

# GRADING AND DRAINAGE PLAN

**SCOPE:**

Pursuant to the established Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Grading and Drainage plan outlines the drainage management criteria for controlling developed runoff from the project site. The property is to be developed for a warehouse addition, with associated paving, landscaping, utility, grading, and drainage improvements.

**EXISTING CONDITIONS:**

The project site is approximately 2.79 acres in size and is located on 308 Menaul NE. This site is bounded on the east by Edith Blvd., on the south by Towner Avenue, on the west by City Self Storage, and on the north by Menaul Blvd. NE. Presently the site is developed as an office and warehouse. The site slopes from east to west at approximately 1.5% and discharges to Menaul Blvd. The site existing roof drainage is marked with flow arrows to show direction of flow. No off-site flows impact the site.

As shown by the attached Floodway Panel 23 of 50, this site does not lie within a designated flood hazard zone. However, there is a designated floodway with an AO-1 depth in Menaul Blvd. along the frontage of this site. Existing and proposed structures are at least 2 feet above its flowline. However, under City Project #4272.92, the 2nd St./Odeia Storm Drain Improvements Phase III (completion by storm season 1998) the City will intercept the Menaul flows at the Edith intersection, effectively eliminating the flooding of Menaul along the frontage of this project.

**PROPOSED CONDITIONS:**

As shown by the Plan, the project consists of an addition of a warehouse to an existing warehouse. The Plan shows the elevations required to properly grade and construct the required improvements. The direction of drainage flows are given by flow arrows and the project hydrology is tabulated for both existing and developed conditions. This is an infill site and the drainage basin is completely developed for the most part.

All drainage flows will be managed on-site by surface improvements: some of the roof drainage will discharge to Towner Avenue and the other half will discharge to Menaul Blvd. The site will be divided into two basins (Basin 1 and Basin 2). Basin 1 will drain to the south to Towner Avenue NE. Basin 2 will drain northwest and out to Menaul Blvd. NE. Existing storm drains are located in Menaul Blvd. which intercept all developed runoff to be discharge by the site.

**EROSION CONTROL:**

Temporary erosion control will be required along the project boundaries during construction to prevent the discharge of sediment into the public street system and adjoining private property. The contractor should construct a ditch dike system (see Detail 'A') along the north, south, and west property lines to effectively retain all runoff generated by the project. Care should be taken to provide ponding areas at the site perimeter, away from the buildings.

**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 "Section 22.2, Part A, Development Process Manual, Vol. 2," dated January 1993.

HYDROLOGY (HYMO)							
Precipitation Zone 2				P360 = 2.35 in			
Basin	Area (Ac)	Land Treatment (acre)	Ew	V100	Q100		
	A	B	C	(in)	(cfs)		
Existing Conditions							
Site	2.79		1.28	1.51	1.67	0.39	11.12
Developed Conditions							
Site	2.79		0.30	0.67	1.82	1.74	11.34
1	0.83		0.08	0.06	0.69	1.92	3.61
2	1.96		0.22	0.61	1.13	1.66	7.73

- DRAINAGE PLAN NOTES**
- BLI recommends that the Owner obtain a Geotechnical Evaluation of the on-site soils prior to foundation/structural design.
  - This Plan recommends positive drainage away from all structures to prohibit ponding of runoff which may cause structural settlement. Future alteration of grades adjacent to the proposed structures is not recommended.
  - Irrigation within 10 feet of any proposed structure is not recommended. Introduction of irrigation water into subsurface soils adjacent to the structure could cause settlement.
  - This Plan is prepared to establish on-site drainage and grading criteria only. BLI assumes no responsibility for subsurface analysis, foundation/structural design, or utility design.
  - Local codes may require all footings to be placed in natural undisturbed soil. If the Contractor plans to place footings on engineered fill, a certification by a registered Professional Engineer will be required. If the contractor wishes BLI to prepare the Certification, we must be notified PRIOR to placement of the fill.
  - BLI recommends that the Owner obtain the services of a Geotechnical Engineer to test and inspect all earthwork aspects of the project.
  - The property boundary shown on this Plan is given for information only to describe the project limits. Property boundary information shown hereon does not constitute a boundary survey. A boundary survey performed by a licensed New Mexico Registered Professional Surveyor is recommended prior to construction.

