HYDROLOGY N15/D2 4 PLANS

LEGEND

- EXIST. CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- T.C. F.L. — PROPOSED SPOT ELEVATION
- CURB & GUTTER
- FLOW ARROW
- CENTER LINE
- NEW STORM DRAIN
- CATCH BASIN
- NEW STORM DRAIN MANHOLE
- HEAVY DUTY PAVING
- ASPHALT PAVING

PROJECT BENCHMARK

WATERVALVE RIM LOCATED 230 FT.± EAST OF THE NORTHEAST CORNER OF THE EXISTING WESTERNAIR HANGAR.
ELEVATION = 5308.84

LEGAL DESCRIPTION:

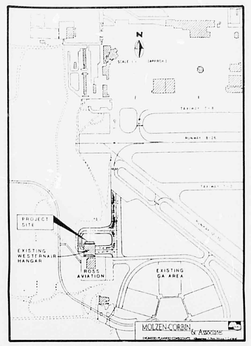
A PORTION OF TRACT F, MUNICIPAL ADDITION NO. 9, T9N, R3E, SECTION 4
AREA = 6.4300 AC±

ZONE ATLAS: N-15-Z

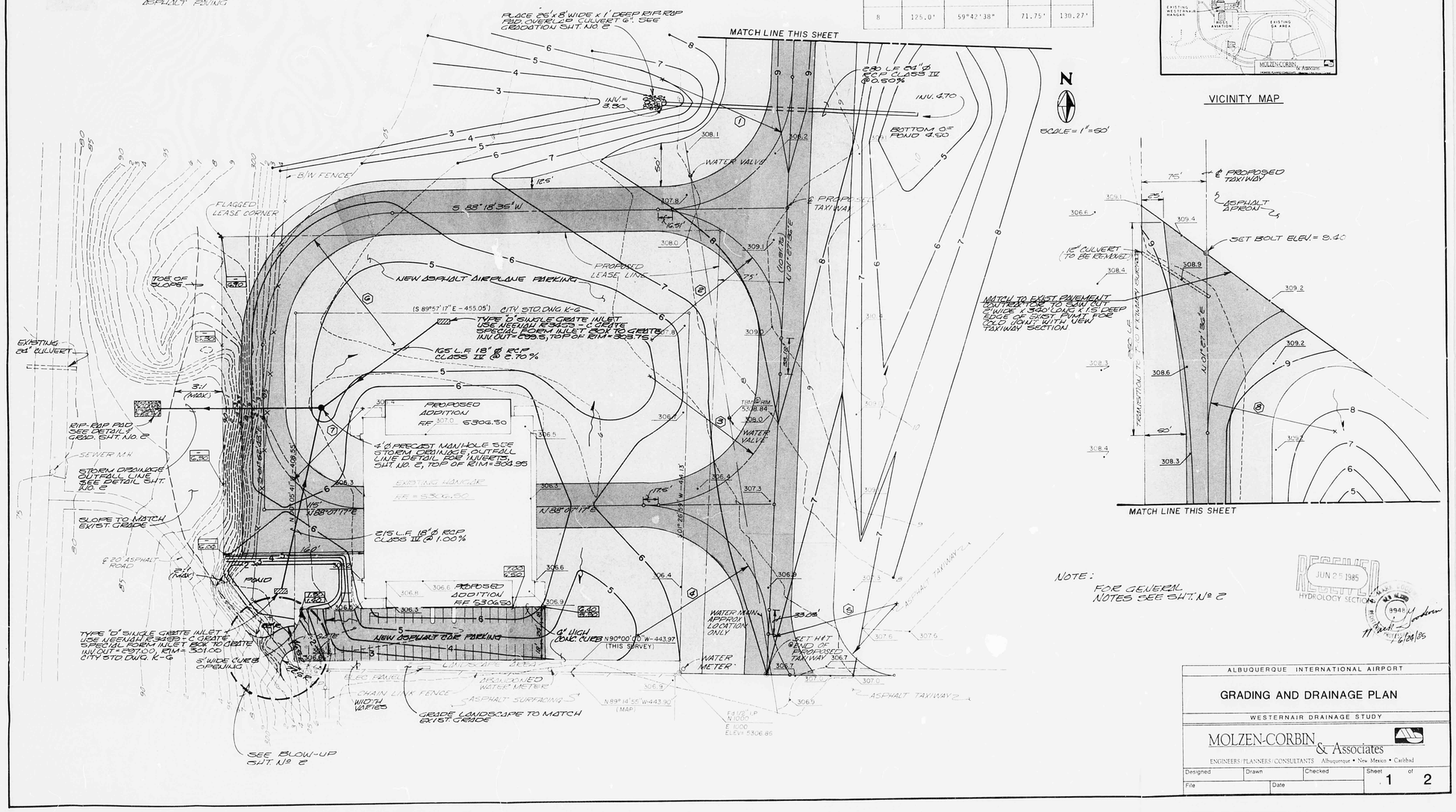
CURRENT ZONE STANDING: SU-1

CENTERLINE CURVE DATA

NO.	R	Δ	T	L
1	150.0'	86°50'59"	141.97'	227.37'
