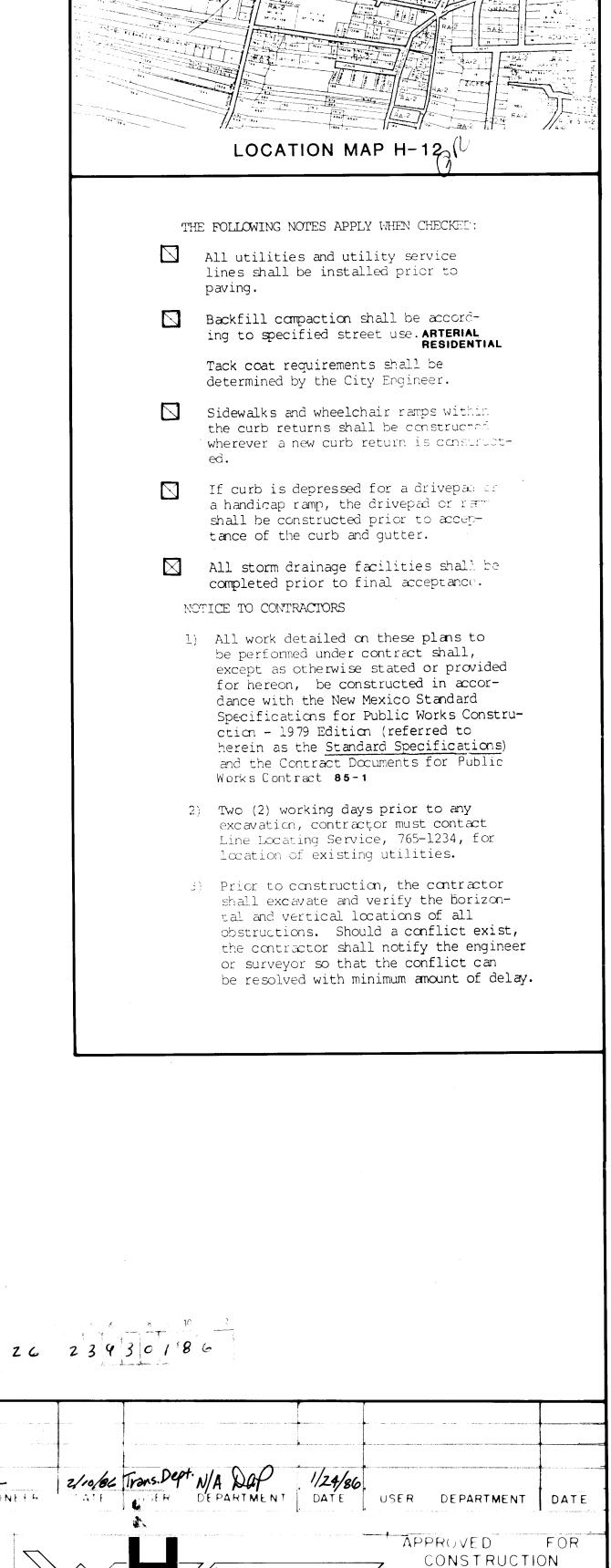
PAWIDOL SUBDIVISION

INDEX TO DRAWINGS

- COVER
 PLAT
- 3. GRADING / DRAINAGE PLAN
- 4. GRADING / DRAINAGE PLAN
- 5. STREET & UTILITY PLAN & PROFILE
- 6. CHANNEL CROSSING PLAN, PROFILE AND DETAILS
- 1. 7. CHANNEL CROSSING PLAN AND DETAILS REVISIONS



WEISS / HINES ENGINEERING, INC.

