

CALCULATIONS

THE FOLLOWING CALCULATIONS WERE DEVELOPED
USING THE CITY OF ALBUQUERQUE DPM SECTION 22.2

SITE CHARACTERISTICS:
SITE LOCATION: ZONE 2
PRECIPITATION: P = 2.35 inches

LAND TREATMENT:
UNCOMPACTED SOIL - TREATMENT A
LANDSCAPE - TREATMENT B
COMPACTED SOIL - TREATMENT C
BUILDINGS & PAVING - TREATMENT D

EXCESS PRECIPITATION:
TREATMENT A E = 0.53 inches
TREATMENT B E = 0.78 inches
TREATMENT C E = 1.13 inches
TREATMENT D E = 2.12 inches

PEAK DISCHARGE:
TREATMENT A = 1.56 cfs/acre
TREATMENT B = 2.28 cfs/acre
TREATMENT C = 3.14 cfs/acre
TREATMENT D = 4.70 cfs/acre

	EXISTING	PROPOSED
TOTAL AREA	= 0.41 AC.	
TREATMENT A	= 0.00 AC. = 0.0%	0.00 AC. = 0.0%
TREATMENT B	= 0.00 AC. = 0.0%	0.04 AC. = 9.8%
TREATMENT C	= 0.17 AC. = 41.5%	0.00 AC. = 0.0%
TREATMENT D	= 0.24 AC. = 58.5%	0.37 AC. = 90.2%

ONSITE - EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:

EXISTING RUNOFF:
WEIGHTED E=[(0.53)(0.00)+(0.78)(0.00)+(1.13)(0.17)+(2.12)(0.24)]/0.41
= 1.71 inches
V100-6hr = (1.71)(0.41)/12 = 0.0584 acre ft = 2,545 cf
DEVELOPED RUNOFF:
WEIGHTED E=[(0.53)(0.00)+(0.78)(0.04)+(1.13)(0.00)+(2.12)(0.37)]/0.41
= 1.99 inches
V100-6hr = (1.99)(0.41)/12 = 0.0680 acre ft = 2,960 cf

ONSITE - PEAK DISCHARGE:

EXISTING DISCHARGE:
Q100 = (1.56)(0.00)+(2.28)(0.00)+(3.14)(0.17)+(4.70)(0.24) = 1.66 cfs
DEVELOPED DISCHARGE:
Q100 = (1.56)(0.00)+(2.28)(0.04)+(3.14)(0.00)+(4.70)(0.37) = 1.83 cfs

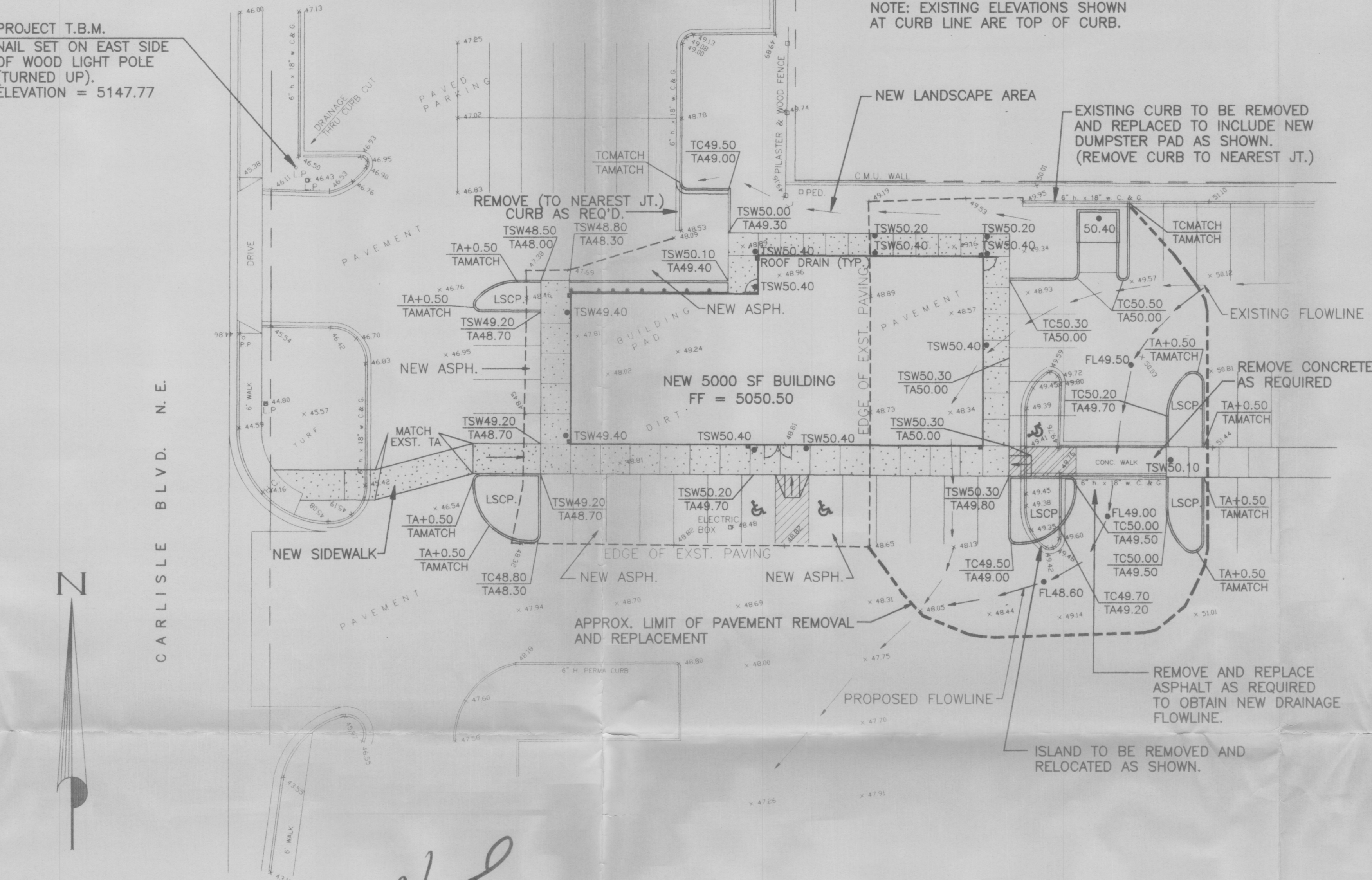
RESULTS:

