

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 28, 1992

Steve Seligman
3909 Juan Tabo Blvd NE Suite 6
Albuquerque, N.M. 87111

RE: DRAINAGE PLAN FOR LOT 16 BK 3, REBONITO SUBD (J-23/D21)
RECEIVED OCTOBER 16, 1992 FOR SPECIAL FILL PERMIT APPROVAL
STAMPED & DATED 10-16-92

Dear Mr. Seligman:

Based on the information included in the submittal referenced above, City Hydrology approves a Special Fill Permit for this project.

The building foot print and the roof drain locations will need to be added to this plan before this project can be approved for Building Permit.

If I can be of further assistance, you may contact me at 768-2727.

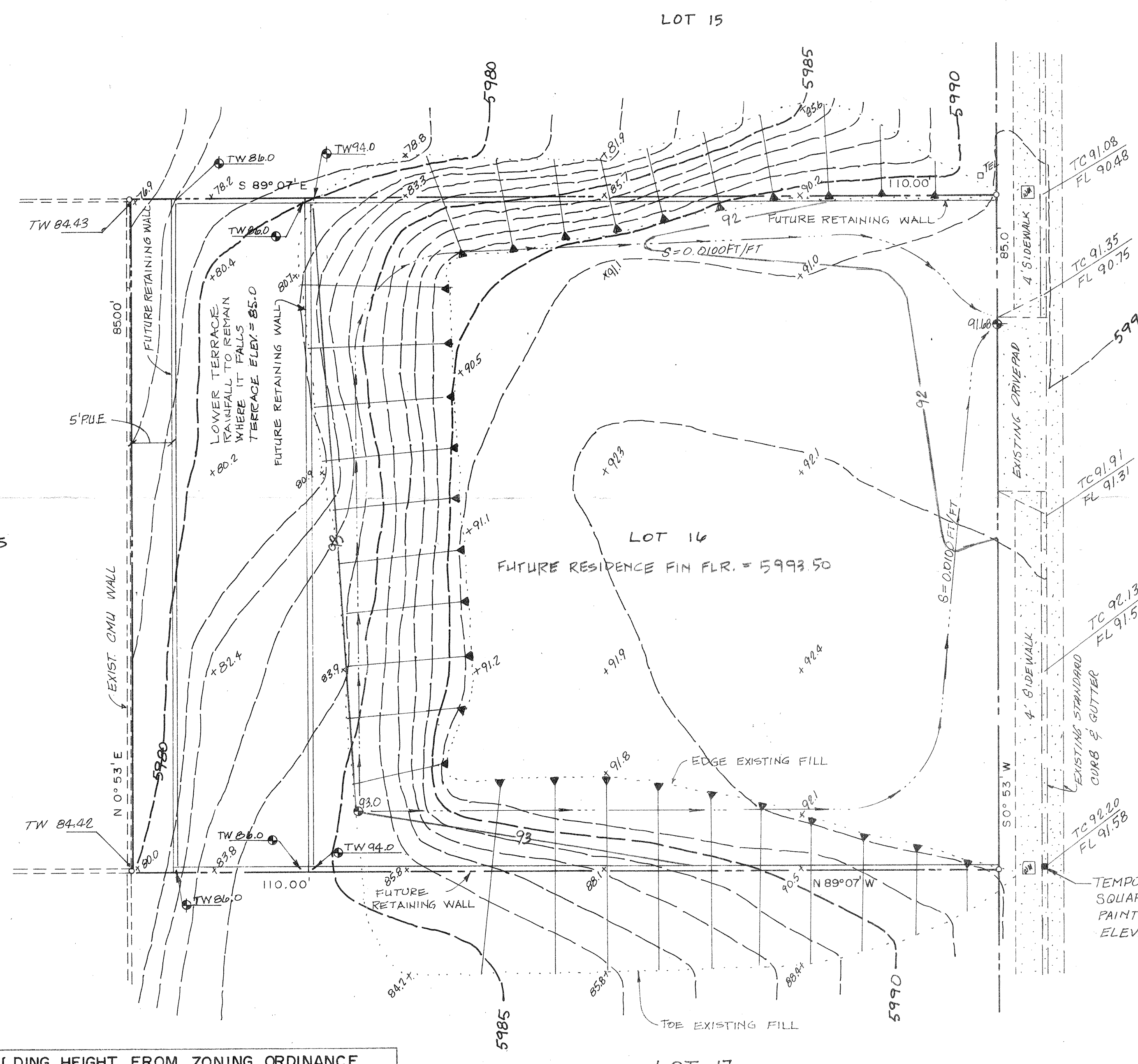
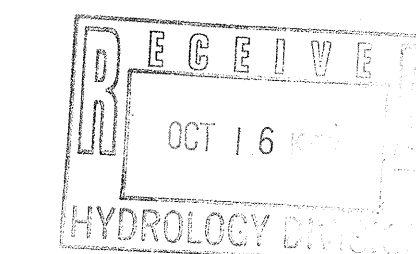
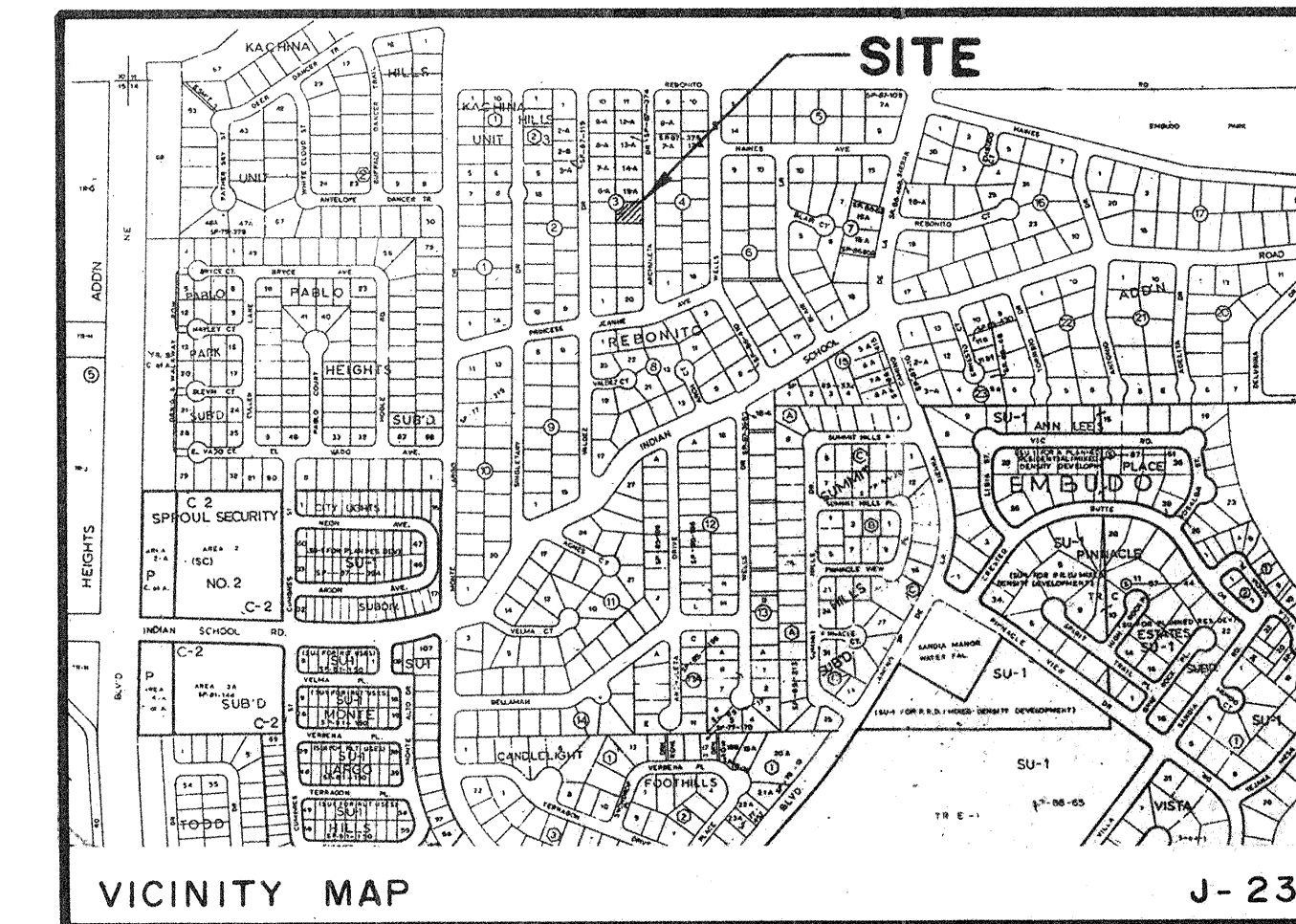
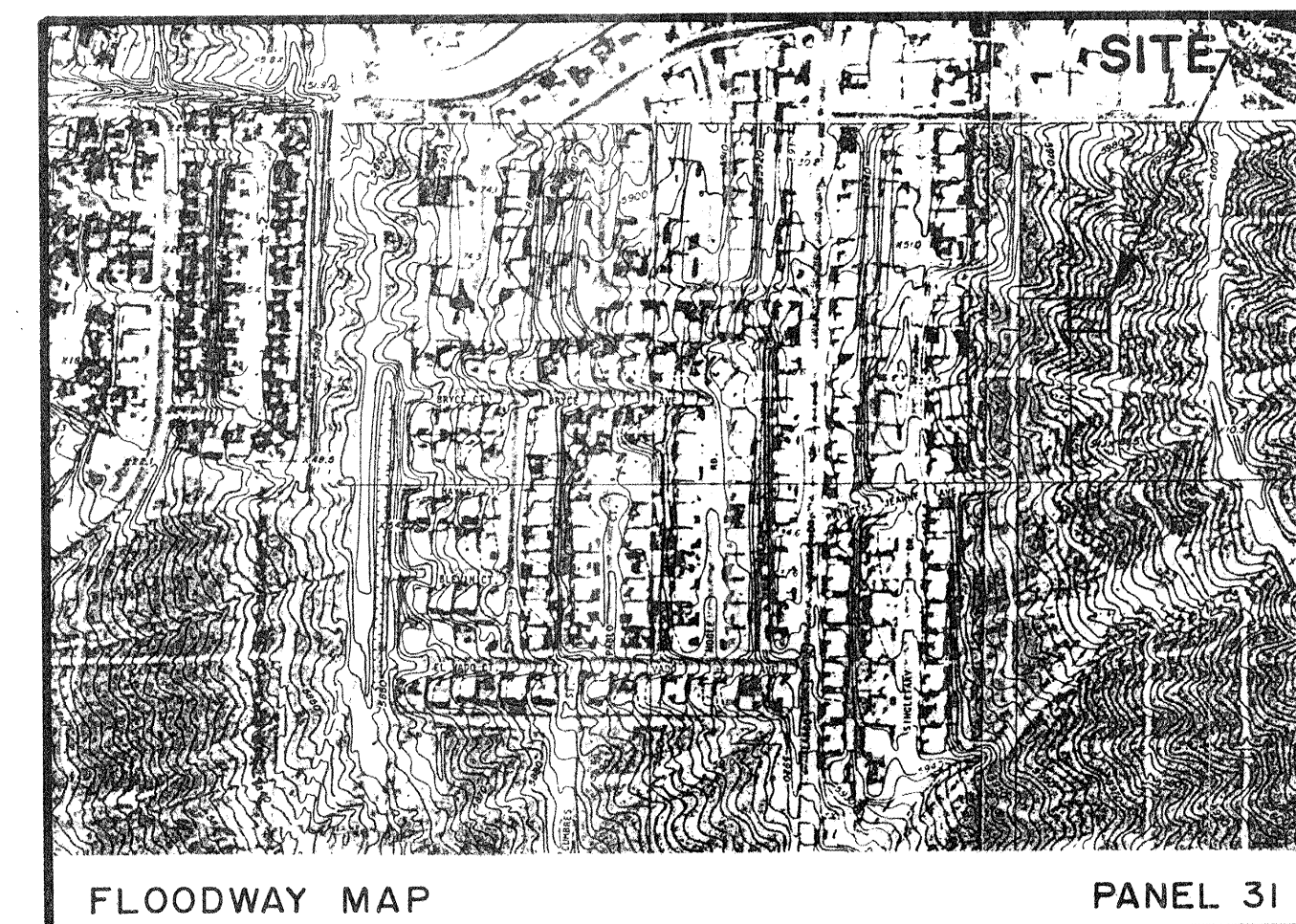
Sincerely,

