PUBLIC WORKS/HYDROLOGY

C22/D16

LOCATION MAP C-22-Z

GENERAL NOTES

1. 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.

2. 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.

3. 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.

4. 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.

5. THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY BERNALILLO COUNTY FOR THE COMPLETION OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.

DRAINAGE PLAN

THE PROPOSED IMPROVEMENTS CONSIST OF A NEW RESIDENTIAL HOME. THE PROPERTY IS LOCATED ON MODESTO AVENUE APPROXIMATELY 330 FEET WEST OF TENNYSON STREET. IT IS THE INTENTION OF THIS PLAN TO MAINTAIN THE CURRENT DRAINAGE PATTERNS OF THE AREA. AS SHOWN ON PANEL 11 OF THE FEDERAL EMERGENCY MANAGEMENT FLOOD BOUNDARY AND FLOODWAY MAP, DATED OCTOBER 14, 1982, THIS SITE DOES NOT LIE WITHIN A DESIGNATED 100 YEAR FLOOD HAZARD AREA.

THE TWO (2) PARCELS OF PROPERTY, LOTS 2 & 31, EAST AND SOUTHEAST OF THE SUBJECT PROPERTY HAVE ALREADY BEEN DEVELOPED. THESE PROPERTIES WERE DEVELOPED IN SUCH A MANNER THAT CURRENTLY, NO OFF-SITE FLOWS enter the SUBJECT PARCEL. THE EXISTING OFF-SITE DRAINAGE CHARACTERISTICS UTILIZE THE ROADWAY RIGHT-OF-WAY (MODESTO AVE.) AND AN EXISTING ARROYO NORTH OF MODESTO AVENUE.

THE EXISTING TOPOGRAPHY SHOWN ON THIS PLAN WAS DEVELOPED FROM A SURVEY PREFORMED BY RIO GRANDE ENGINEERING & SURVEY CO., P.C., ON AUGUST 7, 1990. A SUBSEQUENT FIELD REVIEW OF THE SITE, PERFORMED BY THIS OFFICE, REVILED THAT ALL THE INFORMATION SHOWN ON THIS PLAN IS CONSISTENT WITH THE ACTUAL CONDITIONS THAT EXIST IN THE FIELD.

THE CALCULATIONS SHOWN ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS OF THE 100-YR, 6-HOUR RAINFALL EVENT. THE INTERIM DRAINAGE DESIGN CRITERIA FOR BERNALILLO COUNTY WAS USED TO QUANTIFY THE VOLUMETRIC RUNOFF AND THE PEAK RATE OF DISCHARGE.

CALCULATIONS

THE FOLLOWING CALCULATION WERE DEVELOPED USING THE INTERIM DRAINAGE DESIGN CRITERIA FOR BERNALILLO COUNTY, APRIL 1990.

SITE CHARACTERISTICS

SITE LOCATION: ZONE 4 (IDDC TABLE 1)

PRECIPITATION: P = 2.90 inches (IDDC TABLE 2)

LAND TREATMENT: EXISTING - TREATMENT A (IDDC TABLE 4)
DRIVEWAY - TREATMENT C (IDDC TABLE 4)
BUILDING & CONC. - TREATMENT D (IDDC TABLE 4)

	EXISTING		PROPOSED	
TOTAL AREA	= 0.8864 AC.			
NATURAL VEG.	= 0.8864 AC. = 100.0%		0.6383 AC. = 72.0%	
BUILDING	= 0.00 AC. = 0.0%		0.0879 AC. = 9.9%	
CONCRETE	= 0.00 AC. = 0.0%		0.0303 AC. = 3.4%	
DRIVEWAY	= 0.00 AC. = 0.0%		0.1299 AC. = 14.7%	

EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:

EXCESS PRECIPITATION: TREATMENT A E = 0.66 inches (IDDC TABLE 8)
TREATMENT C E = 1.13 inches (IDDC TABLE 8)
TREATMENT D E = 1.57 inches (IDDC TABLE 8)

EXISTING RUNOFF:

V100 = (0.66)(0.8864)/12 = 0.048 acre-ft = 2,123 cf

DEVELOPED RUNOFF:

WEIGHTED E = [0.66](0.6383) + [1.13](0.1299) + [2.57](0.1182) = 0.98 inches
0.8864

V100 = (0.98)(0.8864)/12 = 0.072 acre-ft = 3,153 cf

RESULT: 3,153 - 2,123 = 1,030 cf INCREASE IN RUNOFF VOLUME

PEAK DISCHARGE:

PEAK DISCHARGE: TREATMENT A = 2.26 cfs/acre (IDDC TABLE 9)
TREATMENT C = 3.94 cfs/acre (IDDC TABLE 9)
TREATMENT D = 5.74 cfs/acre (IDDC TABLE 9)

EXISTING DISCHARGE:

Q100 = (2.26)(0.8864) = 2.00 cfs

DEVELOPED DISCHARGE:

Q100 = (2.26)(0.6383) + (3.94)(0.1229) + (5.74)(0.1182) = 2.63 cfs

RESULT: 2.63 - 2.00 = 0.63 cfs INCREASE IN PEAK DISCHARGE

BENCH MARK

ACS NO. "EG-6MP" USGLO BRASS CAP LOCATED APPROXIMATELY 100' WEST AND 15' NORTH OF THE INTERSECTION OF ELENA DRIVE AND TENNYSON STREET. ELEV = 6081.03

A TEMPORARY BENCHMARK, A SPIKE IN THE SOUTH SIDE OF THE POWER POLE LOCATED APPROXIMATELY 60 FEET NORTH OF THE NORTHEAST PROPERTY CORNER. ELEV = 6059.89

LEGAL DESCRIPTION

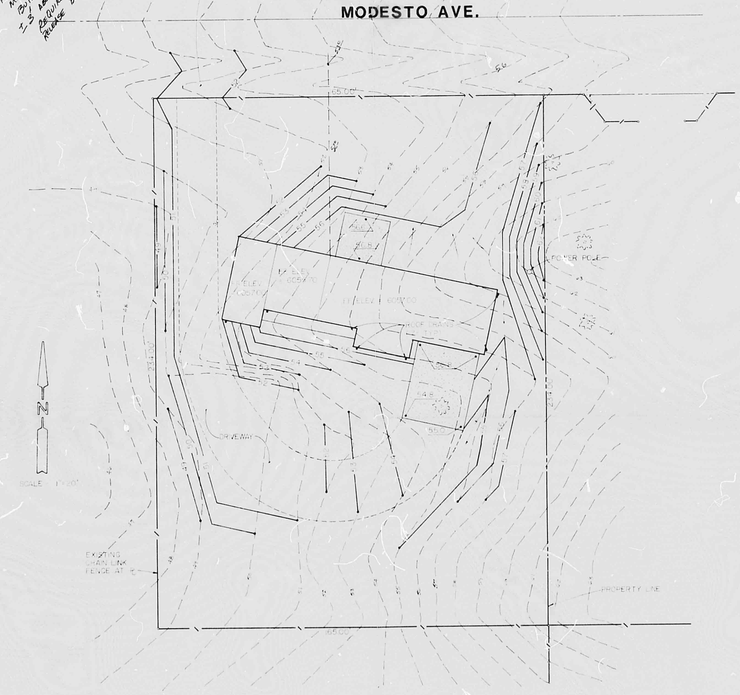
LOT 3, BLOCK 1, TRACT 2, UNIT 1, NORTH ALBUQUERQUE ACRES.

OK SINCE FLOODPLAIN IS AT MODESTO AVENUE R/W IS BUILDING PAD SUFFICIENT? ABOVE 100 YEAR ELEVATION? 9/10/90 JM

A0(D2)

PROVIDE SMOOTH "DIP" SECTION AT DRIVEWAY

MODESTO AVE.



LEGEND

EXISTING CONTOUR
PROPOSED CONTOUR
PROPOSED SPOT ELEVATION
FLOWLINE
FLOW DIRECTION ARROW
PROPOSED CONCRETE

RECEIVED
SEP 7 1990
HYDROLOGY DIVISION

BORDERS RESIDENCE
GRADING & DRAINAGE PLAN

KEMPER & COMPANY
CONSULTING ENGINEERS
P.O. Box 21818 • Albuquerque, New Mexico 87154 • (505) 263-1630

Designed	Drawn	Checked	Sheet of
KJK	KJK	KJK	1
File	Date	AUGUST 1990	

R# 24 DATE 3/14/02 DP

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DIRECTOR 11/5/02

Roberta Duran
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Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My commission expires: 9/10/06

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

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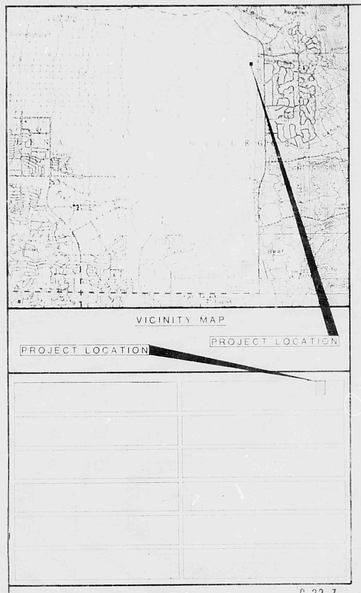
PLANS/PLATS ON FILE

FILE DESC: C22/D16

PLANS/PLATS 1

E 30 D 24 C 20 B 16 A 12

CITY OF ALBUQERQUE C D F



VICINITY MAP

PROJECT LOCATION

PROJECT LOCATION

LOCATION MAP C-22-Z

GENERAL NOTES

DRAINAGE PLAN

MODESTO AVE.

CALCULATIONS

BENCH MARK

LEGAL DESCRIPTION

LEGEND

RECEIVED
SEP 7 1990
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GRADING & DRAINAGE PLAN

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CONSULTING ENGINEERS

1

SCAN SHIT TWICE
ONCE ON LIGHT
ONCE ON DARK

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DIRECTOR

NOTARY PUBLIC

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E 30 D 24 C 20 B 16 A 12

CITY OF ALBUQERQUE C D F