



County of Bernalillo

State of New Mexico

2400 BROADWAY, S.E.
ALBUQUERQUE, NEW MEXICO 87102
PUBLIC WORKS (505) 848-1500

BOARD OF COUNTY COMMISSIONERS

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H. R. FINE, TREASURER

November 12, 1996

Joe Kelly, P.E.
Chavez-Grieves
5639 Jefferson St.
Albuquerque, New Mexico

RE: GRADING AND DRAINAGE PLAN FOR MT. CARMEL TRAILER PARK, TRACT 5B, MRGCD
MAP 39, (K12/D23)(PWD-96-177) ENGINEER'S STAMP DATE 9/26/96.

Dear Mr. Kelly:

Based on the information provided in the submittal of October 10, 1996, it appears that the plan for the above referenced site is acceptable for Special Use Permit per the BCC decision. It also appears that this plan is acceptable for release of the Paving Permit required for the proposed new asphalt.

If you should have any questions, or if I may be of further assistance to you, please call me at 768-2666.

Sincerely,

A handwritten signature in cursive script, reading "Susan Calongne".

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: Roger Paul, Bernalillo County Public Works Division
John Sanchez, Owner
File

DRAINAGE INFORMATION

PROJECT TITLE MT CARMEL TRAILER PARK ZONE ATLAS/DRNG. FILE #: K-12-1021

DRB#: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TRACT SB, MERGED MAP NO 39

CITY ADDRESS: 317 SUNSET RD S.W

ENGINEERING FIRM: Chavez-Grievos Inc CONTACT: JOE KELLEY

ADDRESS: 5639 JEFFERSON ST PHONE: 344-4080

OWNER: Richard Ray Sanchez CONTACT: John Sanchez

ADDRESS: 317 SUNSET RD. S.W PHONE: 839-4273

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☒ DRAINAGE PLAN
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☒ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION
- ☐ OTHER

PRE-DESIGN MEETING:

- ☐ YES
- ☒ NO
- ☐ COPY PROVIDED

DATE SUBMITTED: 10-7-96

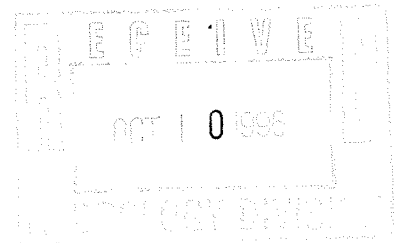
BY: R. Casals

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SKETCH PLAT APPROVAL
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PRMT. APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☒ PAVING PERMIT APPROVAL
- ☐ S.A.D. DRAINAGE REPORT
- ☐ DRAINAGE REQUIREMENTS
- ☒ OTHER Special Use Permit (SPECIFY)

Per B.C.C. Decision

DATED JUNE 5th 1996




GRADING AND DRAINAGE PLAN

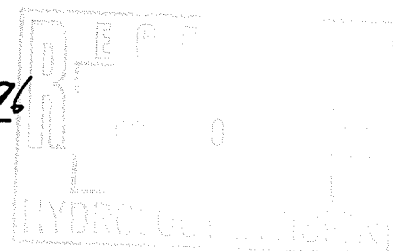
MOUNT CARMEL MOBILE HOME PARK

September 1996

ENGINEER'S STATEMENT

I certify that I am a Registered Professional Engineer in the State of New Mexico and that this report was prepared by me or under my supervision. I have personally inspected this land, and it appears that no grading, filling, or excavation has occurred thereon since the existing contour map was prepared.

Joe Kelley 9/26/96




PURPOSE

The purpose of this report is to document the existing hydrology, as directed by the Bernalillo Board of County Commissioners in their decision dated June 5, 1996.

LOCATION AND SURROUNDING DEVELOPMENT

This site is located near downtown Albuquerque on the west side of Sunset Road SW, north of Osage Avenue. It is on the east side of the Middle Rio Grande Conservancy District (MRGCD) Arenal ditch, and is located in unincorporated Bernalillo County. The site is a mobile home park that has existed for 15 years. The site fronts on Sunset Farm Road, SW, from which it is accessed. The MRGCD Riverside Drain parallels Sunset Farm Road on the east side. Mobile home developments are north and south of the site, and residential houses are west of the site, across the MRGCD ditch.