2	150.0'	93°09'01"	158.48'	243.87'
3	150.0'	86°39'41"	141.50'	226.88'
4	150.0'	93°20'20"	159.01'	244.36'
5	150.0'	29°43'44"	39.93'	78.05'
6	150.0'	90°11'18"	150.49'	236.11'
7	115.0'	90°00'00"	115.00'	180.64'
8	125.0'	59°42'38"	71.75'	130.27'



VICINITY MAP



NOTE:
FOR GENERAL NOTES SEE SHT. Nº 2

RECEIVED JUN 25 1985 HYDROLOGY SECTION

ALBUQUERQUE INTERNATIONAL AIRPORT

GRADING AND DRAINAGE PLAN

WESTERNAIR DRAINAGE STUDY

MOLZEN-CORBIN & Associates
ENGINEERS/PLANNERS/CONSULTANTS Albuquerque • New Mexico • Carlsbad

Designed	Drawn	Checked	Sheet 1 of 2
File	Date		

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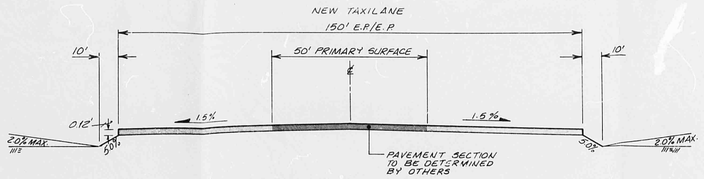
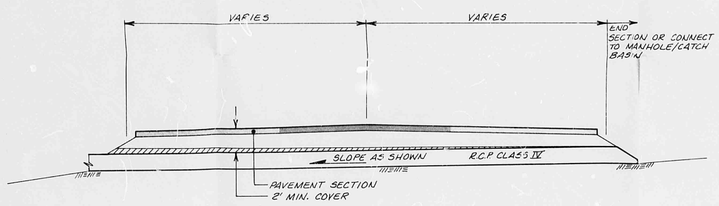


