculate offsite flow, Per Se used recent photo-topo from a 1996 drainage plan (L22-D11) for repairing paving in the shopping center of which the project bank is a part. On the basis of the topo shown on that plan, the part of the shopping center that discharges toward the existing swale north of the bank contributes approximately 11.2 cfs in the 100-year, 6-hour storm. A few onsite parking spaces upstream of the entrance to the channel add approximately 0.2 cfs. The offsite analysis assumes generally that flow patterns are controlled by the contours shown on L22-D11 rather than being modified by the parking islands and curb & gutter. This is because there are small diameter pipes passing through the curbs at roughly 8-foot intervals. At the present time (and at the time of L22-D11) most of these pipes are plugged, and actual offsite flow reaching the site may be less. On the assumption that more of the shopping center flow reached the swale, the Mevatec plan found a larger (23.7 cfs) offfsite peak

What happens to flow if pipes are not plugged?

RUNOFF MITIGATION: Per Se Engineering used DPM Small Watershed methods (see enclosed spreadsheet) to calculate the increase in runoff rate and volume attributable to the proposed changes in onsite condition. The results for the nominal 100-year 6-hour storm are:

CONDITION	INCREASE	
Peak flow rate	0.05	cfs - very small
Volume, 6-hr	312	cu ft - very small

Really!

Per Se proposes a landscaping/detention pond to route all the offsite and some of the onsite flows. The pond reduces the combined peak flow from 12.53 to 11.22 cfs, a change of 1.31 cfs. The 12.53 cfs peak inflow to the pond is based on the AHYMO computer program and is slightly less than the 12.87 cfs calculated by the DPM small watershed method. The pond's main outlet is a concrete weir & channel leading to a pair of Albuquerque standard sidewalk culverts in Juan Tabo Blvd. The crest of the weir is 0.3 feet above the bottom of the pond: that is, the weir doesn't drain roughly the bottom 4 inches ~~of~~ the pond. This provides a degree of "water harvesting" to benefit landscaping in the pond.

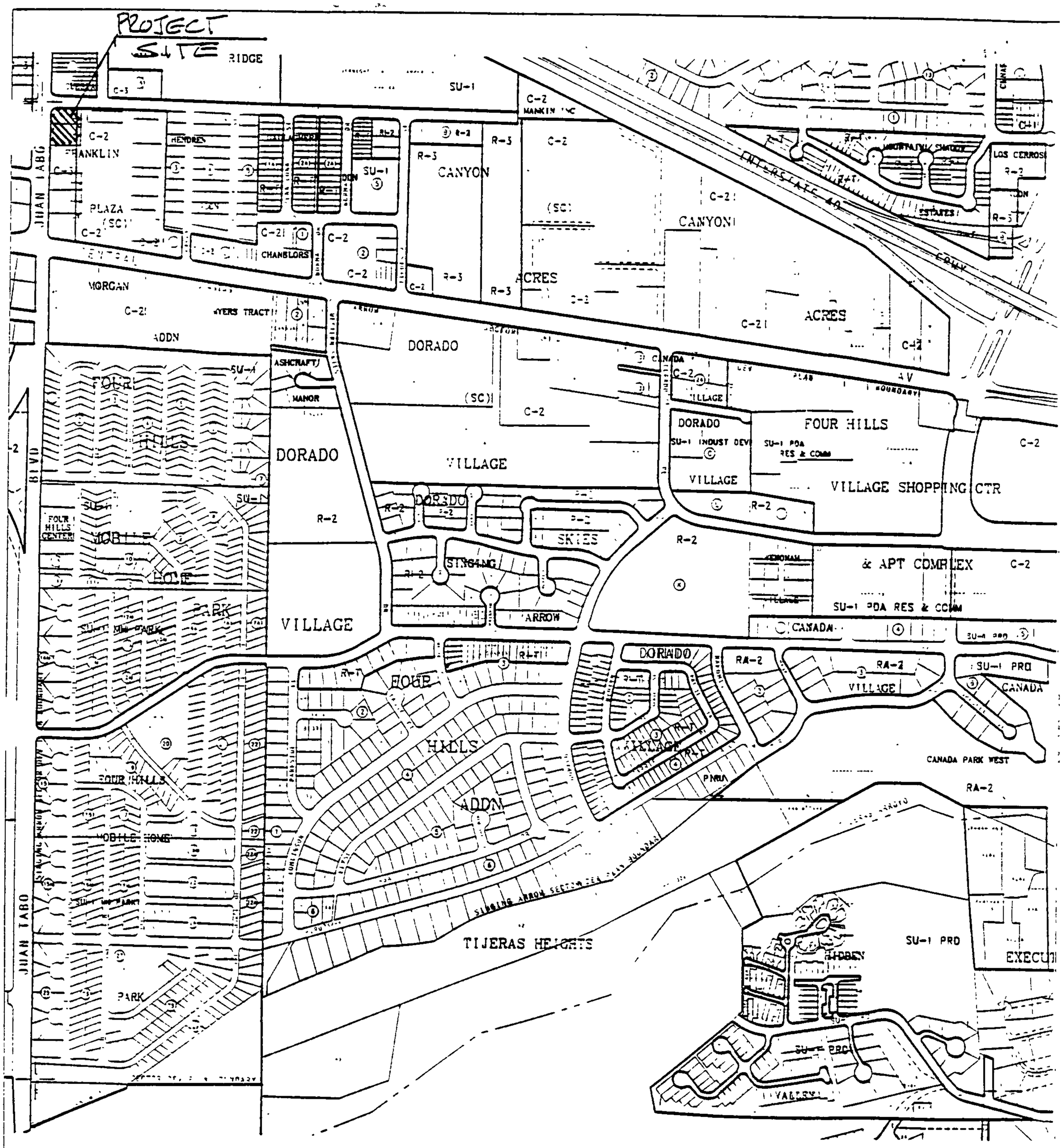
no developed flows to harvest water. Lower the weir

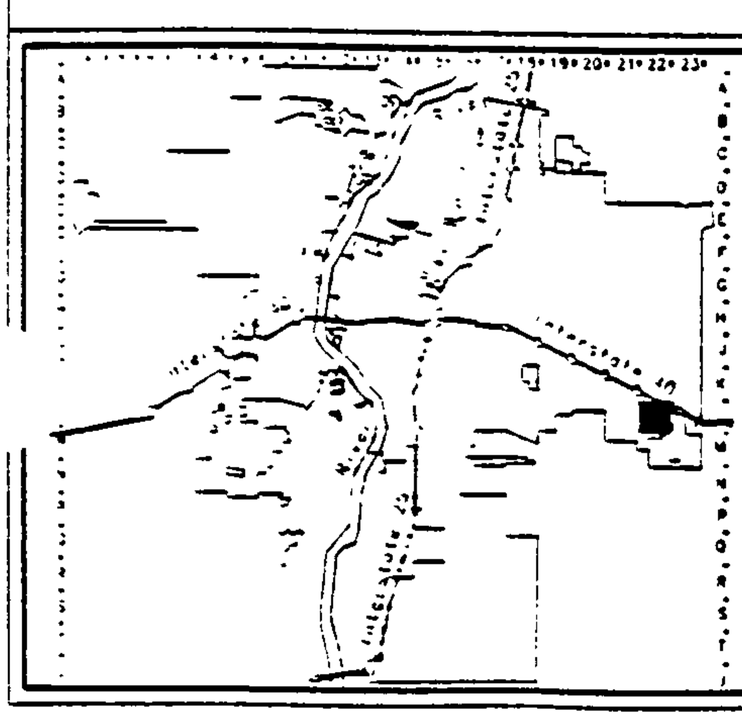
To keep the pond bottom from becoming boggy, an underdrain system will connect to the back of an existing inlet in Skyline Rd. Peak flow in the underdrain is approximately 0.4 cfs when the pond is at its maximum depth. When the water drops to the spillway elevation peak flow in the underdrain is approximately 0.3 cfs. Underdrain flow calculations assume orifice control just downstream of the junction of the two legs and just upstream of the larger pipe going to the existing inlet. The diameter of this pipe was set at 12 inches, based on a request from COA PWD / Hydrology for an 12 inch minimum and on a COA Standard Drawing (2237) calling for a 12-inch maximum.

Don't see orifice called out.

It is possible that the new opening for offiste flow will not have complete capacity for the calculated 100-year flow. Based on weir flow the capacity is approximately 10.6 cfs compared to approximately 11.4 required. However, it is Per Se's judgment that there will not be a problem, since (1) flow cannot escape; (2) the depth of overflow will be very small; (3) the duration of overflow will be very short; and (4) the distance from upstream concrete curb and paving to downstream concrete curb and paving is only about 5 feet.

END OF REPORT.