- LEGEND**
- 4994 - EXISTING CONTOUR ELEVATION
  - 01 - EXISTING SPOT ELEVATION
  - 01 - PROPOSED CONTOUR ELEVATION
  - 01 - PROPERTY LINE
  - 98.2 - PROPOSED SPOT ELEVATION
  - 01 - DIRECTION OF FLOW
  - 01 - DRAINAGE SWALE
  - 01 - DRAINAGE BASIN DIVIDE
  - 01 - LIGHT POLE
  - 01 - POWER POLE
  - 01 - EXIST FLOODLIGHT
  - 01 - ELEC. MH
  - 01 - EXIST FIRE HYDRANT
  - 01 - WATER METER
  - 01 - EXIST CH LK FENCE
  - 01 - EXIST PIPE RAIL
  - 01 - ST. LT.
  - 01 - TELEPHONE PEDESTAL
  - 01 - TRAFFIC PEDESTAL
  - 01 - TRAFFIC SIGN
  - 01 - EXIST S/W DRAIN

**PROPERTY ADDRESS**  
308 Menaul Blvd NE

**LEGAL DESCRIPTION**  
Tract A, Block 3A, and Lots 20-25, Block 3A, Franciscan Acres

**PROJECT BENCHMARK**  
TBM: 13-H15 Located at the southeast corner of the intersection of Menaul Blvd. and Edith Blvd. an Aluminum disk stamped "ACS BM, Elevation=5001.031"