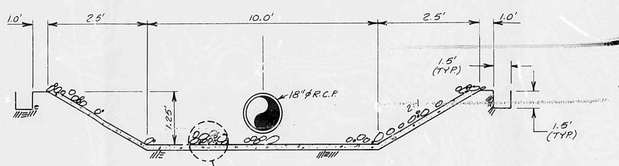
TAXIWAY TYPICAL SECTION

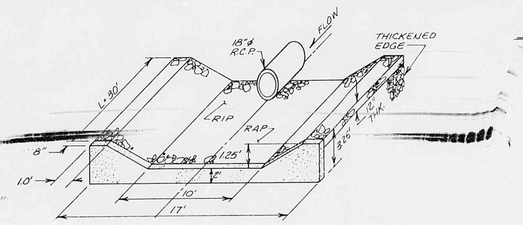
NTS



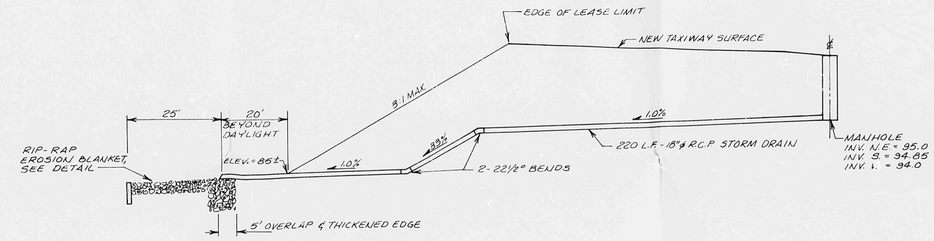
SECTION AT R.C.P. CULVERT CROSSINGS

NTS





ISOMETRIC



STORM DRAINAGE OUTFALL LINE

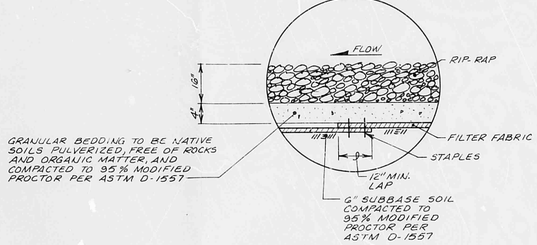
NTS

NOTES:

1. TOPOGRAPHIC SURVEY PROVIDED BY ENERGY COMPANY SERVICES, ALBUQUERQUE, NEW MEXICO.
2. ALL LANDSCAPED AREAS ARE TO BE DEPRESSED A MINIMUM OF 6 INCHES TO CONTROL NUISANCE FLOWS.
3. ALL ELEVATIONS ARE TO MEAN SEA LEVEL DATUM (MSLD).
4. EROSION CONTROL:
   A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL SEDIMENT AND DISTURBED SOIL OFF PUBLIC RIGHT-OF-WAY DURING CONSTRUCTION.
   B. THE CONTRACTOR SHALL CONSTRUCT A 3-FT HIGH X 8' WIDE TRIANGULAR BERM ALONG THE WESTERLY AND SOUTHWESTERLY LEASE LIMITS FOR EROSION CONTROL. THE BERM SHALL BE IN PLACE DURING ROUGH GRADING AND CONSTRUCTION PHASES AND SHALL BE REMOVED FOR PERMANENT PHASE.
   C. THE BERM SHALL BE COMPACTED TO 90% MODIFIED PROCTOR PER ASTM D1557.
5. ALL EARTHWORK, INCLUDING THAT CONSTRUCTED ON CITY OWNED PROPERTY, SHALL BE COMPACTED TO 100% MODIFIED PROCTOR PER ASTM D1557, UNLESS OTHERWISE SHOWN OR NOTED ON PLAN.
6. HYDROLOGY COMPUTATION PER "WESTERNAIR DRAINAGE STUDY" BY MOLZEN-CORBIN & ASSOCIATES, JUNE 1985.
7. THE CONTRACTOR SHALL COORDINATE POSSIBLE RELOCATION OF EXISTING WATERLINE (HORIZONTAL OR VERTICAL) WITH THE CITY OF ALBUQUERQUE AIRPORT AVIATION DEPARTMENT.
8. THE STRIPING PLAN TO BE COORDINATED WITH WESTERNAIR, INC.