John P. Curtin, P.E.
PWD/Hydrology

xc: Alan Martinez - PWD/Hydrology
Frank Lovelady - Lovelady & Associates - 7408 Morrow Ave. NE
Albuquerque, N.M. 87110

WPHYD+3598

PUBLIC WORKS DEPARTMENT



ARCHULETA DR. N.E.

DRAINAGE CALCULATIONS

EXISTING CONDITIONS:
The lot is located on the west side of Archuleta Drive, N.E. between Princess Jeanne Avenue and Rebonito Road, N.E. The natural slope of the lot is from east to west. The lot directly west of this site, Lot 5, is developed with a single family residence with concrete block walls on the north, east and south lot lines. All lots south of Lot 5 are developed in a similar manner. Lots adjacent to the site on the north and south, Lots 15 and 17, are undeveloped. Fill material has been placed on Lot 16 which appears to overlap onto Lots 15 and 17. The approximate limit of the fill material is shown by the dotted line labeled "toe of slope".

PROPOSED CONDITIONS:
Upon development of this lot, retaining walls will be constructed as shown. The maximum wall height will be 8 feet. This will necessitate constructing two walls at the rear of the lot, the space between the walls being terraced at the elevation shown. If lots 15 and 17 are developed at the same time or in advance of lot 16, then the side walls will not be required unless a significant disparity in elevation still exists between adjacent lots. Spot elevations shown will result in positive drainage of the upper terrace of the lot only. The lower terrace will retain rainfall where it falls. The 5' P.U.E. is proposed to remain unobstructed. The height of a future residence shall be as defined in Section 5.B.45 of the City of Albuquerque Comprehensive Zoning Code which is reproduced on this drawing.

SOIL INFORMATION:
(Refer to "Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico", U.S. Soil Conservation Service, June 1977. Site appears to be on the border between ETC, Embudo-Tijeras Complex, Hydrologic Soil Group "B"; and, Te, Tesajo-Millet Stony Sandy Loams, Hydrologic Soil Group "A". Assume Soil is Hydrologic Soil Group "B".

S.C.S. CURVE NUMBERS:
(Refer to DPM, Plate 22.2 C-2) Existing ground is bare ground, dirt, CN = 82; Pavement and roofs, CN = 98; Lawns and landscaping, CN = 61.

TIME OF CONCENTRATION:
Due to the relatively small size of the site, the minimum time of concentration of ten (10) minutes is used.

RAINFALL, 100-YEAR, 6-HOUR:
(Refer to D.P.M., Plate 22.2 D-1): $R_6 = 2.55$ inches.

RAINFALL INTENSITY:
(Refer to D.P.M., Plate 22.2 D-2). $I = R_6 \times 6.84 \times T_c^{-0.51}$
 $I = 2.55 \times 6.84 \times 10^{-0.51} = 5.39$ inches per hour

TOTAL SITE AREA:
The lot is 85' X 110' = 9350 SF = 0.2146 acre.

CALCULATIONS

SITE IMPERVIOUSNESS:
Assume a 3000 SF house, 500 SF of walks, drives and patios. Assume 10 percent landscaping and the remainder of the lot to be bare ground.

