

DRAINAGE REPORT

LEGAL DESCRIPTION: Lots 24-28, Knapp Heights Addition Map F-19

FLOOD ZONE: The site is not in a 100-year flood zone.

PROJECT DESCRIPTION: The site is a set of vacant lots on the east side of Louisiana Blvd. in an area that is essentially completely developed; that is, it is an infill site. The proposed development is a suite of patio townhomes with zero side yard set-backs on one side of each unit. Roof drainage is in all directions from primarily hip-type roofs.

The project uses free discharge of runoff to Louisiana Blvd. Because of the lawn and landscaping proposed with the project, developed condition runoff will be only slightly higher than that calculated for the existing vacant lots. Runoff will reach the street from the driveway and also from sidewalk culverts at the north and south ends of the site.

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HYDROLOGY CALCULATIONS:

The property boundary encloses 39610 sf or 0.0903 acres. Including the area between the back of curb and the property line the total area is 45115 sf or 1.0357 acres. This is the area used in the calculations. The rain zone is 3.

EXISTING CONDITIONS: 44049 sf Treatment C and 1066 sf Treatment D
 $Q_{peak} = (44049 \times 3.45 + 1066 \times 5.02) / 43560 = 3.61$ cfs
 $Vol_{100} = (44049 \times 1.29 + 1066 \times 2.36) / 12 = 4945$ cu ft

PROPOSED CONDITIONS: 17150 sf Treatment B and 27965 sf Treatment D
 $Q_{peak} = (17150 \times 2.60 + 27965 \times 5.02) / 43560 = 4.25$ cfs
 $Vol_{100} = (17150 \times 0.92 + 27965 \times 2.36) / 12 = 6815$ cu ft

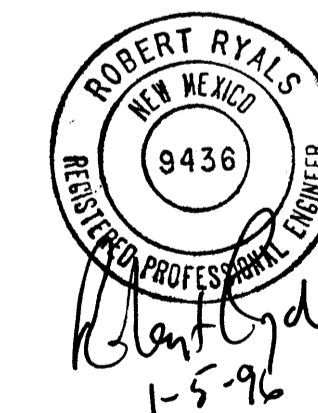
OFFSITE FLOW: Estimated 6000 sf Treatment B and 1900 sf Treatment D
 $Q_{peak} = (6000 \times 2.60 + 1900 \times 5.02) / 43560 = 0.58$ cfs
 $Vol_{100} = (6000 \times 0.92 + 1900 \times 2.36) / 12 = 834$ cu ft

GENERAL NOTES

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2. All work detailed on these plans to be performed, except as otherwise stated or provided hereon, shall be constructed in accordance with the City of Albuquerque Standard Specifications for Public Works Construction, most recent edition.
3. Two working days prior to any excavation, contractor must contact Line Locating Service (260-1990) for location of existing utilities.
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6. Maintenance of these facilities shall be the responsibility of the Owner of the property served.
7. Curbs & sidewalks in the ROW are per City standards.

SECTION A-A CONCRETE RUNDOWN

NO SCALE



VICINITY MAP (F-19) NO SCALE



SCALE: 1"=20'
 0 5 10 20

LEGEND

- TA TOP OF ASPHALT
- TP TOP OF PAVEMENT
- FL FLOW LINE
- TC TOP OF CURB / CONCRETE
- SW SIDEWALK
- FF FINISHED FLOOR
- FG FINISHED GRADE
- EG EXISTING GRADE
- W WATER VALVE
- WM WATER METER
- FH FIRE HYDRANT
- TS TRAFFIC SIGNAL
- CB TRAFFIC CONTROL BOX
- NC NEW CONTOURS
- EC EXISTING CONTOURS
- FD FLOW DIRECTION
- NC NEW CURB AND GUTTER
- EC EXISTING CURB AND GUTTER
- NS NEW SPOT ELEVATION
- AS DENOTES ASBUILT GRADE
- ES EXISTING TOUR ELEVATION

NOTE: SEE ARCH. SITE PLAN FOR WALL AND SPECIAL LINE SYMBOLS

BENCH MARK = STANDARD ACS BRASS TABLET STAMPED M-3A, SET IN TOP OF CONC POST IN THE W MEDIAN OF MONTGOMERY NE AT LOUISIANA NE ELEVATION 5306.00 BM IS LOCATED APPROX. 1300 FT SOUTH OF SITE

PROJECT DEVELOPED FOR:

PATIO HOMES

FOR

JACK DETTUEILER & DAVID GREEN

KNAPP HEIGHTS

ALBUQUERQUE, NM

ARCHITECT:

DAVID W. GREEN

4608 LUNEBURG NE

Albuquerque, New Mexico 87109

Phone: (505) 860-6571

SHEET TITLE:

GRADING & DRAINAGE PLAN

Project Manager: DWG.