**SURVEY**  
Topographic and Field Measurement by Douglas Smith Surveying  
Dated January, 1996

**VARIABLES LIST:**

Y - FLOW DEPTH  
Q - FLOWRATE  
S - CHANNEL SLOPE  
M - CHANNEL SIDE SLOPE  
N - CHANNEL ROUGHNESS

**VARIABLES TO BE SOLVED (Y,Q,S,M,N) ? Q**

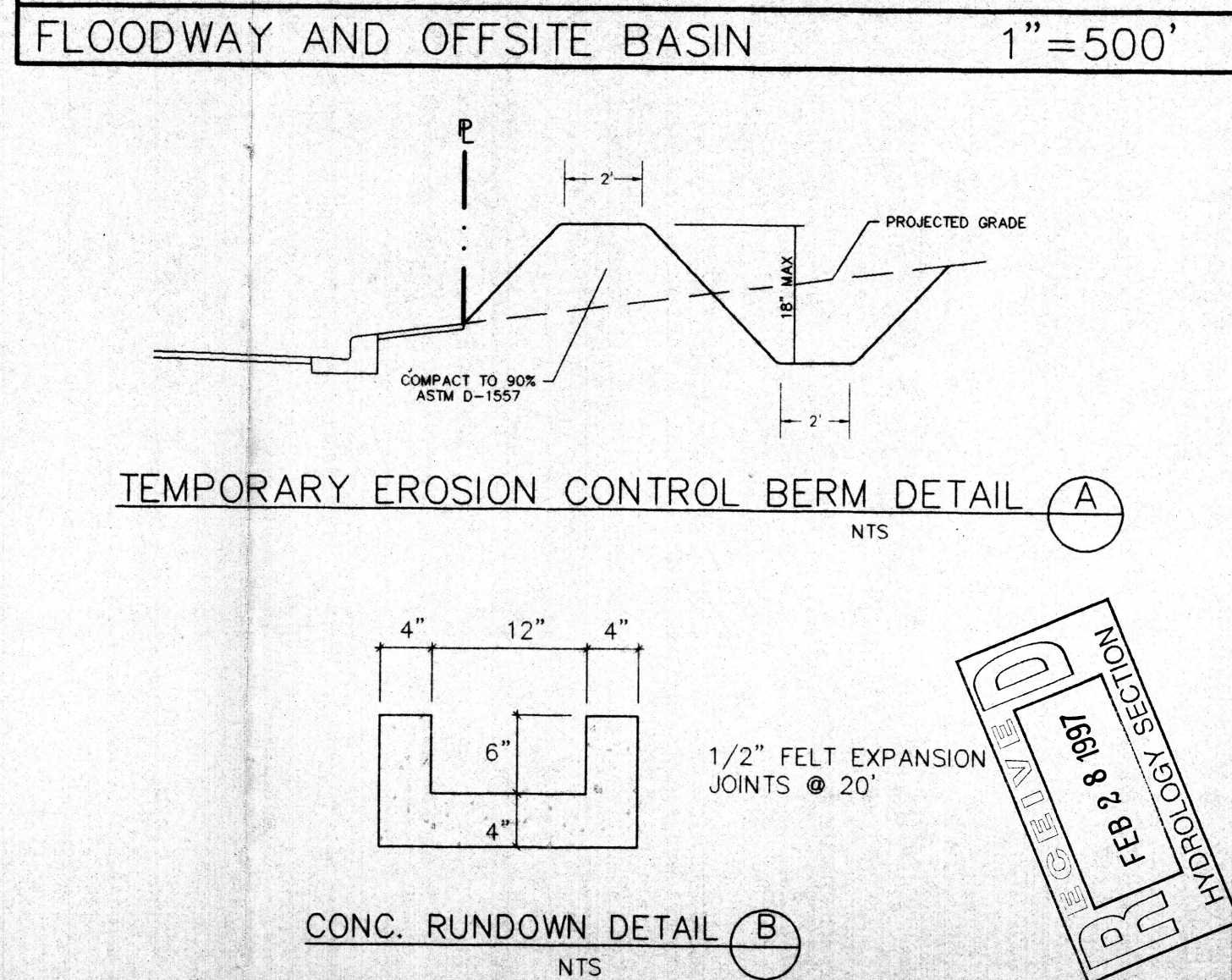
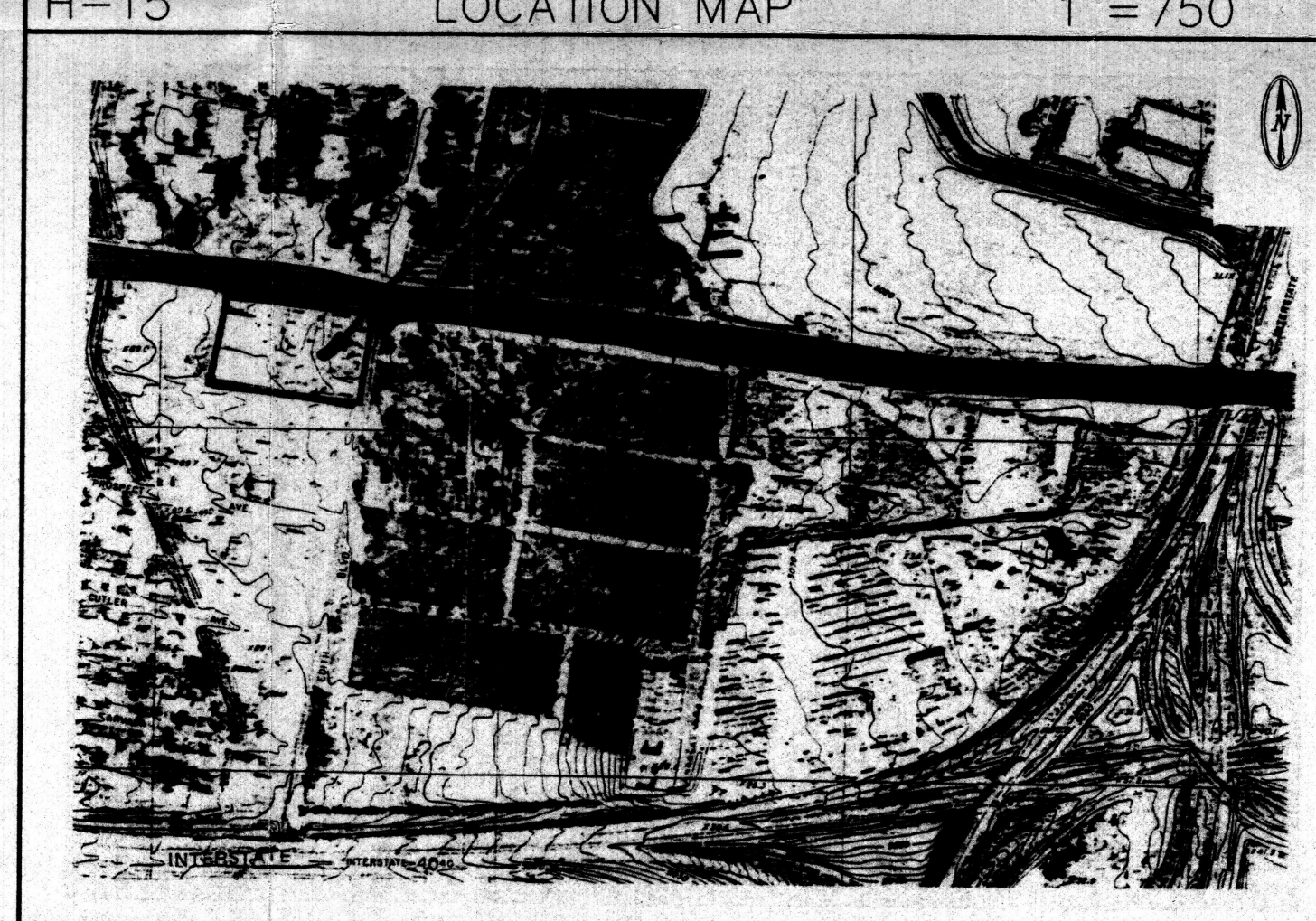