LEGAL DESCRIPTION

Tract 5B, MRGCD Map No. 39.

FLOOD HAZARD ZONES

As shown by Panel 3500020028 of the National Flood Insurance Rate Maps for the City of Albuquerque, dated October 14, 1983, the site is in two designated flood hazard zones: B and AH (EL 4949). Zone B designates "areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than 1 foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood." Zone AH designates "areas of 100-year shallow flooding, where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined."

*Show the
on plan
or in the
report
put to
limits on
plan*

EXISTING SITE CONDITIONS AND DRAINAGE PATTERN

The site is in a low-lying area that has no storm drainage systems. In addition, no storm drainage systems have been planned in the area by either the County or the City, so the overall drainage scheme for the area may not change for a long time (if ever). Runoff from storm events in this area ponds in low-lying areas, and is dispersed by means of evaporation and infiltration.

no off-site contours

There is no runoff on-site from off-site properties. This is a result of the MRGCD ditch on the west, and berms on the north and south property lines. If storm runoff were ever to discharge from the site, it would be into the Sunset Road right-of-way.

Street grades?

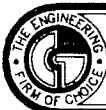
On-site ponding of storm water is generally not advised in the County. But in low-lying areas which have no storm drain or overland outfall, it is permissible. That is the case for this site. The 100-year, 10-day storm volume is 51,400 cubic feet (page A-4), while the on-site storage capacity was conservatively calculated as 181,170 cubic feet (page A-1). So the site will contain 3 times the 100-year storm before overflowing into the Sunset Road right-of-way.

The Sunset Road right-of-way is the release mechanism for storms that are greater than the on-site capacity. Large storms such as this would discharge across Sunset Farm Road, and into the MRGCD Riverside Drain. An additional safety factor is the height of the finished trailer floors, which are more than 18" above the overflow elevation.

> 4949 ?

HYDROLOGY/HYDRAULICS

The runoff calculations and design have been done in accordance with Section 22.2 of the Development Process Manual of the City of Albuquerque, January 1993. In addition, the site complies with the requirements of Bernalillo County Ordinance No. 90-6, the Storm Drainage Ordinance.

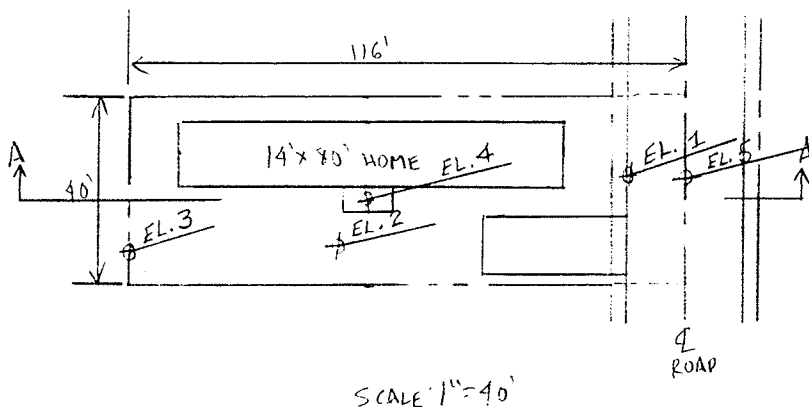


CHAVEZ • GRIEVES CONSULTING ENGINEERS, INC.

5639 JEFFERSON STREET N.E. • ALBUQUERQUE, NEW MEXICO 87109
PHONE (505) 344-4080 • FAX (505) 343-8759

SHEET NO. 1 OF 2
JOB M - CARMEL DRAINAGE PLAN
SUBJECT _____
CLIENT _____
JOB NO. _____
BY JR DATE 10/12/96

TYPICAL LAND TREATMENT



*does this account for
1/2 road adjacent
to lot? OK*

"D" AREA: $(14' \times 80') + (5' \times 16') + (30' \times 12') + (12' \times 90') = 2010 \text{ SF}$

TOTAL AREA: $40' \times 116' = 4640 \text{ SF}$

$\%D = 2010 / 4640 = 43\%$

TAKE THE REMAINDER AS 1/2 B AND 1/2 C, ALTHOUGH THIS IS TOO LOW A PERCENTAGE OF B (CONSERVATIVE).