RIP-RAP GRADATION

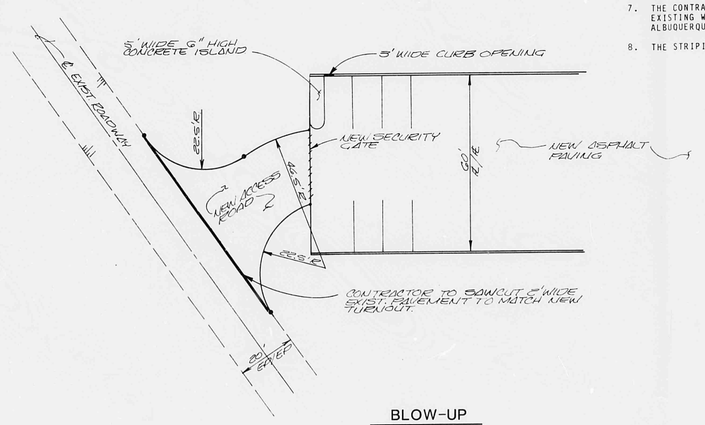
SIZE (IN.)	% PASSING
12	100
9	35-55
2	10



SECTION

RIP-RAP EROSION BLANKET DETAILS

NTS



BLOW-UP

1" = 20'

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JUN 25 1985
HYDROLOGY SECTION

ALBUQUERQUE INTERNATIONAL AIRPORT

DRAINAGE DETAILS

WESTERNAIR DRAINAGE STUDY

MOLZEN-CORBIN & Associates

ENGINEERS/PLANNERS/CONSULTANTS Albuquerque • New Mexico • Carlsbad

Designed	Drawn	Checked	Sheet 2 of 2
File	Date		

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C D

James Innis
August F. Mosimann

engineering associates, inc.

1801
Lomas Boulevard, NW
Albuquerque, N. M.
87104
(505 242-7522

March 25, 1982

Fred J. Aguirre, PE
Civil Engineer/Hydrology
City of Albuquerque
P O Box 1293
Albuquerque, New Mexico 87103

Ref: Western Air Hanger (File No. N15-D1A)
1350 University S.E.
Albuquerque, New Mexico

Dear Fred,

As you requested we have revised the items listed in your conditional approval for the above ; oject. The changes we made are as follows:

1. We have changed the designation "Property Line" to "Lease Line"
2. We have calculated the spillway discharge which indicates a total pipe and spillway discharge rate of 12.3092 CFS. A copy of the pond discharge calculations is included with this letter.
3. We have re-calculated the pipe discharge rates using the "Orifice Equation" and one additional 6 in diam. pipe. The new discharge rate is 2.40 CFS. The Q_5 discharge rate is 4.074 CFS. The pond discharge calculations included with this letter show this.
4. The compaction specifications which were recommended in the F.N. Fox's soil investigation report for the foundation have been included in the pond embankment. These specifications call for the existing ground to be scarified and compacted to 95% of opt!mum density, and then for fill to be placed in 8 in. deep lifts and compacted to 95%.

All of the changes outlined in this letter have been incorporated into the site plan. A copy of the site plan will be included with this letter for your records.

Sincerely,

August F. Mosimann

August F. Mosimann for
Engineering Associates, Inc.

Architectural Structural
Civil Structural
Site Analysis
Drainage Studies
Computer Applications

AM/js

BY_____ DATE_____ SUBJECT WESTERNAIR HANGAR SHEET NO. 2 OF____
CHKD. BY_____ DATE_____ CLIENT Dick Durand JOB NO._____

engineering associates, inc. • 1801 Lomas Blvd., NW • Albuquerque, NM 87104 • (505) 242-7522

WEIR Calculations for Pond Spillway

Using STANDARD HANDBOOK FOR CIVIL ENGINEERS

Section 21-44 "Weirs Not Sharp-crested"

$$Q = CL\left(H + \frac{V^2}{2g}\right)^{3/2}$$

$$C = 3.27 + 0.4\,H/P$$

$C = 3.27 + .4 \cdot .5/1.5 = 3.4033$

Trial Discharge

$Q = 3.4033 \times 3' \times (.5)^{3/2} = 3.6098$ CFS

$V = Q/A = 3.6098 / 3' \cdot .5' = 5.4147$ FPS

Velocity Head

$\frac{V^2}{2g} = \frac{5.4147^2}{2 \cdot 32.2} = .4553'$

Final Discharge

$Q = 3.4033 \times 3 \times (.5 + .4553)^{3/2} = 9.5324$ CFS

Discharge Through Pipes = 2.78 CFS (SH 1)