DEVELOPED VOLUMETRIC RUNOFF:
2,960 - 2,545 = 415 cf INCREASE IN RUNOFF VOLUME
DEVELOPED PEAK DISCHARGE:
1.83 - 1.66 = 0.17 cfs INCREASE IN PEAK DISCHARGE

GENERAL NOTES

- PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE TO RESOLVE THE CONFLICT WITH A MINIMUM AMOUNT OF DELAY.
- ALL WORK ON THIS PLAN SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OWNER OR FROM EXISTING PLANS, AND THIS INFORMATION MAY BE INCOMPLETE, OR OBSOLETE AT THE TIME OF CONSTRUCTION. THE ENGINEER HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THESE LOCATIONS, LINE SIZES OR MATERIAL TYPE, MAKES NO REPRESENTATION THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND INSTALLATION IN OR NEAR THE AREA IN ADVANCE OF AND DURING ANY EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND FACILITIES. IN PLANNING AND CONDUCTING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE CONTRACTOR SHALL INSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHTS-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AND BY WETTING THE SOIL TO KEEP IT FROM BLOWING.
- THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY BERNALILLO COUNTY FOR THE COMPLETION OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.

PROJECT T.B.M.
NAIL SET ON EAST SIDE
OF WOOD LIGHT POLE
(TURNED UP).
ELEVATION = 5147.77



PROPOSED SITE IMPROVEMENTS

BENCH MARK

CITY OF ALBUQUERQUE CONTROL STATION 11-H17, AN ALUMINUM CAP LOCATED AT THE SOUTHEAST CURB RETURN OF THE INTERSECTION OF MANUAL BOULEVARD N.E. AND CARLISLE BOULEVARD N.E. ELEVATION = 5140.36.

LEGAL DESCRIPTION

TRACTS B, C, & D A.J. JOHNSON SUBDIVISION, FILED MAY 5, 1988, BOOK C36, PAGE 110.

GENERAL LEGEND

EXISTING SPOT ELEVATION	x 48.55
PROPOSED SPOT ELEVATION	56.4
FLOWLINE	→
FLOW DIRECTION ARROW	→
PROPOSED CONCRETE	▨
TOP OF CURB ELEVATION	TC
TOP OF SIDEWALK ELEVATION	TSW
FLOWLINE ELEVATION	FL
TOP OF ASPHALT	TA
TELEPHONE PED.	PED