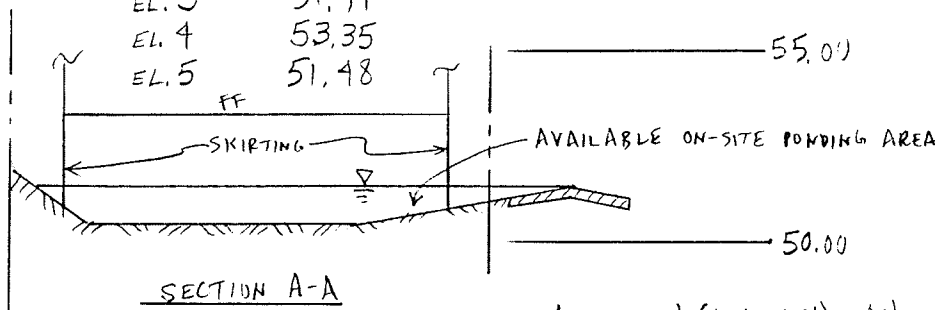
$\%B = 28\%$ $\%C = 29\%$

THESE PERCENTAGES ARE CONSERVATIVE BECAUSE THEY DON'T INCLUDE THE OPEN SPACE AREAS, WHICH WOULD INCREASE THE %B.

AVAILABLE PONDING AREA

AVERAGE ELEVATIONS

EL. 1	51.15
EL. 2	50.48
EL. 3	51.71
EL. 4	53.35
EL. 5	51.48

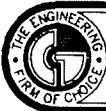


VERT: 1" = 5'
HORIZ: 1" = 40'

VOLUME = $\frac{1}{2} (110' + 55') \times 40' \text{ WIDEX} \times 0.90' \text{ DEEP}$
= 2970 C.F. PER LOT

61 LOTS \times 2970 C.F./LOT = 181,170 C.F. AVAILABLE PONDING AREA.

THIS AVAILABLE AREA IS CONSERVATIVE BECAUSE IT DOESN'T INCLUDE THE PONDING THAT WILL OCCUR IN THE OPEN SPACE AREAS.



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PHONE (505) 344-4080 • FAX (505) 343-8759

SHEET NO. 2 OF 2
JOB _____
SUBJECT _____
CLIENT _____
JOB NO. _____
BY _____ DATE _____

TOTAL AREA DETERMINATION

TOTAL ACREAGE: 8.13 AC.

"D" AREA:

TRAILERS 61 LOTS \times 4640 SF/LOT \times .43 = 121,707 SF

EXTRA ROAD: $\frac{1}{2}$ MIDDLE ROAD NOT YET ACCOUNTED FOR:

$370' \times 12' =$

4,440 SF

FULL WIDTH CONNECTOR ROADS:

$225' \times 24' =$

5,400 SF

TOTAL D:

131,547 SF = 3.02 AC

THE REMAINING 5.11 AC. WILL BE TAKEN AS $\frac{1}{2}$ B AND $\frac{1}{2}$ C, ALTHOUGH THIS IS LESS B THAN REALLY EXISTS. THUS THE FINAL RESULT WILL BE CONSERVATIVELY HIGH.

TOTAL B: 2.55 AC.

TOTAL C: 2.56 AC.

CHAVEZ - GRIEVES / CONSULTING ENGINEERS, Inc.

5639 Jefferson Street NE, Albuquerque, New Mexico 87109

Phone (505) 344-4080 - Fax (505) 343-8759

RUNOFF CALCULATIONS - SIMPLIFIED PROCEDUREBy: Joe KelleyDate: October 1, 1996Project: Mt. Carmel Mobile Home ParkZone Atlas: K-12

This procedure is in accordance with the City of Albuquerque Development Process Manual, Volume 2, Section 22.2, "Hydrology", peak discharge rate for small watersheds less than forty acres in size.

Precipitation Zone from Figure A-1: 1

Land treatment descriptions are in Table A-4.

1. RUNOFF RATE COMPUTATIONUse Equation a-10: $Q_P = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$ Values of Q_{pi} are from Table A-9, and are in CFS/acre. Area values are in acres.

