

FIRM MAP PANEL # 356 E

GRADING & DRAINAGE PLAN

THE PROPOSED WAREHOUSE PROJECT IS LOCATED IN THE EXISTING PRINCESS JEANNE SHOPPING CENTER IN THE NORTHEAST AREA OF ALBUQUERQUE ON EUBANK BLVD. IMMEDIATELY NORTH OF CONSTITUTION ST. THE GRADING AND DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERNALILLO COUNTY FLOOD HAZARD ORDINANCE, NO. 88-46, AND THE CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE PLAN SHOWS:

- EXISTING CONTOURS, AND SPOT ELEVATIONS AND EXISTING DRAINAGE PATTERNS, BUILDINGS AND IMPROVEMENTS.
- PROPOSED IMPROVEMENTS: 3200 SF WAREHOUSE BUILDING, CONCRETE FLAT WORK, NEW GRADE ELEVATIONS, AND LANDSCAPING.
- CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
- QUANTIFICATION OF DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS WHICH CONTRIBUTE TO THE EXISTING FLOWS.

PRESENTLY, THE AREA UNDER THE PROPOSED "FOOTPRINT" IS A DIRT, "HARD-PAN" SURFACE WITHOUT VEGETATION. THE SITE IS BOUNDED BY DEVELOPED COMMERCIAL ZONED FACILITIES. THE SITE FALLS APPROXIMATELY 1% FROM NORTHEAST TO SOUTHWEST.

PRIMARY ACCESS TO THE SITE HAS BEEN FROM EUBANK BLVD. AND WILL REMAIN SO. ON THE EAST IS AN EXISTING PAVED PUBLIC ALLEY WITH INVERTED CROWN. SITE RUNOFF WILL BE ALLOWED TO DRAIN THROUGH THE SITE, OR PONDED IN DEPRESSED LANDSCAPE AREAS. THE SITE HAS HISTORICALLY DRAINED TO THE SOUTHWEST.

HISTORICAL DOWNSTREAM OUTFALL LOCATIONS WILL REMAIN UNCHANGED WITH DEVELOPMENT. FREE DISCHARGE OF SITE RUNOFF IS ACCEPTABLE SINCE DOWNSTREAM CAPACITY EXISTS WITH THE MINIMAL INCREASE DUE TO DEVELOPMENT. A PORTION OF SITE RUNOFF IS ROUTED THROUGH PROPOSED LANDSCAPING.

CALCULATIONS

DESIGN CRITERIA
 HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM) REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE, ADOPTED BY THE COUNTY OF BERNALILLO
 DISCHARGE RATE: $Q = Q_{PEAK} \times AREA$, "Peak Discharge Rates For Small Watersheds"
 VOLUMETRIC DISCHARGE: $VOLUME = E_{WEIGHTED} \times AREA$
 $Q_{100} = 2.90$ inches, Zone 4 Time of Concentration, $T_C = 10$ Minutes
 DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [] = 10 YEAR VALUES

EXISTING CONDITIONS
 70% 30% C
 LOT AREA = 0.33 ACRES, WHERE EXCESS PRECIP. "Composite" = 2.29 in. [1.40]
 PEAK DISCHARGE, $Q_{100} = 1.6$ CFS [1.05] WHERE UNIT PEAK DISCHARGE "C" = 3.73 CFS/AC. [2.26]
 THEREFORE: $VOLUME_{100} = 2743$ CF [1677] $V = 5.25$ CFS/AC.

DEVELOPED CONDITIONS
 DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

AREA	LAND TREATMENT	Q_{Peak}	E
UNDEVELOPED	---	2.20 [0.87]	0.80 [0.28]
LANDSCAPING	A	2.92 [1.45]	1.08 [0.46]
COMPACTED SOIL & Slopes >	B	3.73 [2.26]	1.46 [0.73]
ROOF - PAVEMENT	C	5.25 [3.57]	2.64 [1.69]