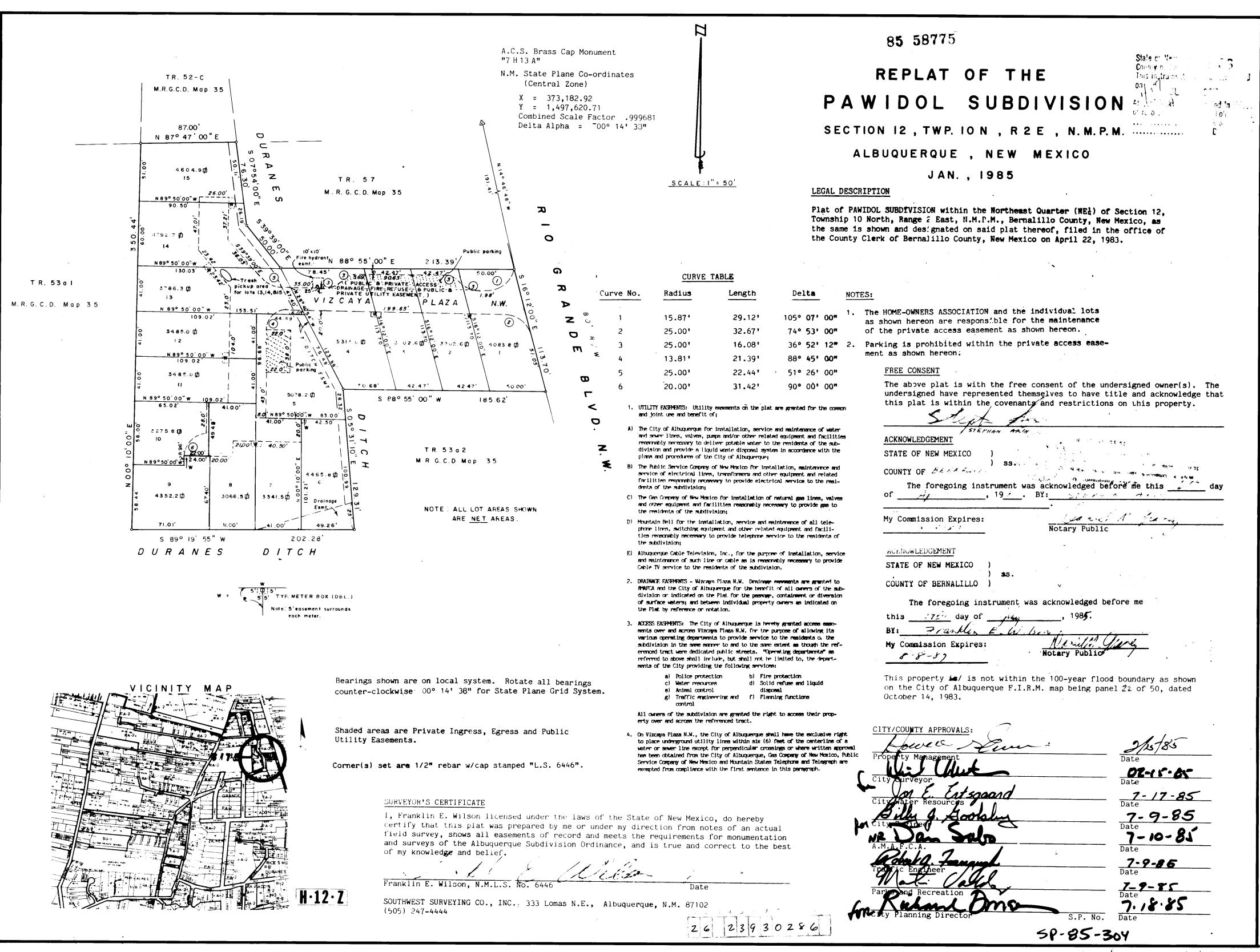
2393

1100-B ALVARADO N.E. ALBUQUERQUE, NEW MEXICO 87110

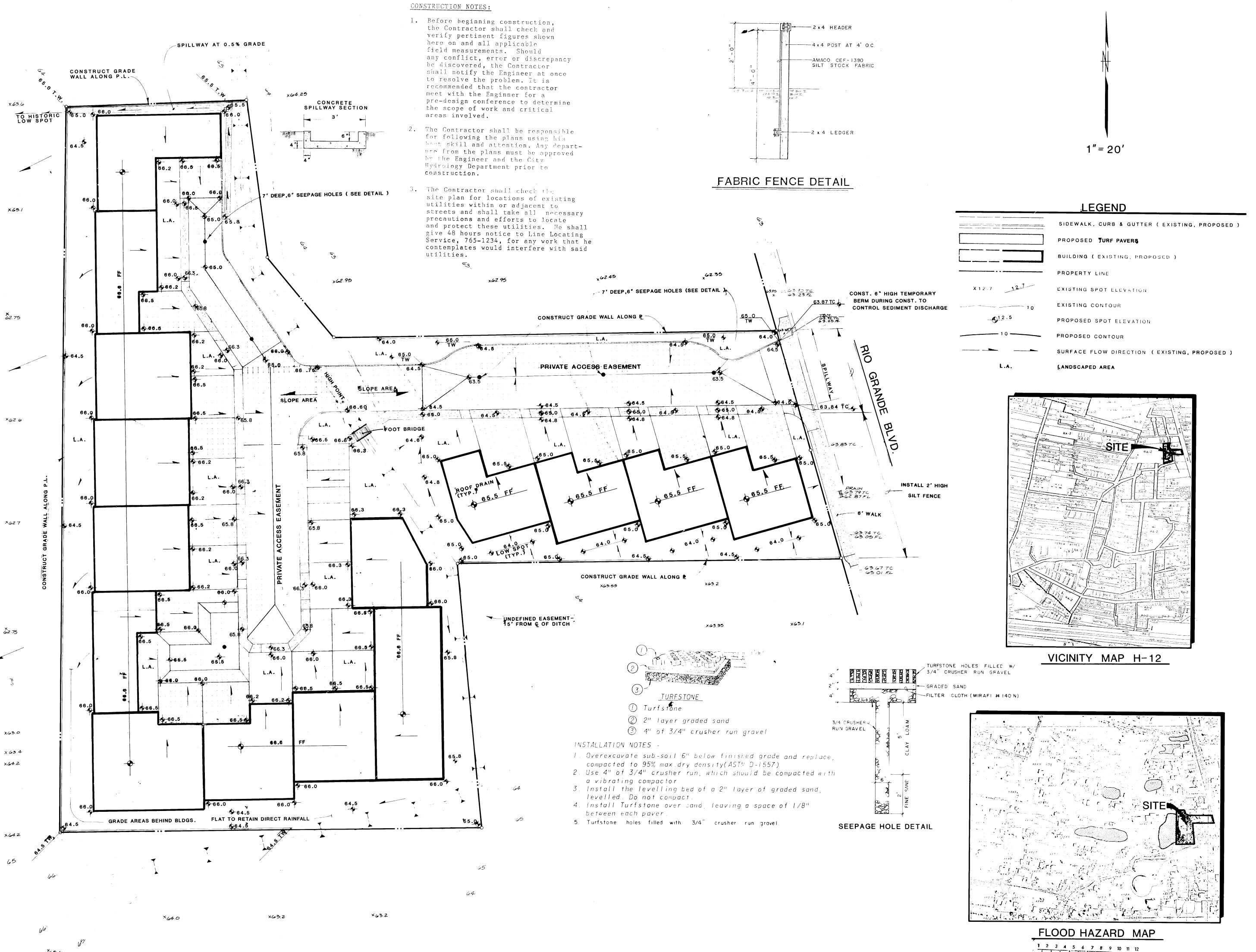
(505) 266-3444

PROJECT NO

APPROVA OF AN ACTION PRAWINGS



The long of the State



2393

SUBDIVI

The proposed improvements, comprised of 15 single story townhouses and associated walks, driveways, landscaping and utilities, is located off Rio Grande Blvd. N.W., several hundred feet south of Los Anayas Road. Because of the lack of capacity on Rio Grande and its storm sewer and because of the difficulties in draining water across the MRGCD ditch, the developer has elected to pond all on-site runoff within private access roadways. Roadways and driveways will be covered with "Turfstone", an open block which allows infiltration into the soil. Percolation tests by Albuquerque Testing Labs indicate that a permeable sand layer exists 6'-7' below ground level. Several 6''-diameter, 7'-deep gravel-filled holes will be constructed from the "Turfstone" pond into this sand Jayer to enhance

The present site is undeveloped except for an old wooden shack which will be torn down. The site is presently undeveloped and is divided into two parts by the Duranes Ditch. The front portion of the site is lower than Rio Grande Blvd. and does not drain to a public Right of Way. The rear portion of the site is very flat and is self ponding in that there is a small berm along the west PL.

The intent of this plan is to show:

- a) Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.
- b) The extent of proposed site improvements, including buildings, walks and pavement.
- c) The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet City requirements for drainage management.
- d) The relationship of onsite improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

GENERAL NOTES:

LEGAL: Tracts 53 A2, 53 B1, and northerly 10 ft. of tract 53 B2, MRGCD Map No. 35, Albuquerque, New Mexico, Bernalillo County, New Mexico. SURVEYOR:
Wayne Johnson, L.S..

City of Albuquerque B.M. F-H13H, Elevation 4964.08.

T.B.M.:

NE corner of site, lot line projection @ T.C. Elevation 4,963.92.

SOILS:
Gila clay loam (Ge) moderately well drained with infiltration capacity of 0.6-2.0 in/hr. (Hydrologic Group B).

