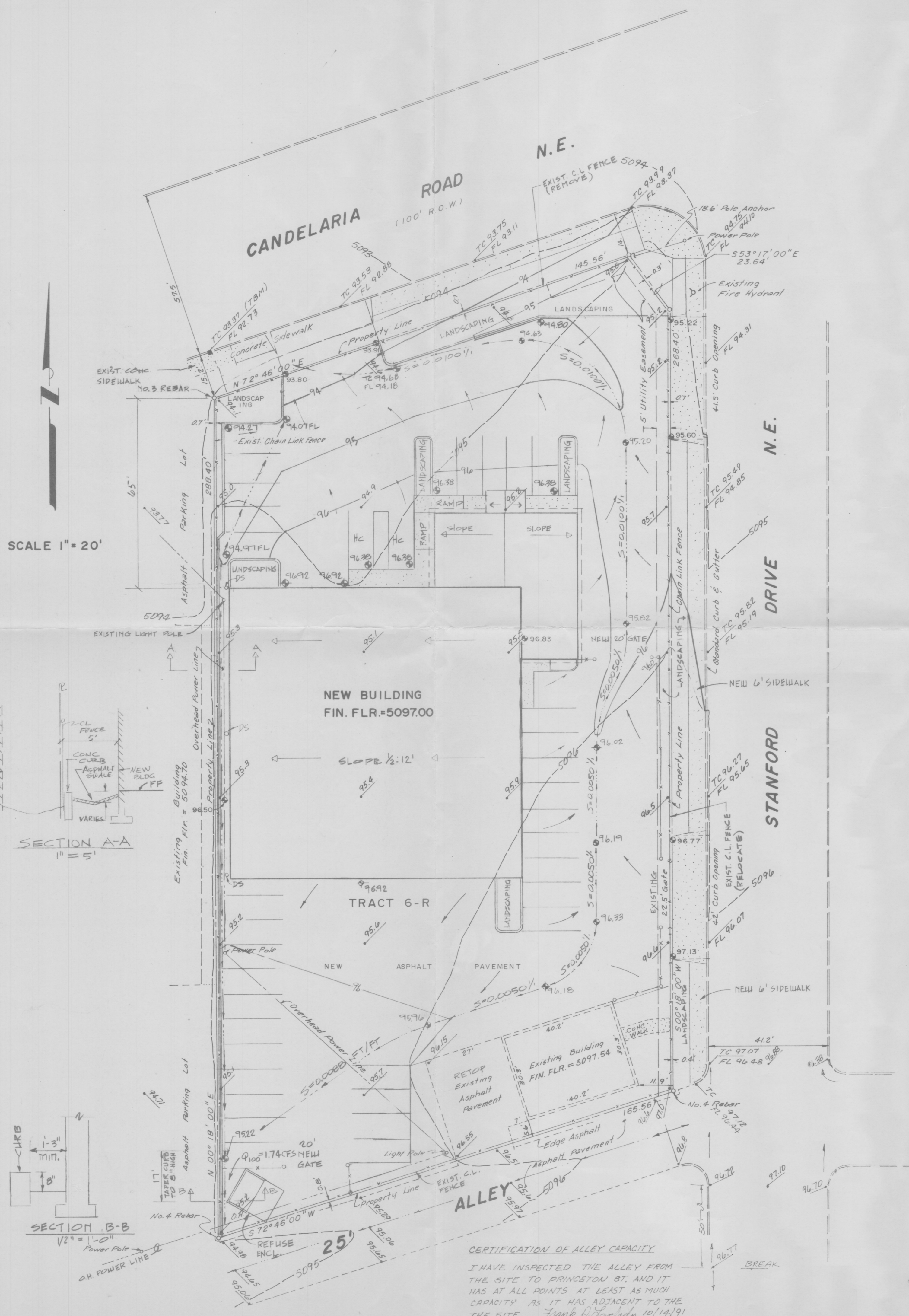
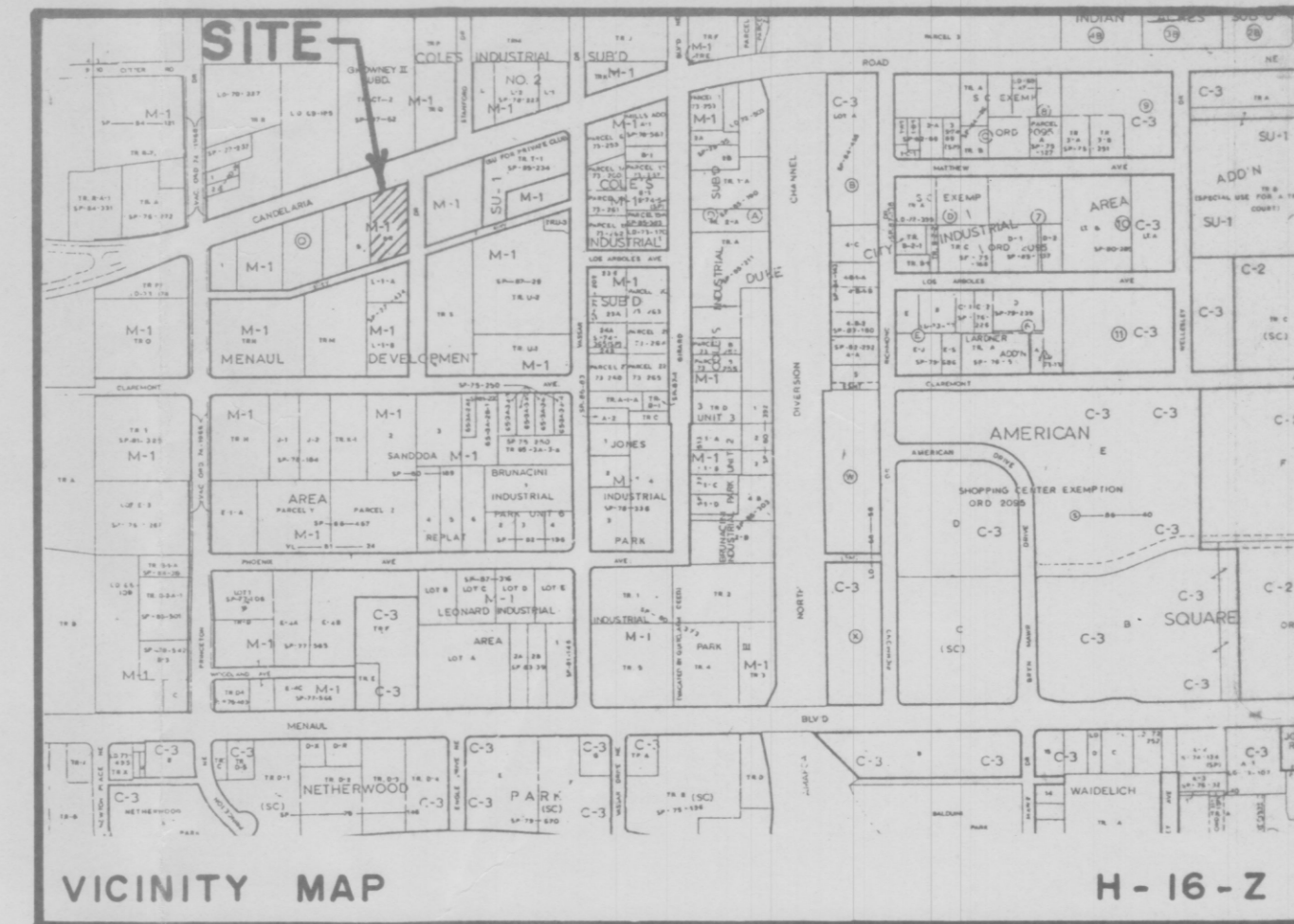