Drawn By: CFW

Project No: 9400

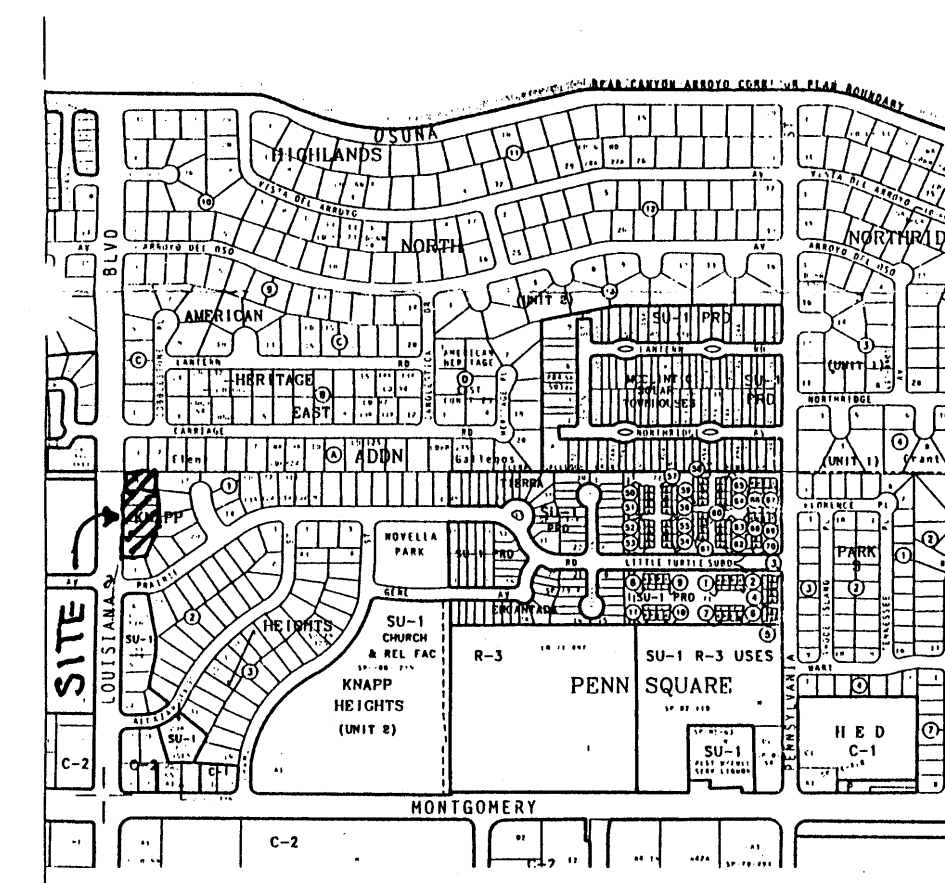
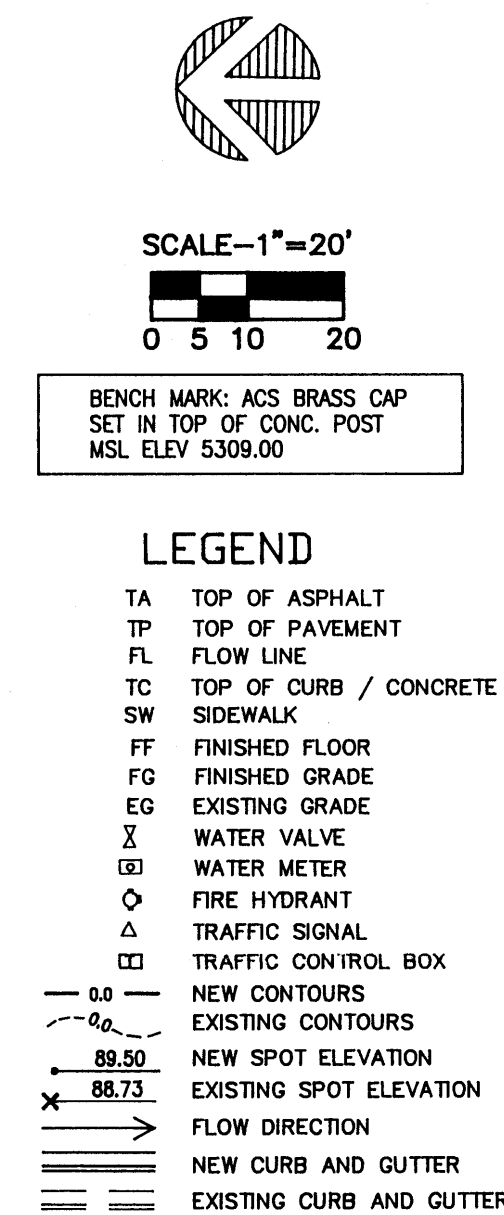
