HYDROLOGY

F18/D46
ONE PLAN

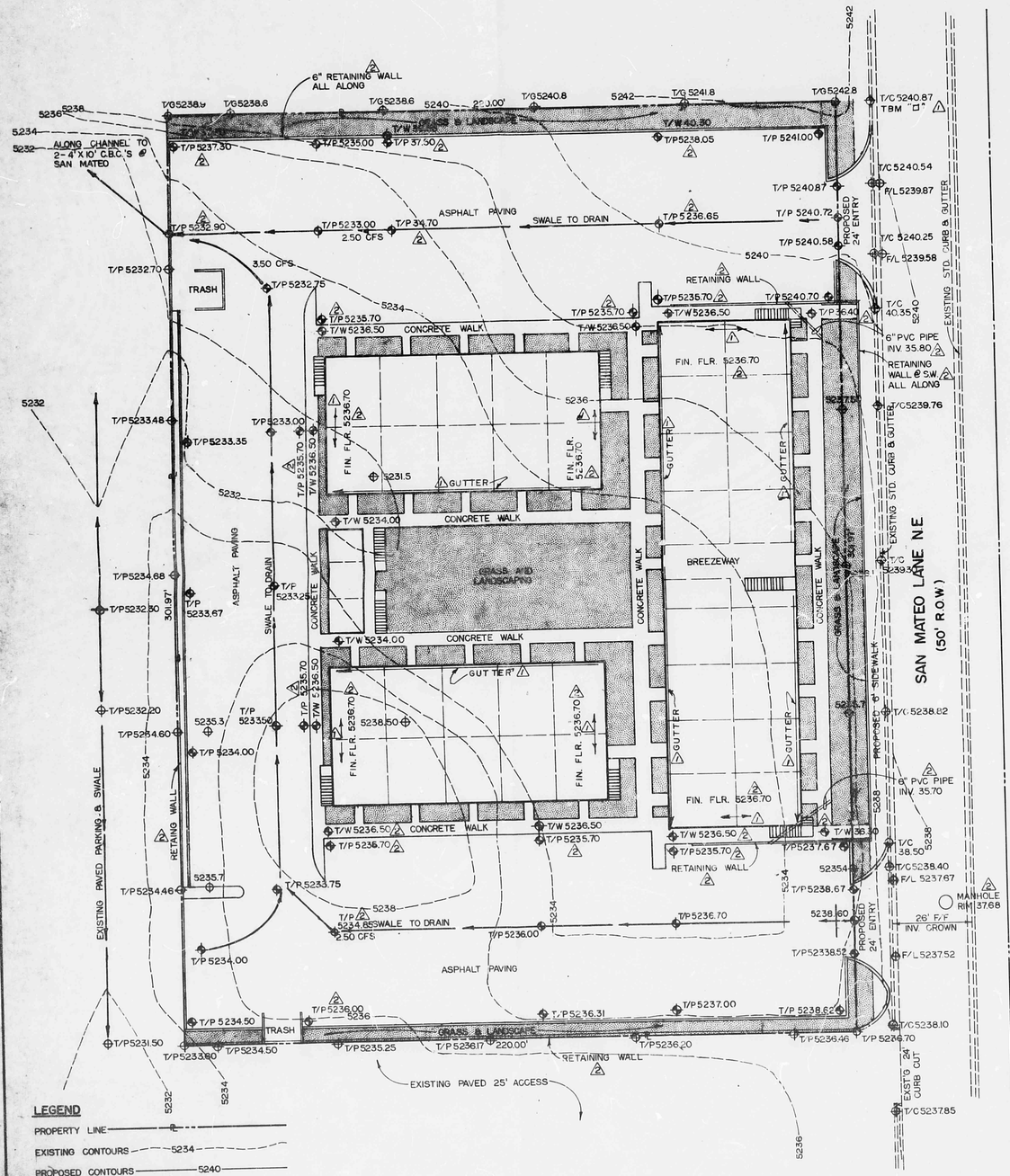
F18/D46

1 Plan

DRAINAGE PLAN

TRACT Y, BANKER'S UNION LIFE SUBDIVISION
ALBUQUERQUE, NEW MEXICO

FLOOD MAP 17 BENCHMARK 8-F17 ELEV. 5209.15 SOIL TYPE B
TOTAL AREA: 66,443 SQ. FT. = 1.525 ACRES
TOTAL AREA ROOFED OR PAVED: 54,400 SQ. FT. = 82%
FILE # F18/D46 APPROVED 10/2/86

