HYDROLOGY

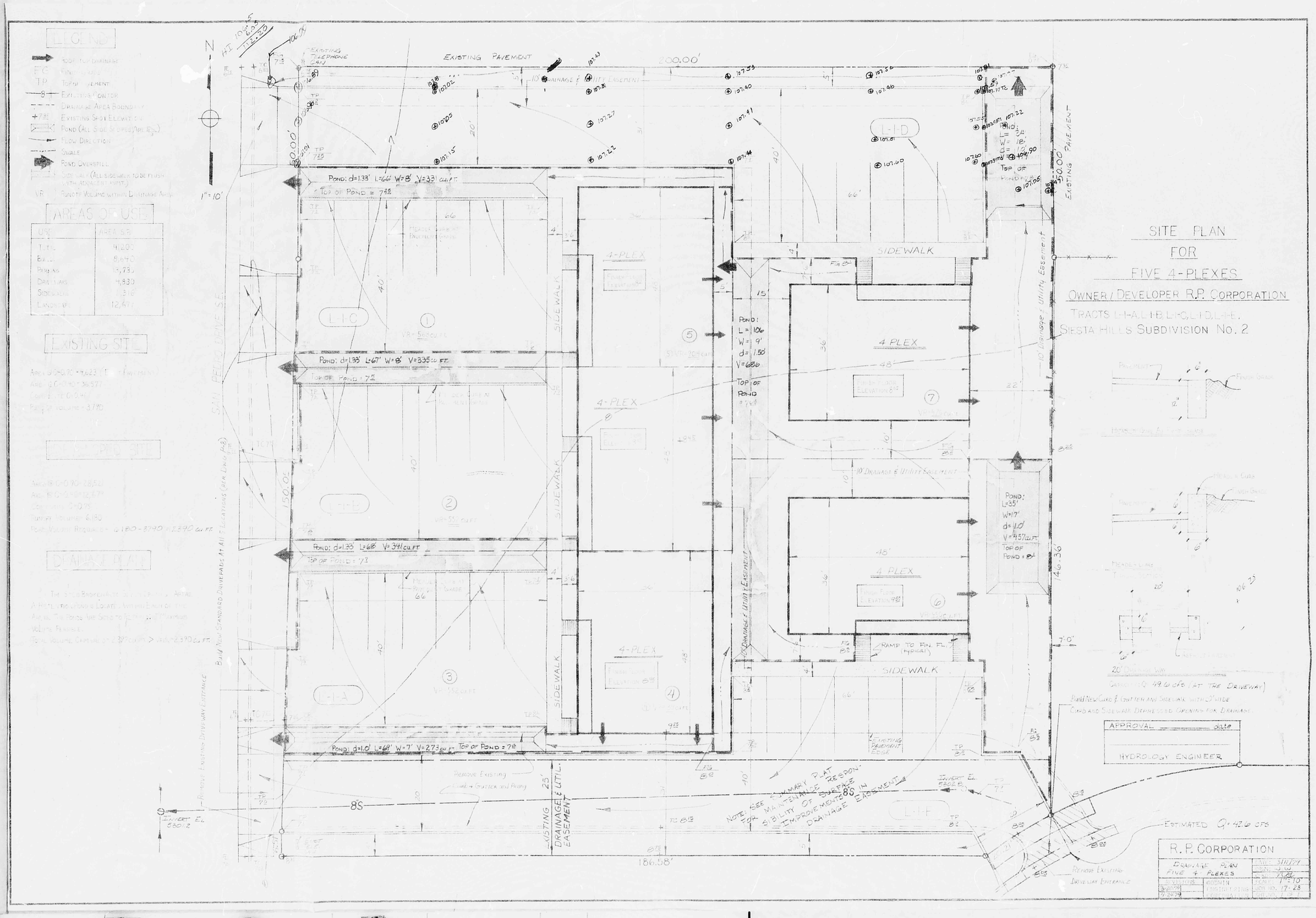
M18/D2

6 PLANS
1 of 2

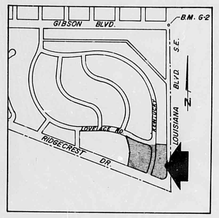
M18/D2

6 Plans

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D




D 24 C 20 B 16 A 12 | CITY OF ALBUQUERQUE C D




LOCATION MAP ( M-18 - Z )