THEREFORE: $E_{WEIGHTED} = 2.39$ in. [1.49] & $VOLUME_{100} = 2863$ CF
 $Q_{100} = 1.62$ CFS $Q_{10} = 1.08$ CFS

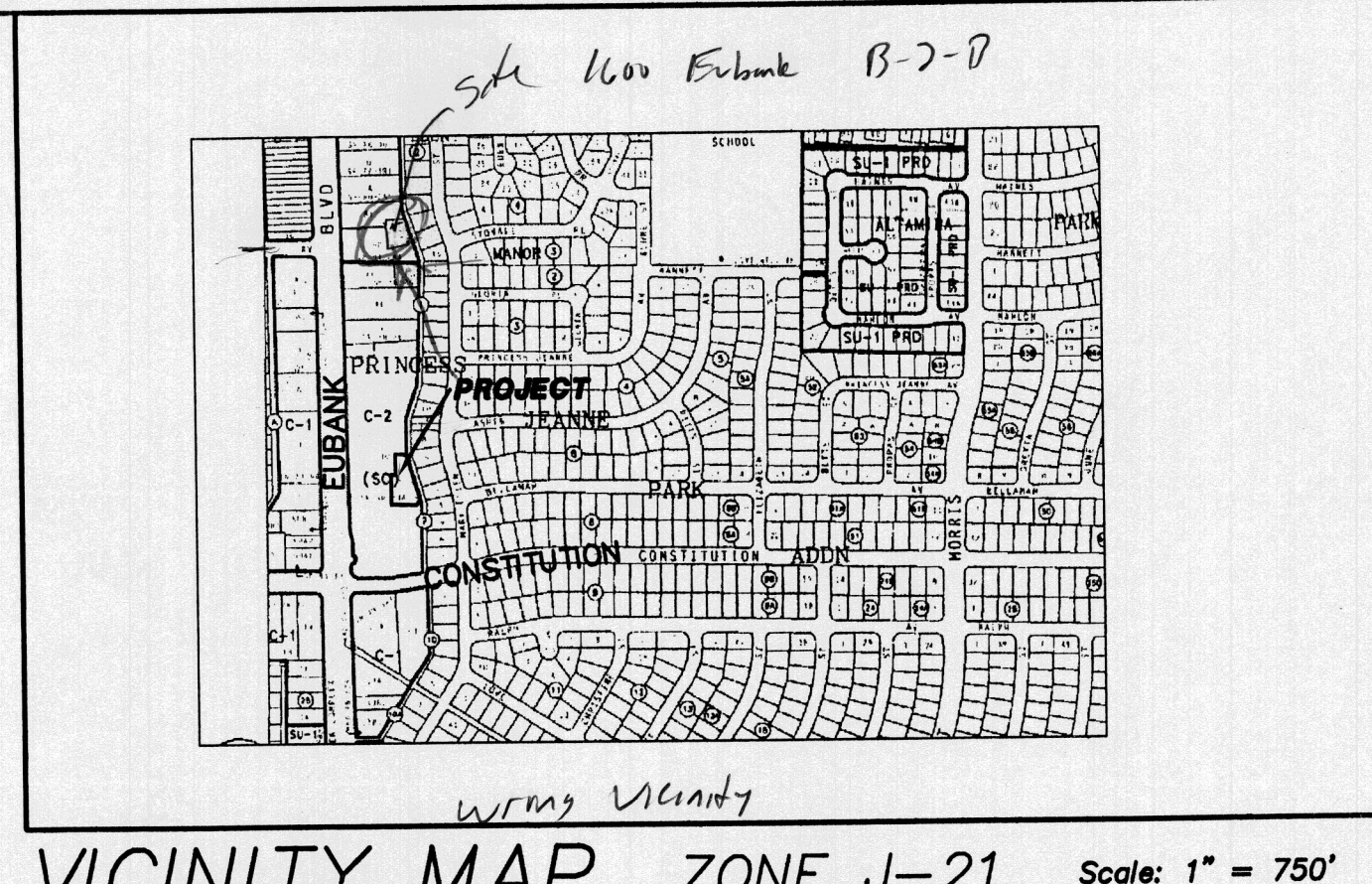
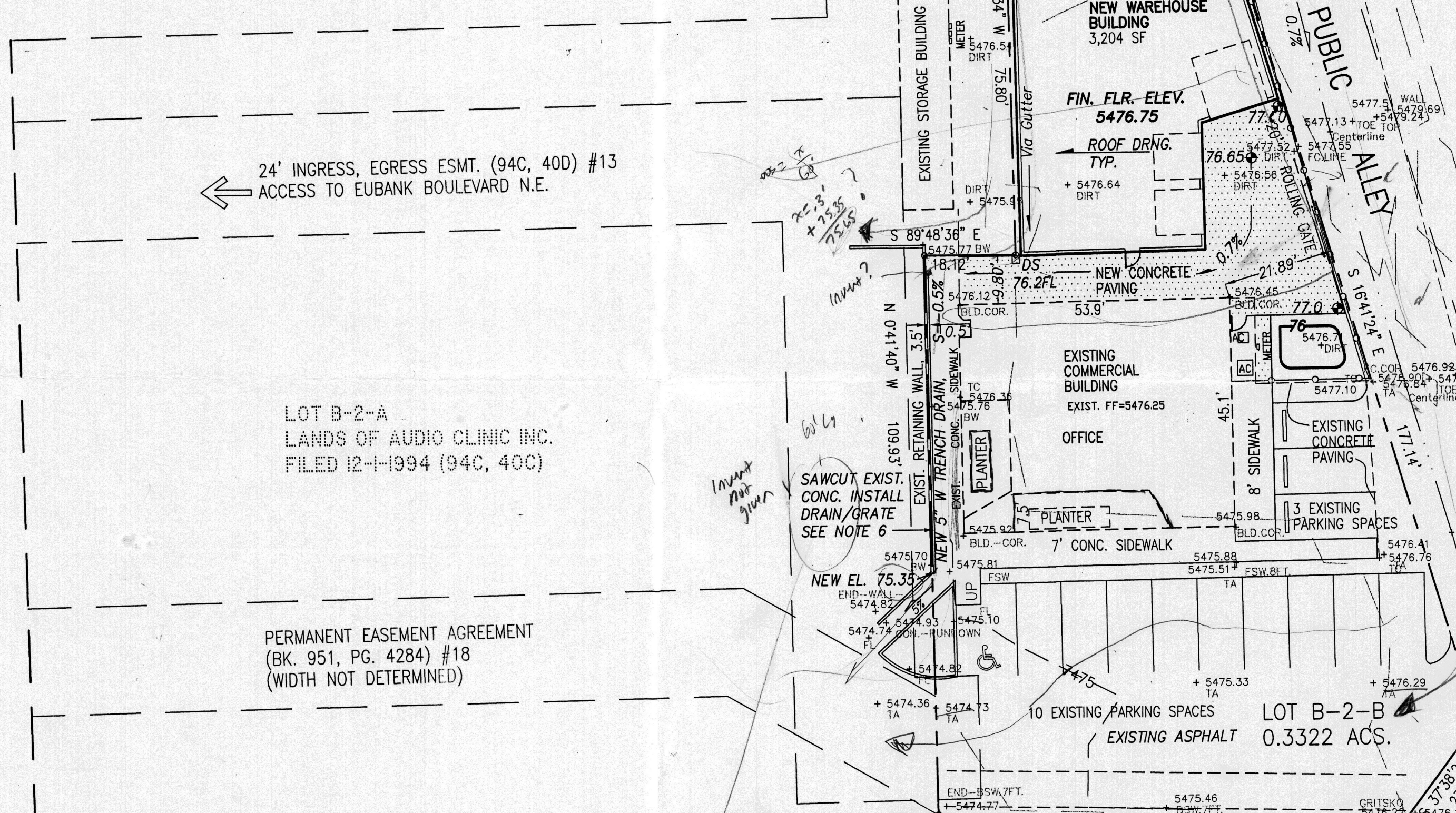
DOWNSTREAM ANALYSIS
 THE SITE HISTORICALLY, AND AS DEVELOPED WILL OUTFALL RUN-OFF TO THE SOUTHWEST WITHIN THE SHOPPING CTR.