Total Discharge = 9.5324 + 2.78 = 12.3092 CFS

The 100 year Discharge is 12.02 CFS

AUGUST F. MOSIMANN STATE OF NEW MEXICO NO. 6686 REGISTERED PROFESSIONAL ENGINEER

BY_____ DATE_____ SUBJECT WESTERNAIR HANGAR SHEET NO. 1 OF____
CHKD. BY_____ DATE_____ CLIENT Dick Durand JOB NO._____

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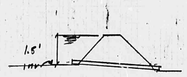
POND DISCHARGE CALCULATIONS

Discharge Pipe Sizes

Using "Orifice Equation"

$$Q = \frac{A \cdot \sqrt{h}}{.2}$$



Pond At Crest of Spillway:

2 - 6" Diam Pipes

$A = .3927$ S.F.

$h = 1.5'$

$Q = \frac{.3927 \cdot \sqrt{1.5}}{.2} = 2.40$ CFS

The Maximum Allowable Discharge (Q_5) is 4.074 CFS

Pond .6' Above Crest

2 - 6" Diam Pipes

$A = .3927$ S.F.

$h = 2.0'$

$Q = \frac{.3927 \sqrt{2}}{.2} = 2.78$ CFS

AUGUST F. MOSIMANN STATE OF NEW MEXICO NO. 6686 REGISTERED PROFESSIONAL ENGINEER

ATTACHED TO
Following PLAN
→

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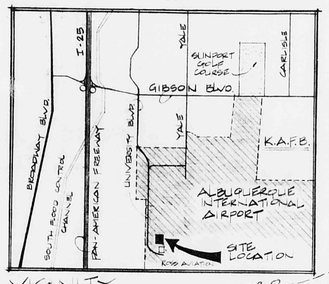
NESTERNARE HANGAR FOR JAYNES CORPORATION

ALBUQUERQUE, NEW MEXICO

SITE, LANDSCAPE, & DRAINAGE PLAN

SCALE · 1 INCH = 30'-0



VICINITY MAP

SCALE · 1 INCH = 1/2 MILE

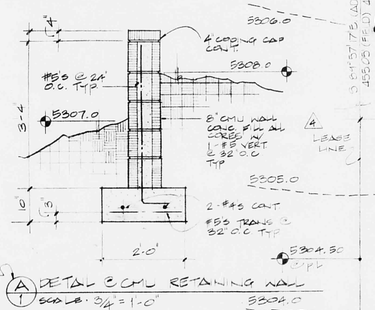
NORTH

ZONE ATLAS #: N-15-Z

LEGAL DESCRIPTION

SITUATED WITHIN N.E. 1/4 OF SECTION 4, TOWNSHIP 9 NORTH RANGE 3 EAST N.M.P.M., WITHIN THE BOUNDARIES OF THE ALBUQUERQUE INTERNATIONAL AIRPORT, A PORTION OF TRACT F

