

## DRAINAGE PLAN

THE SUBJECT PROPERTY IS LOCATED ON COLUMBINE AVE. JUST WEST OF JEFFERSON STREET AND NORTH OF ALAMEDA BLVD. NE. AS SHOWN ON PANEL 9 OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD BOUNDARY AND FLOODWAY MAP. THIS SITE LIES WITHIN A DESIGNATED FLOOD HAZARD AREA. THE APPROXIMATE LOCATION OF THAT BOUNDARY IS SHOWN HEREON. HOWEVER, PUBLIC STORM DRAINAGE IMPROVEMENTS WERE CONSTRUCTED WHICH MAY HAVE REMOVED THE FLOOD BOUNDARY FROM THIS SITE. NO MAP REVISION REQUEST HAS BEEN MADE TO FEMA.

THERE EXISTS AN ESTABLISHED DRAINAGE MANAGEMENT PLAN FOR THE SUBDIVISION. THE RICHFIELD PARK SUBDIVISION IMPROVEMENTS WERE CONSTRUCTED IN 1987. THE DRAINAGE MANAGEMENT CRITERIA FOR THE PROJECT WAS ESTABLISHED BY THE "DRAINAGE REPORT FOR RICHFIELD PARK" PREPARED BY ESPEY, HUSTON & ASSOCIATES, INC., DATED AUGUST 1, 1986. PER THE REPORT, ALL LOTS ARE TO FREE DISCHARGE INTO THE PUBLIC STREET SYSTEM WHICH CONVEYS RUNOFF TO THE EXISTING AMAFCA CHANNEL LOCATED ALONG WEST BOUNDARY OF RICHFIELD PARK, TRACT D-1. THE PROJECT WAS BUILT IN PHASES IN ACCORDANCE WITH THE PHASING PLAN OUTLINED IN THE APPROVED DRAINAGE REPORT. TRACT D-1 IS CURRENTLY UNDEVELOPED; HOWEVER, INTERIM PAVED CHANNELS WERE CONSTRUCTED TO CONVEY RUNOFF FROM THE PUBLIC STREETS TO THE AMAFCA CHANNEL.

THE PLANNED IMPROVEMENTS TO THE SUBJECT PROPERTY INCLUDE THE CONSTRUCTION OF A NEW BUILDING, NEW LANDSCAPING, AND THE CONSTRUCTION OF ACCESS TO COLUMBINE AVENUE.

THE TOPOGRAPHY SHOWN HEREON WAS PROVIDED BY RIO GRANDE SURVEYING FORM A FIELD SURVEY PERFORMED IN MARCH OF 1995. A SUBSEQUENT FIELD INSPECTION PERFORMED BY THIS OFFICE REVEALED THAT ALL THE INFORMATION SHOWN IS CONSISTANT WITH THE ACTUAL CONDITIONS THAT EXIST IN THE FIELD.

OFFSITE DRAINAGE: CURRENTLY, EXISTING OFFSITE RUNOFF ENTERS THE PROPERTY FROM THE EAST. THIS STORM WATER IS IN SHEET FLOW AND HAS BEEN ESTIMATED AT 2.1 cfs. ON 2/15/95 APPROVAL WAS GIVEN BY THE C.O.A. FOR A HYDROLOGY PLAN (C17-2A12) TO DEVELOP LOT 6 (IMMEDIATELY EAST OF SUBJECT PROPERTY). THIS PLAN INCLUDES THE DIVERSION OF ALL WATERS TO THE EXISTING ROADWAY; THEREBY, ELIMINATING ANY OFFSITE CONTRIBUTION TO THIS PARCEL. SHOULD THE DEVELOPMENT OF THIS PROPERTY PRECEED THE DEVELOPMENT OF LOT 6, AN EARTH BERM SHALL BE CONSTRUCTED ALONG THE EAST PROPERTY LINE TO DIVERT ANY STORM WATER TO THE EXISTING STREET.

