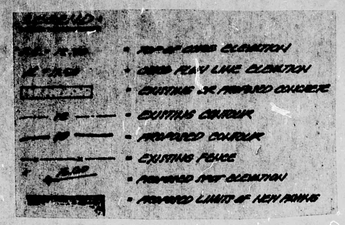
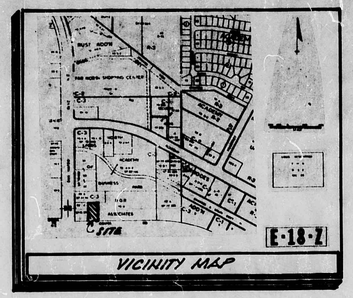
HYDROLOGY

E18/D40
ONE PLAN

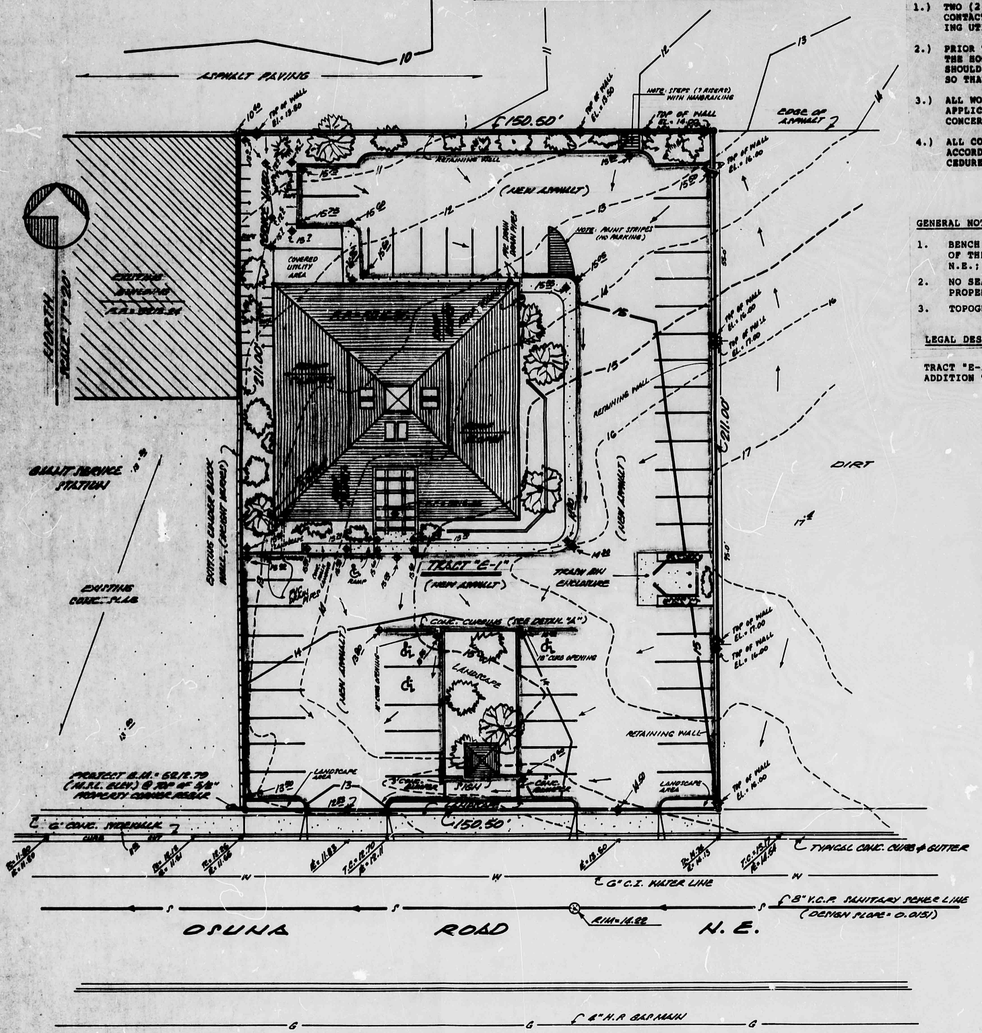
E18/D40

1 PLAN





VICINITY MAP



NOTE: ROOF DRAINAGE IS TO BE TO ROOF GUTTERS, TO DOWNSPOUTS, UNDERGROUND AND THROUGH UNDER SIDEWALK W/ 3"/2" - 4" PVC PIPE(S) AND INTO ASPHALT PAVED PARKING AREAS.