FLOOD HAZARD:
The extreme western portion of the site supposedly lies within a 100-year flood hazard area (Albuquerque MDP, Map H-12). Field inspection by CTS on July 29, 1984, indicates that the flood hazard area does not actually extend onto the site because of a 0.5' berm that runs along the chainlink fence on the west side. The flood hazard area is very shallow (0.2' to

OFF-SITE DRAINAGE: Site is not affected by off-site drainage.

EROSION CONTROL:

Site will be developed in two phases. Phase 1 (east area) will have a 2' high filter fabric "silt fence" installed along east property line and a 6"-high berm across street at intersection with Rio Grande Boulevard. This will ensure that eroded sediments will not leave site. Phase 2 (west area) will be developed later. All flow and sediment will be contained on-site by existing topography and proposed grades. No flow or sediment can reach Rio Grande Boulevard or Phase 1 area from Phase 2.

Based on a pre-design meeting with City of Albuquerque Hydrology, on July 2,1984, the following criteria was established.

a. Free discharge if downstream capacity is available; if not ponding on site. Subsequent analysis showed that connection to the storm sewer coul. not be made conveniently and that street and storm sever the net have hydraulic capacity.)

Calculations are baned on the Cotton of Manual, Vol. II for the 100 year-6 hour storm, unit, the Patienal formula to compare the existing and proposed runoff runs.

AATTONAL METHOD- Q = CJA

Area of site: 73,616 sq.ft.= 1.69 Ac. Excluding back yard areas which will be self infiltrating, sits will have 1.25 ac. draining to lurfacens" pends.

Run-off Coefficient:

Existing site:
East Area (0.5 Ac)
A imp. = 0 Ac
% imp. = 0 % "C" = 0.34 (DPM 22.2 C-Ilaristone" clagging.) West Area (1.19 Ac) est Area (1.19 Ac) A imp. = 0 Ac % imp. = 0 %

"3" = 0.54 (DPM 22.2 C-1) Use "C" = 0.6 to account for

7100 = 6,900 cu. ft.

Curfstone clogging)

Rainfall Intensity:

 $I = P_6 (6.84) \, \text{Tc}^{-0.51} = 4.65'' \, \text{per hour}$ where $P_6 = 2.2''(DPM 22.2 P-1)$ Tc = 10 minutes

"C" = 0.34 (DPM 22.2 C-1)

Existing Condition: Developed Condition: East Area. <u>ast Area</u> Q100 = (0.34)(4.65)(0.5)Q100 = (0.55)(4.65)(0.5)= 0.8cfs V100 = (0.8)(5 Tc)(60 sec 18.7)1V100 = (1.3)(50)(60)/2= 1200 ca. it. = 1950 ca. ft. West Area Q100 = (0.34)(4.65)(1.15)Q100 = (0.6)(4.65)(1.19)= 1.9 cis= 3.3 cfs V100 = (1.9)(5.)(60)/2V100 = (3.3)(50)(60)/2= 2850 cu. fr. = 4950 cu, ft. Total East and West Total East and West Q100 = 2.7 cfsQ130 = 4.6 cfsV100 = 4050 cu. ft.

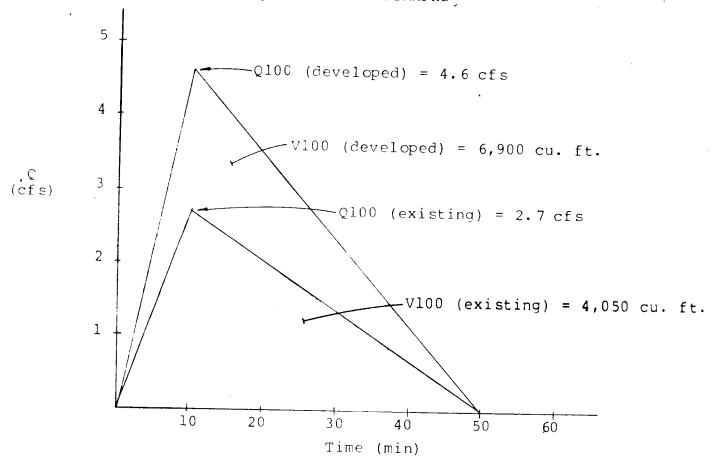
 $\triangle Q100 = (4.6) - (2.7) = 1.9 \text{ cfs (increase)}$ \triangle \hat{V} 100 = $\hat{6}$ 900 - 4050 = 2,850 cu. fr. (increase) PEND VOLUME CALCULATIONS

The entire 6,900 cm. fm. (VVC) will not flow to the "Turfstone" ponds since 0.1 Ac. (east side) and 0.15 Ac. (west side) will be in isolated backyard or landscaped areas. V100 for the 0.1 Ac. area on the west side = GIA x 50 x 50 $^{\prime}$ 2 = 240 cu. ft.; or the east side, V100 for the 0.34 $^{\prime}$ c. area = 810 cu. ft. Subtracting these volumes from the total develope vi00 results in a ponding requirement for the east side of 1,710 cu. ft. and 4,140 cu. ft. for the west stir.

