

VICINITY MAP

H-23-Z

EROSION CONTROL MEASURES:

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR MANAGEMENT OF STORM RUNOFF DURING CONSTRUCTION. HE SHALL ENSURE THAT THE FOLLOWING MEASURES ARE TAKEN:

- 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 SUBJECT SITE AND ENTERING ADJACENT PROPERTIES.
- ADJACENT PUBLIC RIGHT-OF-WAYS SHALL BE PROTECTED AT ALL TIMES FROM STORM WATER RUNOFF FROM THE SUBJECT SITE. NO SEDIMENT BEARING WATER SHALL BE PERMITTED TO ENTER PUBLIC STREET RIGHT-OF-WAYS.
- THE CONTRACTOR SHALL IMMEDIATELY AND THOROUGHLY REMOVE ANY AND ALL SEDIMENT FROM PUBLIC STREETS THAT HAS BEEN ERODED, FROM THE SUBJECT SITE AND DEPOSITED THEREON.

CONSTRUCTION NOTES:

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE AT 260-1990 FOR THE ACTUAL FIELD LOCATION OF THE EXISTING SURFACE OF SUB-SURFACE UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS 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.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- ALL CONSTRUCTION WITHIN PUBLIC STREET RIGHT-OF-WAY(S) SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE/BERNALILLO COUNTY STANDARDS AND PROCEDURES.

LEGEND:

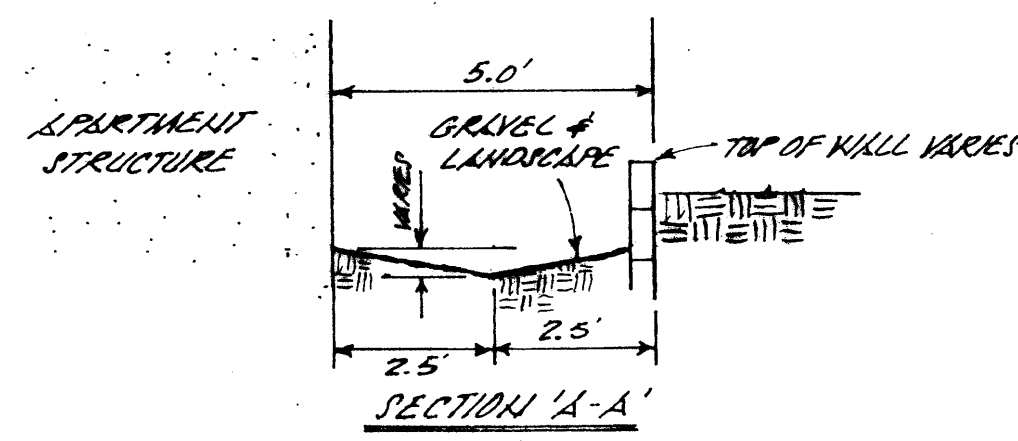
TOP OF CURB ELEVATION = 76.22
CURB FLOWLINE ELEVATION = 76.25
EXISTING SPOT ELEVATION = 76.25
EXISTING CONTOUR ELEVATION = 76.0
PROPOSED SPOT ELEVATION = 76.25
PROPOSED CONTOUR ELEVATION = 76.0
PROPOSED OR EXISTING CONCRETE SURFACE =
EXISTING FENCE LINE =

LEGAL DESCRIPTION:

LOT 235, KACHINA HILLS, UNIT 1
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO.

BENCH MARK REFERENCE:

A.C.S. STATION "2-H23", ELEVATION = 5853.8175
T.B.M. AS SHOWN ON PLAN HEREON.



UTILITY PRECAUTIONS:
THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.