750 375 0 750

Scale: 1" = 750

Albuquerque Geographic Information System

City of Albuquerque

© Planning Department July 1993

LEGAL DESCRIPTION

T10N

R4E

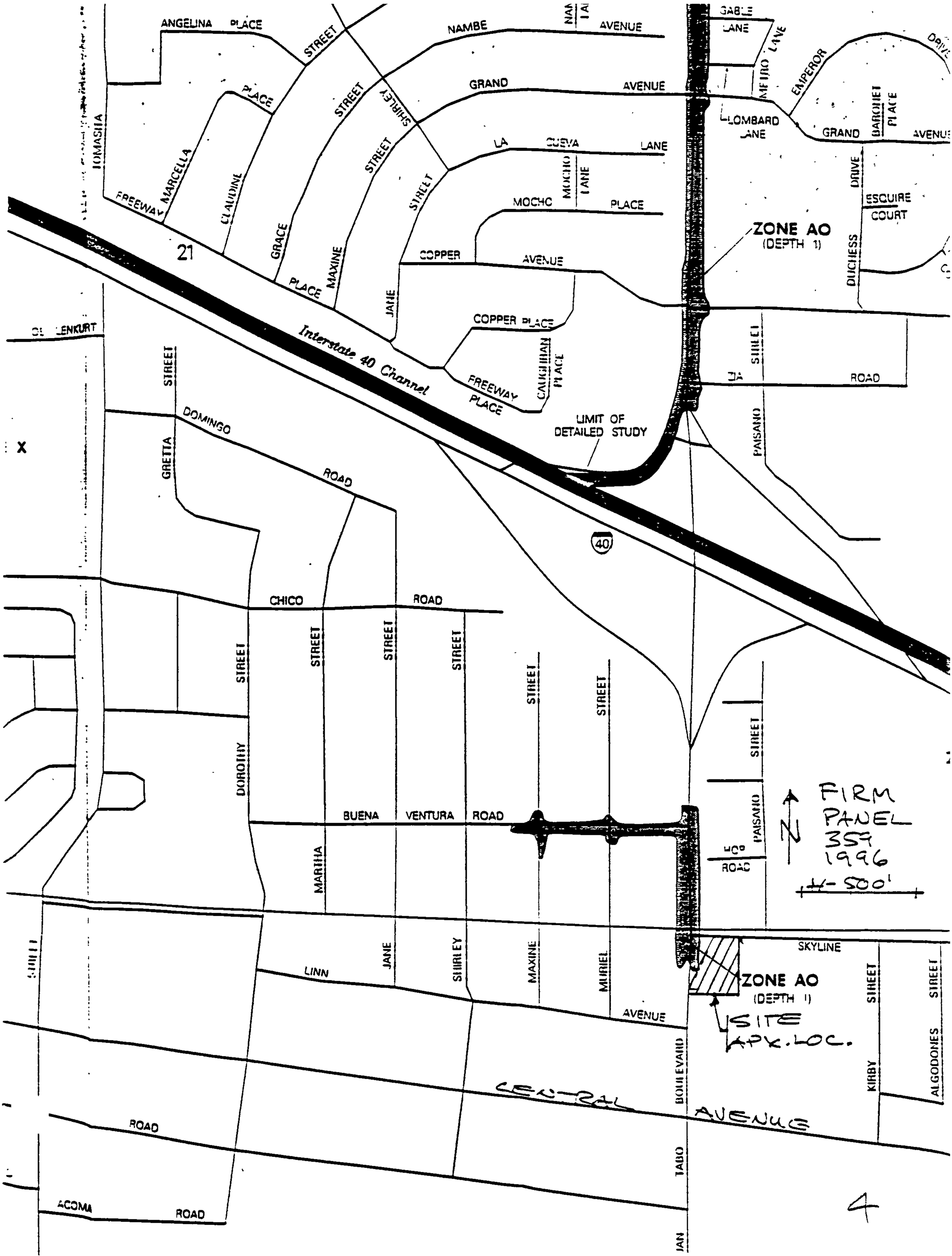
SEC 27

UNIFORM PROPERTY CODE

1-022-056

3

L-22-Z


ANGELINA PLACE
STREET
NAMBE
AVENUE
GABLE
LANE
EMPEROR
DRIVE
GRAND
AVENUE
LOMBARD
LANE
GRAND
AVENUE
PLACE
STREET
SHIRLEY
STREET
STREET
LA CUEVA LANE
MOCHO LANE
MOCHO PLACE
DRIVE
ESQUIRE
COURT
ZONE AO
(DEPTH 1)
DUCHESS
MARCELLA
CLAUDINE
GRACE
MAXINE
JANE
FREEWAY
21
PLACE
COPPER
AVENUE
COPPER PLACE
CAUGHIAN PLACE
FREEWAY
PLACE
Interstate 40 Channel
STREET
ROAD
LIMIT OF
DETAILED STUDY
PAISANO
STREET
GRETTA
DOMINGO
ROAD
40
CHICO
ROAD
STREET
STREET
STREET
STREET
STREET
STREET
STREET
DOROTHY
BUENA
VENTURA
ROAD
MARTHA
PAISANO
ROAD
FIRM
PANEL
359
1996
+/- 500'
SKYLINE
LINN
JANE
SHIRLEY
MAXINE
MURIEL
AVENUE
ZONE AO
(DEPTH 1)
SITE
APX. LOC.
STREET
STREET
KIRBY
ALGODONES
CENTRAL
AVENUE
BOULEVARD
ROAD
TABO
ACOMA
ROAD
4

FILE=NORWHYD2.WQ1
ALBUQUERQUE, NM (1/93 DPM CHAP 22.2) CRITERIA - SIMPLE PROCEDURE FOR <= 40 ACRES
PX100-6 = PRECIPITATION EXCESS FROM 100-YEAR 6-HOUR STORM
VOL10D = VOLUME OF RUNOFF FROM 100-YEAR 10-DAY STORM
TRTMT CLASS A=UNDISTURBED, B=LAWNS, C=UNPAVED ROADS, D=ROOFS,PAVEMENT: SEE DPM 22.2 P A-5

****** PROJECT INFO ******
NORWEST BANK - SE COR JUAN TABO & SKYLINE DRIVE NE: MAP L-22

RAIN ZONE 3 SEE DPM P 22.2-2
100-YEAR PRECIPTATION (P) DEPTHS, INCHES

1 HR	6 HR	24 HR	4 DAY	10 DAY
2.14	2.60	3.10	3.95	4.90

02/18/97 08:59 AM ONSITE - EXISTING CONDITIONS SF TOT

TRTMT CLASS	AREA SQUARE FEET	AREA ACRES	PX100-6 IN/AC	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR AC-FT	VOL1D AC-FT	VOL4D AC-FT	VOL10D AC-FT	TRTMT PERCENT
A	0.00	0.0000	0.66	1.87	0.000	0.000	0.000	0.000	0.000	0.00
B	3685.00	0.0846	0.92	2.60	0.220	0.006	0.006	0.006	0.006	9.83
C	17448.00	0.4006	1.29	3.45	1.382	0.043	0.043	0.043	0.043	46.55
D	16353.00	0.3754	2.36	5.02	1.885	0.074	0.089	0.116	0.146	43.62
TOTAL	37486.00	0.8606	AVG Q/AC=	4.051	3.486	0.123	0.139	0.166	0.195	100.00
					CU FT	5374	6056	7214	8509	

INCREASE = 3.54 - 3.49
= 0.05 CFS — TRIVIAL

02/18/97 08:59 AM ONSITE - PROPOSED CONDITIONS - ENTIRE SITE AC TOT

TRTMT CLASS	AREA SQUARE FEET	AREA ACRES	PX100-6 IN/AC	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR AC-FT	VOL1D AC-FT	VOL4D AC-FT	VOL10D AC-FT	TRTMT PERCENT
A	0.00	0.0000	0.66	1.87	0.000	0.000	0.000	0.000	0.000	0.00
B	14054.00	0.3226	0.92	2.60	0.839	0.025	0.025	0.025	0.025	37.49
C	0.00	0.0000	1.29	3.45	0.000	0.000	0.000	0.000	0.000	0.00
D	23432.00	0.5379	2.36	5.02	2.700	0.106	0.128	0.166	0.209	62.51
TOTAL	37486.00	0.8606	AVG Q/AC=	4.113	3.539	0.131	0.153	0.191	0.234	100.00
					CU FT	5686	6662	8322	10177	

02/18/97 08:59 AM ONSITE - PROPOSED - TO POND ONLY AC TOT

TRTMT CLASS	AREA SQUARE FEET	AREA ACRES	PX100-6 IN/AC	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR AC-FT	VOL1D AC-FT	VOL4D AC-FT	VOL10D AC-FT	TRTMT PERCENT
A	0.00	0.0000	0.66	1.87	0.000	0.000	0.000	0.000	0.000	0.00
B	7453.00	0.1711	0.92	2.60	0.445	0.013	0.013	0.013	0.013	40.90
C	0.00	0.0000	1.29	3.45	0.000	0.000	0.000	0.000	0.000	0.00
D	10768.00	0.2472	2.36	5.02	1.241	0.049	0.059	0.076	0.096	59.10
TOTAL	18221.00	0.4183	AVG Q/AC=	4.030	1.686	0.062	0.072	0.090	0.109	100.00
					CU FT	2689	3138	3901	4753	

FILE=NORWHYD2.WQ1
ALBUQUERQUE, NM (1/93 DPM CHAP 22.2) CRITERIA - SIMPLE PROCEDURE FOR <= 40 ACRES
NORWEST BANK - SE COR JUAN TABO & SKYLINE DRIVE NE: MAP L-22

