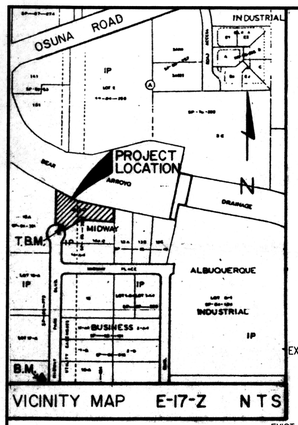
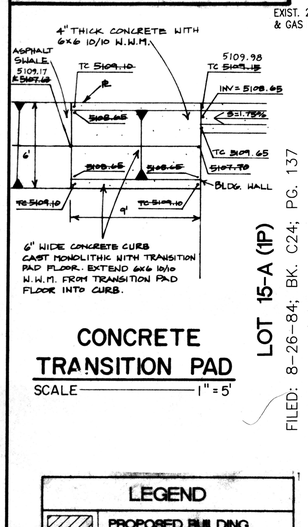



VICINITY MAP E-17-Z NTS




## CONCRETE TRANSITION PAD

SCALE 1" = 5'

LOT 15-A (1P)

FILED: 8-26-84; BK. C24; PG. 137

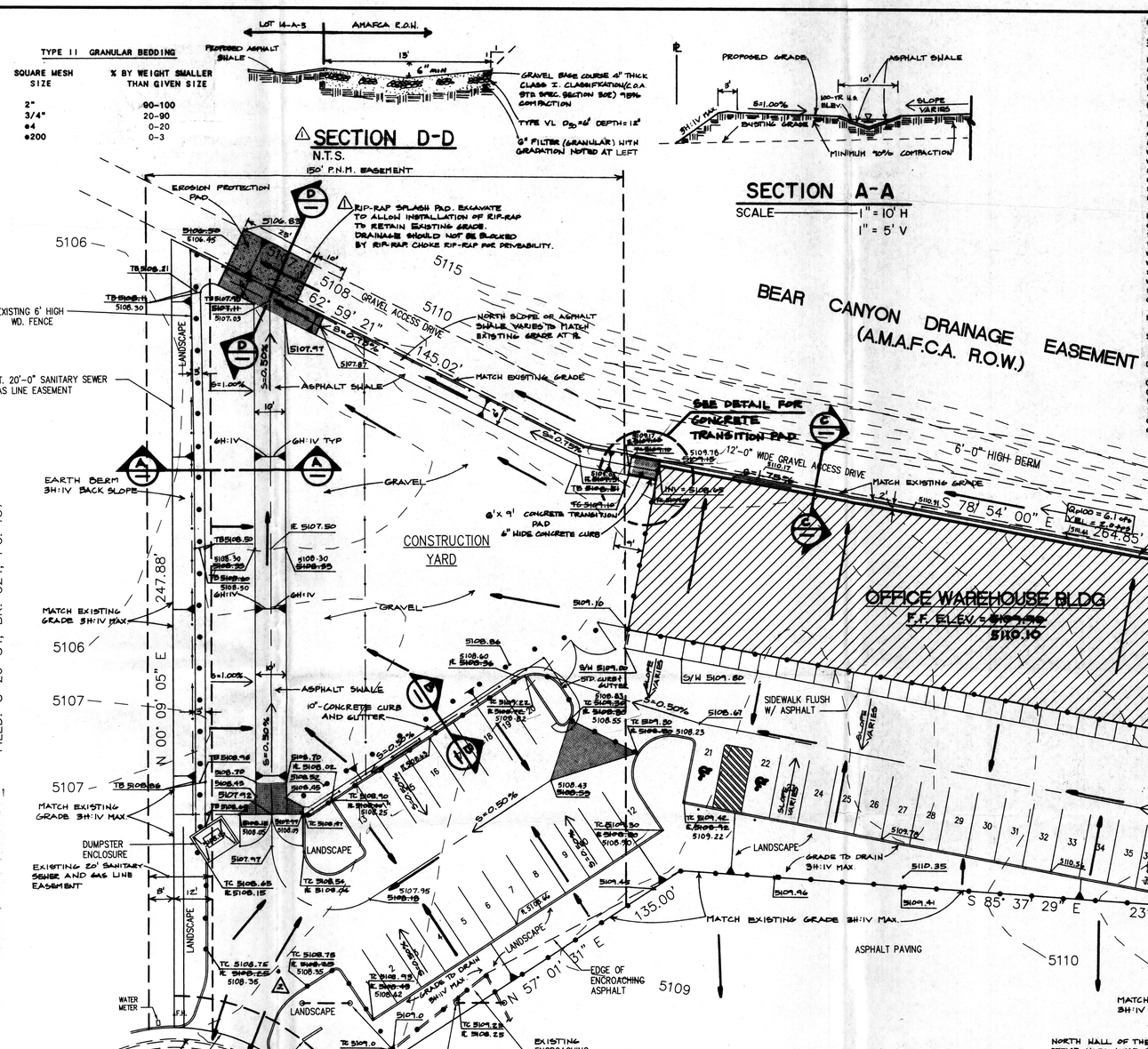
| LEGEND | |
|---|---|
| | PROPOSED BUILDING |
| | TRANSITION AREA |
| | FLOW DIRECTION |
| 50.00 | PROPOSED ELEVATION |
| 57.50 | EXISTING SPOT ELEVATION |
| | |
| | DRAINAGE DIVIDE |
| | EXISTING CONTOURS |