## CURVE DATA

| | Δ | R | L |
|---|---|---|---|
| 1 | 09°11'59" | 675.00' | 108.38' |
| 2 | 18°12'38" | 330.36' | 105.00' |
| 3 | 15°09'54" | 330.36' | 87.44' |
| 4 | 90°00'00" | 50.00' | 78.54' |
| 5 | 48°11'50" | 25.00' | 21.03' |
| 6 | 56°06'14" | 50.00' | 48.96' |
| 7 | 83°40'29" | 50.00' | 73.02' |
| 8 | 77°31'16" | 50.00' | 67.65' |
| 9 | 58°58'08" | 50.00' | 51.46' |
| 10 | 48°11'50" | 25.00' | 21.03' |
| 11 | 111°14'44" | 50.00' | 97.08' |

## ASSUMPTIONS :

| | | |
|---|---|---|
| $C_{UNDEVELOPED}$ | = | 0.35 |
| SMALLEST LOT | = | 13,000 FT² = 0.2984 AC. |
| HOUSE | = | 3,000 FT² |
| DRIVE PAD & SIDEWALK | = | 1,000 FT² |
| $C_{LANDSCAPE}$ | = | 0.25 |
| $C_{IMPERVIOUS}$ | = | 0.90 |
| $C_{DEV.}$ | = | $\frac{(9000)(0.25)+(4000)(0.90)}{13,000}$ |
| $C_{DEV.}$ | = | 0.45 |
| $C_{POND}$ | = | 0.45 − 0.35 = 0.10 |

| LOT NO. | REQ'D VOL. | POND VOL. |
|---|---|---|
| 1 | 330 | 815 |
| 2 | 410 | 900 |
| 3 | 430 | 1000 |
| 4 | 290 | 560 |
| 5 | 320 | 750 |
| 6 | 290 | 350 |
| 7 | 300 | 1200 |
| 8 | 320 | 900 |
| 9 | 270 | 500 |
| 10 | 280 | 370 |
| 11 | 300 | 580 |

B.M. G-2 – INTERSECTION GIBSON & LOUISIANA
ELEV. 5334.757

NOTE : ALL PONDS ARE 0.5' DEEP.

RECEIVED
AUG 27 1981
ENGINEERING

C. A. COONCE & ASSOC.
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH. (505) 296-1089

TITLE: GRADING & DRAINAGE PLAN

PROJECT: REPLAT OF A PORTION OF SIESTA HILLS

| DATE | 7/13/81 | REVISED | | | |
|---|---|---|---|---|---|
| DRAWN | Y.M. | 7/21/81 | | | |
| CHECKED | C.A.C. | | | | |