By planimeter and assuming many depth of 0.5° , the east pond has a storage capacity of 2,60% on. In. the elevation = 64.5.

The west pool has a volume of 5,200 cm. ft. at elevation = 66.0.

SITE HYDROGRAPHS



PERCOLATION TESTS



Albuquerque Testing Laboratory, Inc. 532 Jefferson N.E. (87108) P. O. Box 4101 (87106) Albuquerque, New Mexico (505) 268-4537

August 15, 1984

Mr. Steve Aiken P. O. Box 36137 Station D Albuquerque, New Mexico 87176

Re: ATL Engineering Services Lab No. 2-04374-84. Field Percolation Tests, Rio Grande Blvd., South of Los Anayas. Dear Mr. Aiken:

The results of the referenced tests are herewith submitted. Included are a description of the procedures utilized and results of Partical Size Analysis performed on representative soil

If you have any questions or if we can be of further assistance to you, please call us.

Respectfully submitted: ATL ENGINEERING SERVICES Ticholas T. Korecki

Nicholas T. Korecki, P.E. Reviewed by:

Lobut K. Llayd. Robert K. Lloyd, P.E. Head, Geotechnical Section

NTK/ss

Lab No. 2-04374-84

PERCOLATION TEST NO. 1

INTRODUCTION

Page 2

The percolation test was performed on August 2, 1984 at approximately 35 feet East of the West property line at the approximate Center of the site. The test was run at a depth of three (3) feet beneath the existing ground surface in a 3-1/2"+ diameter hole. The lower two foot portion of the hole was filled with one inch gravel. The top foot contained a 3 inch diameter pipe in which the water level was monitored and measured. The hole was allowed to saturate with water prior to running the test.

TEST RESULTS

Time Interval (minutes)	Initial Water Level in Hole (inches)	Drop in Water Level (inches)
0-10 10-20	36 30-1/4	5-3/4 3-1/4
20-30	27	2-1/4 3
30-40 40-50	36 30-1/4	5-3/4 3-1/4
50-60	36	5-1/2
Domooleties		

Percolation rate during the last ten (10) minutes = 1.8 minutes per inch. The rate varies according to the water level.

Unified Soils Classification: CLAY, brown, sandy (CL)

Lab No. 2-04374-84

PERCOLATION TEST NO. 2

INTRODUCTION

The percolation test was performed on August 9, 1984, 15' West of Test No. 1, at a depth of 10 feet beneath the existing ground's surface, in a 6-1/2"+ diameter hole. The bottom 9 foot portion of the hole was filled with one inch gravel. The upper one foot section contained a 4 inch diameter pipe surrounded by one inch gravel.

Because of the rapid percolation rate in the clean sand the time was recorded during which the water level dropped 12 inches from the ground's surface. A total of twenty measurements were made over a period of 90 minutes. Prior to running the test, 20 gallons of water were poured into the hole in order to saturate

TEST RESULTS Trial Time* Trial Time*

*Time in seconds for water level to drop 12 inches Average Percolation rate for the last 10 trials: 0.34 minutes

Unified Soils Classification: SAND, brown, fine to medium grained (SP).

Lab No. 2-04374-84

DRILLER'S LOG

approximate Center of the site.

Boring Location: 25' East of West Property Line at the

Visual Description CLAY, light brown, sandy, fine grained SAND, brown, fine to medium grained

No water encountered

SKETCH OF TEST PROCEDURE PVC Pipe (3" in TH1; 4" in TH2) Test* Depth Auger hole (3-1/2" in TH1; 6-1/2" in TH2) *3' in TH1; 10' in TH2

LASON 1-505-344-9404 BEST COPY AVAILABLE

DRAINAGE **PLAN**

1 2 3 4 5 6 7 8 9 10 11 12

2393

- I'WG John

SHEET 2 OF 2

PAWIDO

.0

Ž≥

JADI UBDI

. E

SUI O

1-21