FREE DISCHARGE IS ACCEPTABLE SINCE THE DOWNSTREAM STORM DRAINAGE FACILITIES HAVE CAPACITY. THE PROJECT TIME TO PEAK IS MUCH LESS THAN OVERALL BASIN TIME TO PEAK & INCREASE DUE TO DEVELOPMENT IS NEGLIGIBLE. (INCREASE FROM THE EXISTING. (0.02 CFS)

A PORTION OF DEVELOPED RUNOFF WILL BE ROUTED TO AND/OR THROUGH REQUIRED LANDSCAPING.

② Show truck drain calculations
 ③ Show truck drain calculations

LOT B-1
 LANDS OF AUDIO CLINIC INC.
 FILED 6-1-1983 (C21, 87)



NOTES

- ANY WORK WITHIN THE RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION, 7TH EDITION W/ UPDATES.
- AN EXCAVATION/CONSTRUCTION PERMIT IS REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY R.O.W. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION.
- 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.
- CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.
- MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3 HORIZONTAL TO 1 VERTICAL, 3:1. ALL DIMENSIONS TO FACE OF CURB, UNLESS NOTED OTHERWISE.
- INSTALL POLYETHYLENE (PE) TRENCH DRAIN AND GRATE, 5" WIDE, POLY DRAIN, HANGOR OR APPROVED EQUAL. PROVIDE 1/2" ELASTOMERIC SEAL AND EXPANSION JOINT ABUTTING EXISTING SURFACES.