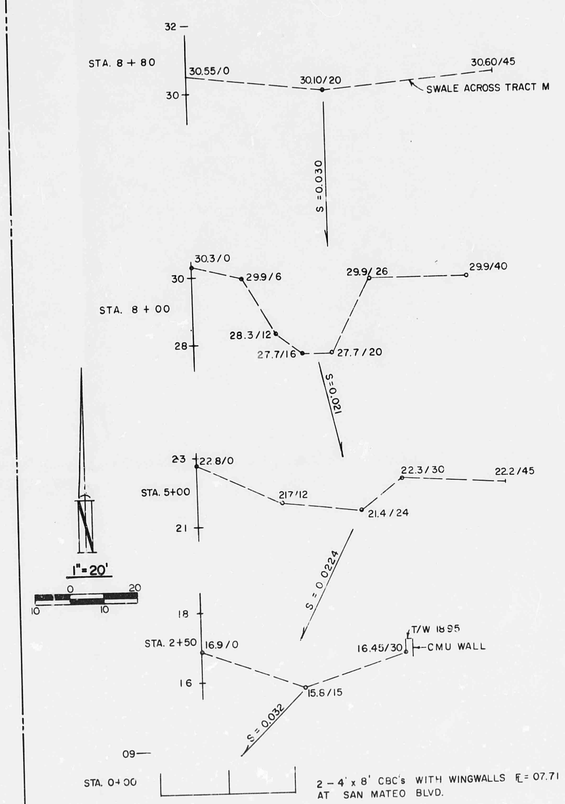


LEGEND

- PROPERTY LINE
- EXISTING CONTOURS — 5234
- PROPOSED CONTOURS — 5240
- EXISTING SPOT ELEVATIONS
- PROPOSED SPOT ELEVATIONS
- FLOW DIRECTION
- EXISTING STD. CURB & GUTTER
- LANDSCAPE AREA

CHANNEL TO CBC's AT SAN MATEO BLVD.

SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 2'



SCALE: HORIZONTAL - 1" = 10', VERTICAL - 1" = 2'

HYDROLOGY

OFF-SITE FLOW: NONE, DUE TO EXISTING CURBS AND PAVED STREETS WITH INVERTED CROWN.
ON-SITE FLOW: UNDEVELOPED $C = 0.40$, $I = 2.15 \times 2.2 = 4.73$, $Q_{100} = 0.40 \times 4.73 \times 1.525 = 2.89$ CFS
VOLUME: BY CN80 = 0.70" x 66443 SQ. FT. = 3875 CU. FT.
DEVELOPED C = 0.59 X 0.95 = 0.56
0.23 X 0.90 = 0.21
0.18 X 0.25 = 0.05
0.82

$Q_{100} = 0.82 \times 4.73 \times 1.525 = 5.91$ CFS
VOLUME: BY CN90 = 1.38" x 66443 SQ. FT. = 7200 CU. FT.
MAXIMUM RUNOFF RATE = 6.00 AT WEST PROPERTY LINE
PAVED SWALE 24' WIDE WITH A CENTERLINE DEPTH OF 3" WILL CARRY 11.3 C.F.S. ON A 3% SLOPE.
$Q = 3.0$ S.F. x $\frac{1.486}{0.017}$ x 0.250 x 0.173 = 11.3 C.F.S.

3.5 C.F.S. IN WEST PAVED SWALE ON 1% SLOPE REQUIRES LESS THAN A 3" DEPTH FOR 24' WIDTH.
$Q = 3.0$ S.F. x $\frac{1.486}{0.017}$ x 0.250 x 0.10 = 6.56 C.F.S.