1380 UNIVERSITY BLVD, S.E.

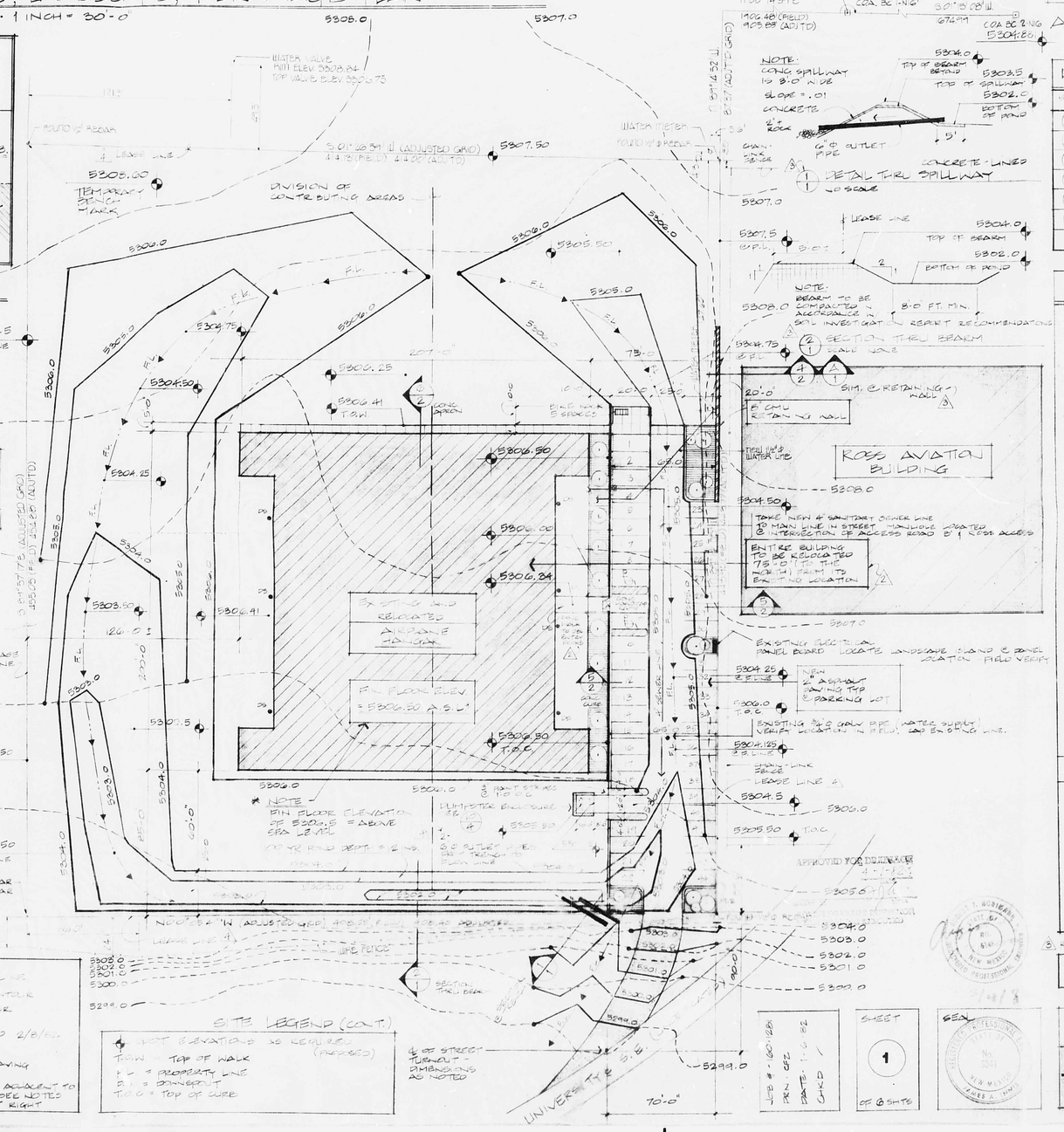


DETAIL CMU RETAINING WALL

SCALE · 3/4" = 1'-0"

POND EMBANKMENT COMPACTION SPECIFICATION

1. SCARIFY EXISTING GROUND 8 IN. DEEP & COMPACT TO 95% OF MAXIMUM DENSITY.
2. PLACE EMBANKMENT FILL IN 8 MAXIMUM DEPTH LIFTS & COMPACT TO 95% OF MAXIMUM DENSITY



SITE PLAN

P.L. = PROPERTY LINE
EXISTING CONTOUR
FINISH CONTOUR
REV SED 1/20/82
REV SED 2/8/82
NEW ASPHALT PAVING
GENERAL LANDSCAPING ACCORDING TO PARKING LOT - SEE NOTES THIS SHEET AT RIGHT

SITE LEGEND (CONT.)