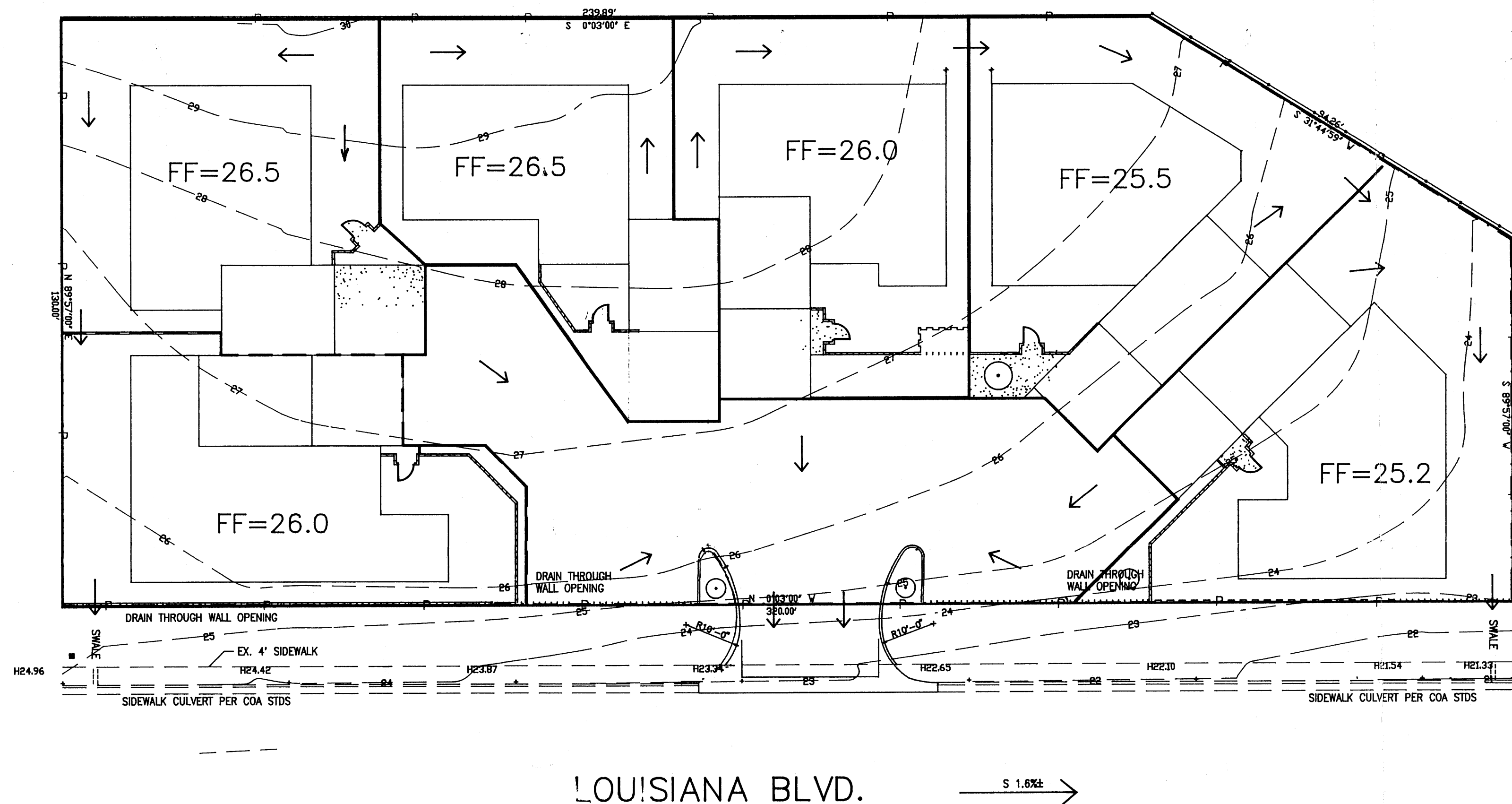
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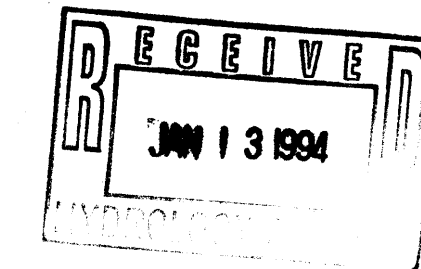
SHEET NO:

3

RYALS engineering & construction services					
4929 Idiewilde SE Albuquerque NM 87108					
(505) 265-8267 269-1142 (mobile)					
CITY OF ALBUQUERQUE					
PUBLIC WORKS DEPARTMENT / ENGINEERING GROUP					
TITLE: GRADING AND DRAINAGE PLAN FOR					
PATIO HOMES @ LOTS 24-28, KNAPP HEIGHTS ADDN.					
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
HYDROLOGY					
INSPECTION					
A.C.E./FIELD					
PERMIT NO.		MAP NO. F-19	SHEET 1	OF 1	



VICINITY MAP (F-19) NO SCALE
LOTS 24-28 KNAPP HEIGHTS ADDN.



CONCEPTUAL DRAINAGE AND GRADING PLAN

LEGAL DESCRIPTION: LOTS 24-28, KNAPP HEIGHTS ADDN. MAP F-19

FLOOD ZONE: THE SITE IS NOT IN A 100-YEAR FLOOD ZONE.

PROJECT DESCRIPTION: THE SITE IS A SET OF REMNANT VACANT LOTS IN AN AREA THAT IS ESSENTIALLY COMPLETELY DEVELOPED, THAT IS, IT IS AN INFILL SITE. THE PROPOSED DEVELOPMENT IS A SUITE OF TOWN HOMES WITH ZERO SIDE YARD SET-BACKS.

THE PROJECT USES FREE DISCHARGE OF DEVELOPED FLOWS TO LOUISIANA BLVD. BECAUSE OF THE LAWN AND LANDSCAPING PROPOSED WITH THE PROJECT, DEVELOPED CONDITION RUNOFF IS ONLY SLIGHTLY HIGHER THAN THAT CALCULATED FOR THE EXISTING VACANT LOTS. RUNOFF WILL REACH THE STREET FROM THE DRIVEWAY AND ALSO FROM SIDEWALK CULVERTS AT THE NORTH AND SOUTH LOTS.

HYDROLOGY CALCULATIONS:

THE PROPERTY BOUNDARY ENCLOSES 39610 SF OR 0.0903 ACRES. THE TOTAL AREA INCLUDING THE AREA BETWEEN THE PROPERTY LINE AND THE STREET IS 45115 SF OR 1.0357 AC. THIS IS THE AREA USED IN THE CALCULATIONS BELOW. THE RAIN ZONE IS 3 (DPM CHAPTER 22.2)

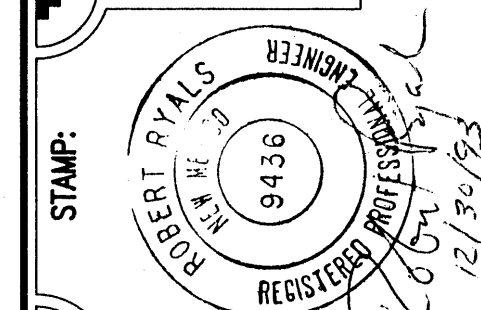
EXISTING CONDITIONS: 43835 SF TREATMENT C AND 1280 SF TREATMENT D
 $Q_{peak} = (43835 \times 3.45 + 1280 \times 5.02) / 43560 = 3.62$ CFS
 $VOL = (43835 \times 1.29 + 1280 \times 2.36) / 12 = 4964$ CU FT

PROPOSED CONDITIONS: 24390 SF TREATMENT A AND 20725 SF TREATMENT D
 $Q_{peak} = (24390 \times 2.60 + 20725 \times 5.02) / 43560 = 3.89$ CFS
 $VOL = (24390 \times 0.92 + 20725 \times 2.36) / 12 = 5946$ CU FT

PROJECT DEVELOPED FOR:
A PLANNED RESIDENTIAL DEVELOPMENT
 FOR JACK DETWILER AND DAVID GREEN
 KNAPP HEIGHTS
 ALBUQUERQUE, NM

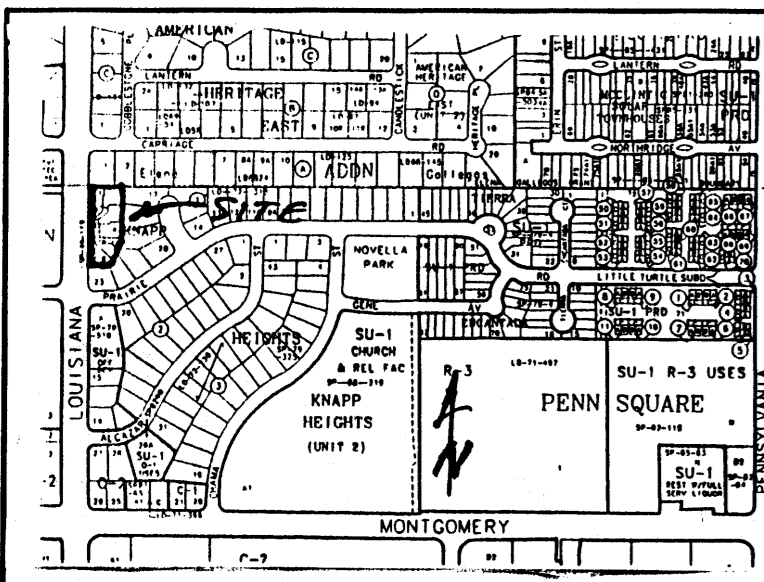
ARCHITECT:
DAVID W. GREEN
 4600 LIMEBURN
 ALBUQUERQUE, NEW MEXICO 87106
 Phone (505) 880-1857