SURFACE TYPE	"C"	"CN"	DIRECT RUNOFF		ON-SITE EXISTING		AREAS (SQ.FT.)	
								DEVELOPED
Building	0.90	98	2.30		-		3000	
Asphalt/Conc.	0.95	98	2.30				500	
Gravel/Dirt	0.40	82	1.10		9350		4950	
Landscaping	0.25	61	0.25		-		925	
Totals					9350		9350	

WEIGHTED "C" FACTOR:
Existing: "C" = 0.40
Developed:
 $C_w = \frac{(0.90 \times 3000 + 0.95 \times 500 + 0.40 \times 4915 + 0.25 \times 935)}{9350} = 0.57$

PEAK DISCHARGE:
(Use Rational Equation, Q = CIA)
Existing: $Q_{100} = 0.40 \times 5.39 \times 0.2146 = 0.46$ cfs
 $Q_{10} = 0.657 \times 0.46 = 0.30$ cfs
Developed: $Q_{100} = 0.57 \times 5.39 \times 0.2146 = 0.66$ cfs
 $Q_{10} = 0.657 \times 0.66 = 0.43$ cfs

VOLUME, 100-YEAR and 10-YEAR, 6-HOUR:
Existing: $V_{100} = 9350 (1.10 / 12) = 857$ cf $V_{10} = 0.657 \times 857 = 563$ cf
Developed: $V_{100} = \frac{(2.30 \times 3500 + 1.10 \times 4915 + 0.25 \times 935)}{12} = 1146$ cf
 $V_{10} = 0.657 \times 1141 = 750$ cf

BENCH MARK:
Station 2455-5 located approximately 80 feet southeast of this point between two power poles. The station is a standard ACS brass cap set in concrete flush with the ground and stamped "2455-5, Elevation = 5979.95."

TEMPORARY BENCH MARK:
Two inch (2") square and letters "TBM" painted on top of curb at the SE corner of the site, Elevation = 5992.20

LEGAL DESCRIPTION:
Lot 16, Block 3, Rebonito Subdivision, City of Albuquerque, County of Bernalillo, New Mexico.

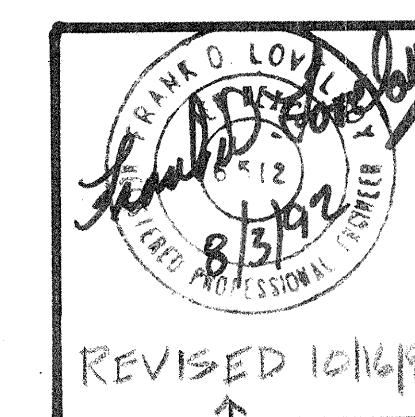
LEGEND:

EXISTING	NEW	DESCRIPTION
5990	90	CONTOUR
90	90	SPOT ELEVATION
---	---	CONCENTRATED FLOW
---	---	SHEET FLOW
---	---	PROPERTY LINE
TC / TOP OF CURB	FL / FLOW LINE	TW / TOP OF WALL

DEFINITION OF BUILDING HEIGHT FROM ZONING ORDINANCE
45. "HEIGHT", when applied to a building, means the vertical distance above the grade at each facade of the building, considered separately, to the highest point of the coping of a flat roof; to the deck line of a mansard roof; or to the average height between the plane and the ridge of a gable, hip, or gambrel roof. The height of a stepped or sloped building means the maximum height above grade of any distinct segment of the building, which segment

Revised 12-3-91
Section 5.B.45.

constitutes at least 10 percent of the gross floor area of the building. (This definition applies to height regulations found in a specific zone but not to regulations found in the General Regulations, Section 40.C.)



GRADING AND DRAINAGE PLAN
LOT 16, BLOCK 3, REBONITO SUBDIVISION
ALBUQUERQUE, NEW MEXICO

REVISED 10/16/92
SHOWN ON ORIGINAL