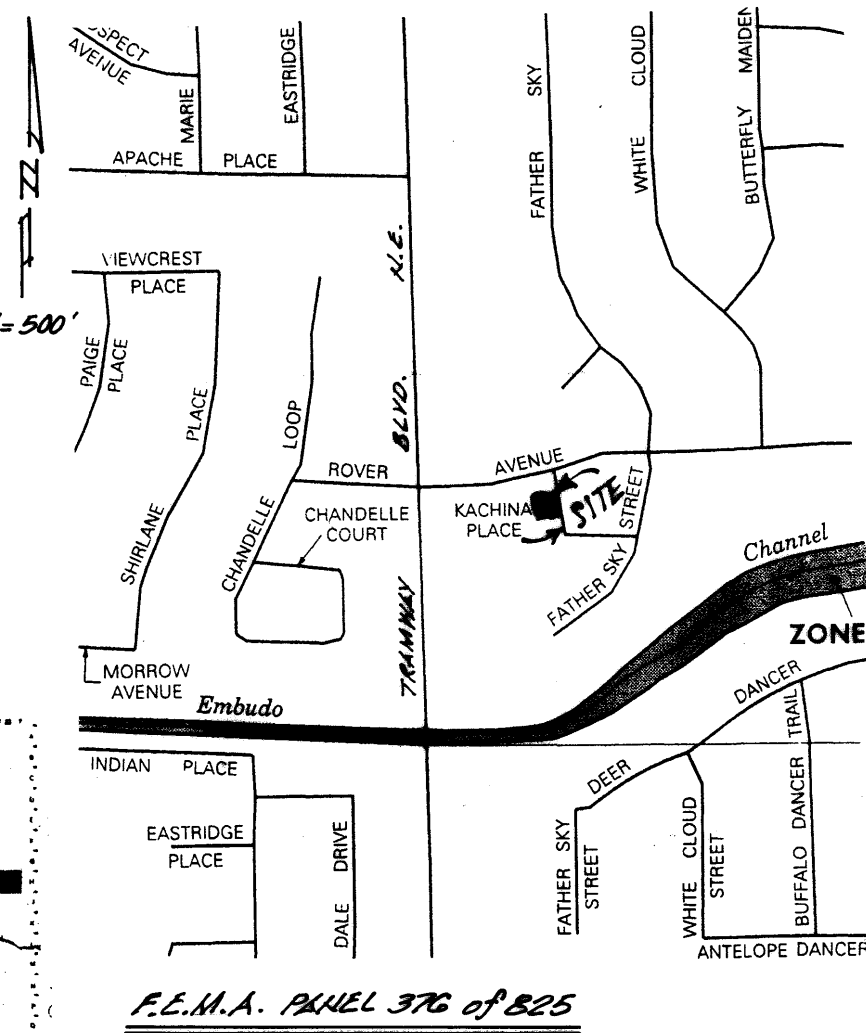
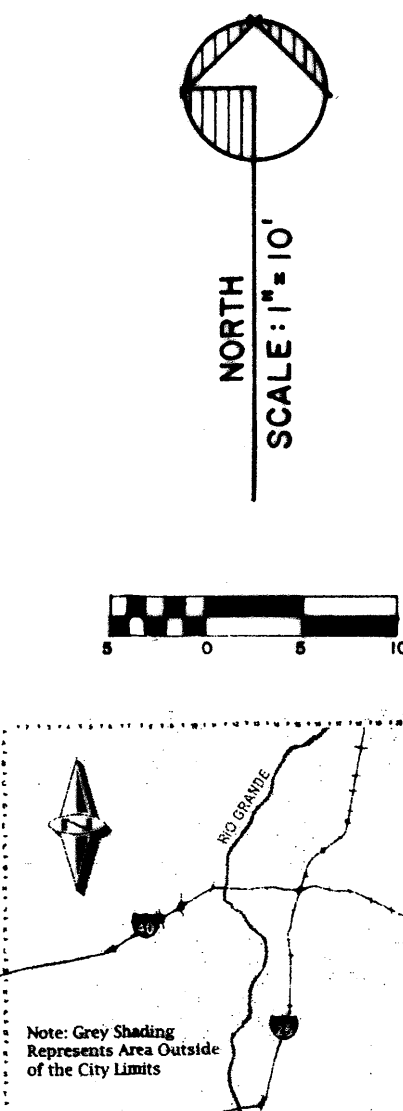
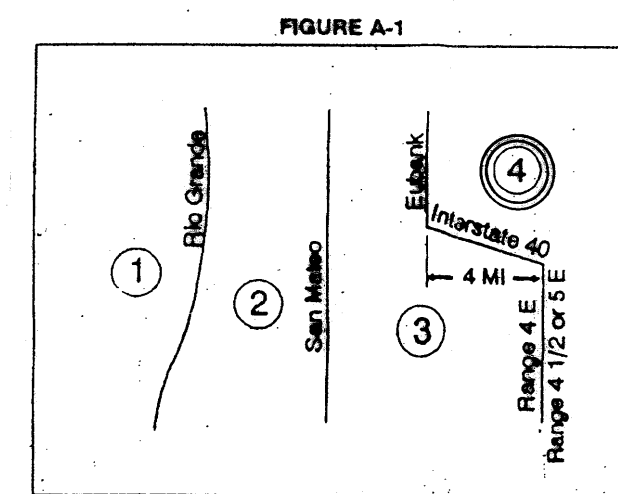