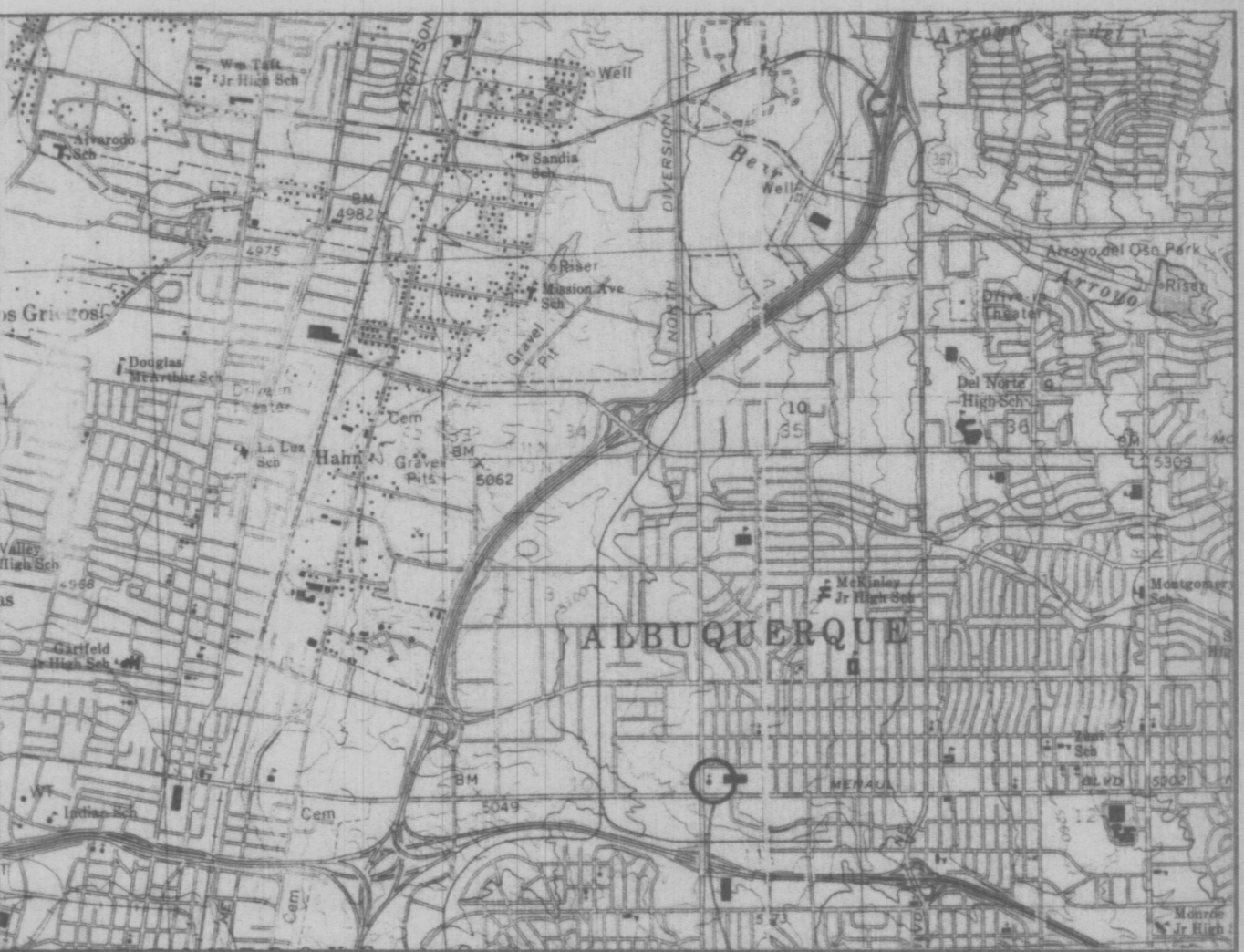
DRAINAGE PLAN

THE SUBJECT PROPERTY IS LOCATED AT 3621 MANUAL BLVD. N.E. (NORTHEAST CORNER OF THE INTERSECTION OF CARLISLE AND MANUAL). THE SITE SHOWN ABOVE IS A PORTION OF THE SHOPPING CENTER THAT EXISTS AT THIS LOCATION. FOR CLARITY ONLY THAT AREA AFFECTED BY THE PLANNED IMPROVEMENTS IS SHOWN AND INCLUDED IN THE CALCULATIONS PROVIDED. AS SUCH THIS PLAN IS A MODIFICATION TO THE PLAN FOR THE ENTIRE CENTER ORIGINALLY SUBMITTED IN OCTOBER OF 1992. SEVERAL MODIFICATIONS TO THIS ORIGINAL PLAN HAVE BEEN COMPLETED AND ARE ON FILE AT THE CITY HYDROLOGY DEPT. (H17-D64 & H17-D64A).

CURRENTLY, THE AREA INCLUDED IN THIS PLAN IS ALL PAVED WITH THE EXCEPTION OF A PAD SITE THAT WAS LEFT FOR THE CONSTRUCTION OF THIS BUILDING. THE PLANNED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A NEW BUILDING, SIDEWALK, AND LANDSCAPE. ALL CURRENT DRAINAGE PATTERNS WILL REMAIN UNCHANGED.