USE 3" DEEP PAVED SWALE 24' WIDE FOR ALL LOCATIONS.
ALL ON-SITE WATER WILL BE CONVEYED TO N.W. CORNER OF SITE. THE WATER WILL THEN BE CONVEYED BY AN EXISTING CHANNEL TO 2-4'X10' CONCRETE BOXES UNDER SAN MATEO BLVD. REFER TO DRAINAGE EASEMENT FILED JULY 16, 1986 BOOK MS 372 A, PAGES 979/980 FOR DRAINAGE ACROSS TRACT M. AND 25' DRAINAGE EASEMENT PER CV-78-07970 FILED IN THE OFFICE OF THE CLERK DISTRICT COURT ON DECEMBER 14, 1981 FOR DRAINAGE ACROSS THE NORTH END OF THE GOODWILL INDUSTRIES TRACT TO SAN MATEO BLVD. N.E.

FLOW IN CHANNEL TO CBC's
AREA = 8.8 ACRES (AREA COMPUTED FROM 1" = 200' ORTHO-TOPO MAP & DISPLAYED ON FLOOD MAP.)
USE T_c = 10 MIN 100 YR - 6HR = 2.3 IN. I = 2.3 x 2.3 = 5.29" USE C = 0.90
Q = 8.8 x 5.29 x 0.90 = 42 C.F.S.
X-SECTION AT STATION 2+50 IS SMALLEST IN AREA.
A = 19.9 P = 30 R = 0.66 $R^{2/3}$ = 0.76 S = 0.0224 $S^{1/2}$ = 0.15 N = 0.03
Q = 19.9 x $\frac{1.486}{0.03}$ x 0.76 x 0.15 = 112 C.F.S. — OK

EROSION CONTROL NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE TO THE FOLLOWING:

1. NO SEDIMENT-BEARING WATER SHALL BE ALLOWED TO DISCHARGE THE SITE DURING CONSTRUCTION.
2. DURING GRADING OPERATIONS AND UNTIL THE PROJECT HAS BEEN COMPLETED, ALL ADJACENT PROPERTY, RIGHTS-OF-WAY, AND EASEMENTS SHALL BE PROTECTED FROM FLOODING.
3. ANY AND ALL SEDIMENTATION ORIGINATING ON THE SITE WHICH IS DEPOSITED WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PROMPTLY AND COMPLETELY REMOVED BY THE CONTRACTOR.
4. CONTROL OF SEDIMENT-LADEN FLOOD WATERS WILL BE ACCOMPLISHED BY THE USE OF A COMPACTED EARTH BERM AT LEAST 12" HIGH. BERM SHALL BE LOCATED ALONG THE DOWNSTREAM PERIMETERS OF THE PROPERTY.

CERTIFICATION DATA

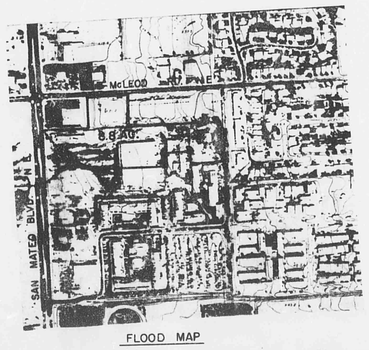
THE CONSTRUCTION, AS BUILT, IS IN ADEQUATE COMPLIANCE WITH THE INTENT OF THE DRAINAGE PLAN APPROVED 10/2/86 - I HEREBY CERTIFY THAT THE CONSTRUCTION & ELEVATIONS SHOWN HEREON ARE TRUE & CORRECT TO THE BEST OF MY KNOWLEDGE & BELIEF.

James W. Gross 6/29/87

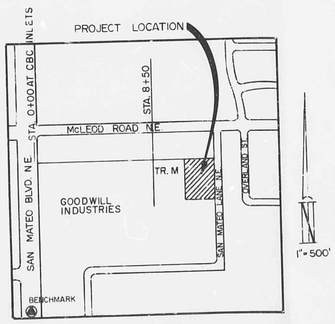
RECEIVED JUL 15 1987 HYDROLOGY SECTION

JAMES W. GROSS NEW MEXICO 4186 REGISTERED PROFESSIONAL ENGINEER

9/16/86



FLOOD MAP



VICINITY MAP
ZONE MAP F-18

△2 AS BUILT 6/29/87
△1 REVISED 9/23/86

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ALBUQUERQUE, NEW MEXICO 87102

DRAINAGE PLAN	File # H-99
FOR: ERICKSON APARTMENTS	Date 3/27/86
AT: SAN MATEO LANE N.E.	Drawn CLL/CLB
ALBUQUERQUE, NEW MEXICO	Sheet 1 of 1