TABLE A-8. PEAK DISCHARGE (cfs/acre)				
Zone	Treatment			100-YR [2-YR, 10-YR]
	A	B	C	D
1	1.29 [0.00, 0.24]	2.03 [0.03, 0.79]	2.87 [0.47, 1.49]	4.37 [1.89, 2.89]
2	1.56 [0.00, 0.38]	2.28 [0.08, 0.95]	3.14 [0.60, 1.71]	4.70 [2.04, 3.14]
3	1.87 [0.00, 0.58]	2.90 [0.21, 1.19]	3.45 [0.78, 2.00]	5.02 [2.04, 3.39]
4	2.20 [0.05, 0.87]	2.92 [0.38, 1.45]	3.73 [1.00, 2.28]	5.25 [2.17, 3.67]

TABLE A-10. PEAK INTENSITY (MMHR at T _c = 0.82 hour)		
Zone	Intensity	100-YR [2-YR, 10-YR]
1	4.70 [1.84, 3.14]	
2	5.05 [2.04, 3.41]	
3	5.38 [2.21, 3.65]	
4	5.81 [2.34, 3.83]	

TABLE A-1. PRECIPITATION ZONES	
Zone	Location
1	West of the Rio Grande
2	Between the Rio Grande and San Mateo
3	Between San Mateo and Eubank, North of Interstate 40; and between San Mateo and the East boundary of Range 4 East, South of Interstate 40
4	East of Eubank, North of Interstate 40; and East of the East boundary of Range 4 East, South of Interstate 40



Where a watershed extends across a zone boundary, use the zone which contains the largest portion of the watershed.

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TABLE A-4. LAND TREATMENTS	
Treatment	Land Condition
A	Soil uncompacted by human activity with 0 to 10 percent slopes. Native grasses, weeds and shrubs in typical densities with minimal disturbance to grading, groundcover and infiltration capacity. Croplands. Unlined arroyos.
B	Irrigated lawns, parks and golf courses with 0 to 10 percent slopes. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes greater than 10 percent and less than 20 percent.
C	Soil compacted by human activity. Minimal vegetation. Unpaved parking, roads, trails. Most vacant lots. Gravel or rock on plastic (desert landscaping). Irrigated lawns and parks with slopes greater than 10 percent. Native grasses, weeds and shrubs, and soil uncompacted by human activity with slopes at 20 percent or greater. Native grass, weed and shrub areas with clay or clay loam soils and other soils of very low permeability as classified by SCS Hydrologic Soil Group D.
D	Impervious areas, pavement and roofs.

Most watersheds contain a mix of land treatments. To determine proportional treatments, measure respective subareas. In lieu of specific measurement for treatment (C), the area percentages in TABLE A-5 may be employed.