## 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	= 0.964 AC.	
TREATMENT A	= 0.964 AC. = 100%	0.000 AC. = 0.0%
TREATMENT B	= 0.000 AC. = 0.0%	0.149 AC. = 15.4%
TREATMENT C	= 0.000 AC. = 0.0%	0.000 AC. = 0.0%
TREATMENT D	= 0.000 AC. = 0.0%	0.815 AC. = 84.6%

ONSITE - EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:  
EXISTING RUNOFF:

$$V100-6hr = (0.53)(0.964)/12 = 0.043 \text{ acre ft} = 1,870 \text{ cf}$$

DEVELOPED RUNOFF:

$$\text{WEIGHTED E} = [(0.78)(0.149) + (2.12)(0.815)]/0.964 = 1.91 \text{ inches}$$

$$V100-6hr = (1.91)(0.964)/12 = 0.153 \text{ acre ft} = 6,660 \text{ cf}$$

ONSITE - PEAK DISCHARGE:

EXISTING DISCHARGE:

$$Q100 = (1.56)(0.964) = 1.50 \text{ cfs}$$

DEVELOPED DISCHARGE:

$$Q100 = (2.28)(0.149) + (4.70)(0.815) = 4.17 \text{ cfs}$$

RESULTS:

DEVELOPED VOLUMETRIC RUNOFF:

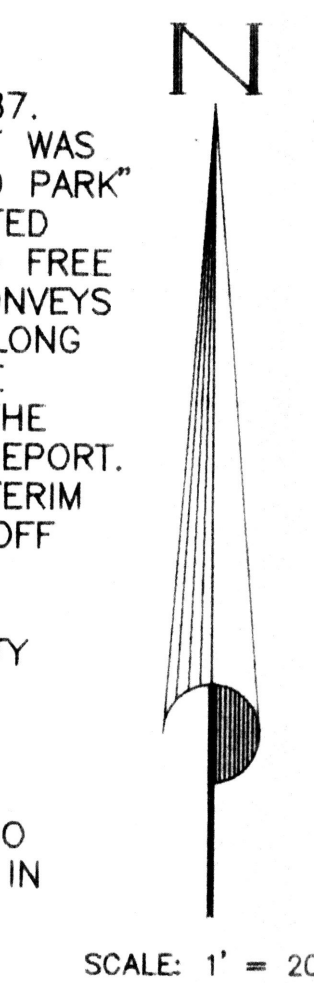
$$6,660 - 1,870 = 4,790 \text{ cfs INCREASE IN RUNOFF VOLUME}$$

DEVELOPED PEAK DISCHARGE:

$$4.17 - 1.50 = 2.67 \text{ cfs INCREASE IN PEAK DISCHARGE}$$

PROJECT TBM:  
SOUTHWEST BONNET  
BOLT ON FIRE  
HYDRANT.  
ELEV. = 5105.01

NOTE:  
IF EXISTING CURB AND GUTTER IS  
TO BE REMOVED (NOT MILLED)  
CONTRACTOR SHALL RE-INSTALL  
TO SAME ELEVATION AND REMOVAL  
SHALL BE TO NEAREST JOINT (FULL STONE)



SCALE: 1" = 20'

10' CONC. & ASPH. SWALE

## LEGAL DESCRIPTION

LOTS NUMBERED SEVEN (7) AND EIGHT (8) OF "RICHFIELD PARK SUBDIVISION", 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 MARCH 10, 1988 IN C36-12

## BENCH MARK

CITY OF ALBUQUERQUE CONTROL STATION 6-C17. NAIL IN POWER POLE AT THE NORTHWEST QUAD. INTERSECTION OF PASEO DEL NORTE AND JEFFERSON ST. ELEVATION = 5120.26

## GENERAL LEGEND

EXISTING CONTOUR	---
PROPOSED CONTOUR	---
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
WATER METER	WM
RECORD DRAWING ELEV.	4.22

## 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.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AND ALL CURRENT UPDATES.
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR PERMIT.
- TWO WORKING DAYS PRIOR TO AN EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE A 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- BACKFILL COMPACTION SHALL BE ACCORDING TO ARTERIAL STREET USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.