BASIN	Q_{PA}	A_A	Q_{PB}	A_B	Q_{PC}	A_C	Q_{PD}	A_D	Q_P
EXISTING BASIN RATE OF RUNOFF (CFS)									
Total	1.29	0	2.03	2.55	2.87	2.56	4.37	3.02	25.72

2. RUNOFF VOLUME COMPUTATION

Use Equation a-5 to compute weighted excess precipitation:

$$\text{Weighted } E = "E" = (E_A A_A + E_B A_B + E_C A_C + E_D A_D) / (A_A + A_B + A_C + A_D) = \sum A_i$$

Use Equation a-6 to compute the volume:

$$V_{360} = "E" \times (A_A + A_B + A_C + A_D) \times 3630 \text{ feet}^3/\text{acre} \cdot \text{inch}$$

Values of E_i are from Table A-8, and are in inches. Area values are in acres.

BASIN	E_A	A_A	E_B	A_B	E_C	A_C	E_D	A_D	$\sum A_i$	"E"	V_{360}
EXISTING BASIN VOLUME OF RUNOFF (CUBIC FEET)											
A	0.44	0	0.67	2.55	0.99	2.56	1.97	3.02	8.13	1.25	36998

RETENTION POND VOLUME CALCULATION*

BASIN	Q_{360} (CFS)	V_{360} (AC-FT)	A_D (AC)	V_{10-DAY} (AC-FT)	V_{10-DAY} (CU-FT)
Mt. Carmel	25.72	0.849	3.02	1.18	51,400.80

* Calculations per Section 22.2, Hydrology of the Development Process Manual, Equations c-7 and a-9.

Q:\PMMTF\CIVIL\HYDROLOGY\RETENPND.WPD

KEYED NOTES

- 1 REMOVE EXISTING MOBILE HOME.
- 2 REMOVE EXISTING GRASS AND TREE FOR NEW ASPHALT.
- 3 REMOVE EXISTING R.R. TIES AND GRASS FOR NEW ASPHALT.
- 4 NEW ASPHALT TO MATCH EXISTING.
- 5 REMOVE EXISTING FENCE AND R.R. TIES.
- 6 INSTALL CRASH GATE.

ENGINEERS CERTIFICATION

I CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO AND THAT THIS REPORT WAS PREPARED BY ME OR UNDER MY SUPERVISION. I HAVE PERSONALLY INSPECTED THIS LAND, AND IT APPEARS THAT NO GRADING, FILLING, OR EXCAVATION HAS OCCURED THEREON SINCE THIS MAP WAS PREPARED.

Joe P. Kelley 9/26/96
JOE P. KELLEY, P.E. DATE

BENCH MARK

ALUMINUM CAP STAMPED "ASC NM45-1A, 1984"
LOCATED 2.7 MILES WEST OF DOWNTOWN ALBUQUERQUE,
AT THE INTERSECTION OF CENTRAL AVE. AND COORS
BLVD. IN THE S.E. QUAD
ELEV.=5016.74

NOTES:

1. THIS DEVELOPMENT WAS APPROVED IN 1980 CSU-80-39 SPECIAL USE PERMIT NO. 803. THE DEVELOPMENT IS IN SUBSTANTIAL COMPLIANCE WITH THAT APPROVAL. THE PREVIOUS DEVELOPMENT PLAN WAS CONCEPTUAL.
2. THE PURPOSE OF THIS AMENDMENT IS TO SHOW THE ACTUAL DEVELOPMENT AND TO APPROVE THE 62 MOBILE HOME SPACES IN EXISTENCE.
3. ROAD SURFACED WITH ASPHALT PAVING.
4. ALL PATIO AND/OR DRIVEWAY OVERHEAD COVERS TO BE INSTALLED AT TENANTS OPTION.
5. STORAGE BUTTED OR AT 10' FROM TRAILER, TO BE INSTALLED AT TENANTS OPTION.
6. EACH TENANT MAY INSTALL A 3' FT. FENCE BETWEEN UNITS.
7. PROPERTY HAS TOTAL SLOPE OF 2' FROM ATRISCO LATERAL TO SUNSET.
8. LARGER UNITS MAY HAVE ENCLOSED GARAGE.
9. ALL UTILITIES - SUPPLIED/UNIT IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
10. SOLID WASTE TO BE STORED IN PUBLIC DUMPSTER AND REMOVED BY PRIVATE CONTRACTOR.
11. PROPERTY HAS NATURAL SLOPE AND DRAINAGE TOWARDS STREET SIDE.
12. MOBILE HOMES SHALL BE SKIRTED WITH MATERIALS COMPATIBLE WITH THE SIDING OF THE MOBILE HOME.
13. 19,673 S.F. USABLE OPEN SPACE FOR RECREATION PROVIDED.