SHEET TITLE:
CONCEPTUAL GRADING AND DRAINAGE PLAN
 Project Manager: **DWG**
 Drawn By: **RBR**
 Project No.: **PH**

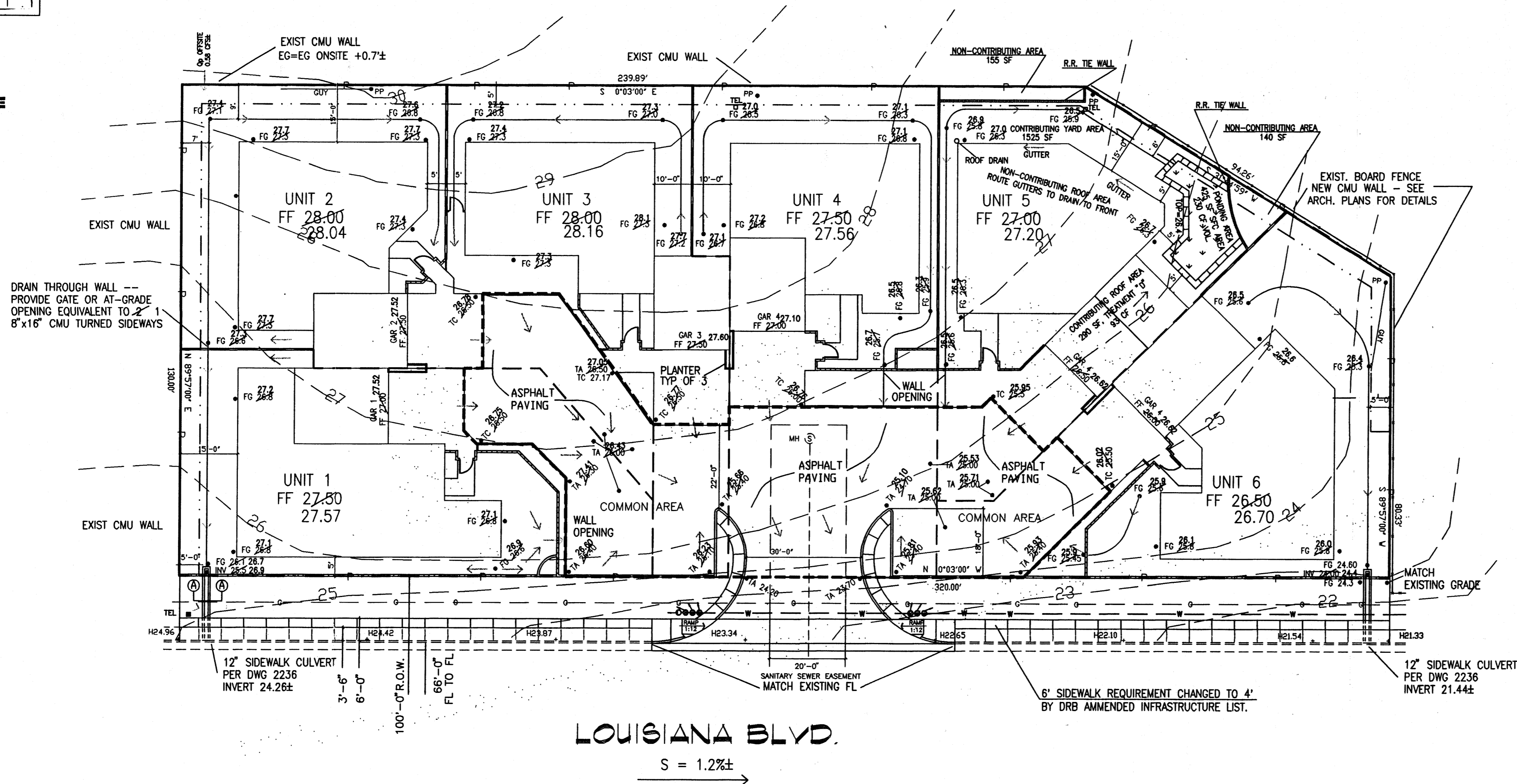


DATE:
 JANUARY 1994

SHEET NO.
 A-3



VICINITY MAP (F-19) NO SCALE



DRAINAGE REPORT

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The project uses free discharge of runoff to Louisiana Blvd. Because of the lawn and landscaping proposed with the project, developed condition runoff will be only slightly higher than that calculated for the existing vacant lots. Runoff will reach the street from the driveway and also from sidewalk culverts at the north and south ends of the site.

An existing cement block wall separates the site from higher lots on the north and east, except that a portion of one lot drains through the wall in the northeast corner; that flow will be passed through the site. A board fence separates the site from lower lots on the south and southeast. Currently these lots receive some runoff from the site but a new cement block wall will protect them in the future.