EROSION CONTROL MEASURES:

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT FOR STORM RUN-OFF DURING CONSTRUCTION; HE SHALL INSURE THAT THE FOLLOWING MEASURES ARE TAKEN:

1.) ADJACENT PROPERTY SHALL BE PROTECTED AT ALL TIMES BY CONSTRUCTION OF BERMS, DIKES, SWALES, PONDS, AND OTHER TEMPORARY GRADING AS REQUIRED TO PREVENT STORM RUNOFF FROM LEAVING THE SITE AND ENTERING ADJACENT PROPERTIES.

2.) ADJACENT PUBLIC RIGHT-OF-WAYS SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUNOFF FROM THE SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER PUBLIC STREETS.

3.) THE CONTRACTOR SHALL IMMEDIATELY AND THROUGHLY REMOVE ANY AND ALL SEDIMENT WITHIN PUBLIC STREETS THAT HAS BEEN ERODED FROM THE SITE AND DEPOSITED THERE.

CONSTRUCTION NOTES:

1.) TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT 765-1234 FOR LOCATION OF EXISTING UTILITIES.

2.) PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS; SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM OF DELAY.

3.) ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

4.) ALL CONSTRUCTION WITHIN CITY RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

GENERAL NOTES:

1. BENCH MARK: CITY SURVEY STATION "NM-367-1", LOCATED AT THE NOSE OF THE NORTH MEDIAN OF THE INTERSECTION OF SAN MATEO AND OSUNA N.E.; M.S.L. ELEVATION = 5,210.60 .
2. NO SEARCH HAS BEEN MADE FOR EASEMENTS OF RECORD WITHIN THE SUBJECT PROPERTY OTHER THAN SHOWN ON THE PLAT OF RECORD.
3. TOPOGRAPHY SURVEY OBTAINED BY "TRANSIT-STADIA" METHOD.

LEGAL DESCRIPTION:

TRACT "E-1" OF THE REPLAT OF TRACT "E", NORTH ACADEMY BUSINESS PARK, AN ADDITION TO THE CITY OF ALBUQUERQUE, NEW MEXICO.

TECHNICAL SPECIFICATIONS FOR "PERMA-CURBS" :

CURBS SHALL BE MACHINE EXTRUDED PERMA-CURB OF THE SHAPE AND DIMENSIONS TO SUITE CLIENT REQUIREMENTS. THE CONCRETE USED FOR PERMA-CURB SHALL BE A SPECIAL NO SLUMP, DESIGN MIX ATTAINING APPROXIMATELY 3,500 LB. STRENGTH IN 28 DAYS. PERMA-CURBS SHALL BE A DENSE, UNIFORM TEXTURE. COLD JOINTS SHALL BE INSTALLED EVERY 15 LINEAL FEET. PERMA-CURBS SHALL IMMEDIATELY BE SPRAYED WITH SEALER TO ATTAIN THE MAXIMUM MOISTURE RETENTION. PERMA-CURBS SHALL BE BONDED TO ASPHALT AND/OR CONCRETE SURFACES WITH EPOXY RESIN OR CSS 1 BITUMELS IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS, TO ASSURE A STRONG MOISTURE PROOF BOND. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE.

"PERMA-CURB" DETAIL (NO SCALE)

(OPTIONAL CURBING)

DETAIL "A" - CURBING
1"-1'-0"

DRAINAGE COMMENTS:

THE FOLLOWING ITEMS CONCERNING THE SUBJECT SITE ARE CONTAINED ON THE GRADING AND DRAINAGE PLAN HEREON:

1.) SITE GRADING AND DRAINAGE PLAN.
2.) VICINITY MAP
3.) LEGAL DESCRIPTION
4.) LIMITS AND CHARACTER OF THE EXISTING AND PROPOSED IMPROVEMENTS.
5.) DRAINAGE CALCULATIONS

AS SHOWN ON THE PLAN HEREON, THE SUBJECT SITE IS LOCATED APPROXIMATELY 200' EAST OF THE INTERSECTION OF SAN MATEO BOULEVARD N.E. AND OSUNA ROAD, N.E. IN THE CITY OF ALBUQUERQUE, NEW MEXICO. THE SITE IS PRESENTLY TOTALLY UNDEVELOPED.