02/23/97 05:23 PM OFFSITE - FROM PART OF ADJ SHOP CTR, PER JMA/K&P (L22-D11) PHOTO-TOPO

TRTMT CLASS	AREA SQUARE FEET	AREA ACRES	PX100-6 IN/AC	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR AC-FT	VOL1D AC-FT	VOL4D AC-FT	VOL10D AC-FT	TRTMT PERCENT
A	0.00	0.0000	0.66	1.87	0.000	0.000	0.000	0.000	0.000	0.00
B	2954.28	0.0678	0.92	2.60	0.176	0.005	0.005	0.005	0.005	3.00
C	0.00	0.0000	1.29	3.45	0.000	0.000	0.000	0.000	0.000	0.00
D	95521.72	2.1929	2.36	5.02	11.008	0.431	0.523	0.678	0.852	97.00
TOTAL	98476.00	2.2607	AVG Q/AC=	4.947	11.185	0.436	0.528	0.683	0.857	100.00
					CU FT	19012	22993	29759	37321	

02/23/97 05:23 PM TO POND - OFFSITE + "TO POND" ONSITE

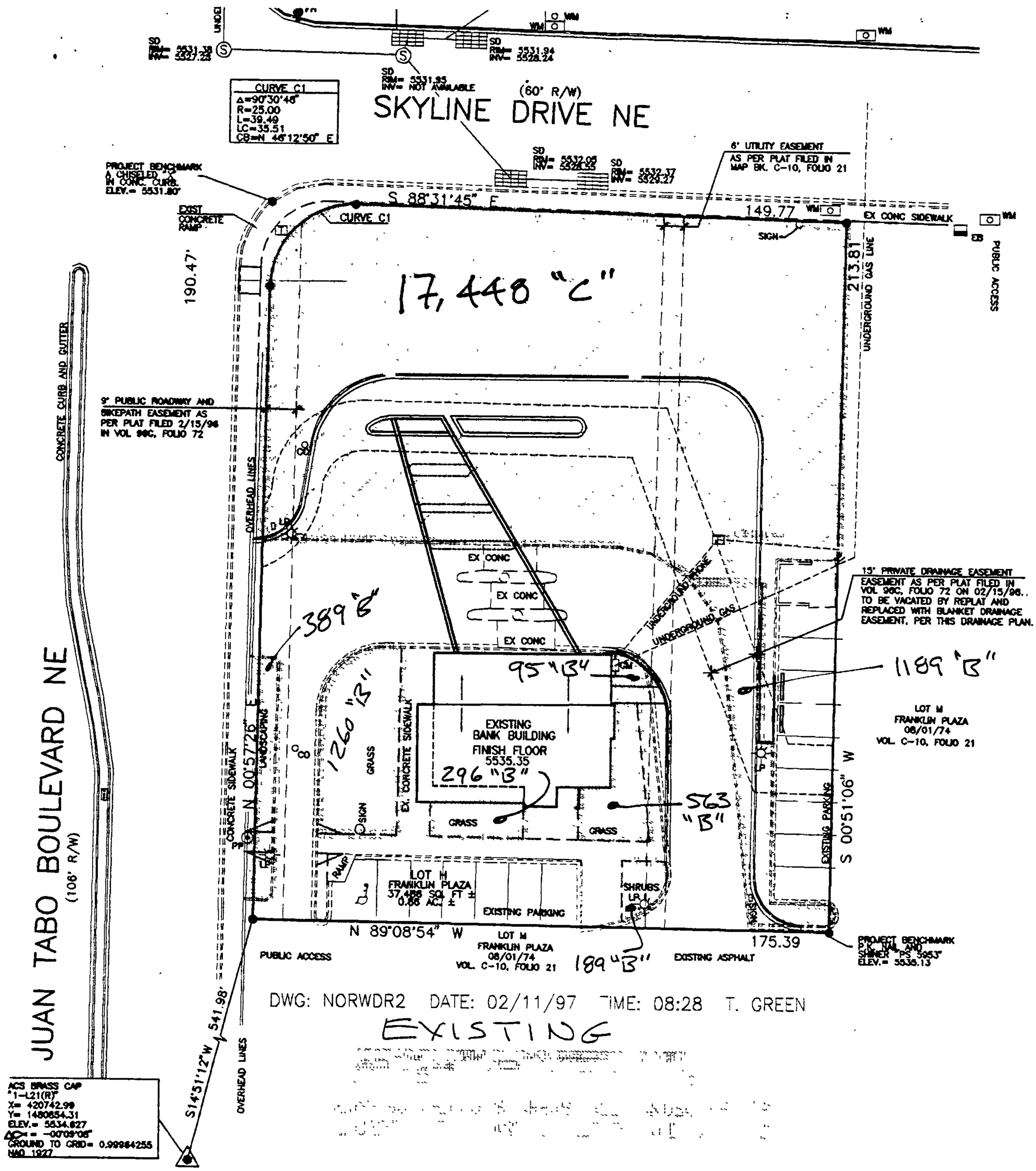
TRTMT CLASS	AREA SQUARE FEET	AREA ACRES	PX100-6 IN/AC	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR AC-FT	VOL1D AC-FT	VOL4D AC-FT	VOL10D AC-FT	TRTMT PERCENT
A	0.00	0.0000	0.66	1.87	0.000	0.000	0.000	0.000	0.000	0.00
B	10407.28	0.2389	0.92	2.60	0.621	0.018	0.018	0.018	0.018	8.92
C	0.00	0.0000	1.29	3.45	0.000	0.000	0.000	0.000	0.000	0.00
D	106289.72	2.4401	2.36	5.02	12.249	0.480	0.582	0.754	0.948	91.08
TOTAL	116697.00	2.6790	AVG Q/AC=	4.804	12.870	0.498	0.600	0.773	0.966	100.00
					CU FT	21702	26130	33659	42074	

0.004186 ~ .00419 mi² COMP TO 12.53 BY AHYMO

02/23/97 05:23 PM OFFSITE - POSS TO E DRIVE (NOT CURB OPENING), PER L22-D11 PHOTOTOPO

TRTMT CLASS	AREA SQUARE FEET	AREA ACRES	PX100-6 IN/AC	QP100-6 CFS/AC	QP100-6 CFS	VOL6HR AC-FT	VOL1D AC-FT	VOL4D AC-FT	VOL10D AC-FT	TRTMT PERCENT
A	0.00	0.0000	0.66	1.87	0.000	0.000	0.000	0.000	0.000	0.00
B	445.56	0.0102	0.92	2.60	0.027	0.001	0.001	0.001	0.001	3.00
C	0.00	0.0000	1.29	3.45	0.000	0.000	0.000	0.000	0.000	0.00
D	14406.44	0.3307	2.36	5.02	1.660	0.065	0.079	0.102	0.128	97.00
TOTAL	14852.00	0.3410	AVG Q/AC=	4.947	1.687	0.066	0.080	0.103	0.129	100.00
					CU FT	2867	3468	4488	5629	