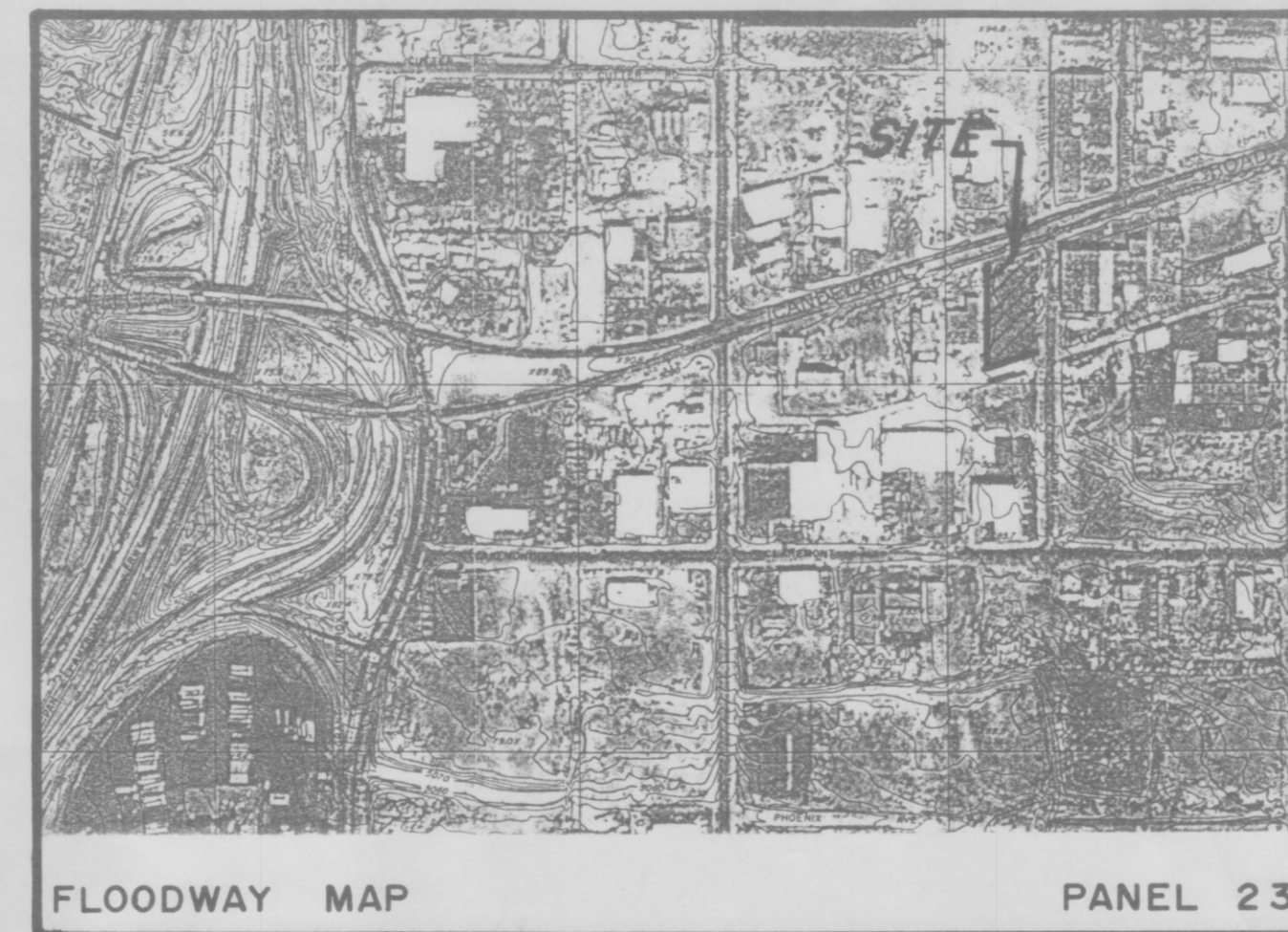