SHEET 1 OF 1

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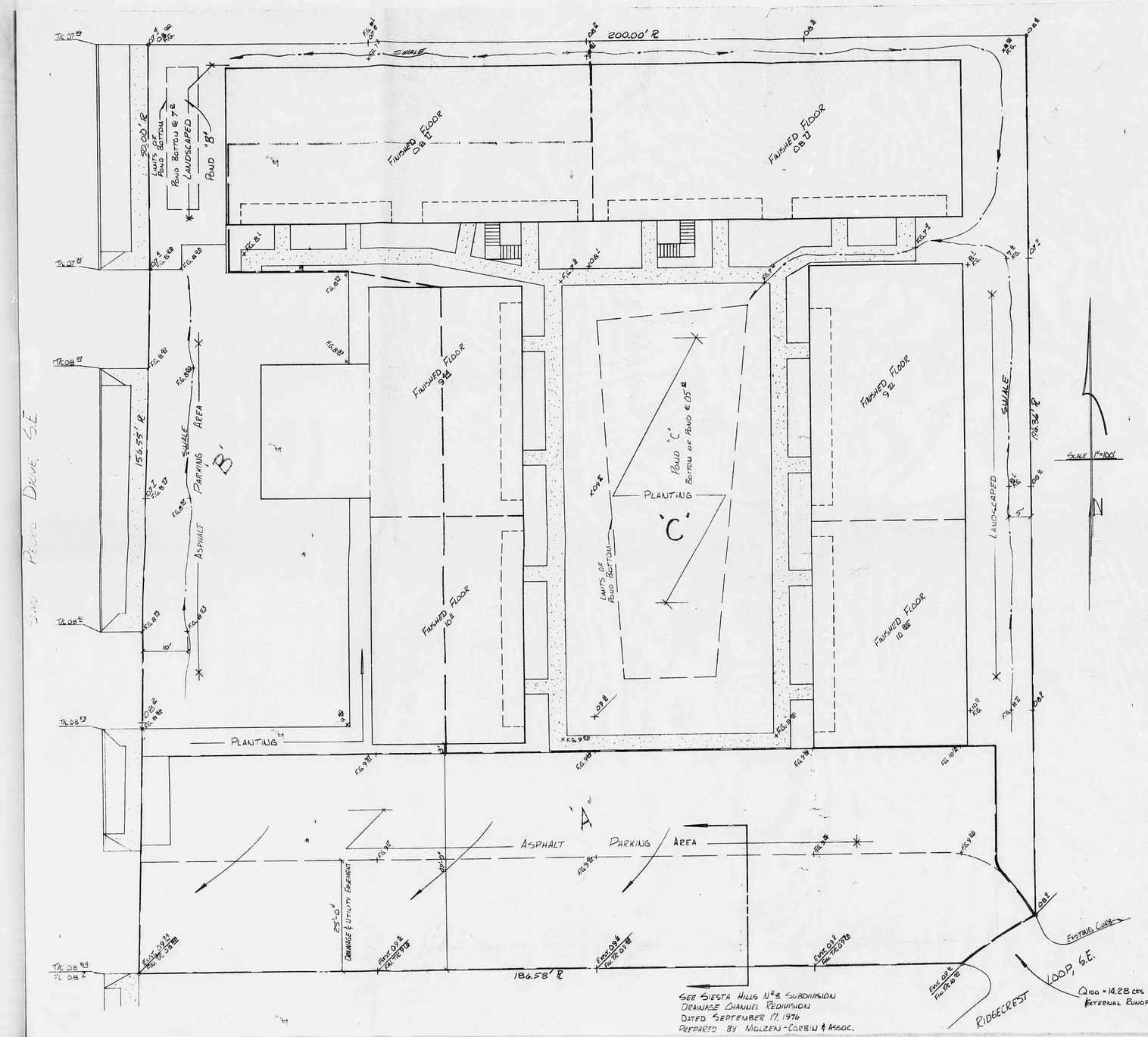


SEE SIESTA HILLS Nº2 SUBDIVISION
DRAINAGE CHANNEL REDIVISION
DATED SEPTEMBER 17, 1976
PREPARED BY MOLZEN-CORBIN & ASSOC.

ENCHANTMENT ENGINEERS INC.
1529-F EUBANK N.E.
ALBUQUERQUE, N.M.

## DRAINAGE CALCULATIONS:
TRACT L-1
SIESTA HILLS SUBDIVISION Nº 2

### UNDEVELOPED:

| | |
|---|---|
| AREA UNDER CONSIDERATION | 0.953 AC. |
| NATURAL RUNOFF COEFFICIENT | 0.40 |
| EXISTING SLOPE | 0.5 % |
| TIME OF CONCENTRATION | 15 MINS. |
| INTENSITY | 4.72 IN/HR. |
| 100 YR., 6 HR. PRECIPITATION | 2.5 IN. |
| UNDEVELOPED RUNOFF | 1.80 CFS |
| VOLUME OF NATURAL RUNOFF | 0.073 AC. FT. |

### DEVELOPED:

| | A | C | A x C |
|---|---|---|---|
| ROOF (FLAT) | 0.318 | 0.85 | 0.270 |
| PAVING | 0.356 | 0.92 | 0.328 |
| LANDSCAPED | 0.279 | 0.42 | 0.112 |

RUNOFF @ MAX. INTENSITY = 5.4 x 0.710 = 3.83 CFS.

VOLUME OF RUNOFF = 0.198 AC. FT.
REQUIRED STORAGE VOLUME = 0.069 AC. FT

| AREA "A" | A | C | A x C |
|---|---|---|---|
| PAVED = | 0.209 | .92 | .192 |
| LANDSCAPED = | 0.009 | 0.40 | .004 |
| | | | .196 = 1.06 |

Q @ 5.4 IN/HR. →
VOLUME = 0.041 AC. FT.

| AREA "B" | A | C | A x C |
|---|---|---|---|
| PAVED = | .095 | .92 | .087 |
| LANDSCAPED = | .028 | .40 | .011 |
| ROOF = | .092 | .85 | .078 |
| | | | .176 = .95 cfs |

Q @ 5.4 IN/HR →
VOLUME = 0.037 AC. FT.
VOLUME OF POND "B" = 0.005 AC. FT.

| AREA "C" | A | C | A x C |
|---|---|---|---|
| PAVED = | .014 | .92 | .013 |
| LANDSCAPED = | .242 | .40 | .097 |
| ROOF = | .226 | .85 | .192 |
| | | | .302 = 1.63 |

Q @ 5.4 IN/HR.
VOLUME = 0.043 AC. FT.
VOLUME OF POND "C" = 0.064 AC. FT.

