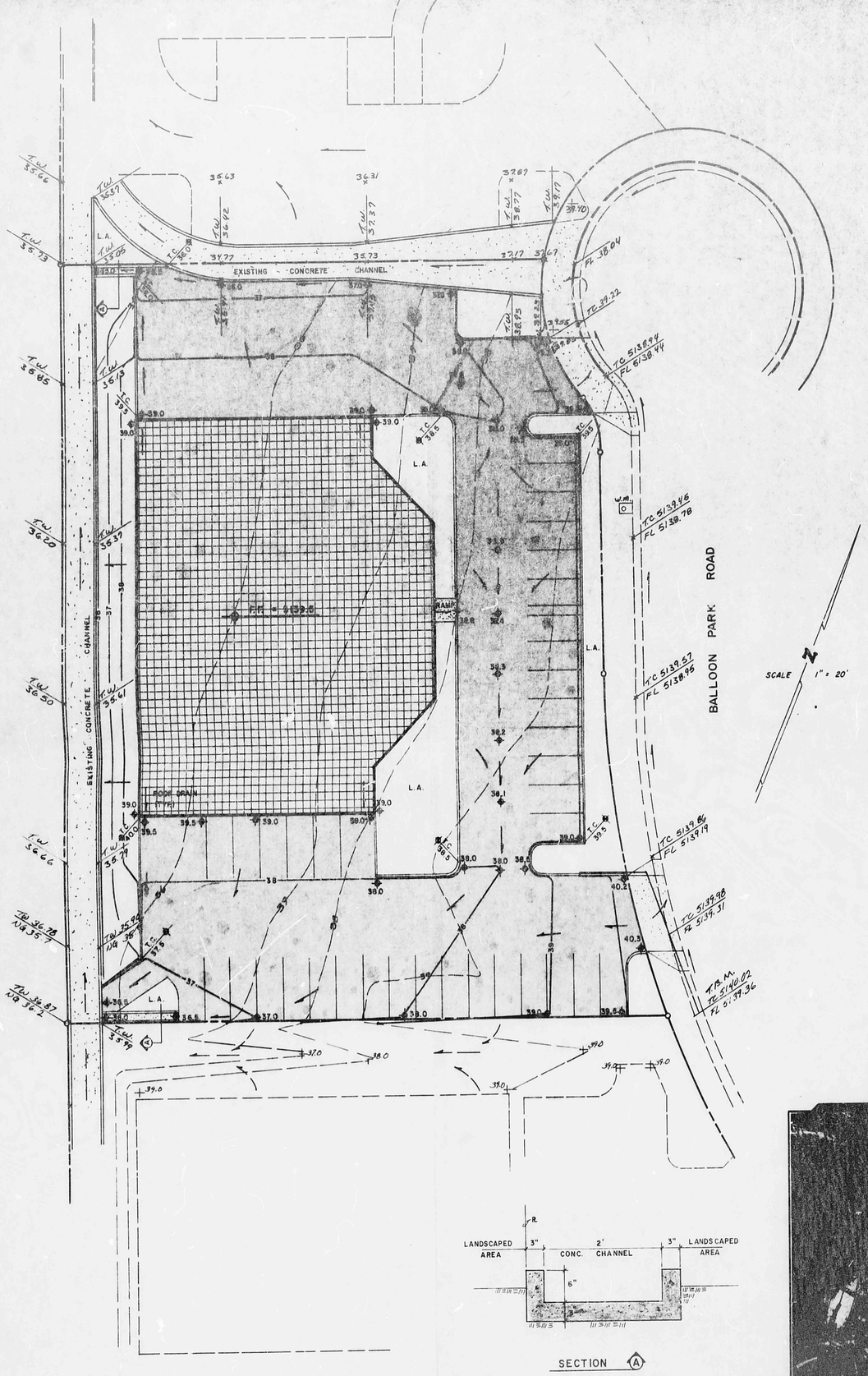
HYDROLOGY

E17/D19F
ONE PLAN

E 17/D22F

1 PLAN



SECTION (A)

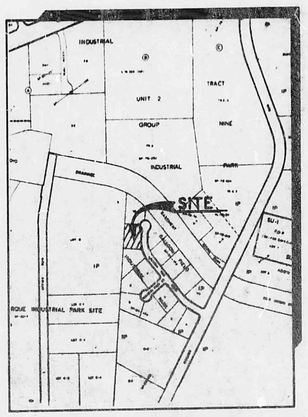
LEGEND

- SIDEWALK, CURB & GUTTER (EXISTING, PROPOSED)
- PROPOSED ASPHALT
- BUILDING (EXISTING, PROPOSED)
- PROPERTY LINE
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR
- SURFACE FLOW DIRECTION (EXISTING, PROPOSED)
- L.A. LANDSCAPED AREA
- T.B.W. TOP OF GRADE WALL (LESS THAN 18" HIGH)
- T.R.W. TOP OF RETAINING WALL (MORE THAN 18" HIGH)
- T.A. TOP OF ASPHALT
- T.C. TOP OF CURB
- F.L. FLOW LINE
- F.F. FINISHED FLOOR