LEGEND

- EXIST. SPOT ELEVATION +5424.0
 EXIST. CONTOUR -10
 NEW SPOT ELEVATION 24.0
 NEW CONTOUR -12
 NEW SWALE
 DRAINAGE DIRECTION, EXISTING
 NEW P.C.C., CONCRETE
 TOP OF CURB, EXISTING TC
 FLOWLINE FL
 EXISTING POWER POLE OPP
 FACE OF CURB/FACE OF CURB F-F

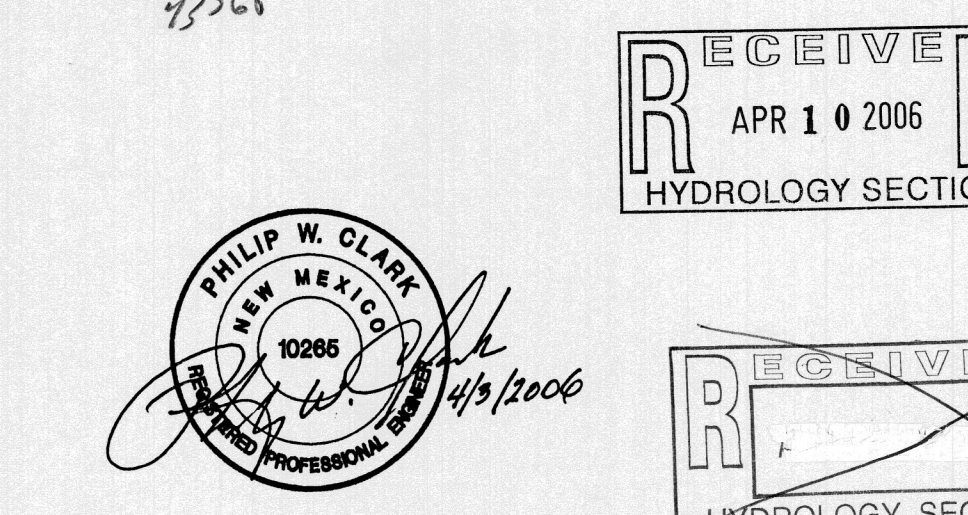
$8' - 10' \times 18' = 18.00$
 $43560 = 0.41 \sim .33$

PROJECT DATA

LEGAL DESCRIPTION (Existing Platting)
 LOT B-2-B, LANDS OF AUDIO CLINIC ALBUQUERQUE, NEW MEXICO

PROJECT BENCHMARK
 TOP OF NUMBER 4 REBAR/CAP AT THE PROJECT MARKED SOUTHEAST PROPERTY CORNER, MSL ELEVATION = 5476.22
 (TIE FROM ACS 6-121, LOCATED IN THE MEDIUM NORTH OF THE CONSTITUTION AND EUBANK BLVD. INTERSECTION)

TOPOGRAPHIC DESIGN SURVEY
 COMPILED BY CLARK CONSULTING ENGINEERS FROM DESIGN SURVEY PERFORMED BY TERRAMETRICS OF NEW MEXICO, 3/2006



Clark Consulting Engineers	
19 Ryan Road Edgewood, New Mexico 87015	
Tel: (505) 281-2444 Fax: (505) 281-2444	
DATE	REVISION
LOT B-2-B, LANDS OF AUDIO CLINIC	
ROTO-ROOTER WAREHOUSE 1600 EUBANK BLVD., NE	
Grading & Drainage Plan	
DESIGNED BY: PWC	DRAWN BY: CCE
CHECKED BY: PWC	DATE: 3/22/06
JOB #: Roto-ROOT	FILE #: G/D
1 OF 1	

I, PHILIP W. CLARK, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT I HAVE VISITED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS, AND DO FURTHER CERTIFY THAT NO EARTHWORK OF ANY KIND, NOR ANY DISTURBANCE OF THE EXISTING GROUND HAS OCCURRED ON THIS SITE SINCE THE CONTOURS WERE DETERMINED.

Philip W. Clark NMPE #10266