EXISTING CONDITIONS:

The site is bounded on the north by Candelaria Road NE, on the east by Stanford Drive NE, on the south by a paved alley, and on the west by a developed lot. The site is presently graded smooth and has one building in the south-east corner and approximately 945 sq.ft. of asphalt pavement.

DEVELOPED CONDITIONS:

The main building will slope east and west from the center. All runoff will flow north and south from a high point near the refuse enclosure. The west side of the building will have a paved swale to carry roof runoff to the parking lot. Runoff will leave the site through the driveway into Candelaria Road on the north and into the alley on the south.

DOWNSTREAM CAPACITY:

The floodway map shows the alley draining west to Princeton and then south on Princeton to Claremont where it enters the storm drainage system, which is 72" beginning at Phoenix and Princeton. The runoff that enters Candelaria Road from the site appears to also enter Princeton and enter the storm drainage system. The site is fairly near the low side of the A.M.D.S. cell BH101. The site is an infill site and a minimal increase in runoff will result from development. The floodway map shows that there are no flood hazard areas downstream from the site. Therefore, unrestricted discharge appears to be appropriate for the site.

SOIL INFORMATION:

(Refer to "Soil Survey of Bernalillo County", June, 1977.) Soil is WeB, Wink-Embudo complex, 0 to 5 percent slopes, Hydrologic Soil Group "B".

TIME OF CONCENTRATION:

Use ten (10) minutes, minimum time of concentration.

RAINFALL, 100-Year, 6-Hour:

(Refer to D.P.S., Plate 22.2 D-1.) $R_0 = 2.2$ inches.

RAINFALL INTENSITY:

$I = R_0 \times 6.84 \times T_c^{-0.51} = 2.2 \times 6.84 \times 10^{-0.51} = 4.65$ inches per hour.

EROSION CONTROL NOTES:

The contractor shall be responsible for compliance with the following:

1. No sediment-bearing water shall be allowed to discharge from the site during construction.
2. During grading operations, and until the project has been completed, all adjacent property, rights-of-way and easements shall be protected from flooding from runoff from the site.
3. Should the contractor fail to prevent sediment-bearing water from entering public right-of-way or adjacent private property, he shall promptly remove all sediment originating from the site.
4. Control of sediment-bearing waters will be accomplished by use of a compacted earth berm of adequate height. The berm shall be located along the downstream perimeter of the property.