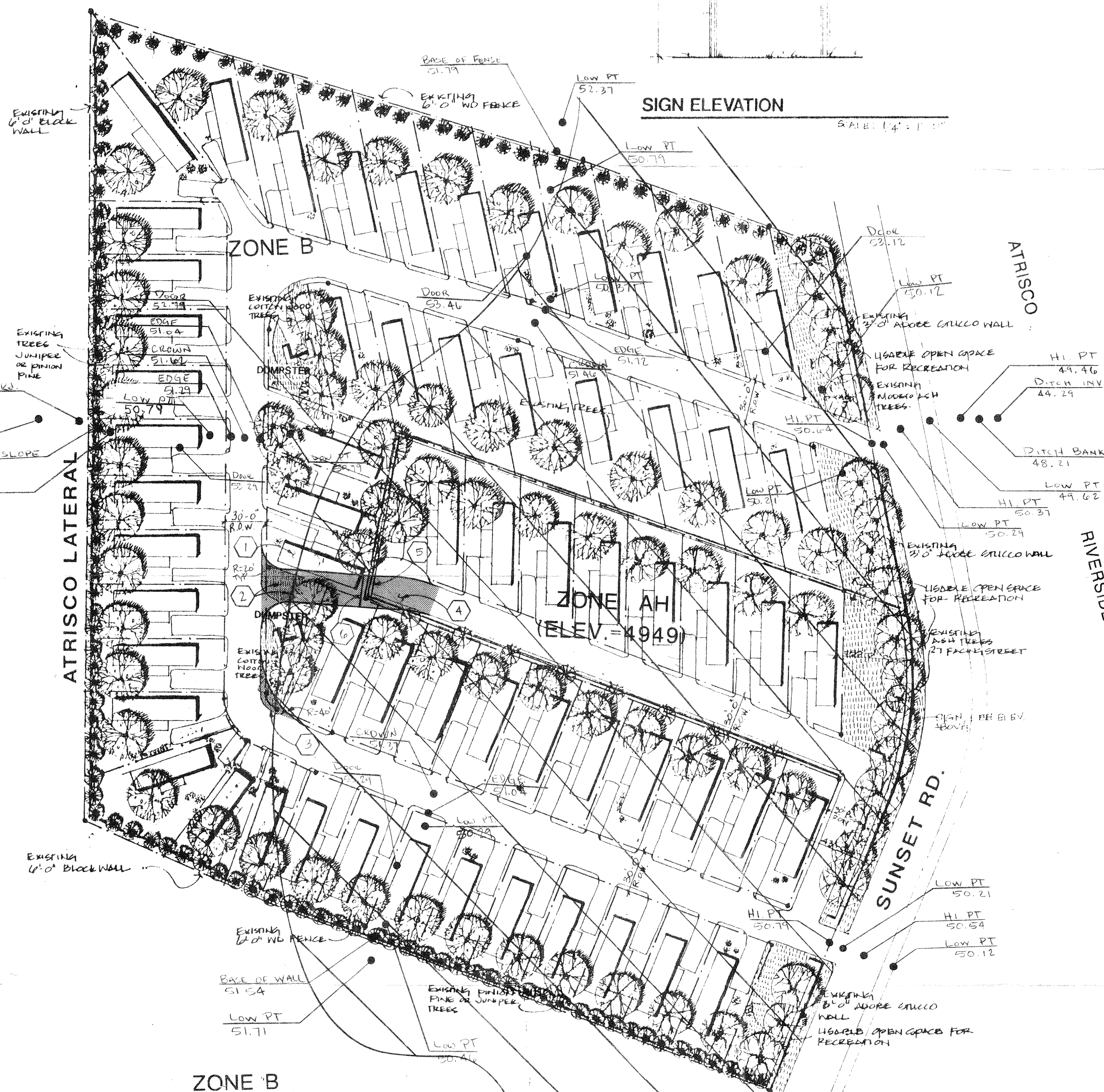
LEGAL DESCRIPTION

TRACT 5B, MRGCD MAP 39.