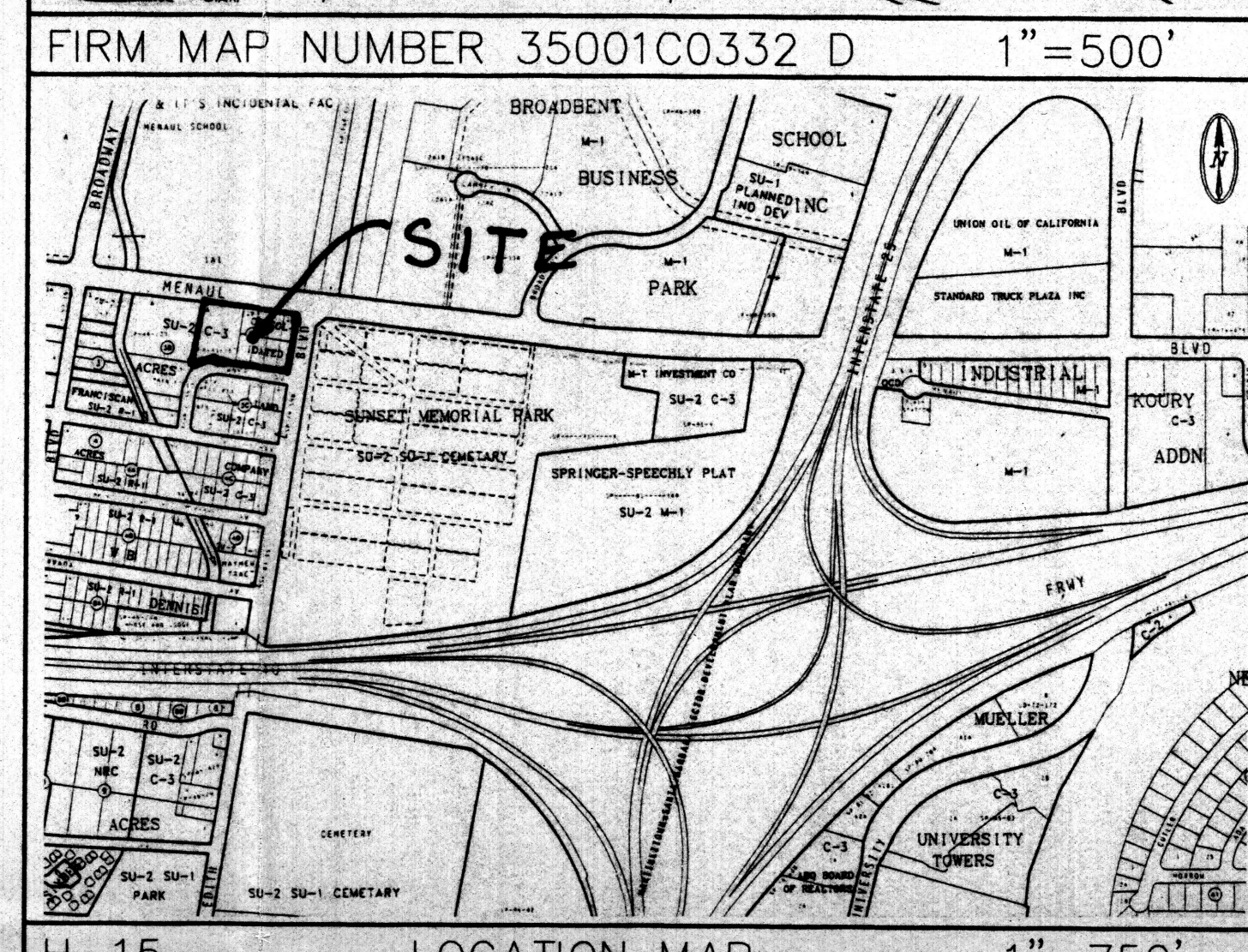
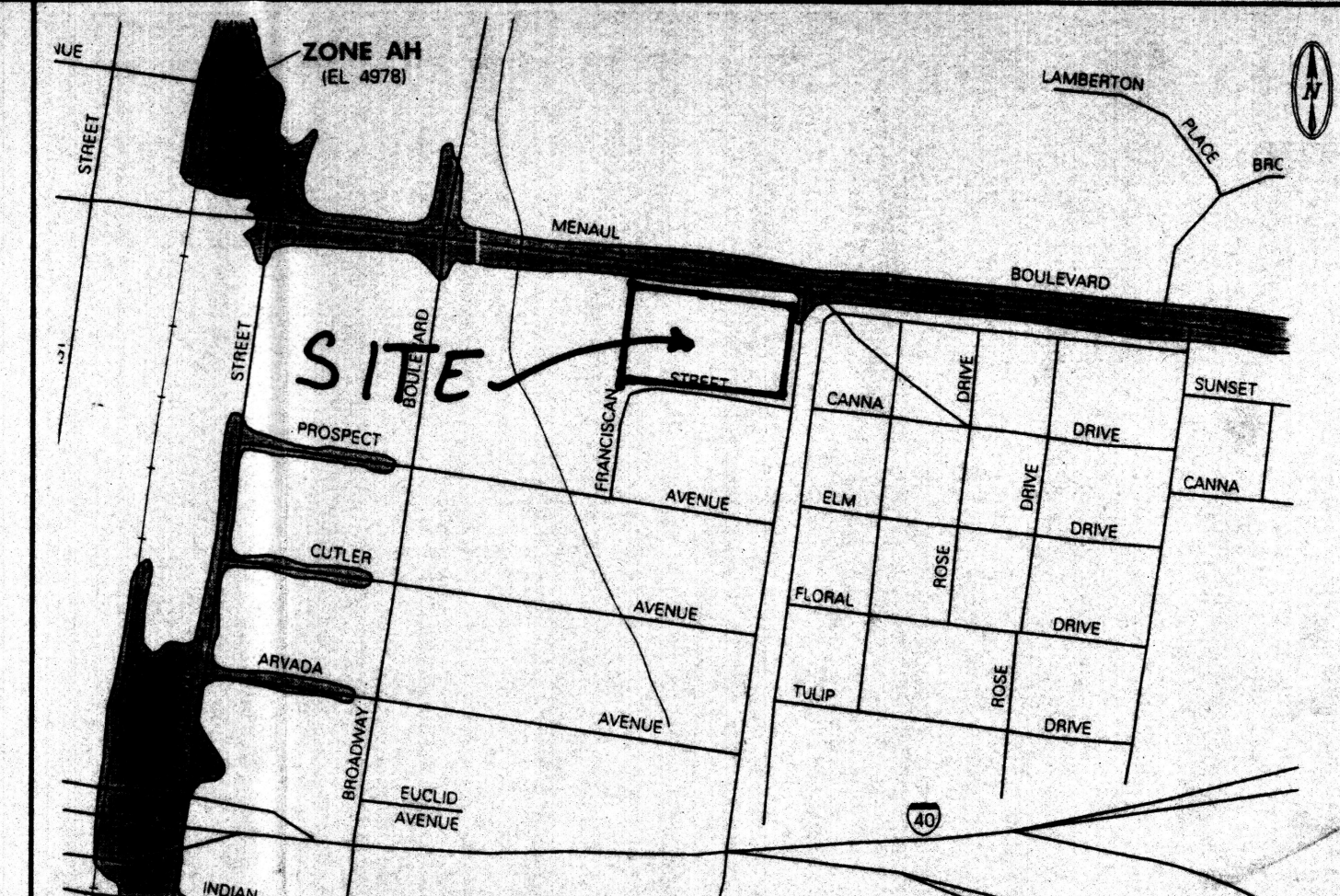
Y (FT)	Q (CFS)	S (FT/FT)	M	N
2.5	2.27	0.01	0.50	0.013
2.1	2.27	0.01	0.50	0.013
2.0	2.27	0.01	0.50	0.013
1.9	2.27	0.01	0.50	0.013
1.8	2.27	0.01	0.50	0.013
1.7	2.27	0.01	0.50	0.013
1.6	2.27	0.01	0.50	0.013
1.5	2.27	0.01	0.50	0.013
1.4	2.27	0.01	0.50	0.013
1.3	2.27	0.01	0.50	0.013
1.2	2.27	0.01	0.50	0.013
1.1	2.27	0.01	0.50	0.013
1.0	2.27	0.01	0.50	0.013
0.9	2.27	0.01	0.50	0.013
0.8	2.27	0.01	0.50	0.013
0.7	2.27	0.01	0.50	0.013
0.6	2.27	0.01	0.50	0.013
0.5	2.27	0.01	0.50	0.013
0.4	2.27	0.01	0.50	0.013
0.3	2.27	0.01	0.50	0.013
0.2	2.27	0.01	0.50	0.013
0.1	2.27	0.01	0.50	0.013