CONSTRUCTION NOTES:

1. Before construction, the Contractor shall check and verify pertinent figures shown hereon and shall make all applicable field measurements. Should any conflict, error or discrepancy be discovered, the contractor shall notify the Engineer at once to resolve the problem. It is recommended that the Contractor meet with the Engineer for a pre-design conference to discuss the scope of work and critical areas involved.
2. The Contractor shall be responsible for following the plans using his best skill and attention. Any departure from the plans must be approved by the Engineer and the City Hydrology Department prior to construction.
3. The Contractor shall check the site plan for locations of existing utilities within or adjacent to streets and shall take all necessary precautions and efforts to locate and protect these utilities. He shall give 48 hours notice to Line Locating Service, 766-2154 for any work that may interfere with said utilities.

FLOOD HAZARD MAP



VICINITY MAP - E-17

NOTES:

The proposed improvements, comprised of an office building, paved access and parking areas and associated landscaping, is located in the Balloon Field Industrial Park on Lot 99.

The present site is a one-acre undeveloped parcel boardered on the east by Balloon Field Road, a paved street, a concrete lined channel on the north and west sides, and a new office building on the south side. The lot will be graded to direct flows into the channel as shown on the approved Master Drainage Plan for Balloon Field Industrial Park.

The intent of this plan is to show:

a) Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.

b) The extent of proposed site improvements, including buildings, walks and pavement.

c) The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet City requirements for drainage management.

d) The relationship of onsite improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

GENERAL NOTES:

LEGAL: Lot 99, Balloon Field Industrial Park, Albuquerque, New Mexico.

SURVEYOR: Claussen and Associates, Inc., 3400 Stanford Dr. N.E., Albuquerque, N.M. July, 1986.

B.M.: Manhole at intersection of Kircher and Singer Boulevards. Elevation = 5,144.07.

T.B.M.: Top of curb on Balloon Park Road at extension of south property line. Elevation = 5,140.02.

SOILS: Soil Type 'EmB', Hydrologic Soil Group "B".

FLOOD HAZARD: Site is not located within a flood hazard zone, as shown on FEMA Map No.16.

OFF-SITE DRAINAGE: The site is unaffected by offsite drainage due to the presence of surrounding improvements on the east and north sides. Flow patterns of the lot boardering the south side of the site drain directly west into the concrete channel.

EROSION CONTROL: Contractor will be responsible for containing any sediments generated during construction by using either a fabric silt fence (as shown by detail) or by constructing a 2'-high earth berm across low points.

CALCULATIONS: Calculations are based on the City of Albuquerque D.P.M. Manual, Vol. II for the 100 year-6 hour storm, using the Rational Formula to compare the existing and proposed runoff rates.

RATIONAL METHOD- Q = CIA

Area of site: 43,560 sq.ft. = 1.0 Ac.

Run-off Coefficient:

Existing site:
Undeveloped Area = 43,560 ft²

$C_u = \frac{43,560(0.40)}{43,560} = 0.40$

Composite C = 0.40

Developed Site:
Roof Area = 12,500 ft²
Landscaped Area = 11,100 ft²

$C_u = \frac{12,500(0.95)}{43,560} = 0.27$

$C_l = \frac{11,100(0.25)}{43,560} = 0.06$

Composite C = 0.77

Rainfall Intensity:

$I = P_6(6.84)\,T_c^{-0.51} = 4.7$" per hour
where $P_6 = 2.2$"(DPM 22.2 D-1)
$T_c = 10$ minutes

Existing Condition:

$Q_{100} = (0.40)(4.7)(1)$
$= 2$ cfs

$V_{100} = (2)(50T_c)(60\ sec/min)/2$
$= 3000$ cu. ft.

Developed Condition:

$Q_{100} = (0.77)(4.7)(1)$
$= 4$ cfs

$V_{100} = (4)(50)(60)/2$
$= 6000$ cu. ft.

SUMMARY:

$Q_{100} = (2)-(4) = 2$ cfs (increase)
$V_{100} = (3000)-(6000) = 3000$ cu. ft. (increase)

CHANNEL RUNDOWN CAPACITY (SECTION A)

S = 2.0 % (min)
n = 0.015
At a 6" flow depth, Q = 7 c.f.s. capacity for an expected maximum flow of 2 c.f.s. in each channel

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AUG 08 1986
HYDROLOGY SECTION

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REVISIONS	DATE
DESIGNED C.C.	6-86
DRAWN J.C.	6-86
CHECKED C.W.	6-86

DRAINAGE / GRADING PLAN
LOT 99
BALLOON FIELD INDUSTRIAL PARK

ENGINEERING

CHRISTOPHER C. WEISS
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER

SHEET 1 OF 1