LEGEND:

EXISTING	NEW	DESCRIPTION
— 5095	— 96	CONTOUR
•	•	SPOT ELEVATION
---	---	PROPERTY LINE
↘	↘	ROOF SLOPE
---	---	SWALE
---	---	SHEET FLOW
TC	TC	TOP OF CONCRETE
TA	TA	TOP OF ASPHALT
FL	FL	FLOW LINE
DS	DS	DOWN SLOPE

CAPACITY BETWEEN REFUSE ENCLOSURE AND CURB.
AREA DRAINING TO THIS POINT = 17950 SF $I = 0.41$ AC
 $Q_{100} = CIA = 0.91 \times 4.65 \times 0.41 = 1.73$ CFS
USE ORIFICE EQUATION $Q = CLH^{3/2}$ $C = 2.65$ $L = 1.25'$ $H = 0.67'$
 $Q = 2.65 \times 1.25 \times 0.67^{3/2} = 1.81$ CFS

SITE IMPERVIOUSNESS:

Surface Type	"C"	Direct Runoff	Existing Area (Sq.Ft.)	Developed Area (Sq. Ft.)
Building roof	0.90	98	2,100	12650
Asphalt & Conc.	0.95	98	2,100	30822
Landscaping	0.25	61	0.15	1890
Unpaved	0.40	82	0.95	43187
Totals			45362	45362

WEIGHTED "C" VALUE:

Existing: $C_w = (2100 \times 0.90 + 975 \times 0.95 + 43187 \times 0.40) / 45362 = 0.43$

Developed: $C_w = (12650 \times 0.90 + 30822 \times 0.95 + 1890 \times 0.25) / 45362 = 0.91$

PEAK DISCHARGE:

Existing: $Q_{100} = CIA = 0.43 \times 4.65 \times 1.0414 = 2.08$ cfs

$Q_{10} = 0.657 \times 2.08 = 1.37$ cfs

Developed: $Q_{100} = CIA = 0.91 \times 4.65 \times 1.0414 = 4.41$ cfs

$Q_{10} = 0.657 \times 4.41 = 2.90$ cfs

VOLUME, 100-YEAR AND 10-YEAR, 6-HOUR:

Existing: $V_{100} = (2175 \times 2.10 + 43187 \times 0.85) / 12 = 3440$ cf

$V_{10} = 0.657 \times 3440 = 2260$ cf

Developed: $V_{100} = (43472 \times 2.10 + 1890 \times 0.15) / 12 = 7631$ cf

$V_{10} = 0.657 \times 7631 = 5013$ CF

SWALE CAPACITY:

Runoff from west side of building. Area = 5500 sf

$Q_{100} = 0.90 \times 4.65 \times 5500 / 43560 = 0.53$ cfs slope = 0.0100

$A = (0.25 \times 4.5) / 2 = 0.56$ sf $P = 2 \times 2.25 = 4.52'$ $R = A/P = 0.56 / 4.52 = 0.12$

$N = 0.17$ for asphalt. $Q = A(1.486/N) R^{2/3} S^{1/2}$

$Q = 0.56 (1.486 / 0.017) (0.12)^{2/3} (0.0100)^{1/2} = 1.19$ cfs > 0.53 cfs Adequate.

BENCH MARK:

Station 12-H16, located at the intersection of Princeton and Candelaria, N.E., at the S.E. corner. The station is a standard A.C.S. brass cap stamped "12-H16 1979" set flush with the curb. Elevation = 5088.32 Feet.

TEMPORARY BENCH MARK (TBM):

A 2" square and letters "TBM" painted on top of curb adjacent to the N.W. property corner. Elevation as shown.

LEGAL DESCRIPTION:

Tract numbered Six-R (6-R) of the plat of Tracts E-1, K-1, L-1, 6-R, S, T, U of MENAUL DEVELOPMENT AREA, in the City of Albuquerque, New Mexico, as as the same is shown and designated on said Plat, filed in the office of the County Clerk of Bernalillo County, New Mexico, on July 27, 1962 in Map Book B3, Folio 192.

NOTES:

1. There is no off-site flow associated with this site.
2. All elevations are mean sea level (M.S.L.). Add 5000 to spot elevations to obtain actual M.S.L. elevations.
3. The site does not lie within or upstream from a 100-year flood plain.
4. See Architectural Site Plan for dimensions of building and parking lot layout.
5. Contour interval = 1.0'.

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REGISTERED PROFESSIONAL ENGINEER
NO. 8512
9/19/91

RECEIVED
AUG 20 1992
HYDROLOGY DIVISION

REVISED 10/14/91
REVISED 8/20/92