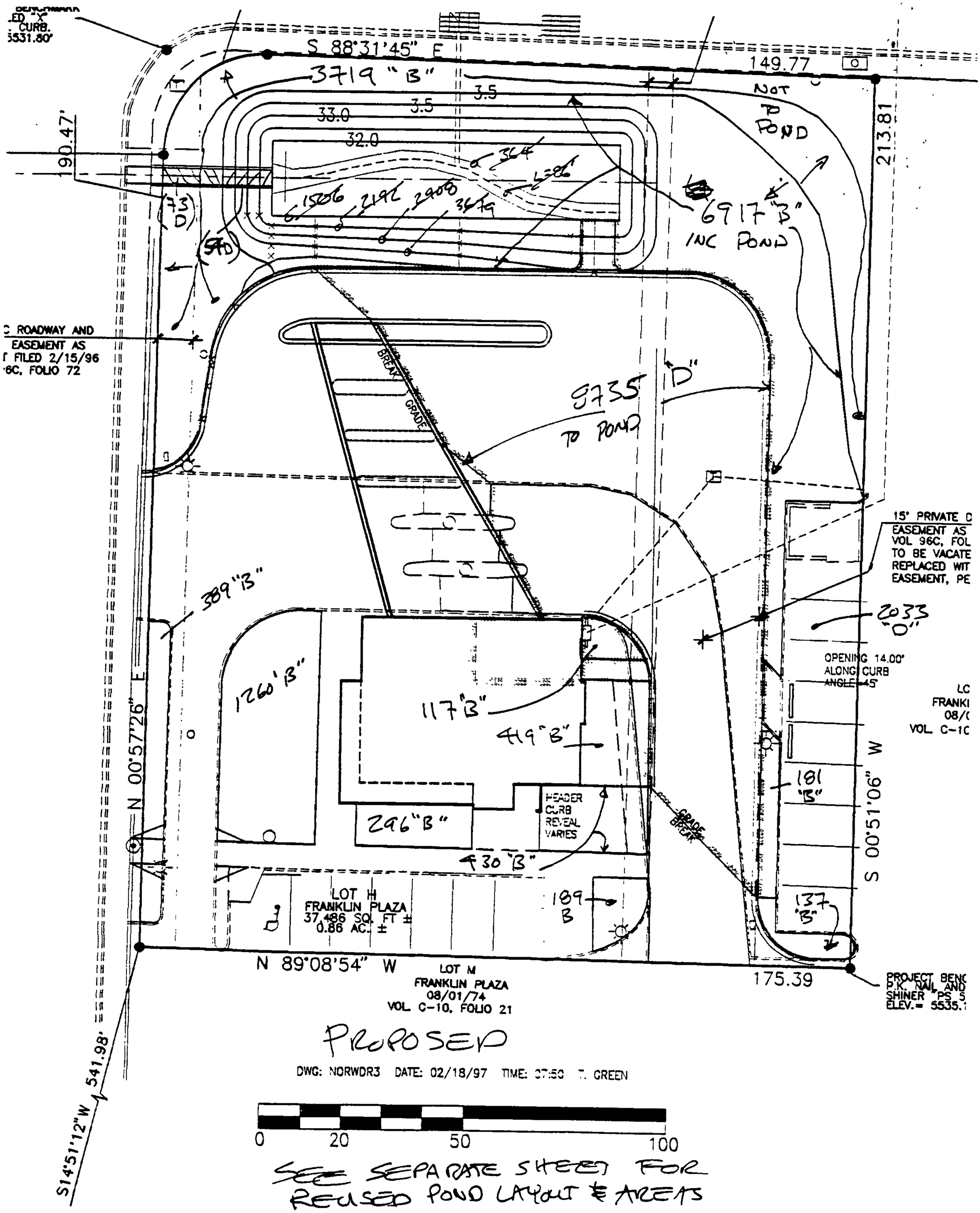
DON'T USE:
RELEVANT ONLY RE WATER BLOCK



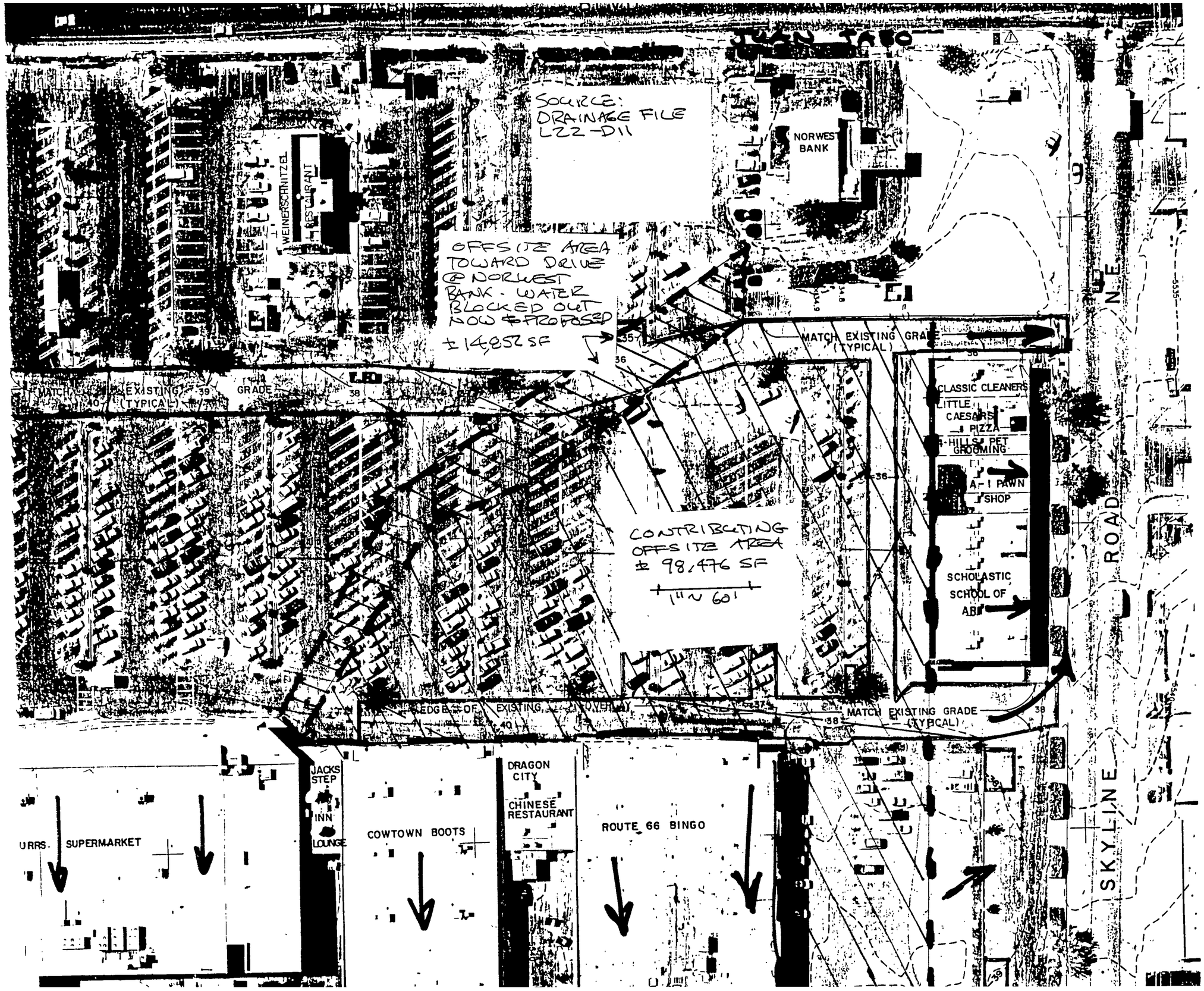
DWG: NORWDR2 DATE: 02/11/97 TIME: 08:28 T. GREEN

EXISTING

7


S 88°31'45" E
149.77
3719 "B"
3.5
3.5
33.0
32.0
NOT TO POND
190.47'
213.81
364
1506
2192
2908
3479
6917 "B"
INC POND
(73 D)
(97D)
ROADWAY AND EASEMENT AS FILED 2/15/96
BREAK GRADE
9735 "D"
TO POND
15' PRIVATE D
EASEMENT AS
VOL 96C, FOL
TO BE VACATE
REPLACED WIT
EASEMENT, PE
389 "B"
2033 "D"
OPENING 14.00'
ALONG CURB
ANGLE 45°
1260 "B"
117 "B"
419 "B"
N 00°57'26" E
S 00°51'06" W
181 "B"
HEADER CURB REVEAL VARIES
296 "B"
430 "B"
GRADE BREAK
LOT H
FRANKLIN PLAZA
37,486 SQ. FT ±
0.86 AC. ±
189 B
137 "B"
N 89°08'54" W
LOT M
FRANKLIN PLAZA
08/01/74
VOL. C-10, FOLIO 21
175.39
541.98'
S14°51'12"W
PROPOSED
DWG: NORWDR3 DATE: 02/18/97 TIME: 07:50 T. GREEN
0
20
50
100
SEE SEPARATE SHEET FOR
REUSED POND LAYOUT & AREAS

8



and repl
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Option
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FRANKLI
PARKING
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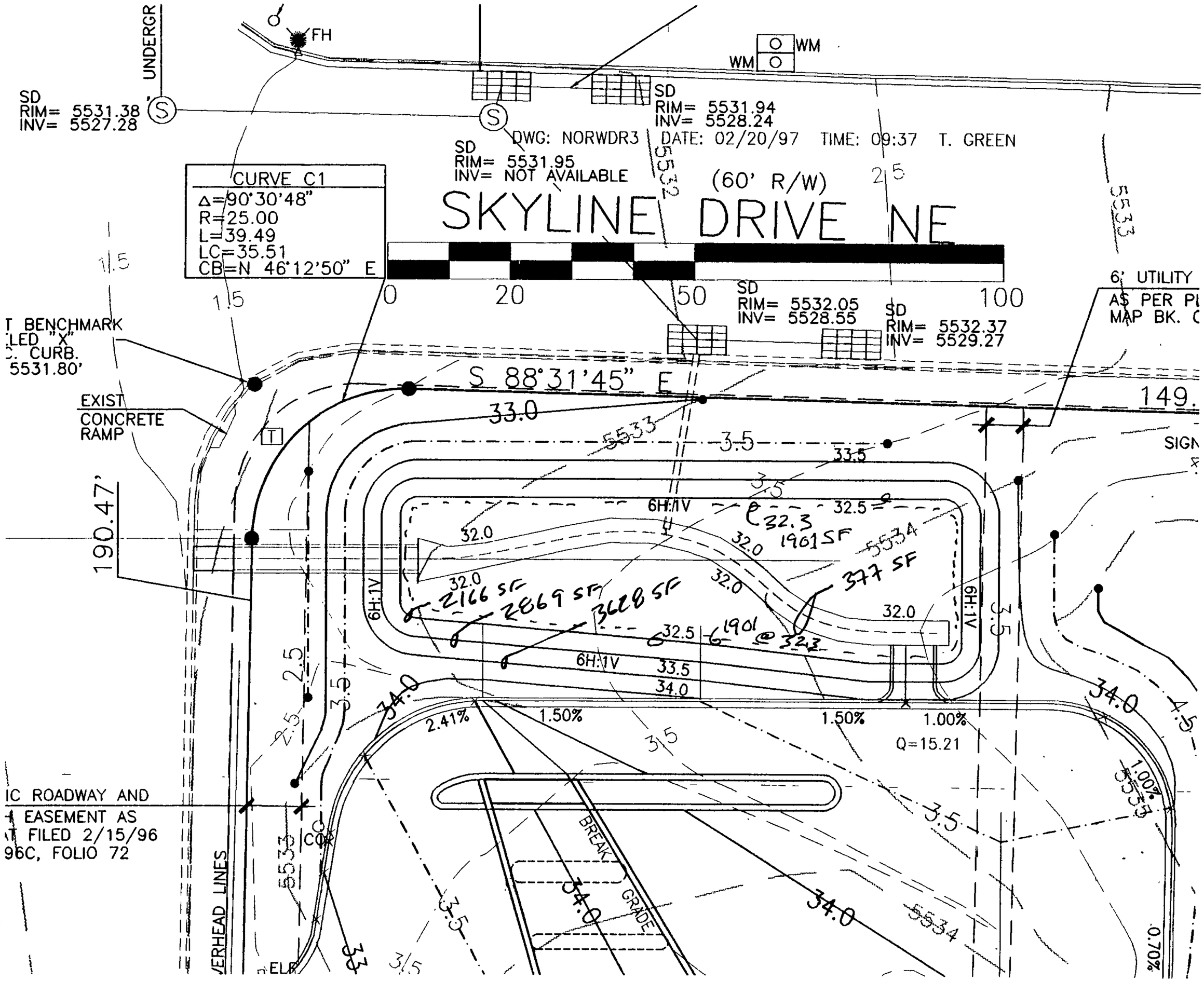
JMA NO