HOT ELEVATIONS AS REQUIRED (PROPOSED)
TW = TOP OF WALK
P.L. = PROPERTY LINE
D.S. = DOWNSPOUT
T.O.C = TOP OF CURB
℄ OF STREET TURNOUT & DRIBBLING AS NOTED

DRAWING INDEX

SHEET NO.	DESCRIPTION
1	COVER, INDEX, CODE DATA, SITE & DRAINAGE PLANS
2	FOUNDATION PLAN & RELATED DETAILS
3	FRAMING PLAN (S) & RELATED DETAILS
4	WALL SECTION FRAMING & MISC DETAILS
5	BLDG. ELEVATIONS, TOILET PLANS & DETAILS
6	PLUMBING & ELECTRICAL SCHEME & DETAILS

KAFB DATA & CODE STUDY REQ'TS

NET SQUARE FOOTAGE: ENTIRE HANGAR = 85 [illegible] SF

SITE AREA: [illegible] SF [illegible] ACRES

CITY ZONE ATLAS PAGE: N-15-Z

SEISMIC ZONE: ZONE 2 U.B.C.

ZONING: SU-1

NATURAL STRENGTHS: STEEL FY = [illegible] CONCRETE FC = [illegible] PSI

PARKING REQUIRED: NO DETERMINED BY PLANNING & ZONING.

PARKING PROVIDED: 42 SPACES - 1 SPACE FOR EVERY 842 SQ FT OF FLOOR AREA

SOIL BEARING = 2000 (ASSUMED) PSF

BICYCLE SPACE PROVIDED: 5 SPACES - 1 RACK

DESIGN LOADS: ROOF LIVE LOAD: 20 PSF AND WIND: 20 PSF

U.B.C. OCCUPANCY GROUP: H-2 AIRCRAFT REPAIR HANGARS

FIRE DISTANCE BY ALL EXTERIOR WALLS: 1 HOUR

SETBACKS REQUIRED: 85'-0" FROM FRONT P.L. 25'-0" FROM SIDE P.L. 105'-0" FROM REAR P.L. 14'-0" FROM SIDE P.L.

TYPE OF CONSTRUCTION: TYPE III - ONE HOUR

HEIGHT & NO OF STORIES: 40'-0" TO TOP OF BLDG. 2 STORIES

LANDSCAPING REQUIRED: 7% OF PAVED AREA - PAVED AREA = 8200 SF .07 X 8200 = 574 SF

OCCUPANT LOAD: 35400/500 = 70 OCCUPANTS TOTAL

LANDSCAPE PROVIDED: 2400 SQUARE FEET

GENERAL NOTES

(1) U.B.C. 902.3 ALLOWS 5% ALLOWABLE INCREASE FOR TRUE INCREASE FOR EVERY FOOT IN EXCESS OF 20'-0" FROM PROPERTY LINE. MIN. ALLOW. SETBACK = 20'-0" 75'-0" - 20'-0" = 55'-0" X .05 = 275% INCREASE (2.75 X 11,200) + 11,200 = 30,800 + 11,200 = [illegible] = (ALLOWABLE). ACTUAL SQ FT = [illegible]

(2) GENERAL LANDSCAPING & IRRIGATION. PLANTING OF TREES IN THE PARKING LOT. CONCRETE CURB SURROUNDING [illegible] AREA. WALKWAY TREES AT 25' O.C. [illegible] SHRUBS TO BE 2 GALLON. SHRUB SPACING. AREA SURROUNDING TREES TO BE BY JAVA ROCK (ROCKA) ON 3 MIL VISQUEEN SHEETING.

REVISED/APPROVED 3/4/82 — REVISED 3/25/82

SITE & DRAINAGE PLAN / COVER, CODE DATA, INDEX

NESTERNARE HANGAR FOR JAYNES CORPORATION

1201 LOMAS BLVD. N.W. ALBUQUERQUE, N.M. 87104 (505) 242-7522

engineering associates, inc

JOB # - 80-1828
DRN - GFZ
DATE - 1-6-82
CHKD -

SHEET 1 OF 6 SHTS

SEAL

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