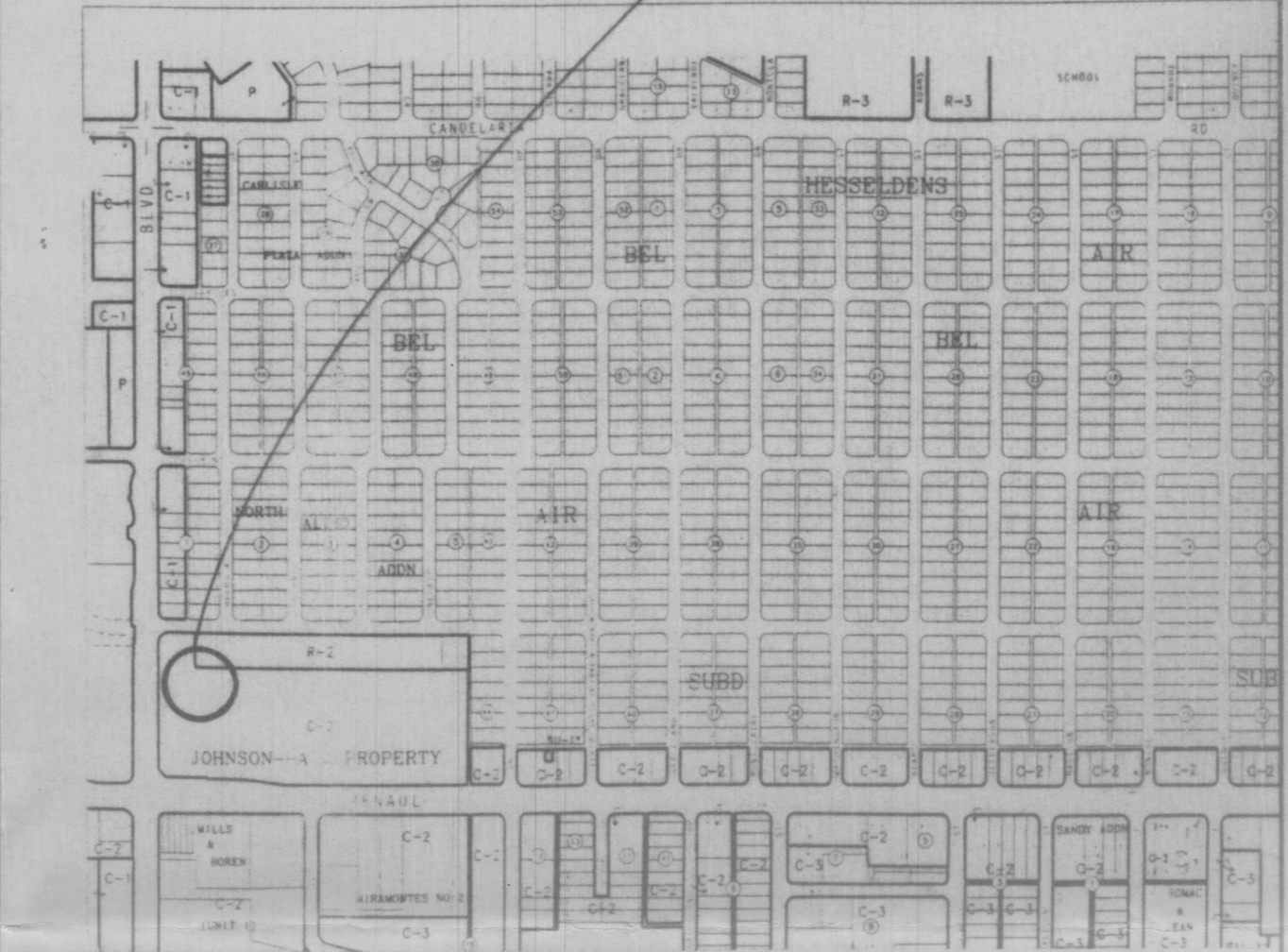
AS SHOWN ON PANEL 23 OF THE FEDERAL ENERGY MANAGEMENT AGENCY FLOOD BOUNDARY AND FLOODWAY MAP, DATED OCTOBER 14, 1983, THIS SITE DOES NOT LIE WITHIN THE DESIGNATED 100 YEAR FLOOD HAZARD AREA.