ITEM NO

BASE BID
ITEM NO.

BASE BI
ITEM NO

9


UNDERGR
FH
WM
WM
SD
RIM= 5531.38
INV= 5527.28
SD
RIM= 5531.94
INV= 5528.24
DWG: NORWDR3 DATE: 02/20/97 TIME: 09:37 T. GREEN
SD
RIM= 5531.95
INV= NOT AVAILABLE
CURVE C1
Δ=90°30'48"
R=25.00
L=39.49
LC=35.51
CB=N 46°12'50" E
(60' R/W)
SKYLINE DRIVE NE
0 20 50 100
SD
RIM= 5532.05
INV= 5528.55
SD
RIM= 5532.37
INV= 5529.27
6' UTILITY
AS PER PL
MAP BK. C
T BENCHMARK
LED "X"
C. CURB.
5531.80'
S 88°31'45" E
149.
EXIST
CONCRETE
RAMP
33.0
3.5
33.5
6H:1V
32.5
32.3
1901 SF
32.0
377 SF
2166 SF
2869 SF
3628 SF
1901 @ 32.3
33.5
34.0
190.47'
2.41%
1.50%
1.50%
1.00%
Q=15.21
SIGN
IC ROADWAY AND
EASEMENT AS
T FILED 2/15/96
96C, FOLIO 72
BREAK
GRADE
VERHEAD LINES
0.70%

FILE=NORWVOL.WQ1 02/21/97 08:10 AM

NORWEST BANK, JUAN TABO & SKYLINE

POND 1 FT DEEP

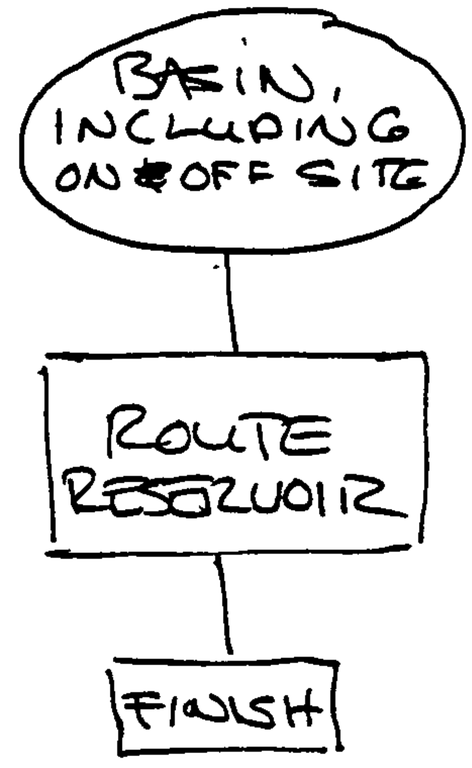
ELEV FT	AREA	PYRAMID DVOL CONE	VOL FT^3	VOL AC-FT	DVOL AV AREA	AV END AREA VOL FT^3	VOL AC-FT
33.5	3628	1621	3697	0.0849	1624	3752	0.0861
33	2869	1255	2077	0.0477	1259	2128	0.0488
32.5	2166	406	822	0.0189	407	869	0.0199
32.3	1901	312	416	0.0095	342	462	0.0106
32	377	83	103	0.0024	101	121	0.0028
31.5	25	20	20	0.0005	20	20	0.0005
30.7	25						

AHYMO INPUT INFO FOR ROUTING RESERVOIR 4.

ELEV FT	DEPTH	Q 3"orfc	Qweir	Qtot-out	VOL,AF	
33.5	2.8	0.401	16.55	16.951	0.0861	.0849
33	2.3	0.362	7.37	7.732	0.0488	.0477
32.5	1.8	0.318	1.13	1.448	0.0199	.0189
32.3	1.6	0.298	0	0.298	0.0106	.0095
32	1.3	0.266	0	0.266	0.0028	* AHYMO CRASHING FOR VOL < .0036
31.5	0.8	0.202	0	0.202	0.0005	* AHYMO CRASHING FOR VOL < .0036
30.7	0	0	0	0	0	

11

2/23/97 AHYMO 1/3




```
    AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
         RUN DATE (MON/DAY/YR) = 02/23/1997
         START TIME (HR:MIN:SEC) = 18:33:01     USER NO.= PERSEENG.194
         INPUT FILE = NORW2

START                 0.0   PUNCH CODE=0   PRINT LINES=58
                      CONTROL CODES AT START = 027 038 107 050 083
                      0 0 0 0 0   0 0 0 0 0   0 0 0 0 0
                      CONTROL CODES AT END = 0 0 0 0 0
                      0 0 0 0 0   0 0 0 0 0   0 0 0 0 0
* CONTROL CODES ABOVE FOR HP DESKJET 540 INKJET PRINTER
*S FILE = NORW2, FOR NORWEST BANK AT JUAN TABO & SKYLINE, 2nd VERSION
*S ROUTE OFFSITE & PART OF SITE THROUGH POND, DECREASE Qp ENOUGH TO ACCOUNT
*S FOR THE (VERY SMALL, APX 0.05 cfs) INCREASE COMP TO EXIST FOR ENTIRE SITE
*S LOWEST PART OF POND IS UNDERDRAIN & GRAVEL (TO 32.0). WEIR OUT @ 32.3,
*S SO LOWEST 0.3 FT FILLS FAST & OFTEN
*S !!AHYMO CRASHES FOR VOL < 0.0036 AF: ACTUAL VOL @ 32.0 = 0.0028 AF
* TUCKER GREEN, PER SE ENGINEERING, FEB 1997
* REVISION NOTES:
*
*****************************************************************************
* RAINFALL PER ALBUQUERQUE NM DPM - COMMENT OUT THOSE THAT DON'T APPLY
* TYPE 1 IS 6-HR STORM PER NOAA ATLAS 2 W PEAK INTENSITY @ 1.4 HRS (EQ C1-C5)
*    FOR 6-HR USE DT = 0.033333 HR = 2 MINUTES
* TYPE 2 IS 24-HR STORM PER NOAA ATLAS 2 W PEAK INTENSITY @ 1.4 HRS (EQ C1-C6)
*    FOR 24-HR USE DT = 0.0500 HR = 5 MINUTES
* RAIN QUARTER = 0.0 EXCEPT FOR TYPE 3 (6-HR PMP: SEE AHYMO MANUAL)
*
* RAINFALL            TWO YR   TYPE= 1  RAIN QUARTER= 0.0   RAIN ONE= x.xx
*                     RAIN SIX= x.xx    RAIN DAY= x.xx      DT= .033333 HR
* RAINFALL            TEN YR   TYPE= 1  RAIN QUARTER= 0.0   RAIN ONE= 0.xx
*                     RAIN SIX= x.xx    RAIN DAY= x.xx      DT= .033333 HR
RAINFALL            HUNDRED YR  TYPE= 1  RAIN QUARTER= 0.0   RAIN ONE= 2.07
                    RAIN SIX= 2.60    RAIN DAY= 3.10      DT= .033333 HR

              COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
              DT =    .033333 HOURS       END TIME =     5.999940 HOURS
                 .0000   .0037   .0075   .0114   .0153   .0194   .0235
                 .0277   .0320   .0365   .0410   .0456   .0504   .0553
                 .0603   .0655   .0708   .0763   .0820   .0878   .0939
                 .1001   .1066   .1133   .1204   .1277   .1353   .1433
                 .1517   .1606   .1699   .1756   .1817   .1883   .2024
                 .2338   .2822   .3517   .4466   .5713   .7302   .9281
                1.1697  1.3931  1.4866  1.5655  1.6357  1.6996  1.7584
                1.8131  1.8641  1.9119  1.9570  1.9994  2.0395  2.0775
                2.1135  2.1476  2.1800  2.2107  2.2399  2.2474  2.2545
                2.2613  2.2678  2.2741  2.2802  2.2860  2.2917  2.2972
                2.3025  2.3077  2.3127  2.3177  2.3225  2.3271  2.3317
                2.3362  2.3406  2.3449  2.3491  2.3532  2.3573  2.3613
                2.3652  2.3690  2.3728  2.3765  2.3802  2.3838  2.3873
                2.3908  2.3943  2.3977  2.4011  2.4044  2.4076  2.4109
                2.4140  2.4172  2.4203  2.4234  2.4264  2.4294  2.4324
                2.4353  2.4382  2.4411  2.4439  2.4467  2.4495  2.4523
                2.4550  2.4577  2.4604  2.4630  2.4657  2.4683  2.4709
                2.4734  2.4760  2.4785  2.4810  2.4834  2.4859  2.4883
                2.4907  2.4931  2.4955  2.4979  2.5002  2.5025  2.5048
                2.5071  2.5094  2.5116  2.5139  2.5161  2.5183  2.5205
                2.5227  2.5249  2.5270  2.5291  2.5313  2.5334  2.5355
```