### EXTERNAL RUNOFF

EXTERNAL RUNOFF ENTERS THE SUBJECT PROPERTY AT THE SOUTHEAST CORNER AND IS DEVELOPED FROM SIESTA HILLS Nº3 SUBDIVISION. DRAINAGE REPORT OF WHICH WAS PREPARED BY MOLZEN - CORBIN & ASSOCIATES.

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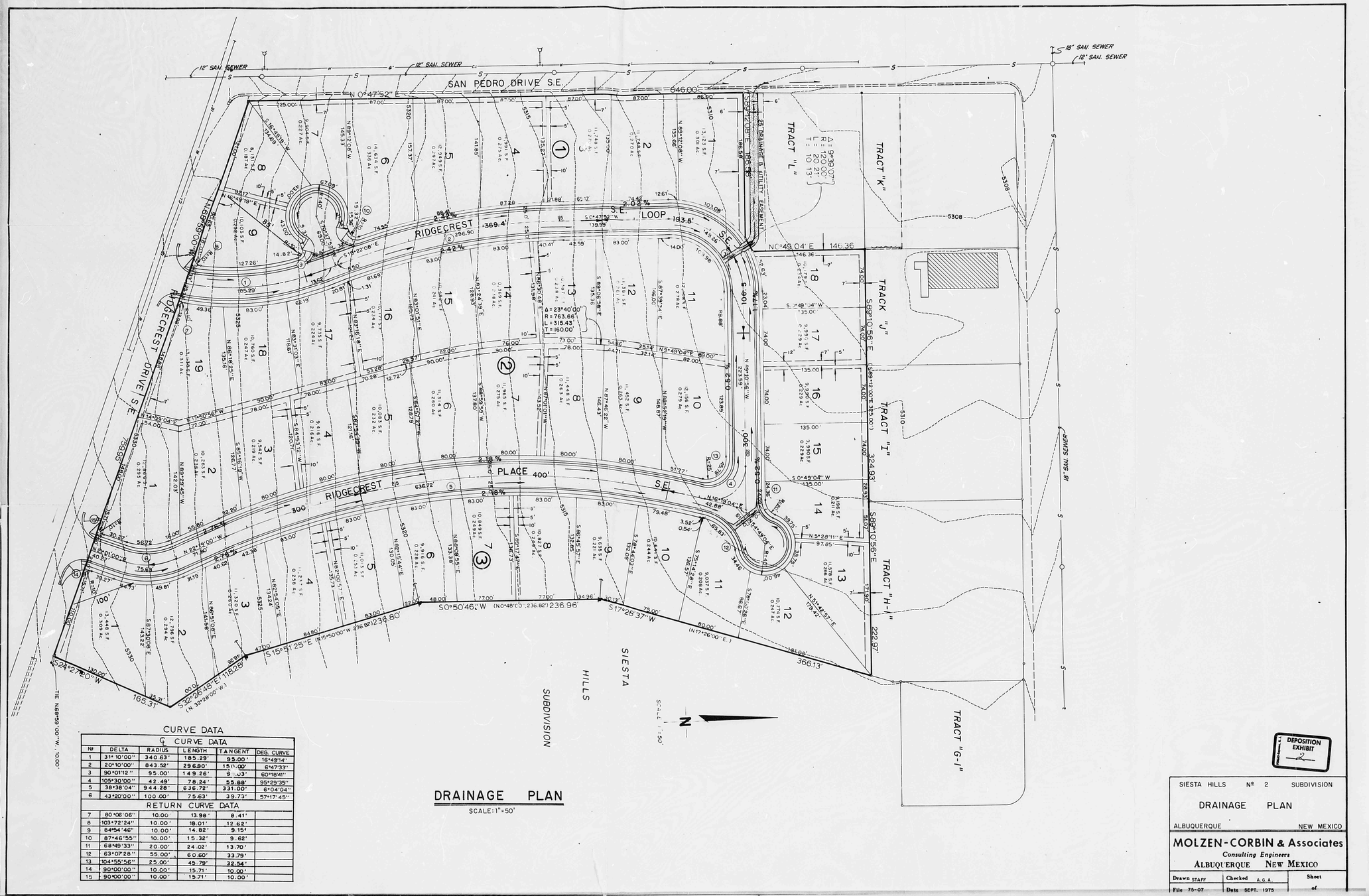
D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D