**RESULTS**

Q = 2.27 CFS  
A = 0.50 SF  
P = 2.50 FT  
V = 4.54 FPS  
F = 1.13

**MAN-MADE CHANNELS**

**SUPER-CRITICAL FLOW**



**BRASHER & LORENZ, INC.**  
Consulting Engineers  
2201 San Pedro NE Building 1 Suite 210  
Albuquerque, New Mexico 87110  
Ph: 505-888-6088 Fax: 505-888-6188

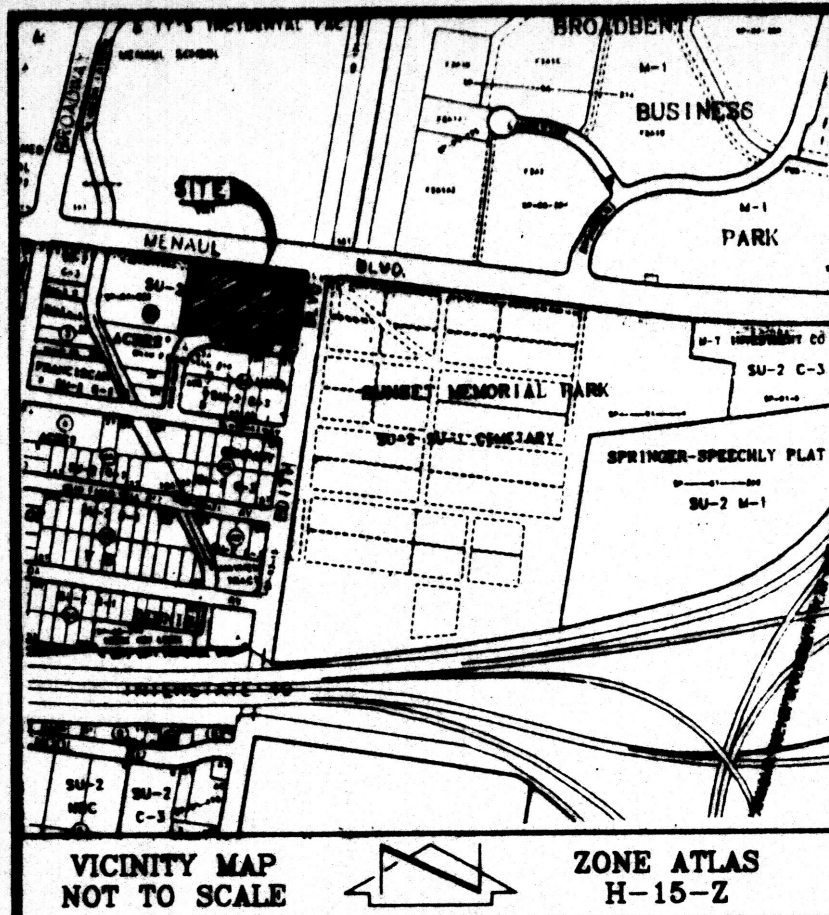
**BENEKEITH**  
Foods  
ALBUQUERQUE, NEW MEXICO

**GRADING & DRAINAGE PLAN**

**REVISIONS:**

△ CONC. RUNDOWN  
DATE: 2/20/97  
CHECKED BY: P.B.  
DRAWN BY: STAFF  
JOB NO: 6090  
FILE NO: 6090-GD.DWG  
SHEET NO: 3 OF 7