1. Call AMAFCA, 884-2215, two (2) days prior to work in Right of Way.
2. AMAFCA must inspect filter material in place, rip-rap on site, prior to placing rip-rap.

**APPROVED FOR CONSTRUCTION**

2-18-94

AMAFCA DATE




T.B.M.: A CHISLED "+" ON TOP OF CURB
ELEVATION = 5107.01

I, ELVIDIO V. DINIZ, REGISTERED PROFESSIONAL ENGINEER NO. 7111 DO HEREBY CERTIFY THAT THE AS-BUILT ELEVATIONS HAVE BEEN SURVEYED BY ANDREW S. MEDINA, N.M.P.S. NO. 12649 ON SEPT. 6, 1996 AND THIS DRAINAGE PLAN IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED DRAINAGE PLAN.

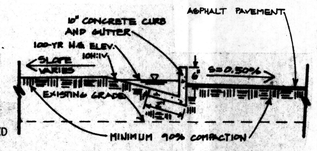
9/10/96

**LEGAL DESCRIPTION:**

LOT 14-A-3, MIDWAY BUSINESS PARK
SECTION 26, T 11 N, R 3 E

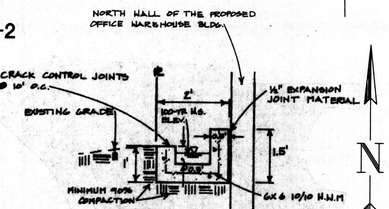
**BENCHMARK:**

ACS BRASS CAP LOCATED EAST OF THE NORTH DIVERSION CHANNEL AND SOUTH OF OSUNA RD. N.E. MARKED "SC 27|26 34|35 ,1965"
ELEVATION 5110.406




## SECTION B-B

SCALE 1" = 5' H
1" = 2' V




## SECTION C-C

SCALE 1" = 2' H
1" = 2' V

## SECTION A-A

SCALE 1" = 10' H
1" = 5' V

BEAR CANYON DRAINAGE EASEMENT (A.M.A.F.C.A. R.O.W.)

**GENERAL NOTES**

**Site Description:**

Present Conditions: A field survey showed the site to be a vacant lot which slopes generally from east to west at an approximate slope of 1.4 percent. In agreement with the Midway Business Park Master Drainage Plan, existing storm run-off exits the site at the northwest corner of the property and into the Bear Canyon Drainage Easement.

Future Conditions: The east side of the project site will be developed for a 11,995 sq.ft. Office Warehouse Building with associated parking, landscaping and sidewalks which will be flush with the asphalt parking lot. The southern 1/2 of the west side will be paved; however, the remaining portion will not be paved and will be used as a construction yard. Proposed design will allow on-site storm run-off to be conveyed via asphalt lined swales to the Bear Canyon Drainage Easement. Also, a concrete rectangular swale will be constructed between the north property line and the proposed north side of the Office Warehouse Building. This concrete rectangular swale will intercept and discharge roof run-off onto the proposed asphalt swale and into the Bear Canyon Drainage Easement. There will also be a 3-foot top width earth berm constructed along the west property line with a back slope not to exceed 3H:1V. The toe of the back slope will match existing grade at the west property line. A very small portion of the entry driveway of this proposed development will drain to Midway Park Boulevard N.E. The impact of this storm run-off will be insignificant when compared to the street capacity and drainage structures down stream.

Flood Hazard Zone: Zone C

Soil Type : Type EmB - Embudo gravelly fine sandy loam
- Hydrologic Soil Group "B"

Drainage Area : The project site is 58,423 sq.ft. or 1.34 acres

Off-Site Drainage : There is a minor off-site drainage area of 0.034 acres to the east of this project site. The run-off from this off-site drainage area will be intercepted by a swale that is 5 feet away from the proposed Office Warehouse Building and directed to the asphalt parking lot. This minor off-site drainage computation is also quantified below.