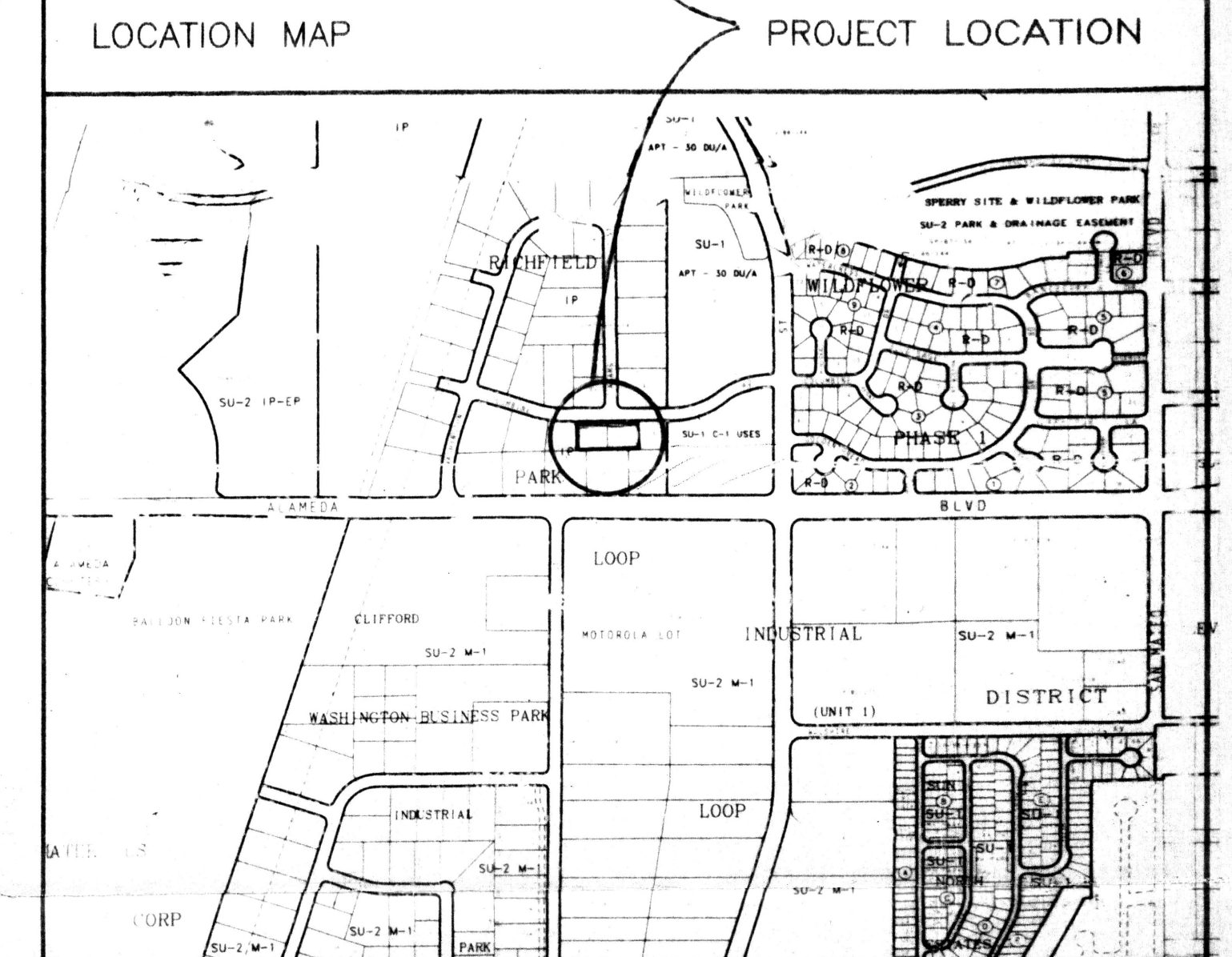
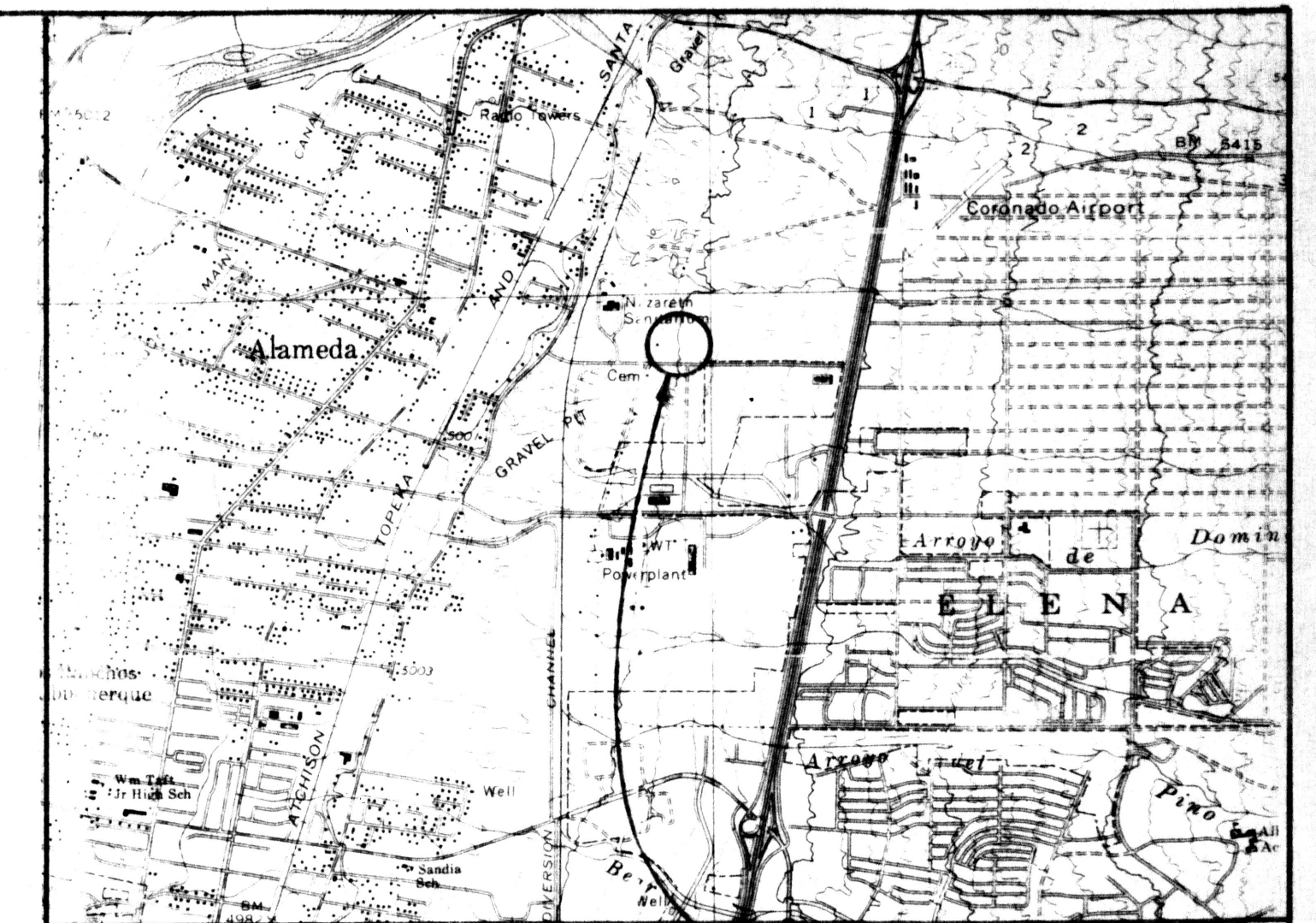
NAME	DATE
HYDROLOGY	
INSPECTOR	
A.C.E./FIELD	

THE SITE IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLAN WITH ENGINEER'S SEAL DATED 4/27/95, (WITH THE MINOR REVISIONS AND RECORD DRAWING INFORMATION AS SHOWN HEREON) AND THE DRAINAGE WILL FUNCTION AS PROPOSED.

RECORD DRAWING

DATE: 8/31/95

\*\*\*RECORD DRAWING REVISION TO INCLUDE PROPOSED PARKING CANOPY. DATED 10/9/95



FLOOD BOUNDARY MAP PROJECT LOCATION

RICHFIELD PARK SUBDIVISION, ALBUQUERQUE, NEW MEXICO			
LOT 7 & 8 RICHFIELD PARK			
GRADING AND DRAINAGE PLAN			
LEASE BUILDING FOR NEAL MEISNER			
KEMPER-VAUGHAN			
CONSULTING ENGINEERS			
3700 COORS RD. N.W. • ALBUQUERQUE, NEW MEXICO 87120 • (505) 831-4520			
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