TALOS LOG No.: 97011711570284

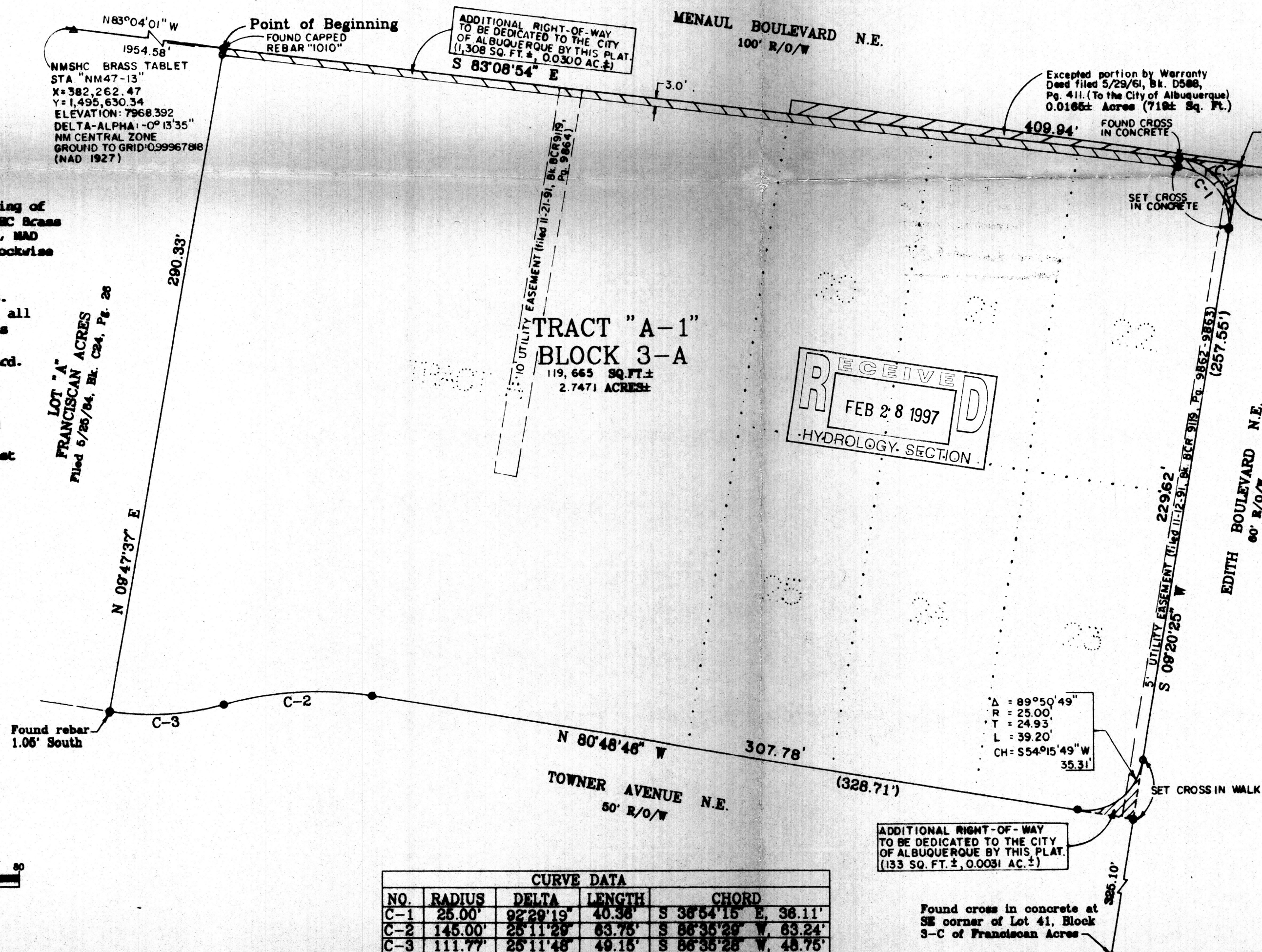
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#### DISCLOSURE STATEMENT:

The purpose of this plat is to combine Tract "A" and Lots 20 thru 26, inclusive, Block 3-A, Franciscan Acres into one Tract as shown hereon and to dedicate additional right-of-ways to the City of Albuquerque by the filing of this plat.

#### NOTES:

- 1). Bearings are grid based on bearing of N 09 deg. 37' 57" E between NMSHC Brass tablets "9947-12" and "9947-13", NAD 1927, rotate 00 deg. 58' 54" clockwise for record bearings.
- 2). Distances are ground.
- 3). Ground to grid factor=0.99967628.
- 4). All corners found tagged "7002", all corners set capped "7002", unless otherwise indicated.
- 5). Plat shows all easements of record.
- 6). Prior to development, City of Albuquerque Water and Sanitary Sewer service to this property must be verified and coordinated with the Public Works Department, City of Albuquerque, via a request for water and sanitary sewer availability statement.



#### LEGAL DESCRIPTION:

Tract lettered "A" in Block numbered Three-A (3-A) of FRANCISCAN ACRES, a Subdivision to the City of Albuquerque, New Mexico, as the same is shown and designated on the plat of said Subdivision, filed in the office of the County Clerk of Bernalillo County, New Mexico, on June 15, 1983, in Map Book C21, Folio 106; TOGETHER with Lots numbered Twenty (20), Twenty-one (21), Twenty-two (22), Twenty-three (23), Twenty-four (24) and Twenty-Five (25), in Block numbered Three-A (3-A) of FRANCISCAN ACRES, a Subdivision to the City of Albuquerque, New Mexico, as the same is shown and designated on the plat of said Subdivision, filed in the office of the County Clerk of Bernalillo County, New Mexico, on October 25, 1941, in Map Book C, Folio 123; EXCEPTING THEREFROM those portions of property conveyed to the City of Albuquerque by Warranty Deed filed March 29, 1961, in Book D588, Page 411 and Warranty Deed filed May 24, 1973 in Book D943, Page 15, records of Bernalillo County, New Mexico, and being more particularly described as follows: BEGINNING at the Northwest corner of the parcel herein described, said corner being a point of the Southerly Right-of-way line of Menaul Boulevard N.E. and being common to the Northeast corner of Lot "A", Block 3 of Franciscan Acres, whence NMSHC brass cap stamped "STANM47-13" bears N 83°04'01" W, 1954.58 feet; thence, S 83°08'54" E, 409.94 feet along the Southerly Right-of-way line of Menaul Boulevard, N.E. to a point of curve, thence 40.36 feet along a curve to the right (having a radius of 25.00 feet) to a point of tangency on the Westerly Right-of-way line of Edith Boulevard, N.E.; thence, S 09°20'25" W, 257.55 feet along the Westerly Right-of-way line of Edith Boulevard, N.E. to the Southeast corner of the parcel herein described, said corner being a point on the Northerly Right-of-way of Towner Avenue, N.E.; thence N 80°48'46" W, 328.71 feet along the Northerly Right-of-way line of Towner Avenue, N.E. to a point of curve; thence, 63.75 feet along a curve to the left (having a radius of 145.00 feet) to a point of reverse curve; thence, 49.15 feet distance continuing along the Northerly Right-of-way line of Towner Avenue, N.E. (having a radius of 111.77 feet) to the Southwest corner of the parcel herein described, said corner being common to the Southeast corner of Lot "A", Block 3, Franciscan Acres; thence, N 09°47'37" E, 290.33 feet to the point of beginning containing 1.7803 acres (121,106 Sq. Ft.), more or less. EXCEPTING therefrom those portions dedicated to the City of Albuquerque by this Plat.