Drainage Comments:

As shown on the Vicinity Map hereon, the subject site is located southeast of the intersection of Tramway Blvd. N.E. and Rover Avenue N.E., in the City of Albuquerque, New Mexico, (City Zone Atlas Map "H-23-2").

The subject site is presently an undeveloped vacant lot; the proposed plan shown hereon, is to construct a 3-plex residential unit with associated improvements thereon.

The subject site (1) does not lie within a designated floodplain, nor does it have downstream flooding conditions (RE: F.E.M.A. Floodway Panel 372, of 825), 2.) does not accept offsite flows from adjacent properties, 3.) does not contribute to offsite flows of adjacent properties, 4.) does not lie adjacent to a natural or artificial water course, 5.) is allowed free discharge of developed flow into the adjacent street right of ways, (these flows do not and will not have an adverse impact to downstream properties).

Drainage Calculations:

Per Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, Bernalillo County, New Mexico.

Site Area: 0.24 acres
Precipitation Zone: Four (4), Table A-1
Peak Intensity: In./Hr. at T_c = Twelve (12) Minutes, 100-Yr. = 5.61
"Land Treatment Method" for calculation of "Q_p", Tables A-8 & A-9.
"Land Treatment Factors", Table A-4.

PROJECT AREA = 0.24 ac.

ZONE: FOUR (4)
PRECIPITATION: 360 = 2.90 in.
1440 = 3.65 in.
10day = 5.95 in.

EXCESS PRECIPITATION:		PEAK DISCHARGE:	
TREATMENT A	0.80 in.	2.20 cfs/ac.	
TREATMENT B	1.08 in.	2.92 cfs/ac.	
TREATMENT C	1.46 in.	3.73 cfs/ac.	
TREATMENT D	2.64 in.	5.25 cfs/ac.	

EXISTING CONDITIONS:		PROPOSED CONDITIONS:	
TREATMENT A	0.24 ac.	AREA	0.00 ac.
TREATMENT B	0.00 ac.	TREATMENT B	0.00 ac.
TREATMENT C	0.00 ac.	TREATMENT C	0.07 ac.
TREATMENT D	0.00 ac.	TREATMENT D	0.17 ac.

EXISTING EXCESS PRECIPITATION:

Weighted E = (0.80)(0.24) + (1.08)(0.00) + (1.46)(0.00) + (2.64)(0.00) / 0.24 = 0.80 in
V100-360 = (0.80)(0.24) / 12 = 0.0160 ac-ft = 697.0 cf

EXISTING PEAK DISCHARGE:

Q100 = (2.20)(0.24) + (2.92)(0.00) + (3.73)(0.00) + (5.25)(0.00) = 0.53 cfs

PROPOSED EXCESS PRECIPITATION:

Weighted E = (0.80)(0.00) + (1.08)(0.00) + (1.46)(0.07) + (2.64)(0.17) / 0.24 = 2.30 in
V100-360 = (2.30)(0.24) / 12.0 = 0.04600 ac-ft = 2,003.8 cf

V100-1440 = (0.05) + (0.17)(3.65 - 2.90) / 12 = 0.06063 ac-ft = 2,641.0 cf

V100-10day = (0.05) + (0.17)(5.95 - 2.90) / 12 = 0.09321 ac-ft = 4,060.2 cf

PROPOSED PEAK DISCHARGE:

Q100 = (2.20)(0.00) + (2.92)(0.00) + (3.73)(0.07) + (5.25)(0.17) = 1.15 cfs

BACKYARD PONDING FOR WEST 1/2 OF LOT:

• NORTHWEST PORTION: PROPOSED EXCESS PRECIPITATION
WEIGHTED "E" = (0.80)(0.00) + (1.08)(0.00) + (1.46)(0.02) + (2.64)(0.02) / 0.04 = 2.00 in.
V100-360 = (2.00)(0.04) / 12 = 0.00667 ac. ft. = 290.5 cu. ft.