HYDROLOGY

M18/D2

6 PLANS
2 of 2




## DRAINAGE PLAN

SCALE: 1"=50'

CURVE DATA

| Nº | DELTA | RADIUS | LENGTH | TANGENT | DEG. CURVE |
|---|---|---|---|---|---|
| ℄ CURVE DATA | | | | | |
| 1 | 31° 10'00" | 340.63' | 185.29' | 95.00' | 16°49'14" |
| 2 | 20°10'00" | 843.52' | 296.90' | 150.00' | 6°47'33" |
| 3 | 90°01'12" | 95.00' | 149.26' | 95.03' | 60°18'41" |
| 4 | 105°30'00" | 42.49' | 78.24' | 55.88' | 95°29'35" |
| 5 | 38°38'04" | 944.28' | 636.72' | 331.00' | 6°04'04" |
| 6 | 43°20'00" | 100.00' | 75.63' | 39.73' | 57°17'45" |
| RETURN CURVE DATA | | | | | |
| 7 | 80°06'06" | 10.00' | 13.98' | 8.41' | |
| 8 | 103°72'24" | 10.00' | 18.01' | 12.62' | |
| 9 | 84°54'46" | 10.00' | 14.82' | 9.15' | |
| 10 | 87°46'55" | 10.00' | 15.32' | 9.62' | |
| 11 | 68°49'33" | 20.00' | 24.02' | 13.70' | |
| 12 | 63°07'28" | 55.00' | 60.60' | 33.79' | |
| 13 | 104°55'56" | 25.00' | 45.79' | 32.54' | |
| 14 | 90°00'00" | 10.00' | 15.71' | 10.00' | |
| 15 | 90°00'00" | 10.00' | 15.71' | 10.00' | |

DEPOSITION EXHIBIT 2

SIESTA HILLS Nº 2 SUBDIVISION

DRAINAGE PLAN

ALBUQUERQUE NEW MEXICO

**MOLZEN-CORBIN & Associates**
*Consulting Engineers*
ALBUQUERQUE NEW MEXICO

| Drawn STAFF | Checked A.G.A. | Sheet |
|---|---|---|
| File 75-07 | Date SEPT. 1975 | of |

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D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D

CURVE DATA

| ℄ CURVE DATA | | | | | |
|---|---|---|---|---|---|
| № | DELTA | RADIUS | LENGTH | TANGENT | DEG. CURVE |
| 1 | 31°10'00" | 340.63' | 185.29' | 95.00' | 16°49'14" |
| 2 | 20°10'00" | 843.52' | 296.90' | 150.00' | 6°47'33" |
| 3 | 90°01'12" | 95.00' | 149.26' | 95.03' | 60°18'41" |
| 4 | 105°30'00" | 42.49' | 78.24' | 55.88' | 95°29'35" |
| 5 | 38°38'04" | 944.28' | 636.72' | 331.00' | 6°04'04" |
| 6 | 43°20'00" | 100.00' | 75.63' | 39.73' | 57°17'45" |
| RETURN CURVE DATA | | | | | |
| 7 | 80°05'06" | 10.00' | 13.98' | 8.41' | |
| 8 | 103°72'24" | 10.00' | 18.01' | 12.62' | |
| 9 | 84°54'46" | 10.00' | 14.82' | 9.15' | |
| 10 | 87°46'55" | 10.00' | 15.32' | 9.62' | |
| 11 | 68°49'33" | 20.00' | 24.02' | 13.70' | |
| 12 | 63°07'28" | 55.00' | 60.60' | 33.79' | |
| 13 | 104°55'56" | 25.00' | 45.79' | 32.54' | |
| 14 | 90°00'00" | 10.00' | 15.71' | 10.00' | |
| 15 | 90°00'00" | 10.00' | 15.71' | 10.00' | |

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| 14 | 90°00'00" | 10.00' | 15.71' | 10.00' | |
| 15 | 90°00'00" | 10.00' | 15.71' | 10.00' | |

## DRAINAGE PLAN

SCALE: 1"=50'

SIESTA HILLS № 2 SUBDIVISION

DRAINAGE PLAN

ALBUQUERQUE NEW MEXICO

**MOLZEN-CORBIN & Associates**
*Consulting Engineers*
ALBUQUERQUE NEW MEXICO

| Drawn STAFF | Checked A.G.A. | Sheet |
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