2/23/97 AHYMO 2/3

2.5375	2.5396	2.5417	2.5437	2.5457	2.5478	2.5498
2.5518	2.5537	2.5557	2.5577	2.5596	2.5616	2.5635
2.5654	2.5673	2.5692	2.5711	2.5730	2.5748	2.5767
2.5785	2.5804	2.5822	2.5840	2.5858	2.5876	2.5894
2.5912	2.5930	2.5947	2.5965	2.5983	2.6000	

```
*
*****************************************************************************
COMPUTE NM HYD       ID= 1    HYD NO= 101       DA= 0.004186 SQ MI
                     PER A = 0.00    B= 8.03    C= 0.00    D= 91.97
                     TP= -0.13333 HRS   RAIN= -1

   K =   .072665HR    TP =   .133330HR    K/TP RATIO =   .545000     SHAPE CONSTANT, N =  7.106420
   UNIT PEAK =   15.196    CFS   UNIT VOLUME =    .9987       B =   526.28      P60 = 2.0700
   AREA =      .003850 SQ MI    IA =    .10000 INCHES    INF =    .04000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333


   K =   .132841HR    TP =   .133330HR    K/TP RATIO =   .996335     SHAPE CONSTANT, N =  3.543444
   UNIT PEAK =   .81553    CFS   UNIT VOLUME =    .9828       B =   323.49      P60 = 2.0700
   AREA =      .000336 SQ MI    IA =    .50000 INCHES    INF =   1.25000 INCHES PER HOUR
   RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =   .033333

PRINT HYD            ID= 1   CODE= 5
```

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	1.500	12.5	3.000	.2	4.500	.1	6.000	.1
.167	.0	1.667	6.4	3.167	.2	4.667	.1	6.167	.1
.333	.0	1.833	4.1	3.333	.2	4.833	.1	6.333	.0
.500	.0	2.000	3.0	3.500	.1	5.000	.1	6.500	.0
.667	.0	2.167	1.4	3.667	.1	5.167	.1	6.667	.0
.833	.2	2.333	.7	3.833	.1	5.333	.1	6.833	.0
1.000	.4	2.500	.5	4.000	.1	5.500	.1		
1.167	.4	2.667	.3	4.167	.1	5.667	.1		
1.333	3.9	2.833	.2	4.333	.1	5.833	.1		

```
   RUNOFF VOLUME =     2.23170 INCHES     =        .4982 ACRE-FEET
   PEAK DISCHARGE RATE =      12.53 CFS  AT   1.500 HOURS   BASIN AREA =   .0042 SQ. MI.
```

↳ COMP TO 12.87 BY SMALL AREA SPREADSHEET

```
*C CODES: 0=ALL; 1=TOTALS ONLY; 2=EVERY 2ND + TOTALS; SIMILARLY 3, 5, 10, 20
*C
ROUTE RESERVOIR      ID= 5  HYD= 305  INFLOW ID= 1     CODE= 5
                     OUTFLOW CFS    STORAGE AC-FT   ELEVATION FT
                      0.0           0.0              30.7
                      0.202         0.0036           31.5
                      0.266         0.0037           32.0
                      0.298         0.0095           32.3
                      1.448         0.0189           32.5
                      7.732         0.0477           33.0
                      16.951        0.0849           33.5

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

    TIME      INFLOW    ELEV      VOLUME    OUTFLOW
    (HRS)     (CFS)     (FEET)    (AC-FT)   (CFS)
```

2/23/97 ATHYMO 3/3

.00	.00	30.70	.000	.00
.17	.00	30.70	.000	.00
.33	.00	30.70	.000	.00
.50	.00	30.70	.000	.00
.67	.00	30.70	.000	.00
.83	.17	30.81	.000	.03
1.00	.42	31.46	.003	.19
1.17	.44	32.11	.006	.28
1.33	3.85	32.52	.020	1.69
1.50	12.53	33.13	.058	10.17
1.67	6.35	33.01	.049	7.95
1.83	4.14	32.76	.034	4.77
2.00	3.03	32.65	.028	3.38
2.17	1.42	32.55	.022	2.02
2.33	.71	32.43	.015	1.03
2.50	.47	32.36	.012	.63
2.67	.33	32.32	.011	.42
2.83	.25	32.30	.010	.30
3.00	.20	32.25	.009	.29
3.17	.17	32.18	.007	.28
3.33	.16	32.09	.006	.28
3.50	.15	32.01	.004	.27
3.67	.14	31.39	.003	.17
3.83	.13	31.30	.003	.15
4.00	.13	31.25	.002	.14
4.17	.12	31.22	.002	.13
4.33	.12	31.20	.002	.13
4.50	.12	31.19	.002	.12
4.67	.12	31.18	.002	.12
4.83	.12	31.17	.002	.12
5.00	.12	31.17	.002	.12
5.17	.12	31.17	.002	.12
5.33	.12	31.17	.002	.12
5.50	.12	31.18	.002	.12
5.67	.12	31.18	.002	.12
5.83	.12	31.19	.002	.12
6.00	.13	31.19	.002	.12
6.17	.05	31.13	.002	.11
6.33	.01	30.95	.001	.06
6.50	.01	30.84	.001	.03
6.67	.00	30.77	.000	.02
6.83	.00	30.74	.000	.01
7.00	.00	30.72	.000	.00

Qp IN 12.53
Qp OUT 11.22
DECREASE 1.31 > .05 OK

11.219 ~ 11.22 ~ 11.2 CFS

PEAK DISCHARGE = 11.219 CFS - PEAK OCCURS AT HOUR 1.53
MAXIMUM WATER SURFACE ELEVATION = 33.189 33.19 ~ 33.2
MAXIMUM STORAGE = .0618 AC-FT INCREMENTAL TIME= .033333HRS
→ 2692 FT³

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 18:33:02

file=qweir.wq1 02/21/97 07:17 AM

Q = C*L*H^1.5

NORWEST BANK AT FRANKLIN PLAZA BROAD CRESTED WEIR - PER KING'S HANDBOOK

USE

C = 2.65		C = 2.65		C = 2.65		C = 2.65		C = 2.65	
L = 4.75		L = 5.00		L = 5.25		L = 5.50		L = 5.75	
H, FT	Q, CFS	H, FT	Q, CFS	H, FT	Q, CFS	H, FT	Q, CFS	H, FT	Q, CFS
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.10	0.40	0.10	0.42	0.10	0.44	0.10	0.46	0.10	0.48
0.20	1.13	0.20	1.19	0.20	1.24	0.20	1.30	0.20	1.36
0.30	2.07	0.30	2.18	0.30	2.29	0.30	2.39	0.30	2.50
0.40	3.18	0.40	3.35	0.40	3.52	0.40	3.69	0.40	3.85
0.50	4.45	0.50	4.68	0.50	4.92	0.50	5.15	0.50	5.39
0.60	5.85	0.60	6.16	0.60	6.47	0.60	6.77	0.60	7.08
0.70	7.37	0.70	7.76	0.70	8.15	0.70	8.54	0.70	8.92
0.80	9.01	0.80	9.48	0.80	9.95	0.80	10.43	0.80	10.90
0.90	10.75	0.90	11.31	0.90	11.88	0.90	12.44	0.90	13.01
1.00	12.59	1.00	13.25	1.00	13.91	1.00	14.57	1.00	15.24
1.10	14.52	1.10	15.29	1.10	16.05	1.10	16.82	1.10	17.58
1.20	16.55	1.20	17.42	1.20	18.29	1.20	19.16	1.20	20.03
1.30	18.66	1.30	19.64	1.30	20.62	1.30	21.60	1.30	22.59
1.40	20.85	1.40	21.95	1.40	23.05	1.40	24.14	1.40	25.24
1.50	23.12	1.50	24.34	1.50	25.56	1.50	26.78	1.50	27.99
1.60	25.48	1.60	26.82	1.60	28.16	1.60	29.50	1.60	30.84
1.70	27.90	1.70	29.37	1.70	30.84	1.70	32.31	1.70	33.77
1.80	30.40	1.80	32.00	1.80	33.60	1.80	35.20	1.80	36.80
1.90	32.97	1.90	34.70	1.90	36.44	1.90	38.17	1.90	39.91
2.00	35.60	2.00	37.48	2.00	39.35	2.00	41.22	2.00	43.10
2.10	38.31	2.10	40.32	2.10	42.34	2.10	44.35	2.10	46.37
2.20	41.07	2.20	43.24	2.20	45.40	2.20	47.56	2.20	49.72
2.30	43.91	2.30	46.22	2.30	48.53	2.30	50.84	2.30	53.15
2.40	46.80	2.40	49.26	2.40	51.73	2.40	54.19	2.40	56.65
2.50	49.76	2.50	52.38	2.50	54.99	2.50	57.61	2.50	60.23
2.60	52.77	2.60	55.55	2.60	58.33	2.60	61.10	2.60	63.88
2.70	55.85	2.70	58.78	2.70	61.72	2.70	64.66	2.70	67.60
2.80	58.98	2.80	62.08	2.80	65.18	2.80	68.29	2.80	71.39
2.90	62.16	2.90	65.44	2.90	68.71	2.90	71.98	2.90	75.25
3.00	65.41	3.00	68.85	3.00	72.29	3.00	75.73	3.00	79.18
3.10	68.70	3.10	72.32	3.10	75.94	3.10	79.55	3.10	83.17
3.20	72.06	3.20	75.85	3.20	79.64	3.20	83.43	3.20	87.22
3.30	75.46	3.30	79.43	3.30	83.40	3.30	87.37	3.30	91.34
3.40	78.91	3.40	83.07	3.40	87.22	3.40	91.37	3.40	95.53
3.50	82.42	3.50	86.76	3.50	91.10	3.50	95.44	3.50	99.77
3.60	85.98	3.60	90.50	3.60	95.03	3.60	99.55	3.60	104.08
3.70	89.59	3.70	94.30	3.70	99.02	3.70	103.73	3.70	108.45
3.80	93.24	3.80	98.15	3.80	103.06	3.80	107.97	3.80	112.87
3.90	96.95	3.90	102.05	3.90	107.15	3.90	112.25	3.90	117.36
4.00	100.70	4.00	106.00	4.00	111.30	4.00	116.60	4.00	121.90