PROPOSED POND:

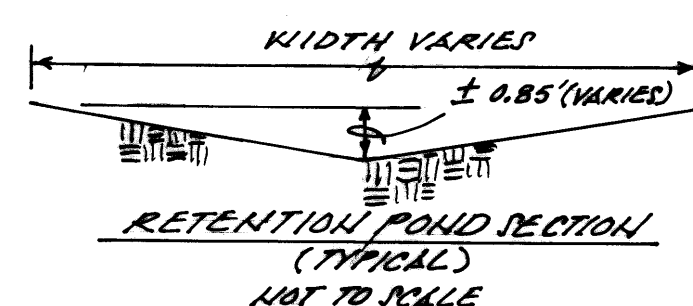
291.0 cf / 690.0 SQ. FT. = 0.42' depth
0.85' X 690.0 = 586.5 cf / 2 = 293.3 c.f.

• SOUTHWEST PORTION: PROPOSED EXCESS PRECIPITATION

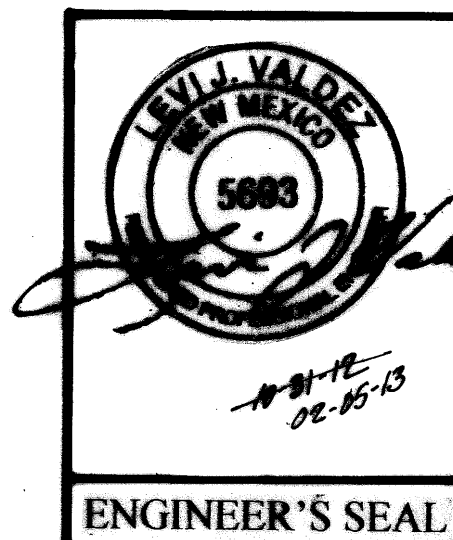
WEIGHTED "E" = (0.80)(0.00) + (1.08)(0.00) + (1.46)(0.02) + (2.64)(0.04) / 0.06 = 2.17 in.
V100-360 = (2.17)(0.06) / 12 = 0.01085 ac. ft. = 472.6 cu. ft.

PROPOSED POND:

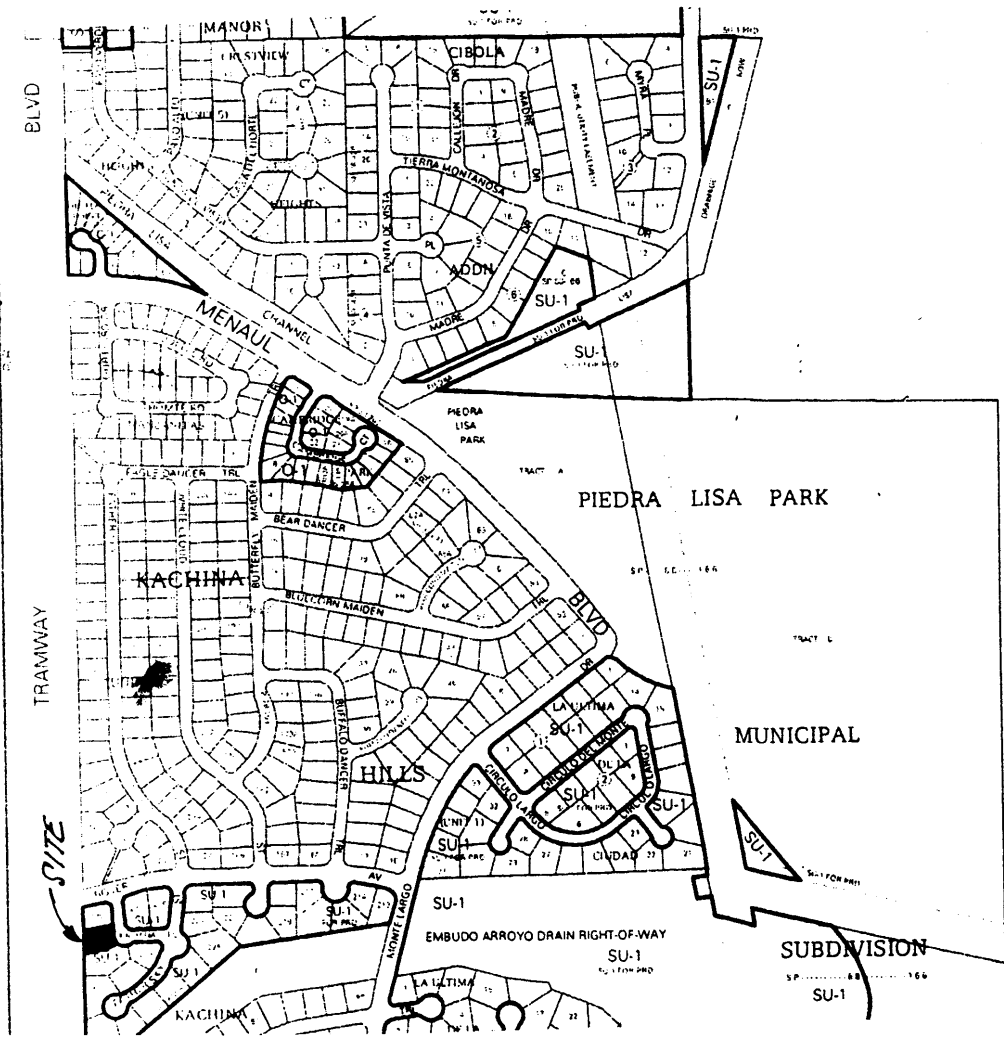
472.6 cf / 1,035.0 SQ. FT. = 0.45' depth
0.92' X 1,035.0 = 952.2 cf / 2 = 476.1 c.f.