THE PROJECT SITE, (1.) DOES NOT LIE WITHIN A FLOOD PLAIN, (2.) DOES NOT LIE ADJACENT TO A NATURAL OR ARTIFICIAL WATER COURSE, (3.) HAS NO DRAINAGE EASEMENTS ON THE PROPERTY; THE SUBJECT SITE DOES NOT ACCEPT OR CONTRIBUTE TO OFF-SITE FLOWS OF ADJACENT PROPERTIES.

BASED ON A SITE INVESTIGATION, IT HAS BEEN DETERMINED THAT THE FREE DISCHARGE OF SURFACE FLOWS OF THE EXISTING AND PROPOSED QUANTITIES HAVE NO ADVERSE AFFECT ON DOWNSTREAM PROPERTIES.

DRAINAGE CALCULATIONS:

I. REFERENCES:

A. CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL (DPM) VOLUME 2, DESIGN CRITERIA, CHAPTER 22, DRAINAGE, FLOOD CONTROL AND EROSION CONTROL.

B. SOIL SURVEY OF BERNALILLO COUNTY AND PARTS OF SANDOVAL AND VALENCIA COUNTIES, NEW MEXICO, UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE.

C. FLOODWAY MAP, PANEL 16 OF 50, FEDERAL EMERGENCY MANAGEMENT AGENCY, OCTOBER 14, 1983.

II. GENERAL INFORMATION:

A. SOIL TYPE (REF. B., PAGE 21), SOIL TYPE IS EmB (EMBUDO) AND TgB (TIJERAS) GRAVELLY FINE LOAM, HYDROLOGIC SOIL GROUP "B".

B. IMPERVIOUSNESS:

TYPE OF SURFACE	EXISTING SQ. FT.	EXISTING ACRES	PROPOSED SQ. FT.	PROPOSED ACRES
BUILDING ROOF	-	-	5,850.0	0.13
CONCRETE SURFACE	-	-	1,385.0	0.03
ASPHALT SURFACE	-	-	18,156.0	0.42
LANDSCAPING	-	-	6,365.0	0.15
UNDEVELOPED SURFACE	31,755.50	0.73	-	-
SITE TOTAL	31,755.50	0.73	31,755.50	0.73
PERCENT IMPERVIOUS	0 %		80 %	

C. "C" FACTOR (SEE REF. A., PLATE 22.2 C-1)

1. UNDEVELOPED "C" FACTOR = 0.34
2. DEVELOPED "C" FACTOR = 0.76

D. RAINFALL, 100-YEAR, 6-HOUR, R_6; (SEE REF. A., PLATE 22.2 D-1)
R_6 = 2.2 INCHES

E. TIME OF CONCENTRATION, T_c; USE MINIMUM TIME OF CONCENTRATION OF TEN (10) MINIMUM FOR A SITE THIS SIZE.

F. RAINFALL INTENSITY, "I"; (SEE REFERENCE A., PLATE 22.2 D-2)
$I = R_6 \times 6.84 \times T_c^{-0.51} = 2.2 \times 6.84 \times (10)^{-0.51} = 4.65$ IN./HR.

III. PEAK DISCHARGE:

A. EXISTING CONDITIONS, (USE RATIONAL EQUATION)
$Q_{100} = 0.34 \times 4.65 \times 0.73 = 1.15$ cfs
$Q_{10} = 0.657 \times 1.15 = 0.76$ (REF. A., PLATE 22.2 D-1)

B. DEVELOPED CONDITIONS.
$Q_{100} = 0.76 \times 4.65 \times 0.73 = 2.58$ cfs
$Q_{10} = 0.657 \times 2.58 = 1.70$ cfs

IV. PEAK VOLUME:

A. EXISTING CONDITIONS:
$V_{100} = 0.34 \times (2.2/12) \times 31,755.5 = 1,975.8$ cu. ft.
$V_{10} = 0.657 \times 1,975.8 = 1,298.1$ cu. ft.

B DEVELOPED CONDITIONS:
$V_{100} = 0.76 \times (2.2/12) \times 31,755.5 = 4,416.6$ cu. ft.
$V_{10} = 0.657 \times 4,416.6 = 2,901.7$ cu. ft.

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DATE: DECEMBER, 1985

GRADING AND DRAINAGE PLAN FOR "THE EMPEROR RESTAURANT" OSUNA RD. N.E. ALBUQUERQUE, NEW MEXICO

SHEET 1 OF 1