A drainage divide crosses Louisiana Blvd. about 1000 ft. upstream so there is adequate street capacity. A storm sewer system starts about a block downstream approximately 400 ft north of Montgomery Blvd. The storm sewer in Montgomery starts about a block east - upstream - of Louisiana. Neither Louisiana nor Montgomery in this area is in (or has) a 100-year flood zone according to either the official (1983, panel 17) or the preliminary revised (1993, panel 139) FIRM flood plain maps.

HYDROLOGY CALCULATIONS:

The property boundary encloses 39610 sf or 0.0903 acres. Including the area between the back of curb and the property line the total area is 45115 sf or 1.0357 acres. This is the area used in the calculations. The rain zone is 3.

EXISTING CONDITIONS: 44049 sf Treatment C and 1066 sf Treatment D
Qpeak = (44049+3.45 + 1066+5.02)/43560 = 3.61 cfs
Vol100 = (44049+1.29 + 1066+2.36)/12 = 4945 cu ft

PROPOSED CONDITIONS: 17150 sf Treatment B and 27965 sf Treatment D
Qpeak = (17150+2.60 + 27965+5.02)/43560 = 4.25 cfs
Vol100 = (17150+0.92 + 27965+2.36)/12 = 6815 cu ft

OFFSITE FLOW: Estimated 6000 sf Treatment B and 1900 sf Treatment D
Qpeak = (6000+2.60 + 1900+5.02)/43560 = 0.58 cfs
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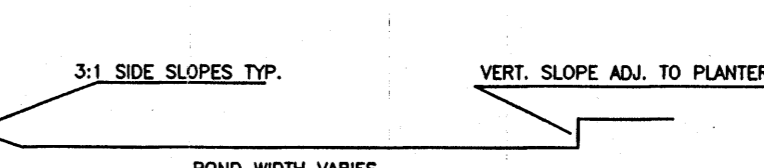
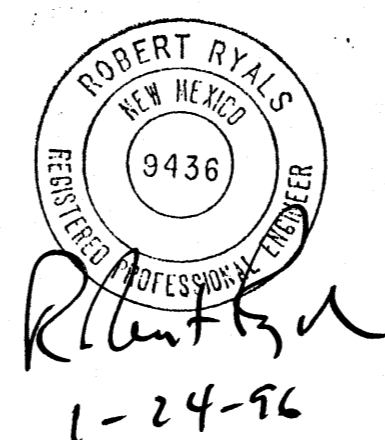
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7. Curbs & sidewalks in the ROW are per City standards.

SECTION A-A CONCRETE RUNDOWN

NO SCALE

I, ROBERT B. RYALS, A REGISTERED PROFESSIONAL ENGINEER HEREBY CERTIFY THAT I HAVE FIELD INSPECTED THE GRADING AND DRAINAGE IMPROVEMENTS CONSTRUCTED FOR THIS SITE AND, EXCEPT AS NOTED IN A LETTER TO MR. MONTOYA, CITY HYDROLOGY, DATED 1/24/96, HAVE FOUND THEM TO BE IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLAN.



UNIT 5, PONDING AREA
TYPICAL POND CROSS SECTION, NTS

LAND TREATMENT	SF	100 VOL(CF)
YARD	1520	117
ROOF	290	113
TOTAL	1815	230

PONDING VOLUME, BASED ON 10 DAY STORM, 100 YEAR



SCALE-1"=20'
0 5 10 20

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- DENOTES ASPHALT GRADE
- EXISTING CURB ELEVATION

NOTE: SEE ARCH. SITE PLAN FOR WALL AND SPECIAL LINE SYMBOLS

BENCH MARK = STANDARD ACS BRASS TABLET STAMPED M-3A, SET IN TOP OF CONC POST IN THE W MEDIAN OF MONTGOMERY NE AT LOUISIANA NE ELEVATION 6309.00 BM IS LOCATED APPROX. 1300 FT SOUTH OF SITE

NO. DATE BY DESCRIPTION CONST.					
REVISIONS					
RYALS engineering & construction services 4929 Idelwild SE Albuquerque NM 87108 (505) 265-8267 269-1142 (mobile)					
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT / ENGINEERING GROUP					
TITLE: GRADING AND DRAINAGE PLAN FOR PATIO HOMES @ LOTS 24-28, KNAPP HEIGHTS ADDN.					
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
HYDROLOGY					
INSPECTION					
A.C.E./FIELD					
PERMIT NO.	MAP NO. F-19		SHEET 1		OF 1

PROJECT DEVELOPED FOR

PATIO HOMES

FOR

JACK DETTUELER & DAVID GREEN
KNAPP HEIGHTS
ALBUQUERQUE, NM

ARCHITECT:

DAVID W. GREEN

4609 LINDBER NE
Albuquerque, New Mexico 87109
Phone: (505) 860-1031

SHEET TITLE:

GRADING & DRAINAGE PLAN

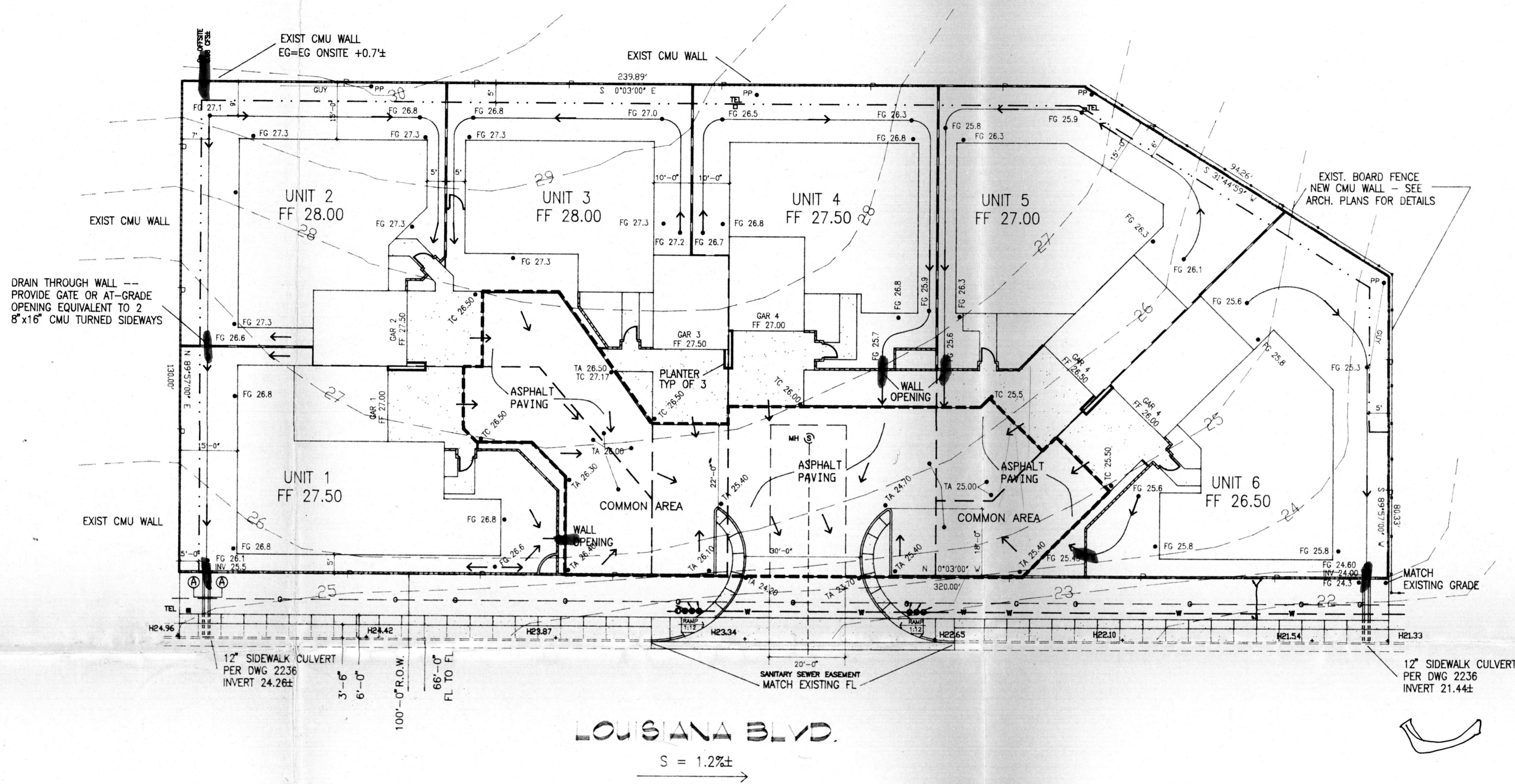
STAMP:

DATE:

12-30-93

SHEET NO.