GRADING AND DRAINAGE PLAN



A PROPOSED PLAN
FOR
VIGIL 3 DWELLING UNITS
(12904 KACHINA PLACE N.E.)
ALBUQUERQUE, NEW MEXICO
SEPTEMBER, 2012



VICINITY MAP H-23-Z

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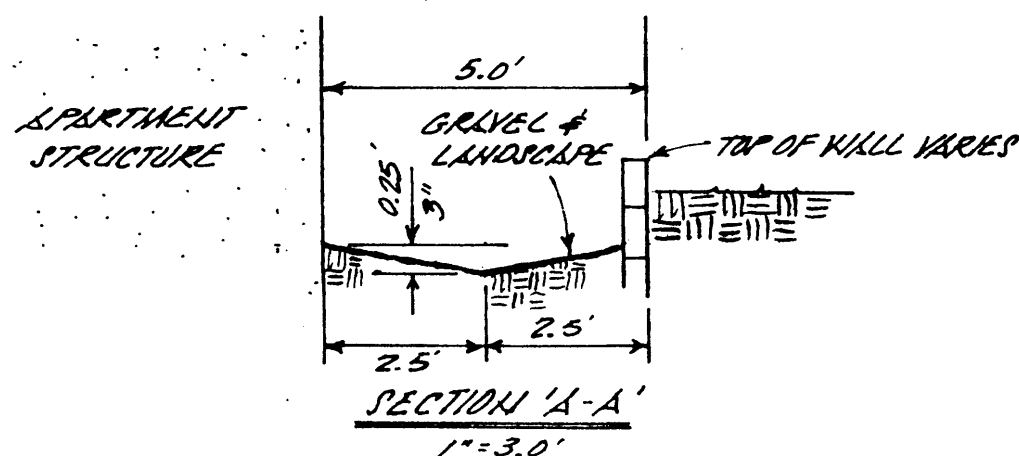
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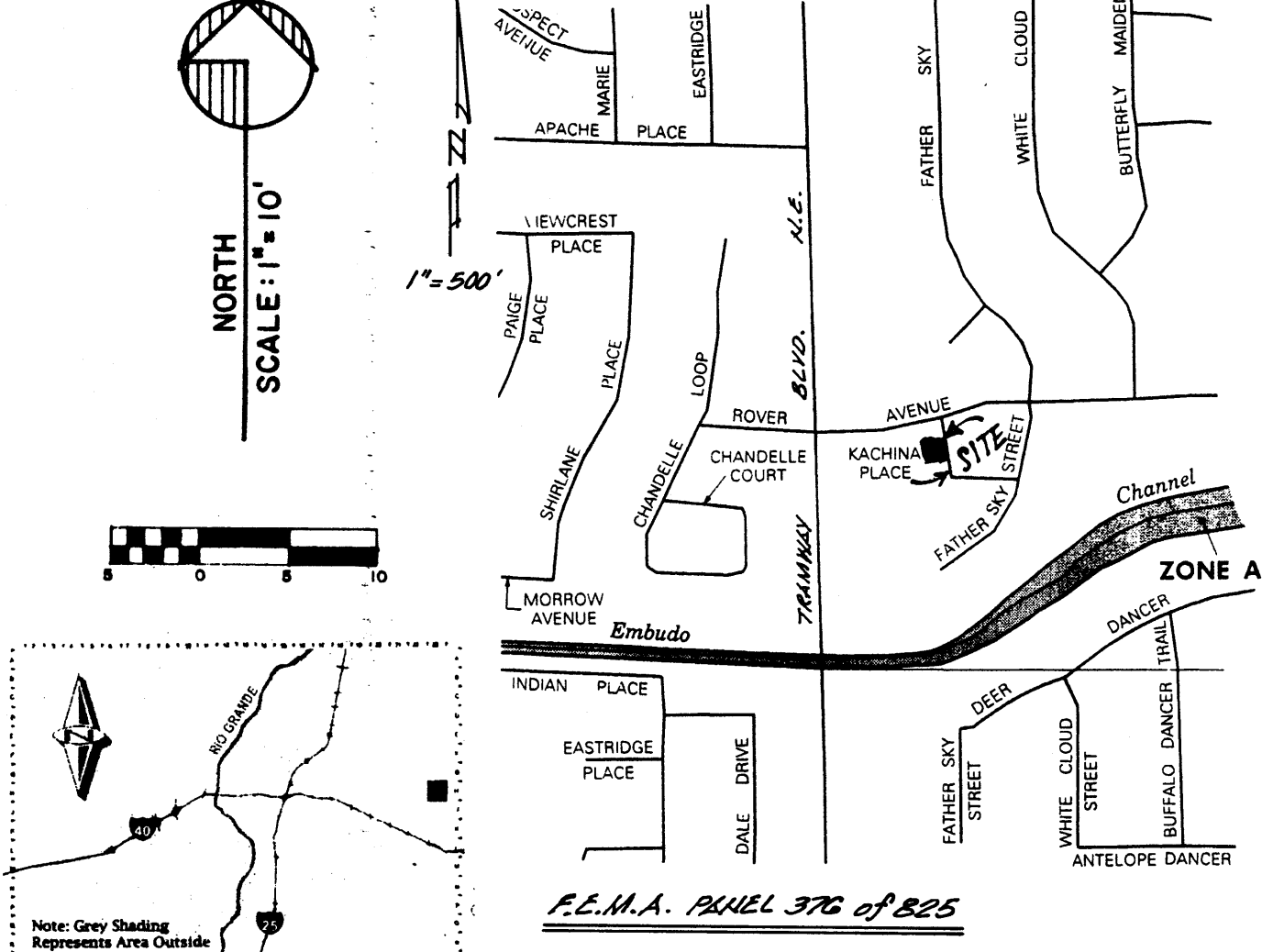