THE EXISTING SURVEY INFORMATION SHOWN HEREON WAS PREPARED FROM A FIELD SURVEY DONE BY RIO GRANDE SURVEYING CO., INC., IN DECEMBER OF 1995. A SUBSEQUENT FIELD REVIEW BY THIS OFFICE REVEALED THAT ALL THE INFORMATION SHOWN HEREON IS CONSISTANT THE THE ACTUAL CONDITIONS THAT EXIST IN THE FIELD.



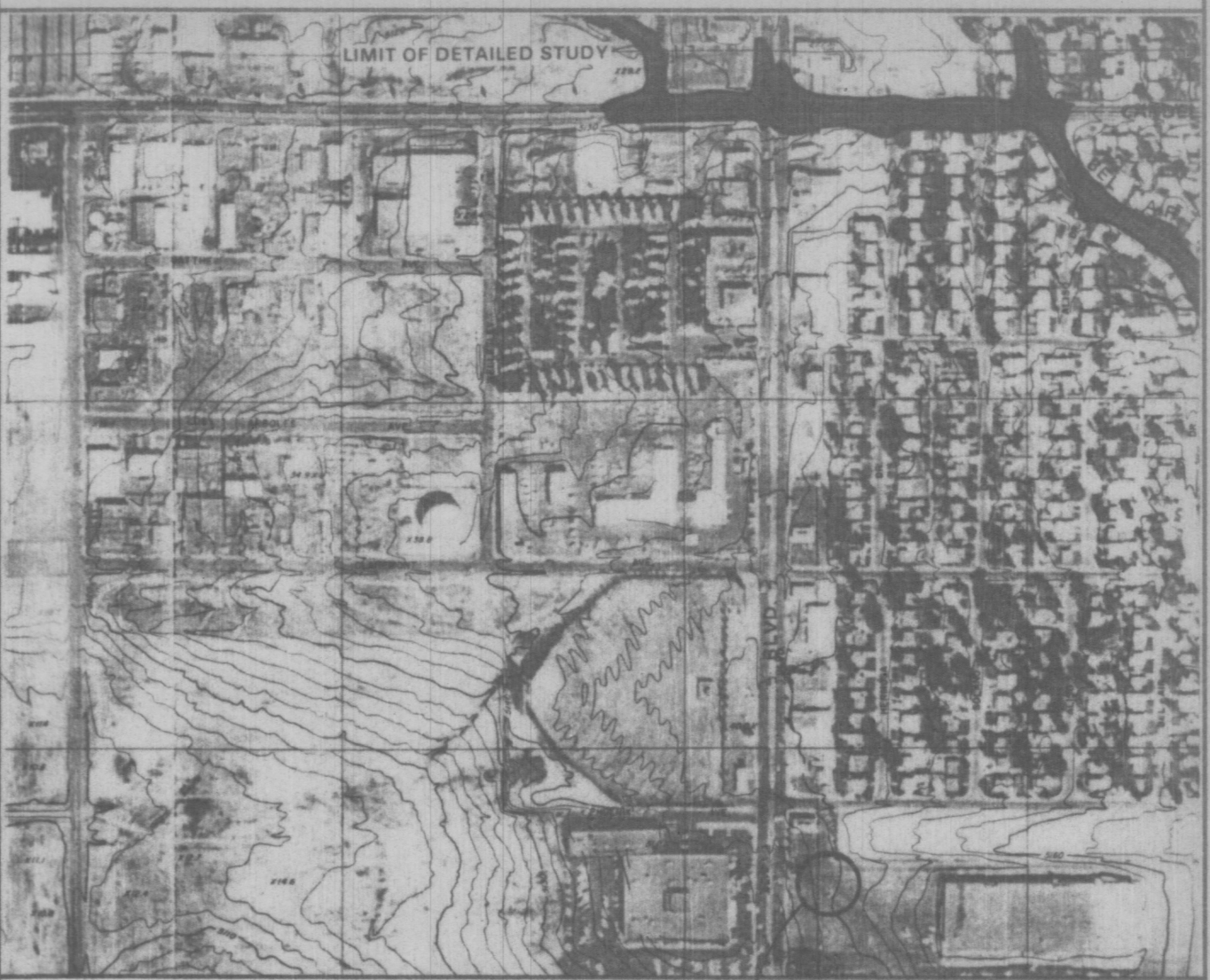
LOCATION MAP

PROJECT LOCATION



ZONE MAP

H-17



FLOOD BOUNDARY MAP

PROJECT LOCATION

GATEWAY SHOPPING CENTER
GRADING AND DRAINAGE PLAN

KEMPER-VAUGHAN
CONSULTING ENGINEERS

3700 COORS RD. N.W. • ALBUQUERQUE, NEW MEXICO 87120 • (505) 831-4520							
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