FILE = ORIFICE.WQ1 02/18/97 09:10 AM

FREE DISCHARGE FLOW THROUGH ORFICE: Q = C*A*SQRT(2*g*h)
C=COEFFICIENT, APX 5/8; A= FLOW AREA, SF; g=GRAVITY=32.17 FT/SEC^2
h=HT OF WATER SURFACE ABOVE *CENTROID* OF FLOW AREA, FT
H=HT OF WATER ABOVE BOTTOM OF ORIFICE, = CENTROID + h)
C*SQRT(2*g) OFTEN TAKEN AS 5.0, ==> C=0.623346
MATHEMATICALLY NOT VALID FOR WATER SURFACE BELOW CENTROID OF ORIFICE!

==> ENTER THIS NUMBER

3" POND UNDER DRAIN

CIRCULAR: Q = 5*A*SQRT(h)

# H, FT	# DIAM,FT	h, FT	AREA, SF	Q, CFS	V, FPS
0.100	0.250	-0.025	0.0491	ERR	ERR
0.200	0.250	0.075	0.0491	0.067	1.369
0.300	0.250	0.175	0.0491	0.103	2.092
0.400	0.250	0.275	0.0491	0.129	2.622
0.500	0.250	0.375	0.0491	0.150	3.062
0.600	0.250	0.475	0.0491	0.169	3.446
0.700	0.250	0.575	0.0491	0.186	3.791
0.800	0.250	0.675	0.0491	0.202	4.108
0.900	0.250	0.775	0.0491	0.216	4.402
1.000	0.250	0.875	0.0491	0.230	4.677
1.100	0.250	0.975	0.0491	0.242	4.937
1.200	0.250	1.075	0.0491	0.254	5.184
1.300	0.250	1.175	0.0491	0.266	5.420
1.400	0.250	1.275	0.0491	0.277	5.646
1.500	0.250	1.375	0.0491	0.288	5.863
1.600	0.250	1.475	0.0491	0.298	6.072
1.700	0.250	1.575	0.0491	0.308	6.275
1.800	0.250	1.675	0.0491	0.318	6.471
1.900	0.250	1.775	0.0491	0.327	6.661
2.000	0.250	1.875	0.0491	0.336	6.847
2.100	0.250	1.975	0.0491	0.345	7.027
2.200	0.250	2.075	0.0491	0.354	7.202
2.300	0.250	2.175	0.0491	0.362	7.374
2.400	0.250	2.275	0.0491	0.370	7.542
2.500	0.250	2.375	0.0491	0.378	7.706
2.600	0.250	2.475	0.0491	0.386	7.866
2.700	0.250	2.575	0.0491	0.394	8.023
2.800	0.250	2.675	0.0491	0.401	8.178
2.900	0.250	2.775	0.0491	0.409	8.329
3.000	0.250	2.875	0.0491	0.416	8.478
3.100	0.250	2.975	0.0491	0.423	8.624
3.200	0.250	3.075	0.0491	0.430	8.768
3.300	0.250	3.175	0.0491	0.437	8.909
3.400	0.250	3.275	0.0491	0.444	9.048
3.500	0.250	3.375	0.0491	0.451	9.186

file=qweir.wq1 02/20/97 10:01 AM
Q = C*L*H^1.5
NORWEST BANK AT FRANKLIN PLAZA INFLOW TO POND WEIR

C =	3.00	C =	3.00	C =	3.00	~~C =~~	~~3.00~~
L =	6.50	L =	9.50	L =	12.50	~~L =~~	~~8.50~~
H, FT	Q, CFS	H, FT	Q, CFS	H, FT	Q, CFS	~~H, FT~~	~~Q, CFS~~
0.00	0.00	0.00	0.00	0.00	0.00	~~0.66~~	~~13.52~~
0.10	0.62	0.10	0.90	0.10	1.19		
0.20	1.74	0.20	2.55	0.20	3.35	~~C =~~	~~3.00~~
0.30	3.20	0.30	4.68	0.30	6.16	~~L =~~	~~9.50~~
0.40	4.93	0.40	7.21	0.40	9.49	~~H, FT~~	~~Q, CFS~~
0.50	6.89	0.50	10.08	0.50	13.26	~~0.61~~	~~12.10~~
0.60	9.06	0.60	13.25	0.60	17.43		
0.70	11.42	0.70	16.69	0.70	21.96	~~C =~~	~~3.00~~
0.80	13.95	0.80	20.39	0.80	26.83	~~L =~~	~~8.50~~
0.90	16.65	0.90	24.33	0.90	32.02	~~H, FT~~	~~Q, CFS~~
1.00	19.50	1.00	28.50	1.00	37.50	~~0.66~~	~~13.52~~
1.10	22.50	1.10	32.88	1.10	43.26		
1.20	25.63	1.20	37.46	1.20	49.30		
1.30	28.90	1.30	42.24	1.30	55.58		
1.40	32.30	1.40	47.21	1.40	62.12		
1.50	35.82	1.50	52.36	1.50	68.89		
1.60	39.47	1.60	57.68	1.60	75.89		
1.70	43.22	1.70	63.17	1.70	83.12		
1.80	47.09	1.80	68.83	1.80	90.56		
1.90	51.07	1.90	74.64	1.90	98.21		
2.00	55.15	2.00	80.61	2.00	106.07		
2.10	59.34	2.10	86.73	2.10	114.12		
2.20	63.63	2.20	93.00	2.20	122.37		
2.30	68.02	2.30	99.41	2.30	130.80		
2.40	72.50	2.40	105.96	2.40	139.43		
2.50	77.08	2.50	112.66	2.50	148.23		
2.60	81.75	2.60	119.48	2.60	157.21		
2.70	86.51	2.70	126.44	2.70	166.37		
2.80	91.36	2.80	133.53	2.80	175.70		
2.90	96.30	2.90	140.75	2.90	185.19		
3.00	101.32	3.00	148.09	3.00	194.86		
3.10	106.43	3.10	155.56	3.10	204.68		
3.20	111.62	3.20	163.14	3.20	214.66		
3.30	116.90	3.30	170.85	3.30	224.80		
3.40	122.25	3.40	178.67	3.40	235.10		
3.50	127.68	3.50	186.62	3.50	245.55		
3.60	133.20	3.60	194.67	3.60	256.14		
3.70	138.78	3.70	202.84	3.70	266.89		
3.80	144.45	3.80	211.12	3.80	277.78		
3.90	150.19	3.90	219.50	3.90	288.82		
4.00	156.00	4.00	228.00	4.00	300.00		

12.53 12.53 12.53

W MAX WS @ 33.20 ± THIS TABLE PROB NOT APPLY
TOP CURB @ CURB RETURN @ INLET = 33.0 + 0.5 + 0.08 = 33.58
MAX Q IN WILL SPREAD OUT, OOZE OVER @ 33.58 + A HAIR

file=NORWMAN: NORWest bank, MANning's equation for normal flow in trapezoidal channels
06:53 PM COMMENT:NORWEST BANK: JUAN TABO AT SKYLINE
02/23/97 COMMENT:

	SPILLWAY CHANNEL	SW CULVERT Q/2=5.41
n	0.0130	0.0130
S	0.02120	0.02000
M1	0.0000	0.0000
M2	0.0000	0.0000
B	4.7500	2.0000
Y	0.3189	0.3903
T	4.7500	2.0000
A	1.5148	0.7806
P	5.3878	2.7806
R	0.2812	0.2807
Q	10.820	5.410
V	7.14	6.93
Ev	0.793	0.747
Es	1.11	1.14
Fr (Y)	2.23	1.96
Fr (A/T)	2.23	1.96
Ms	2.64	1.32

DRAINAGE INFORMATION SHEET REUSED SUBMITTAL

PROJECT TITLE: NORWEST BANK IMPRVMTS FRANKLIN PLAZA BRANCH ZONE ATLAS/DRNG. FILE #: L22-D11A

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

LEGAL DESCRIPTION: LOT H1 FRANKLIN SUBDIVISION

CITY ADDRESS: S.E. CORNER JUAN TABO & SKY LINE

ENGINEERING FIRM: PER SE ENGINEERING CONTACT: TUCKER GREEN

ADDRESS: 9109 LA BARRANCA NE 87111 PHONE: 275 2717, 275-0451

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: VAN H GILBERT CONTACT: JOE MUHLBERGER

ADDRESS: 319 CENTRAL NW STE 201 PHONE: 247-9955

SURVEYOR: CLINT SHERRILL & ASSOC CONTACT: BOLESLO ROMERO

ADDRESS: 730 SAN MATEO SE 87108 PHONE: 256-7364

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

- ✓ DRAINAGE REPORT
- ✓ DRAINAGE PLAN
- ___ CONCEPTUAL GRADING & DRAINAGE PLAN
- ✓ GRADING PLAN
- ___ EROSION CONTROL PLAN
- ___ ENGINEER'S CERTIFICATION
- ___ OTHER

PRE-DESIGN MEETING:

- ✓ YES — SORT OF, UNOFFICIAL NOT PER SE
- ___ NO
- ___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ___ SKETCH PLAT APPROVAL
- ✓ 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 SO19 (SPECIFY)

↳ 2 COPIES OF PLAN
1 COPY OF REPORT
IN THIS SUBMITTAL

DATE SUBMITTED: 2-24-97

BY: TUCKER GREEN

Date 7-22-97 Permit No. 992651

Contractor Henderson

Location Skyline & Juan Tabo NE

Time

PUBLIC WORKS DEPARTMENT

SIDEWALK & DRIVEPAD INSPECTION

5-9-19

APPROVED

Inspector

	Permits	Dispatch	Insp. Office
Phone:	768-2551	857-8025	857-8036

CITY OF
Albuquerque
Public Works Department

March 3, 1997

Martin J. Chávez, Mayor

Robert E. Gurulé, Director

Tucker Green, P.E.
Per Se Engineering
9109 La Barranca NE
Albuquerque, NM 87111

RE: NORWEST BANK (L22-D11A). DRAINAGE REPORT FOR PRELIMINARY PLAT, FINAL PLAT, AND BUILDING PERMIT APPROVALS. ENGINEER'S STAMP DATED FEBRUARY 24, 1997.

Dear Mr. Green:

Based on the information provided on your February 24, 1997 submittal, City Hydrology has the following comments:

1. Landscaping ponds/water harvesting ponds are allowed only if no developed flow is routed to them. Since this is not the case with this project, please lower your weir to the very bottom of the pond. No retaining will be allowed in this pond.

2. I don't see an orifice plate called out on the 12-inch diameter pipe. Assuming you lower the weir, and the entire pond drains, is the connection to the existing catch basin necessary?

3. As I understand it, you are allowing 11.22 cfs out of the channel/sidewalk culvert. It appears that your channel weir calculations let a maximum of 16.55 cfs out the channel/sidewalk culvert.

4. Section "D" shows a concrete rundown. Should "Low Pt at Entrance" be labeled "High Point at Entrance?"

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

Sincerely,

Lisa Ann Manwill, P.E.
Engineering Assoc./Hyd.

c: Andrew Garcia
File

CITY OF
Albuquerque

Public Works Department

January 15, 1997

Martin J. Chávez, Mayor

Robert E. Gurulé, Director

Boleslo Romero
Mevatec Engineering
5700 Harper NE
Suite 240
Albuquerque, NM 87199

RE: NORWEST BANK (L22-D11A). DRAINAGE PLAN FOR BUILDING PERMIT APPROVAL. ENGINEER'S STAMP DATED JANUARY 3, 1997.

Dear Mr. Romero:

Based on the information provided on your January 6, 1997 submittal, City Hydrology has the following comments:

1. French drains are not allowed in the City of Albuquerque. You must use a surface detention pond.

2. Private storm water is not allowed to run over a public side walk. Use a sidewalk culvert or series of pipes below the sidewalk to take care of your offsite flow condition. An SO #19 Permit will be required for the above construction.

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

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Norwest Bank: Juan Tabo ZONE ATLAS/DRNG. FILE #: L-22/D11A

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

LEGAL DESCRIPTION: Lot H1, Franklin Plaza Add'n

CITY ADDRESS: 156 Juan Tabo NE Albuq. NE

ENGINEERING FIRM: Mevatec Engineering CONTACT: Boleslo Romero

ADDRESS: 5700 Harper NE, Ste 240 Albuq 87199 PHONE: 823-4494

OWNER: Norwest Bank CONTACT: Gary Williams

ADDRESS: 200 Lomas NW 87102 PHONE: 766-7301

ARCHITECT: Van H. Gilbert PC CONTACT: Joe Mulberger

ADDRESS: 319 Central SW Ste 201 87102 PHONE: 247-9955

SURVEYOR: Clint Sherrill Surveying CONTACT: Clint Sherrill

ADDRESS: 730 San Mateo SE PHONE: 256-7364

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

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

PRE-DESIGN MEETING:

___ YES Discussed w/ Fred Aguirre Dec 96
___ NO
___ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL
___ 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
___ SUBDIVISION CERTIFICATION
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: 1/3/97

BY: _____

RECEIVED JAN 6 1997 HYDROLOGY DIVISION

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Norwest Bank ZONE ATLAS/DRNG. FILE #: L-22/D11A

DRB #: — EPC #: — WORK ORDER #: —

LEGAL DESCRIPTION: Lots J & H, Franklin Plaza

CITY ADDRESS: 156 Juan Tabo, NE / north of Central

ENGINEERING FIRM: Crawford Development Services CONTACT: Steve Crawford

ADDRESS: P O Box 1573 Los Lunas, NM 87031 PHONE: 865-6442

OWNER: CONTACT:

ADDRESS: PHONE:

ARCHITECT: CONTACT:

ADDRESS: PHONE:

SURVEYOR: Clint Sherrill CONTACT:

ADDRESS: PHONE: 256-7364

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

TYPE OF SUBMITTAL:

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

PRE-DESIGN MEETING:

- ____ YES
- X 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
- X 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
- ____ SUBDIVISION CERTIFICATION
- ____ OTHER _____ (SPECIFY)

DATE SUBMITTED: 11-27-95

BY: Steve Crawford

NOV 27 1995

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

December 19, 1995

Steve Crawford
Crawford Development Services
P.O. Box 1573
Los Lunas, NM 87031

RE: ***NORWEST BANK (L22-D11A) DRAINAGE PLAN FOR PRELIMINARY AND FINAL PLAT APPROVAL. ENGINEER'S STAMP DATED NOVEMBER 27, 1995.***

Dear Steve:

Based on the information provided on your November 27, 1995 submittal, the above referenced project is approved for Preliminary Plat. Prior to Final Plat approval, please address the following:

1. If the existing swale from Lot H2 to Lot H1 is to remain, a drainage easement should be shown on the plat. The easement should specifically grant cross lot drainage to Lot H2. Even if the flow from this swale is to eventually be diverted, it is in the property owners best interest to obtain an easement.

2. If the existing swale referenced above stays in place, prior to any further construction or improvement to Lot H1 or Lot H2, a sidewalk culvert will need to be installed. The construction of a sidewalk culvert requires a SO #19 approval, which can be granted by the Hydrology Division.

If I can be of further assistance, please feel free to contact me at 768-3622.

Sincerely,

Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
(File)

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

CITY OF
Albuquerque
Public Works Department

March 14, 1997

Martin J. Chávez, Mayor

Robert E. Gurulé, Director

Tucker Green, P.E.
Per Se Engineering
9109 La Barranca NE
Albuquerque, NM 87111

RE: NORWEST BANK (L22-D11A). DRAINAGE REPORT FOR PRELIMINARY PLAT, FINAL PLAT, BUILDING PERMIT, AND SO #19 PERMIT APPROVALS. ENGINEER'S STAMP DATED FEBRUARY 24, 1997.

Dear Mr. Green:

Based on the information provided on your February 24, 1997 submittal and your letter dated March 5, 1997, the above referenced project is approved for Preliminary Plat, Final Plat, and Building Permit.

Prior to Certificate of Occupancy approval, an Engineer's Certification will be required. Be certain to include copies of the City inspector's "green tags" for the sidewalk culverts and the tie-in to the back of the existing catch basin. Also, it will be required that you indicate on the as-builts that the 3-inch connecter pipe, between the under drain and the 12-inch end cap, is in place.

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

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

Sincerely,

Lisa Ann Manwill, P.E.
Engineering Assoc./Hyd.

c: Arlene Portillo
Andrew Garcia
File