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DEPRESS ALL SHOWN PREPARED LANDSCAPE AREAS

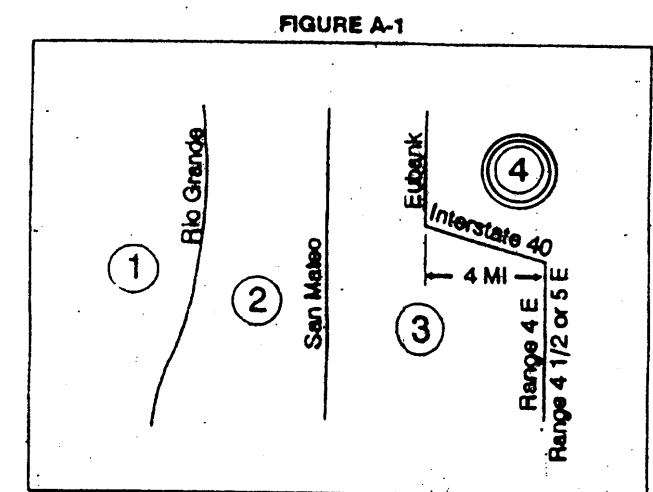
WATER RISE/VENTING LANDSCAPE SKULLE



Zone	Treatment				100-YR [2-YR, 10-YR]
	A	B	C	D	
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2	1.58 [0.00, 0.38]	2.29 [0.08, 0.95]	3.14 [0.80, 1.71]	4.70 [1.86, 3.14]	
3	1.87 [0.00, 0.58]	2.60 [0.21, 1.19]	3.45 [0.78, 2.00]	5.02 [2.04, 3.39]	
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DPM SECTION 22.2 - HYDROLOGY
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D	Impervious areas, pavement and roofs.

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Drainage Comments:

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PROJECT AREA = 0.24 ac.

ZONE: FOUR (4)

PRECIPITATION:

360 = 2.90 in.
1440 = 3.65 in.
10day = 5.95 in.

EXCESS PRECIPITATION:

TREATMENT A 0.80 in.
TREATMENT B 1.08 in.
TREATMENT C 1.46 in.
TREATMENT D 2.64 in.

PEAK DISCHARGE:

2.20 cfs/ac.
2.92 cfs/ac.
3.73 cfs/ac.
5.25 cfs/ac.

EXISTING CONDITIONS:

TREATMENT A 0.24 ac.
TREATMENT B 0.00 ac.
TREATMENT C 0.00 ac.
TREATMENT D 0.00 ac.

PROPOSED CONDITIONS:

AREA 0.00 ac.
AREA 0.00 ac.
AREA 0.07 ac.
AREA 0.17 ac.

EXISTING EXCESS PRECIPITATION:

Weighted E = $(0.80)(0.24) + (1.08)(0.00) + (1.46)(0.00) + (2.64)(0.00)/0.24$
= 0.80 in
 $V_{100-360} = (0.80)(0.24)/12 = 0.0160 \text{ ac-ft} = 697.0 \text{ cf}$

EXISTING PEAK DISCHARGE:

$Q_{100} = (2.20)(0.24) + (2.92)(0.00) + (3.73)(0.00) + (5.25)(0.00) = 0.53 \text{ cfs}$

PROPOSED EXCESS PRECIPITATION:

Weighted E = $(0.80)(0.00) + (1.08)(0.00) + (1.46)(0.07) + (2.64)(0.17)/0.24$
= 2.30 in
 $V_{100-360} = (2.30)(0.24)/12.0 = 0.04600 \text{ ac-ft} = 2,003.8 \text{ cf}$

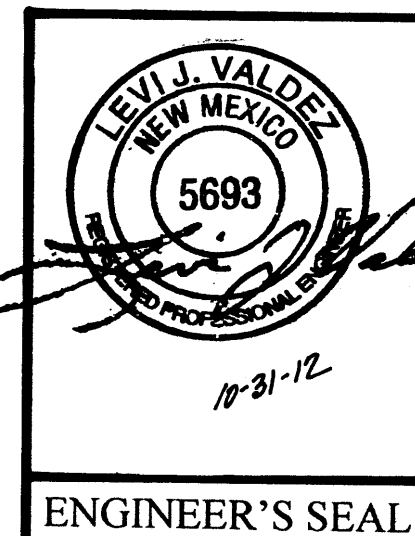
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GRADING AND DRAINAGE PLAN



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