HYDROLOGY

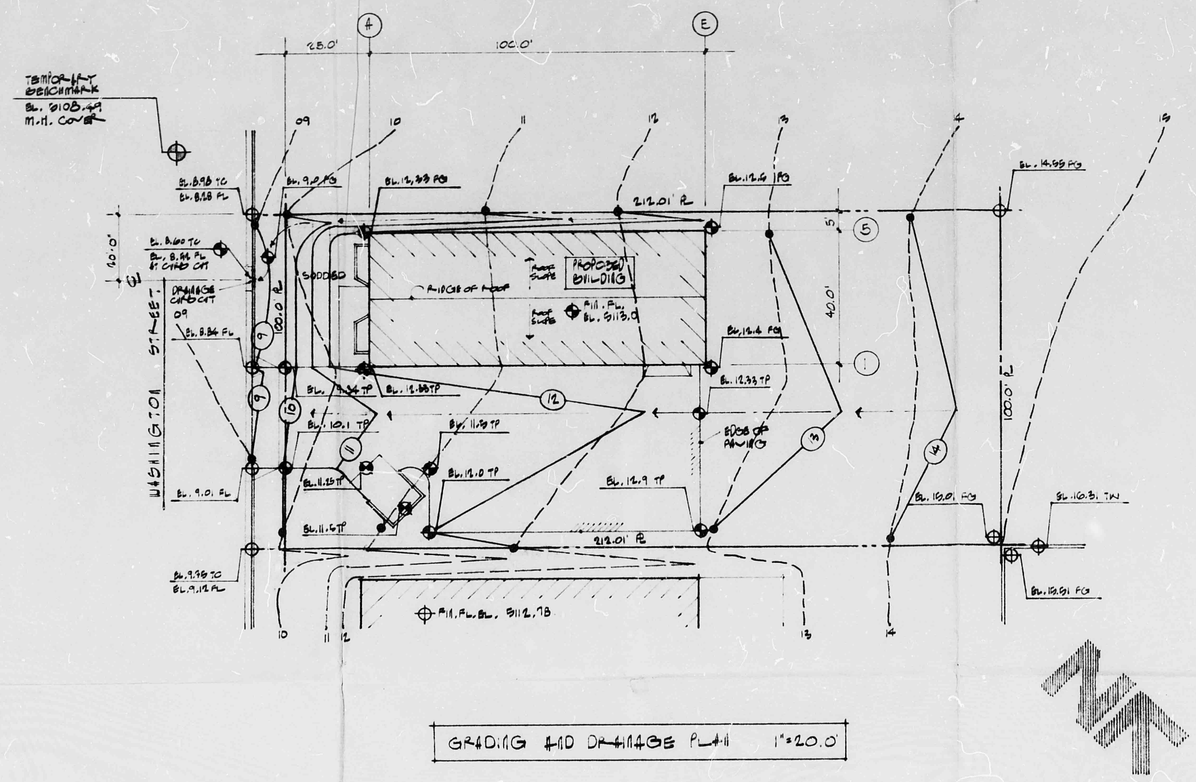
D17/D40

ONE PLAN

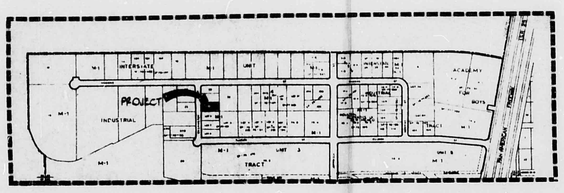
1 PLAN FOR

Facility FOR.
OLE FOLKS MACHINE SHOP

D17 — D40



GRADING AND DRAINAGE PLAN 1"=20.0'



VICINITY MAP NTS
ZONE ATLAS MAP # D-17

RECEIVED
MAY 0 4 1983
ENGINEERING

North Swale at Curb Cut

Broad crested weir
Q= CLH3/2
0.3=(2.6)(1.0)H 3/2
H= 0.24 ft.
For street flows less than 0.4 ft. in depth the swale flow will not over-top the curb.

South Swale (Earth Section)

Q=2.5 cfs
S=2.85% = 0.0285 1/1
n= 0.035
Triangular section w/ left slope app.= 150:1
right slope app.= 50:1
depth app.=0.19 ft.
velocity = 1.1 fps (non-erosive)
No erosion protection required.

North Swale

Q=0.3 cfs
S=2%=0.02 1/1
n= 0.045
Triangular section w/ left slope app.= 5:1
right slope app.= 5:1
depth = 0.23 ft.
velocity: 1.1 fps (non-erosive)

South Swale (paved section)

Q= 2.5 + 0.8 = 3.3 cfs
S= 1.25 = 0.0125 1/1
n= 0.02
Triangular section w/ left slope app. = 12:1
right slope app. = 40:1
depth app. = 0.25 ft.
therefore top width app. 13 ft.

DRAINAGE CONDITIONS AND REQUIREMENTS

1. Offsite flows must be allowed to pass through the site.
2. No ponding required.
3. Determine swale requirements for above conditions.

OFFSITE FLOW

AREA:	0.9 Acres
RUNOFF FACTOR:	0.6 (undeveloped & earth storage)
TIME OF CONC.:	10 minutes
RAINFALL INTENSITY:	4.65 in/hr.

Q = CiA = (0.6)(4.65)(0.9) = 2.5 cfs

ONSITE FLOW

North Swale

AREA:	2625 sq.ft. = 0.06 Acres
RUNOFF FACTOR:	0.99 (Metal roof and gravel swale)
TIME OF CONC.:	10 minutes
RAINFALL INTENSITY:	4.65 in/hr.

Q = CiA = (0.99)(4.65)(0.06) = 0.3 cfs

South Swale

AREA:	8000 sq.ft. = .18 Acres
RUNOFF FACTOR:	(0.99)(Metal roof & asphalt parking)
RAINFALL INTENSITY:	4.65 in/hr.

Q = CiA = (0.99)(4.65)(0.18) = 0.8 cfs

LEGAL DESCRIPTION:

Lot 31 of Interstate Industrial Tract
Unit 4
Albuquerque, New Mexico
Zone Atlas Map No. D-17

SOIL TYPE: EmB - Embudo gravelly fine sandy loam, 0-5 percent slopes.

LEGEND

- Proposed spot elevation
- Existing spot elevation
- Existing contour
- Proposed contour
- Junction of existing and proposed contour
- Direction of runoff
- TC Top of curb
- FL Flow line
- FG Finished grade
- TP Top of pavement
- TW Top of wall

BENCHMARK INFORMATION:

Albuquerque Control Station: 8-D17A is located approximately 400' south of the intersection of Ellison NE and Jefferson NE, and 45' west of centerline of Jefferson NE. Elevation of control station: 5145.55.

STATE OF NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER
JAMES L. BORDENAVE
5/9/83
Grading & Drainage

G R A D I N G A N D D R A I N A G E P L A N

FACILITY FOR OLE FOLKS MACHINE SHOP
7200 WASHINGTON NE
ALBUQUERQUE, NEW MEXICO

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D17/D40