**HYDROLOGY**

**Precipitation:**

Zone 2 (DPM Figure A-1)

Six Hour Rainfall Depth from NOAA Atlas 2, Volume IV:
10-Year = 1.67 inches
100-Year = 2.35 inches

Peak Rainfall Intensity (DPM Table A-10):
10-Year = 3.41 inches/hour
100-Year = 5.05 inches/hour

**Land Treatment:**

On-Site — Total Tract Area = 1.34 acres

Existing Conditions - Land Treatment C = 100 % = 1.34 acres (unpaved parking lot)

Developed Conditions - Land Treatment B = 12 % = 0.16 acres (landscaping)
Land Treatment C = 33 % = 0.44 acres (unpaved parking lot)
Land Treatment D = 55 % = 0.74 acres (impervious)

Off-Site — Drainage Basin Area = 0.03 acres

Existing Conditions - Land Treatment C = 100 % = 0.03 acres (natural ground cover)

Future Conditions - Land Treatment C = 100 % = 0.03 acres (natural ground cover)

**Excess Precipitation (DPM Table A-8)**

| | 10-yr. (in.) | 100-yr. (in.) |
|---|---|---|
| Zone 2 Land Treatment B | 0.28 | 0.78 |
| Zone 2 Land Treatment C | 0.52 | 1.13 |
| Zone 2 Land Treatment D | 1.34 | 2.12 |

**Peak Discharge per Land Treatment (DPM Table A-9)**

10-Year = Land Treatment B = 0.95 cfs/acre
Land Treatment C = 1.71 cfs/acre
Land Treatment D = 3.14 cfs/acre

100-Year = Land Treatment B = 2.28 cfs/acre
Land Treatment C = 3.14 cfs/acre
Land Treatment D = 4.70 cfs/acre

**RESULTS**

| | Existing Conditions | Developed Conditions |
|---|---|---|
| **On-Site:** | | |
| Total Area Run-off Volume (cu ft.) | | |
| 10-Year | 2,529 | 4,583 |
| 100-Year | 5,497 | 7,941 |
| Total Area Peak Discharge (cfs) | | |
| 10-Year | 2.3 | 3.2 |
| 100-Year | 4.2 | 5.2 |
| **Off-Site:** | | |
| Run-off Volume (cu ft.) | | |
| 10-Year | 64 | 64 |
| 100-Year | 139 | 139 |
| Peak Discharge (cfs) | | |
| 10-Year | 0.08 | 0.08 |
| 100-Year | 0.11 | 0.11 |

**SWALE HYDRAULIC COMPUTATIONS:**

Concrete Rectangular Swale (along north property line)

Roof area = 12,456 sq.ft. or 0.29 acres
Volume = 2,232 cu ft.
Qp100 = 1.3 cfs
Bottom width = 1 foot
Depth of concrete channel = 0.5 feet
Slope = 1.75%
"n" = 0.013
100-Yr. Flow Depth = 0.3 feet
Velocity = 4.9 fps

Asphalt "V" Section Swale (parallel with north property line)

Contributing area = 15,670 sq.ft. or 0.36 acres
Volume = 2,556 cu ft.
Qp100 = 1.7 cfs
Top width = 6 feet
Side slope = 3H:1V
Slope = 0.75%
"n" = 0.017
Depth of asphalt swale = 1 foot
100-Yr. Flow Depth = 0.5 feet
Velocity = 2.8 fps

Asphalt "V" Section Swale (parallel with west property line)

Contributing area = 40,532 sq.ft. or 0.93 acres
Volume = 5,345 cu ft.
Qp100 = 3.5 cfs
Top width = 10 feet
Side slope = 6H:1V
Slope = 0.50%
"n" = 0.017
Depth of asphalt swale = 0.83 feet
100-Yr. Flow Depth = 0.5 feet
Velocity = 2.5 fps

RECEIVED SEP 24 1996 HYDROLOGY DIVISION

| NO. | DATE | REVISIONS | BY | CHKD |
|---|---|---|---|---|
| 3 | 9/10/96 | AS-BUILT ELEVATIONS, CERTIFICATION | LP JDS | E.D. |
| 2 | 12/6/95 | Revised entry driveway grades | JDS | E.D. |
| 1 | 2/16/94 | AMAFCA COMMENTS FROM 1-31-94 | G.C. | E.P. |

SCALE: 1" = 20'

0 20 40 60

# MIDWAY PARK OFFICE BUILDING GRADING and DRAINAGE PLAN

Resource Technology, Inc.
ENGINEERS & ENVIRONMENTAL SCIENTISTS
2129 OSUNA NE - SUITE 200, ALBUQUERQUE, NEW MEXICO 87113
TELEPHONE - (505) 345 - 3115

JOB NO. 93 - ~~230~~ 440

SHEET NO. 1 of 1

DESIGNED BY: G.C. DRAWN BY: G.C. CHECKED BY: E.D. DATE: JAN. 1994