3



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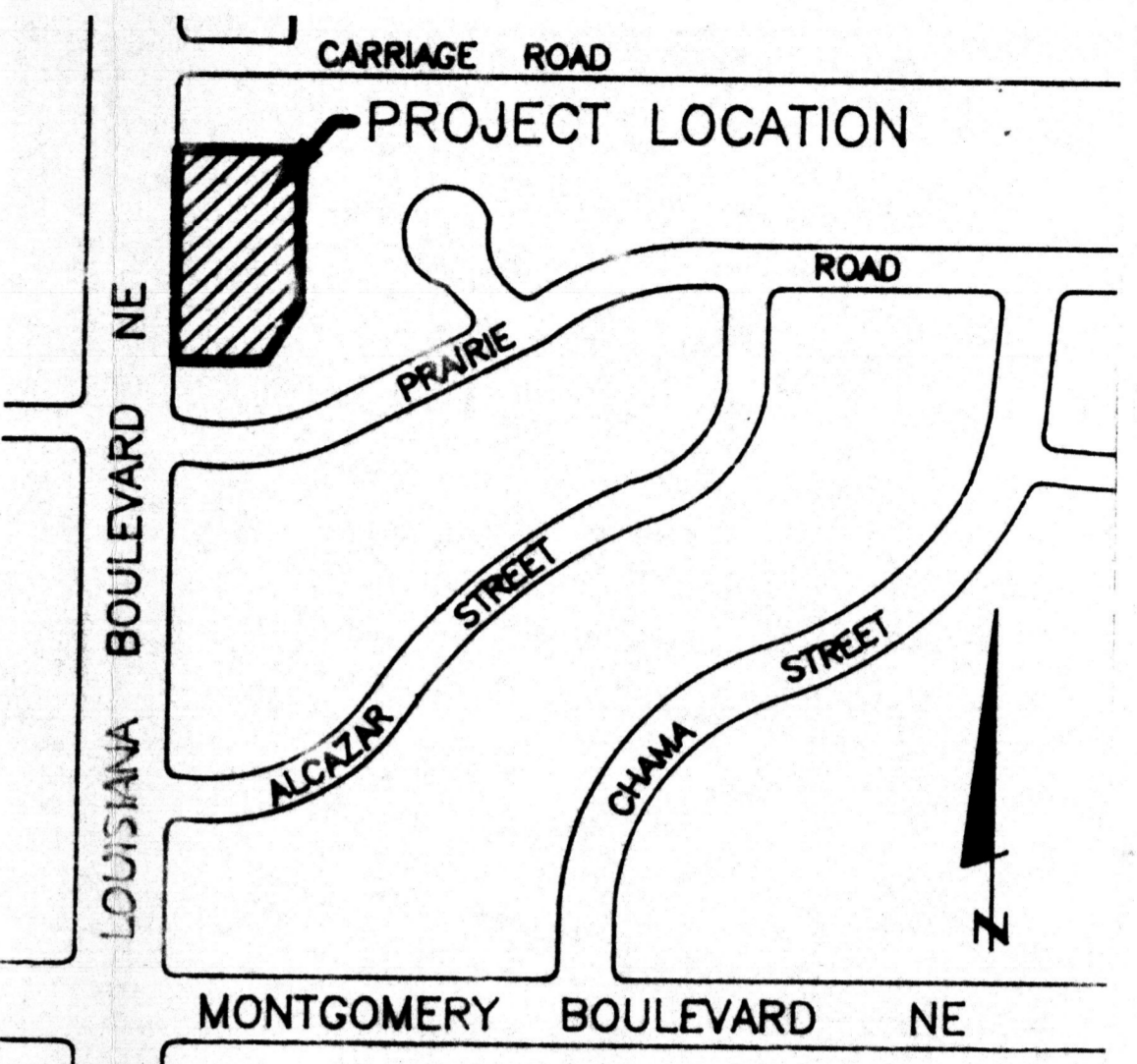
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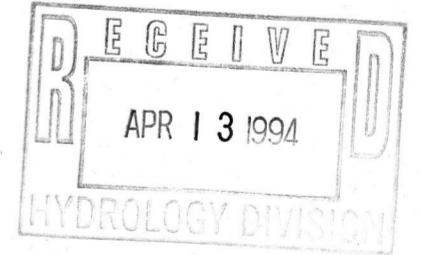
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- (M) WATER METER
- FIRE HYDRANT
- △ TRAFFIC SIGNAL
- TRAFFIC CONTROL BOX
- 0.0 — NEW CONTOURS
- 2.0 --- EXISTING CONTOURS
- FLOW DIRECTION
- ===== NEW CURB AND GUTTER
- ===== EXISTING CURB AND GUTTER
- 88.50 NEW SPOT ELEVATION
- 88.73 + EXISTING TCURB ELEVATION

NOTE: SEE ARCH. SITE PLAN FOR WALL AND SPECIAL LINE SYMBOLS

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PUBLIC WORKS DEPARTMENT / ENGINEERING GROUP

TITLE: GRADING AND DRAINAGE PLAN FOR
PATIO HOMES @ LOTS 24-28, KNAPP HEIGHTS ADDN.

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
HYDROLOGY					
INSPECTION					
A.C.E./FIELD					

PERMIT NO. MAP NO. F-19 SHEET 1 OF 1

PROJECT DEVELOPED FOR:

PATIO HOMES

FOR

JACK DETTUEILER & DAVID GREEN

KNAPP HEIGHTS

ALBUQUERQUE, NM

ARCHITECT:

DAVID W. GREEN

4409 LUNBER NE

Albuquerque, New Mexico 87109

Phone: (505) 860-1031

SHEET TITLE:

GRADING & DRAINAGE PLAN

Project Manager: DWG.

Drawn By: CHW

Project No: 9400

DATE:

12-30-93

REVISION 1/7/94

REVISION 4-94

SHEET NO.

3