#### CONSENT:

Replatted as shown hereon and now comprising Tract "A-1", Block 3-A, FRANCISCAN ACRES, Section 9, Township 10 North, Range 3 East, New Mexico Principal Meridian, Albuquerque Bernalillo County, New Mexico, is the free consent of and in accordance with the wishes and desires of the undersigned owner(s) and proprietor(s) thereof, and dedication of additional right-of-ways as shown hereon.

**BEN E. KEITH COMPANY**

OWNER'S NAME **BEN E. KEITH COMPANY** Date  
By: **S.D. GREENLEE** JAN. 20, 1997  
OWNER'S NAME **S.D. GREENLEE** Date  
VICE PRESIDENT

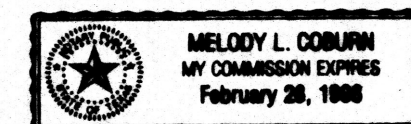
#### NOTARY:

STATE OF **TEXAS**

COUNTY OF **TARRANT**

On this **20** day of **JAN.**, 1997, this instrument was

acknowledged before me by **S.D. GREENLEE**  
**Melody L. Coburn** 2-28-98  
Notary Public My commission expires:



97015280

PLAT

OF  
TRACT "A-1", BLOCK 3-A  
FRANCISCAN ACRES

ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO  
NOVEMBER, 1996

#### APPROVALS:

PLAT No. **97-97-34**

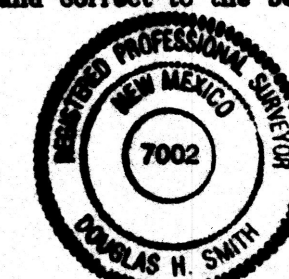
<b>Thelma R. Smith</b>	<b>2-10-97</b>
TRAFFIC ENGINEER	DATE
<b>Edward O. Stang</b>	<b>2-3-97</b>
PARKS AND GENERAL SERVICES	DATE
<b>Neil Clark</b>	<b>012897</b>
CITY SURVEYOR	DATE
<b>John H. Stang II</b>	<b>1-30-97</b>
WATER RESOURCES	DATE
<b>N/A</b>	
PROPERTY MANAGEMENT	DATE
<b>Frank J. Aguirre</b>	<b>1-30-97</b>
A.M.A.F.C.A.	DATE
<b>Frank J. Aguirre</b>	<b>1-30-97</b>
CITY ENGINEER	DATE
<b>Kyle L. Mc</b>	<b>2-12-97</b>
CITY PLANNER	DATE

THIS IS TO CERTIFY THAT TAXES ARE CURRENT AND  
PAID ON UPC# **SEE ATTACHMENT A**  
PROPERTY OWNER ON RECORD:  
**BEN E. KEITH CO**  
BERNALILLO COUNTY TREASURER'S OFFICE:  
**Mike Vikeat**

#### SURVEYOR'S CERTIFICATION:

I, Douglas H. Smith, New Mexico Professional Surveyor No. 7002, hereby certify that this plat was prepared from field notes of an actual ground survey performed by me or under my direct supervision; that it meets the Standards for Land Surveys in New Mexico as adopted by the New Mexico State Board of Registration for Professional Engineers and Land Surveyors; that it meets the minimum requirements for surveys and monumentation of the Albuquerque Subdivision Ordinance; and that the same is true and correct to the best of my belief and knowledge.

Douglas H. Smith, N.M.P.S. No. 7002



#### INDEXING INFORMATION FOR COUNTY CLERK

Section 9, Township 10 North, Range 3 East, NMPM  
Franciscan Acres