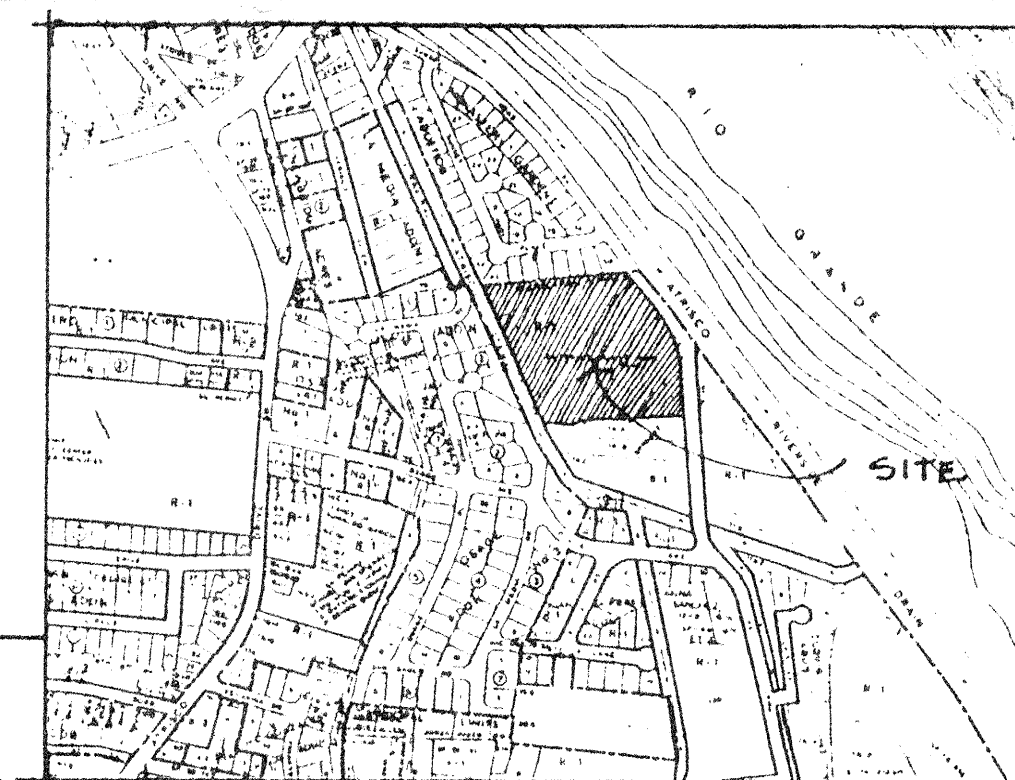
APPROXIMATELY 8.13 ACRES

AMENDED SITE DEVELOPMENT AND LANDSCAPE PLAN AND GRADING PLAN

0 10 20 30 40 50 60 70 80 90 100

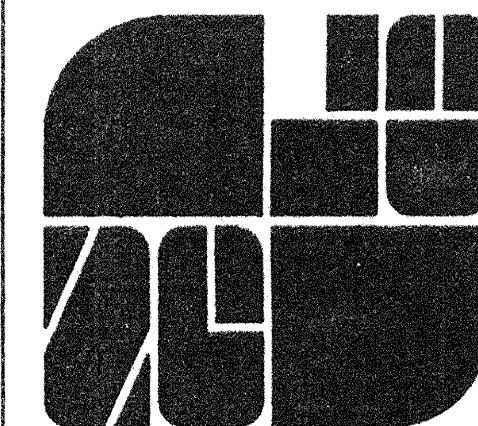


TYPICAL MOBILE HOME SPACE



VICINITY MAP K-12-Z

APPROVALS	
PLANNING	DATE
FIRE MARSHALL	DATE



SHELTER GROUP/
LIVING CENTERS

HOUSING CONSULTANTS,
ARCHITECTURE & PLANNING

204 MADEIRA N.E.
ALBUQUERQUE, NEW MEXICO 87108
505-265-6676

Job no:
Acad file:
Drawn by:
Checked:
Date:

Revisions:

AMENDED SITE DEVELOPMENT AND LANDSCAPE PLAN
MOUNT CARMEL MOBILE HOME PARK FOR
SANCHEZ FAMILY

BERNALILLO CO. NM.

317 SUNSET ROAD

Sheet no: