DRAINAGE PLAN
FOR
ALBUQUERQUE INTERNATIONAL
SUNPORT EAST
CONCOURSE EXPANSION
Albuquerque, New Mexico

BPLW PROJECT NUMBER: 95004

May 19, 1995

Prepared By: **Jeffrey R. Bergmann, PE # 10853**

BPLW

Architects & Engineers, Inc. **Albuquerque, New Mexico**

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MAY 22 1995

JEFFREY R. BERGMANN
NEW MEXICO
10853
REGISTERED PROFESSIONAL ENGINEER
5-19-95

BPLW

Architects & Engineers, Inc. Albuquerque, New Mexico

DRAINAGE REPORT
ALBUQUERQUE INTERNATIONAL SUNPORT
EAST CONCOURSE EXPANSION
Albuquerque, New Mexico
BPLW PROJECT NUMBER: 95004

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PURPOSE

The purpose of this report is to present the Drainage Plan for building permit approval for the construction of the Albuquerque International Sunport East Concourse Expansion. The plans have been prepared in accordance with the Development Process Manual (DPM) of the City of Albuquerque. Concurrently, Molzen-Corbin is submitting a Storm Drainage Master Plan for the entire airport property. References to that Storm Drainage Master Plan contained herein are references to the preliminary report dated June 1994 updated with comments from Carlos Montoya of the City of Albuquerque Hydrology Department.

Exhibits 1 and 2 are compilations of drawings from the Master Plan Improvement Program for the Albuquerque International Airport (MPIP-AIA) and the East Concourse Expansion project for which this report is being submitted. The original drawings from the MPIP-AIA are included in Appendix B for reference. Exhibits 1 and 2 are to facilitate explanation of the East Concourse Expansion and are not intended as construction documents. The drawings contained in Appendix D are the relevant construction documents for which approval is sought.

SITE LOCATION

The site is located at 2200 Sunport Blvd. SE at the Albuquerque International Sunport. The site is located near the airport terminal. The Zone Atlas Map for this area is included in Appendix A.

PROJECT SUMMARY

The east concourse expansion of the Albuquerque International Sunport consists of extending the concourse approximately 160 feet to the east. This expansion is shown in Exhibit 2 and Plate 2 (Sheet G2.1) in Appendix D. The expansion consists of a terminal area elevated over an open-air area. This open-air area is to provide space for luggage handling, food service equipment and supplies, and other services for the aircraft. This system is similar to the system already in use at the airport.

The project also consists of removing the existing asphaltic concrete pavement in the expansion area and changing it to concrete pavement (see Exhibit 2 and Appendix D Plate 3-Sheet C1.1). Additionally, a storm sewer manhole (see Exhibit 1, MH #1) and approximately 190 feet of 18" storm sewer line will be removed (see Exhibit 2). A new manhole is to be placed directly east of the expanded terminal (see Exhibit 2, MH #3). The terminal roof runoff including the new expansion will then be taken directly into the storm sewer at this manhole (MH #3).

APPENDIX A

EXISTING CONDITIONS

The existing drainage system in the expansion area uses overland flow combined with a storm sewer system. The existing area directly under the proposed expansion area is asphalt concrete pavement surrounded by concrete pavement (see Exhibit 1). The asphalt concrete pavement currently sheet flows away from the terminal area and to two storm sewer inlet structures (see Exhibit 1, Inlet #1 and Inlet #2). The runoff from the existing terminal roof is taken directly into the storm sewer system at the manhole located directly east of the existing terminal (see Exhibit 1, MH #1).

DEVELOPED CONDITIONS

The proposed drainage system in the expansion area uses overland flow and the existing storm sewer system to convey flows away from the expansion area. The area underneath the terminal which is to be changed from asphaltic concrete pavement to concrete pavement (the services area) is graded to take flows to edge of what was the asphaltic concrete pavement (see Exhibit 2 and Appendix D Plate 3-Sheet C1.1). The existing surrounding concrete pavement was designed to then take these sheet flows to the two existing storm sewer inlet structures mentioned above. The runoff from the terminal roof is designed to be taken directly into the storm sewer system at the new manhole, MH #3 (see Exhibit 2 and Appendix D Plate 7-Sheet 1.1). This runoff from the terminal roof will consist of the existing runoff from the terminal roof in addition to the runoff from the terminal expansion.

HYDROLOGIC CONDITIONS

The site soil is Wink fine sandy loam as shown in the soil survey contained in Appendix A. This soil is in hydrologic soil group B according to the Soil Conservation Service soil grouping. The existing site is covered with concrete and asphaltic concrete. Therefore, the existing surface of the drainage area for the site is impervious. The developed site will continue to be covered by concrete. Therefore, the developed site surface will be impervious. Therefore, there is no net change in the impervious area and the total flow from runoff and the total volume of runoff from the site will not change with the concourse expansion.

According to the Flood Boundary and Floodway Map of the City of Albuquerque, the project site does not lie in the 100-year flood plain. A copy of this map is included in Appendix A for reference.

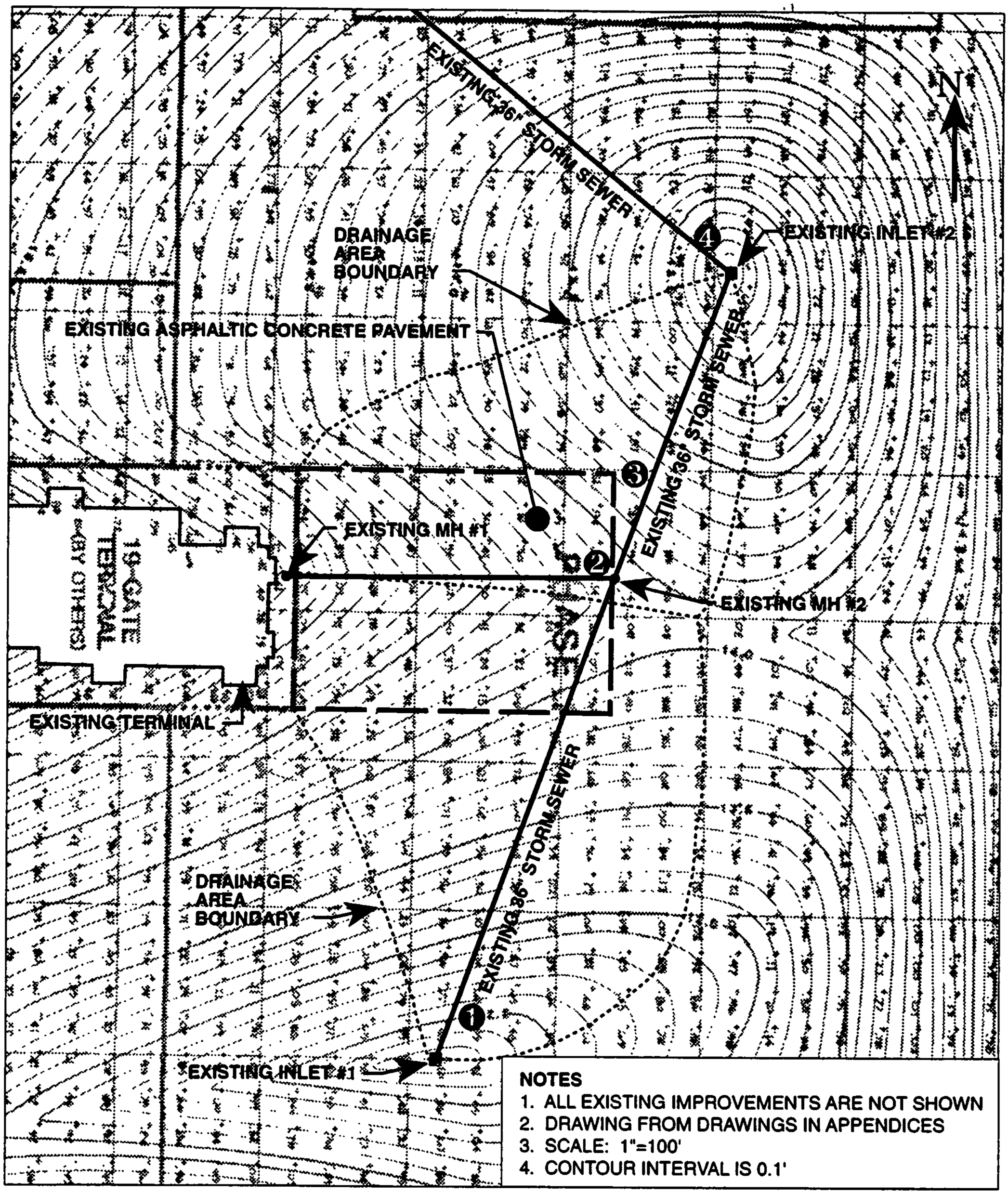
EFFECT OF THE PROJECT ON THE DRAINAGE MASTER PLAN

The effect of the Expansion on the Storm Drainage Master Plan will be minimal. The expansion project is located in Sub-basin 220, Basin N17. Appendix C contains excerpts from the Storm Drainage Master Plan as well as Plates 2 and 4 from the Storm Drainage Master Plan which show the existing and proposed drainage basins and sub-basins at the airport. As stated above, the runoff flow and total runoff volume from this sub-basin will not change due to the expansion because the area of expansion is currently impervious and will remain impervious with the concourse expansion.

There will be a slight change, however, in the storm sewer flows in the upper reaches of the storm sewer system because of the expansion (see Exhibit 2). The flow into inlet #1 will no longer carry the flow from approximately half the area under the expansion since this runoff is taken from the roof directly into the storm sewer system via roof drains (terminal roof runoff). Likewise, the flow into inlet #2 will be reduced by half the area under the terminal expansion since this runoff is taken directly into the storm sewer system via roof drains (terminal roof runoff). The flow into the MH #3, however, will increase by the runoff from the roof of the terminal expansion.

Therefore, the flow at point "1" is reduced by half the area under the expansion. The flow at point "2" is increased by the runoff from the entire roof of the expansion. The flow at point "3" is increased by half the runoff from the terminal expansion roof. The flow at point "4" is the same as existing conditions.

The proposed flows in the storm sewers at points 1 and 4 are the same or lower than existing flows. Since these flows are currently conveyed adequately in this area, it can be concluded that the existing system at points 1 and 4 is adequate for the proposed development. This conclusion does not affect any conclusions made by the Storm Drainage Master Plan for future changes. An analysis of the storm sewer flow capacities for developed conditions at points 2 and 3 was not conducted.

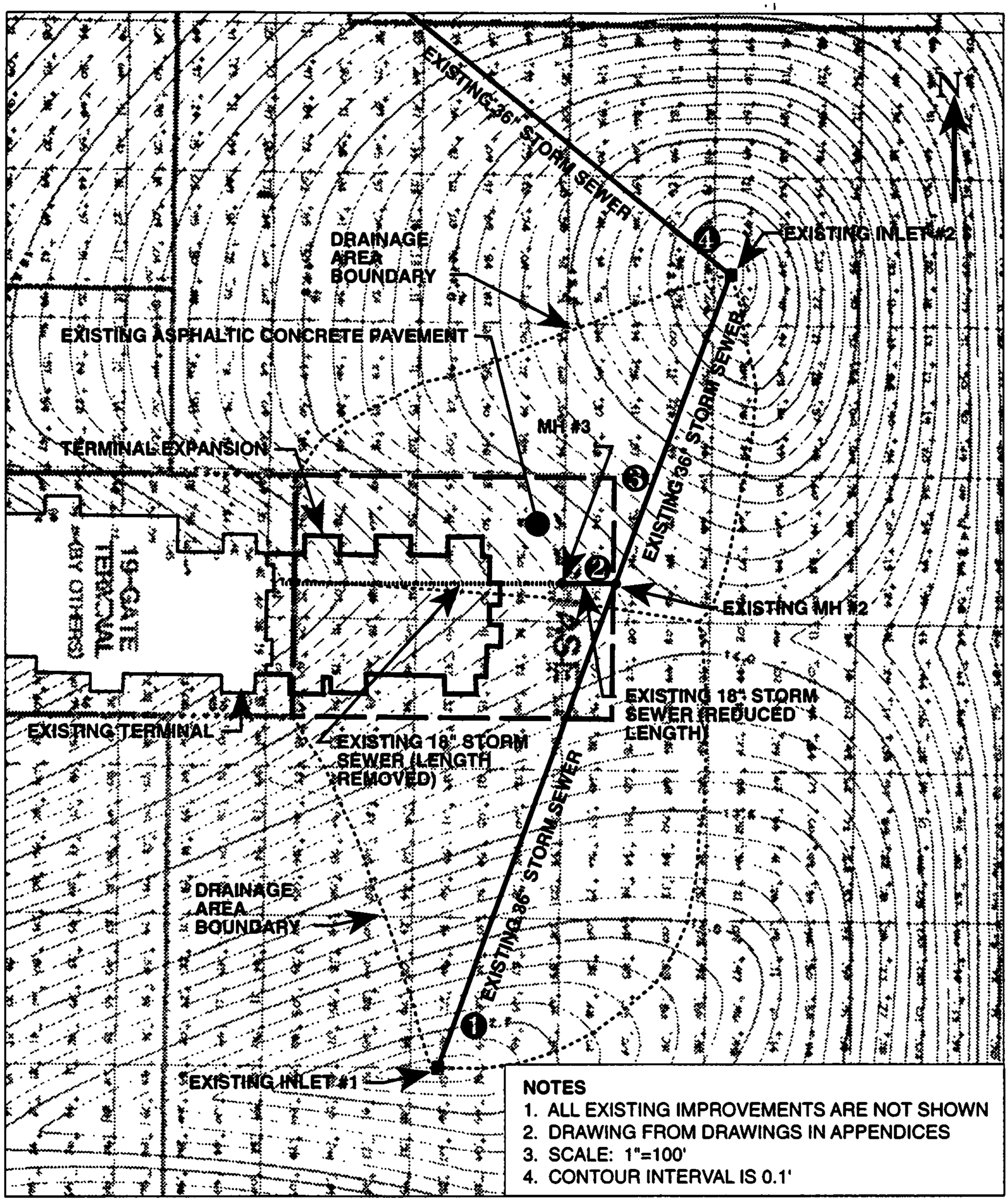


REV. 1.1

EXHIBIT 1
EXISTING CONDITIONS
Albuquerque International Airport

May 8, 1995

BPLW
Architects & Engineers, Inc.
American Financial Center #5
2400 Louisiana Blvd. NE Suite 400
Albuquerque, NM 87110
(505) 881-2759

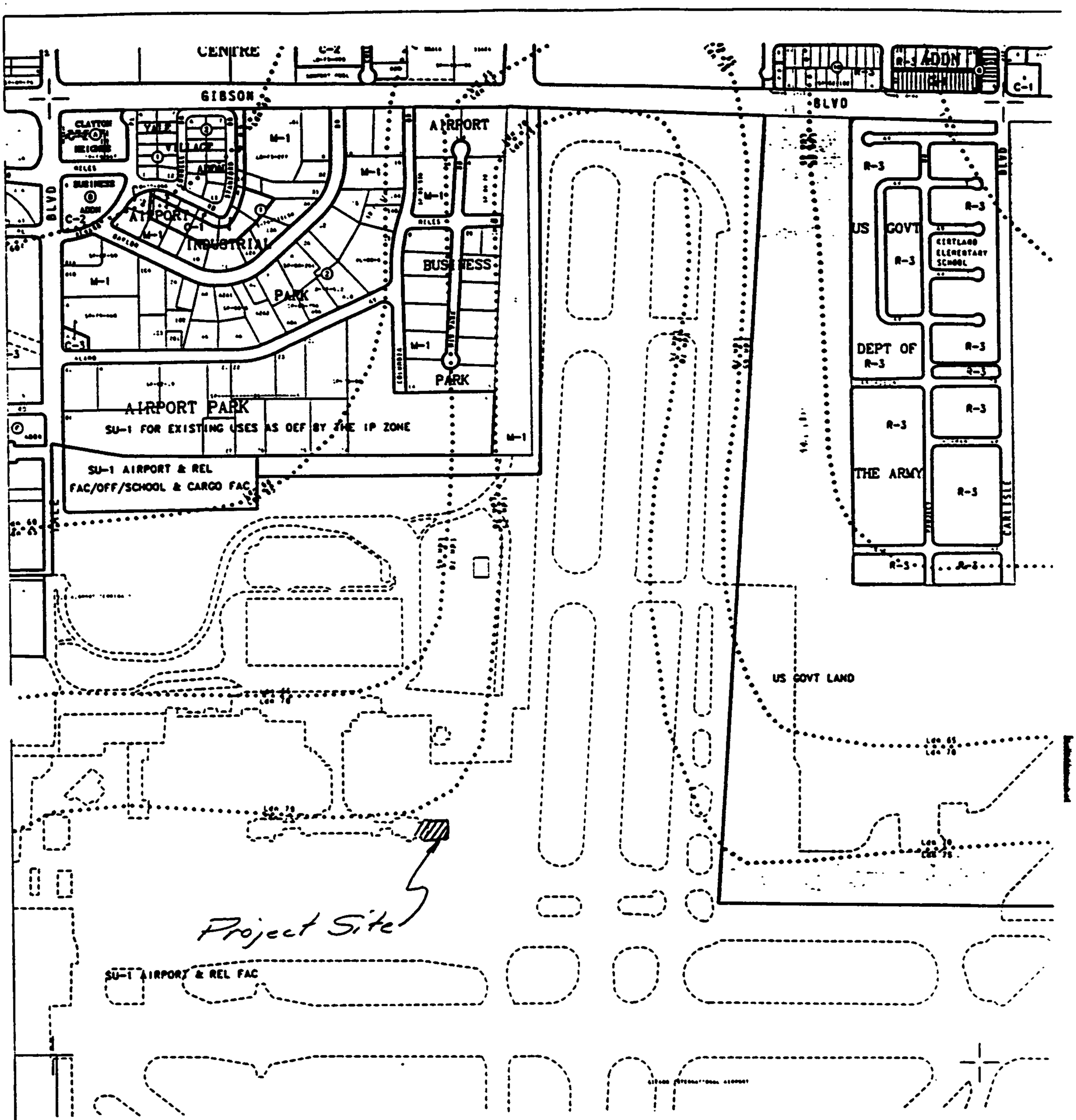


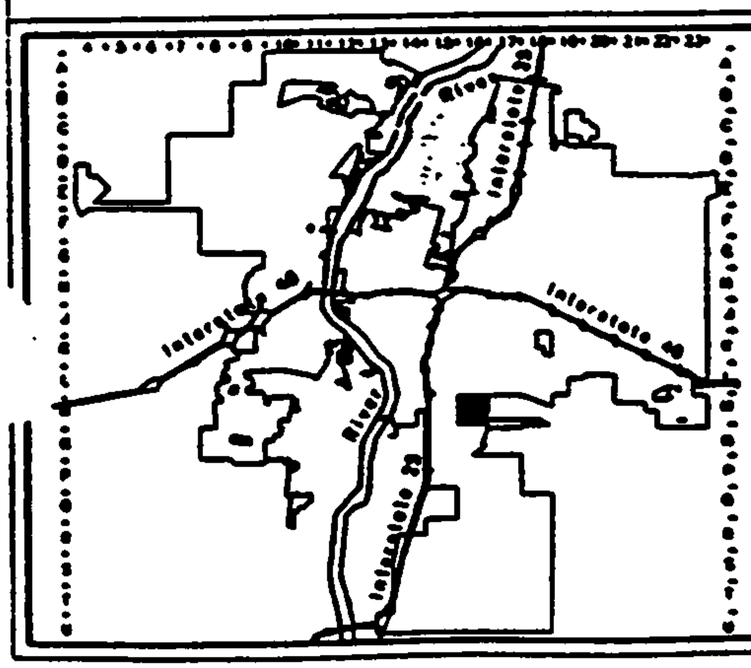
REV. 1.1

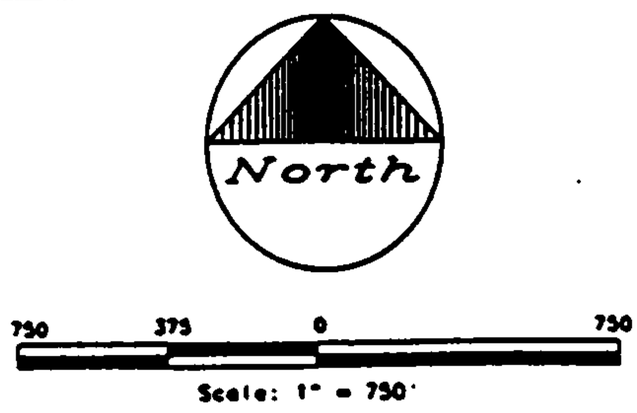
EXHIBIT 2
PROPOSED CONDITIONS
Albuquerque International Airport

May 8, 1995

BPLW
Architects & Engineers, Inc
American Financial Center #5
2400 Louisiana Blvd. NE Suite 400
Albuquerque, NM 87110
(505) 881-2759







A Geographic Information System
City of Albuquerque

© Planning Department July 02, 1993

LEGAL DESCRIPTION

T10N

R3E

SEC 34

UNIFORM PROPERTY CODE

1-016-055

M-16-Z

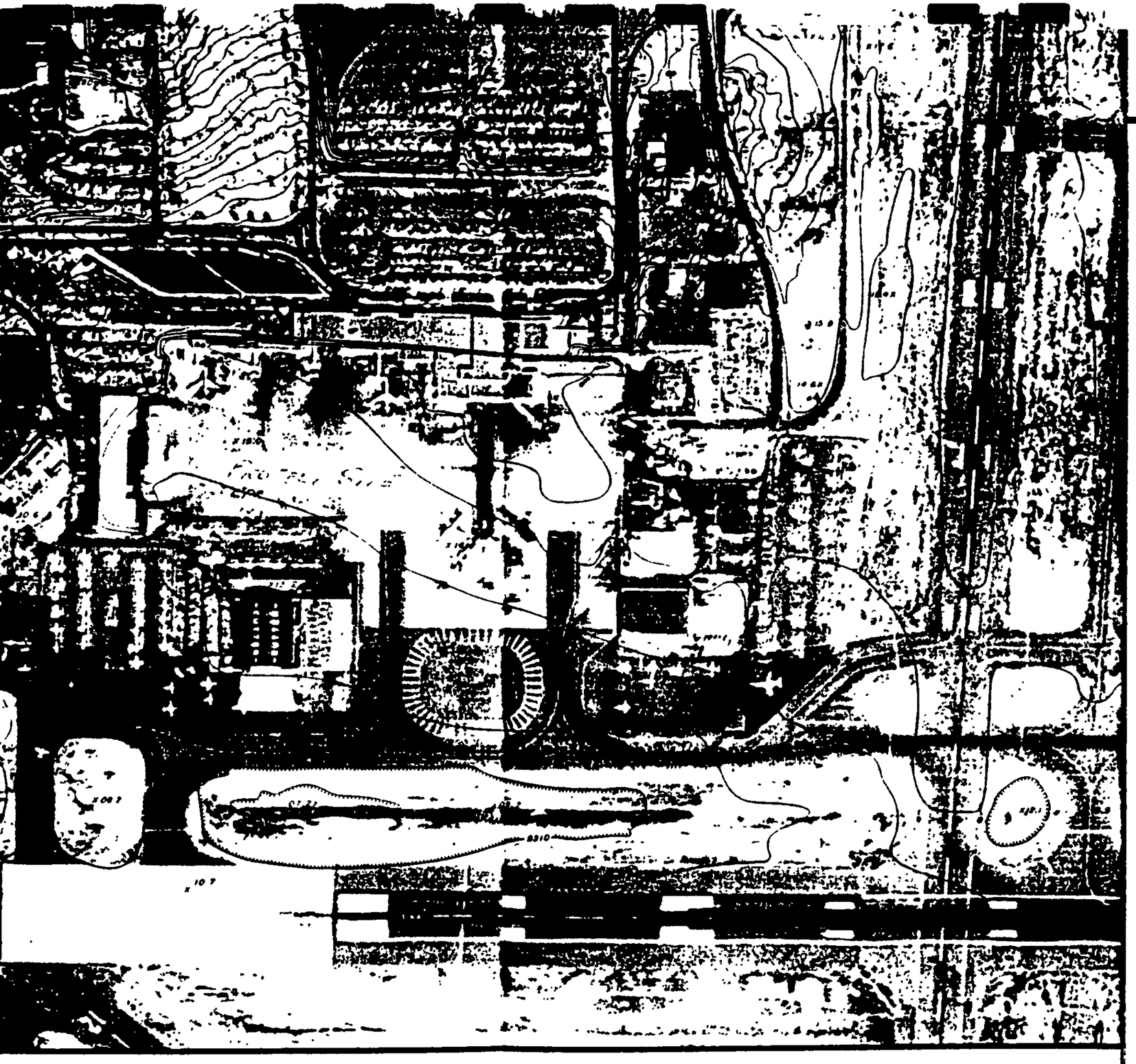
from Bernalillo County and Parts of Sandoval and Valencia Counties, New Mex, o Soil Survey June 1977, SCS

BERNALILLO COUNTY, AND PARTS OF SANDOVAL A

BERNALILLO CO., & PARTS OF SANDOVAL & VALENCIA COUNTIES, NEW MEXICO

This map is compiled on 1973 aerial photography by the U. S. Department of Agriculture, Soil Conservation Service and cooperating agencies. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

NO. 41



SCALE 1"=500'

500 0 500

TOGRAPHY EX-

NAN–HUSTON,
AND THE ALBU-
TOGRAPHIC RE-

ATUM OF 1929.

NATIONAL FLOOD INSURANCE PROGRAM

FLOODWAY

FLOOD BOUNDARY AND FLOODWAY MAP

CITY OF

ALBUQUERQUE, NEW MEXICO

BERNALILLO COUNTY

PANEL 35 OF 50

COMMUNITY-PANEL NUMBER

350002 0035

EFFECTIVE DATE:

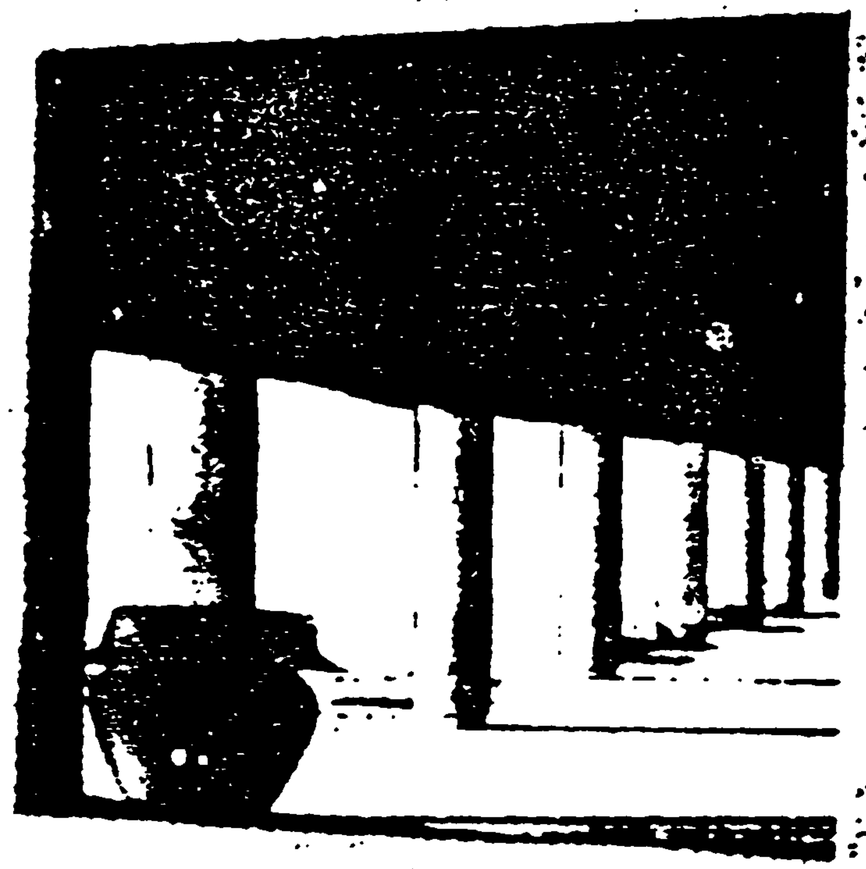
OCTOBER 14, 1983

APPENDIX B

Apron and Service Roads
8525-07
2910

OCTOBER 1986

Master Plan Improvement Program
Albuquerque International Airport



Albuquerque International Airport

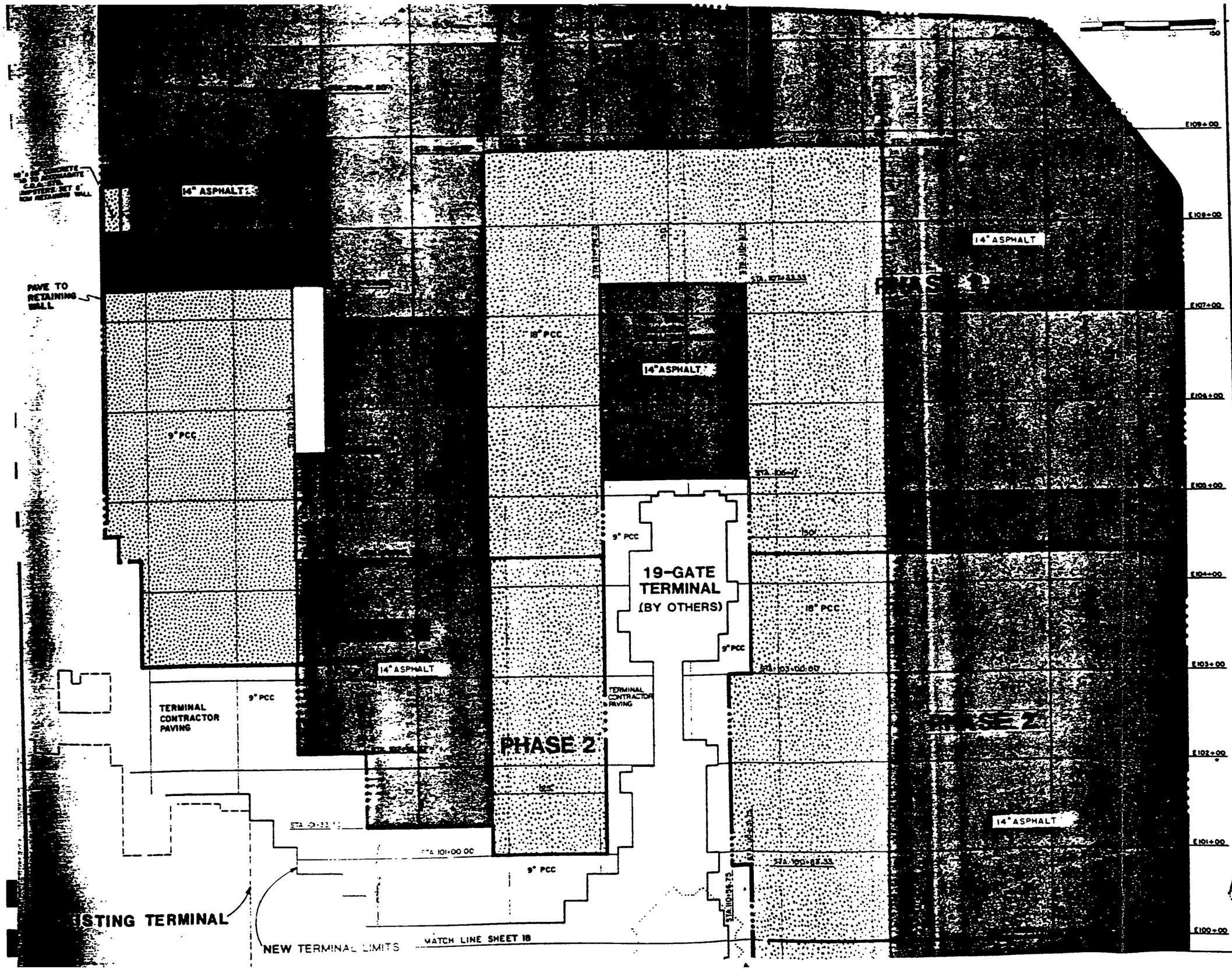
REV	SHEETS	BY ENGR	DATE	USER DEPT	DATE	USER

APPROVAL OF REVISIONS

APPROV
CONSTR

DRAWING NO. 2910

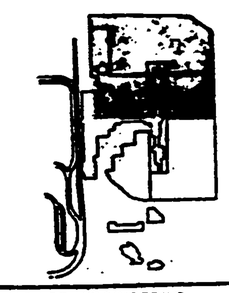
CITY E



LEGEND

- 17" PORTLAND CEMENT CONCRETE
- 14" ASPHALT
- ASPHALT OVERLAY (NO PAVEMENT REMOVAL)
- PAVING BOUNDARY
- 9" PORTLAND CEMENT CONCRETE

SEE TYPICAL PAVEMENT SECTIONS SHEET 21



GREINER ENGINEERING
2601 WYOMING BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87112
(505) 292-1936

THE BURNS/PETERS GROUP
OLD AIRPORT TERMINAL BUILDING
2920 TALE BLVD. S.E.
ALBUQUERQUE, NEW MEXICO 87106
(505) 842-4422

CITY OF ALBUQUERQUE
AVIATION DEPARTMENT

TITLE ALBUQUERQUE INTERNATIONAL AIRPORT
MASTER PLAN IMPROVEMENTS 1986
PAVING PLAN - EAST

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER
City Engineer		11/5/86	Land Water	
Chief Design		10/30/86	Traffic	
Chief Engineer		10/30/86	Water	
Director		10/30/86		

DRAWING NO 2910 | MAP NO. M-16 | SHEET 17

AS BUILT INFORMATION
CONTRACTOR
NAME
SIGNATURE
DATE
SUPERVISOR

BENCH MARKS
"BNO" A CHISELED LOCATED ON THE NORTH SIDE OF BUNPORT BLVD., THE WEST END OF THE TERMINAL BLDG., TOP OF CONCRETE SIDEWALK, APPROX. 120' EAST OF INTERSECTION CURVE OF BUNPORT BLVD.

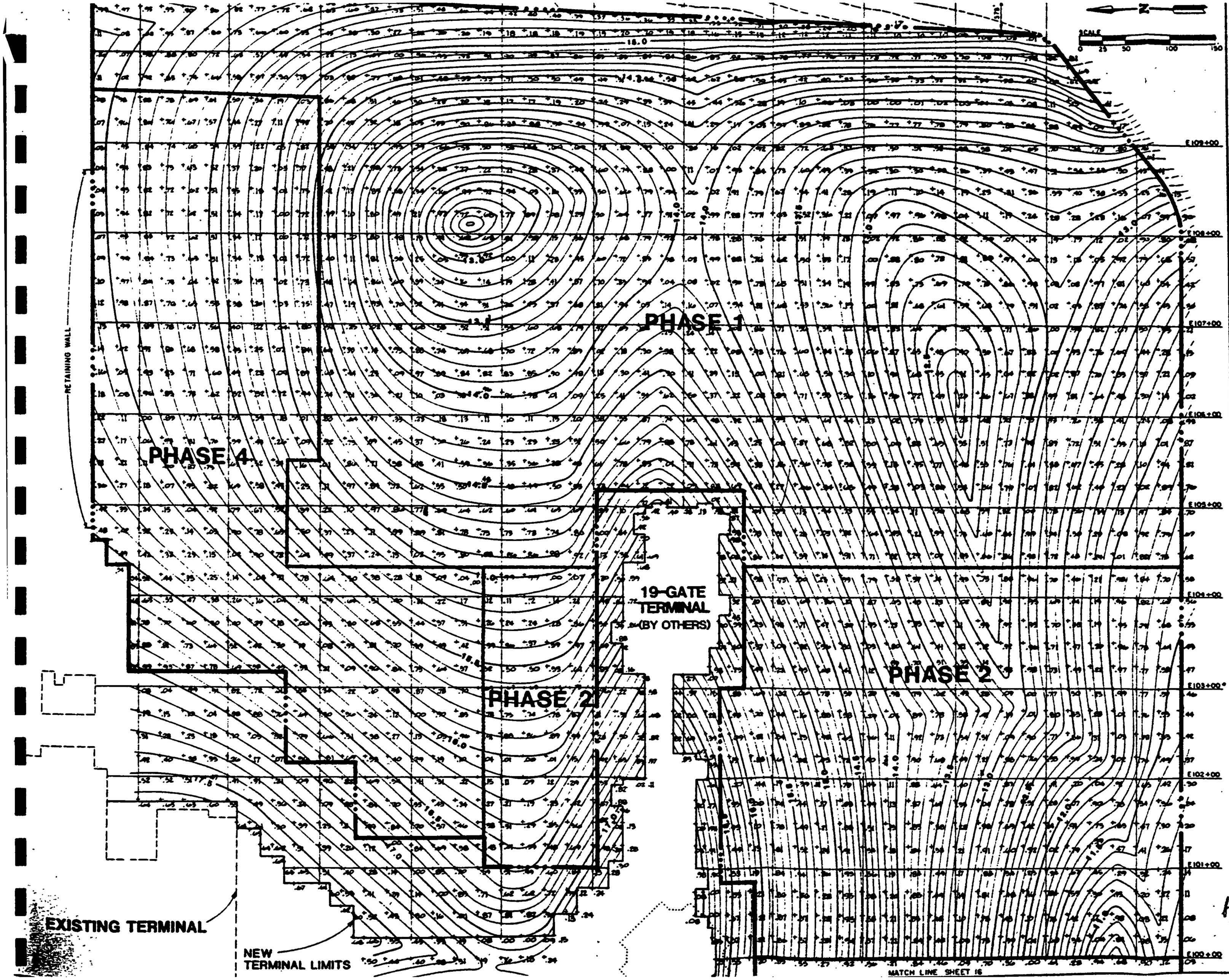
SURVEY INFORMATION
FIELD NOTES

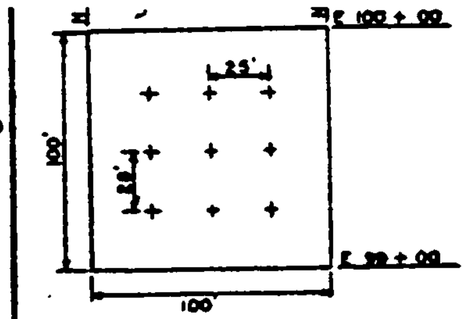
NO	BY	DATE
1728	M. MARTINEZ	1-86
1724	J. AYERS	12-85
1711	D. FRANZEN	10-85

ENGINEER'S SEAL

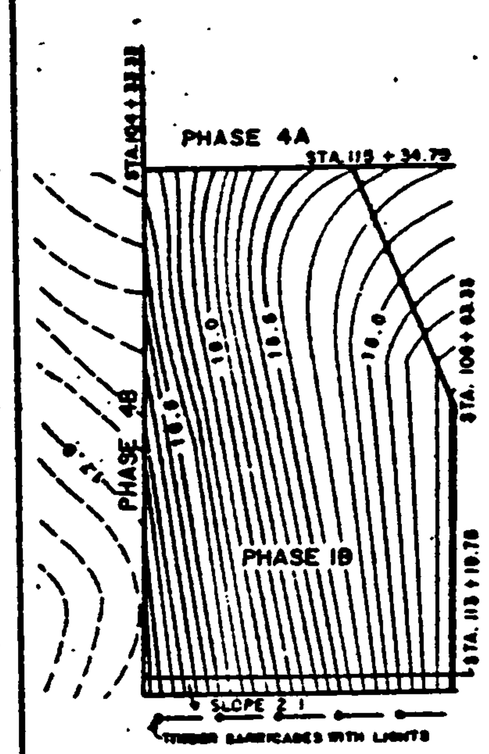
NO	DATE	REMARKS	BY
1	11-88	ADDENDUM No.1	

REVISIONS

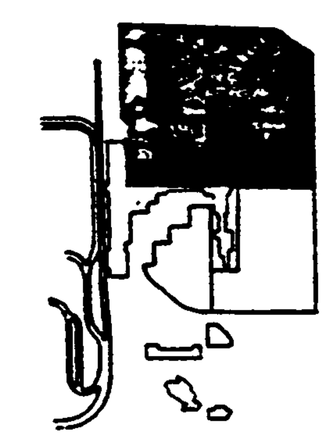




SURVEY GRID ELEVATIONS
SCALE 1" = 50'



TEMPORARY ASPHALT RAMP
SCALE 1" = 50'



GREINER ENGINEERING
2501 WYOMING BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87112
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THE BURNS/PETERS GROUP
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2920 YALE BLVD. S.E.
ALBUQUERQUE, NEW MEXICO 87106
(505) 842-4422

CITY OF ALBUQUERQUE
AVIATION DEPARTMENT

TITLE ALBUQUERQUE INTERNATIONAL AIRPORT
MASTER PLAN IMPROVEMENTS 1986

GRADING PLAN–EAST

APPROVALS	ENGINEER	DATE	APPROVALS
City Engineer		11/3/86	Liquid Waste
A-E Design		10/31/86	Traffic
A-E Hydrology		10/31/86	Water
Aviation		10/30/86	

DRAWING NO. 2910 | MAP NO. M-16 | SHEET 15 OF 6

AS BUILT INFORMATION
1 LINEN THAT TOP
DATE
NUMBER
AS BUILT BY
FIELD VERIFIED BY
DRAWING BY
CORRECTED BY
MICRO-FILM INFORMATION
FILMED BY

BENCH MARKS
"3M0", A CHISELED LOCATED ON THE NORTH SIDE OF SUNPORT BLVD., THE WEST END OF THE TERMINAL BLDG., TOP OF CONCRETE SIDEWALK, APPROX. 120' EAST OF INTERSECTION CURVE OF SUNPORT BLVD ELEVATION = 5300.00'

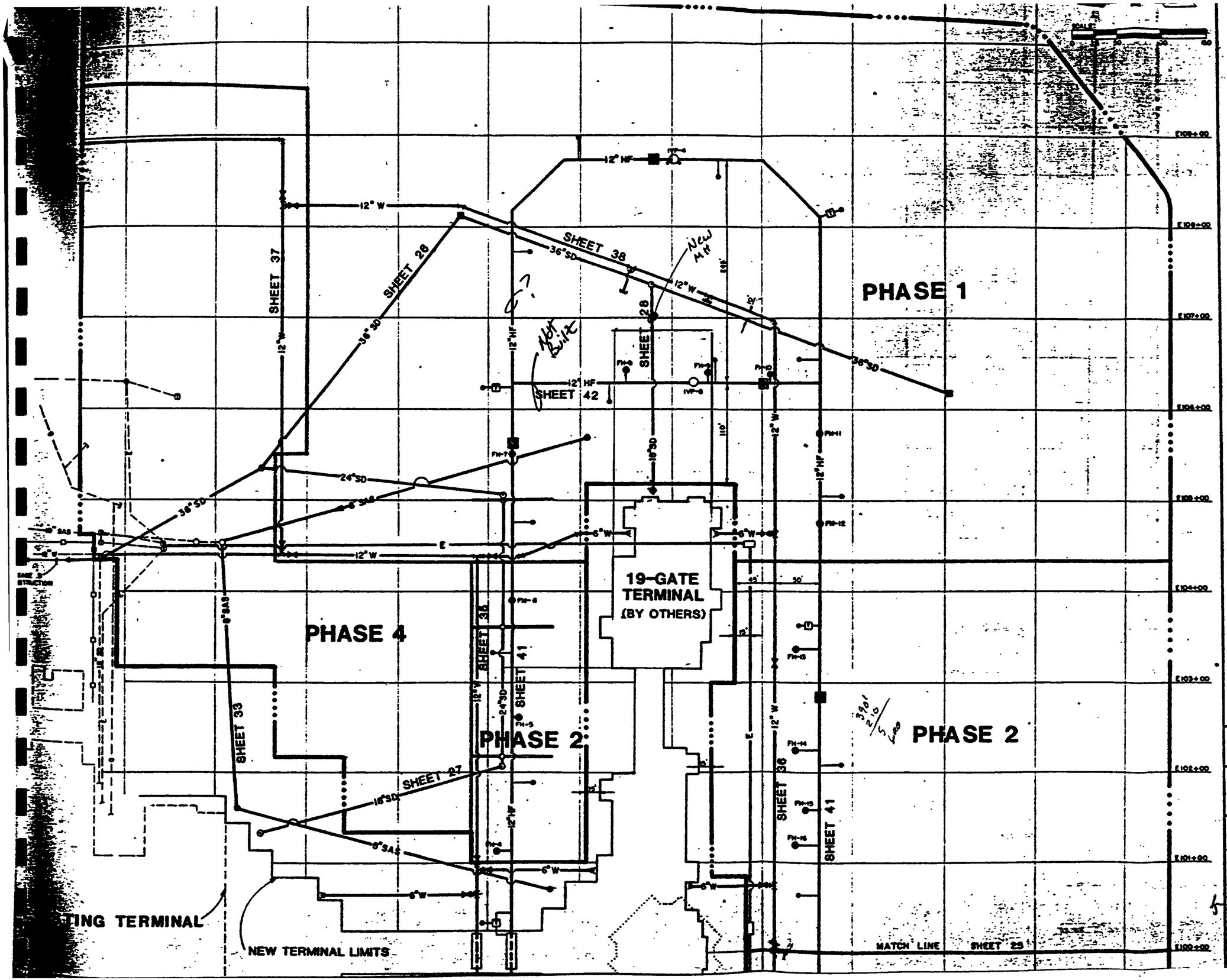
SURVEY INFORMATION
FIELD NOTES

NO	BY	DATE
1728	M. MARTINEZ	1-86
1724	J. AYERS	12-85
1711	D. FRANZEN	10-85
1704	D. FRANZEN	9-85

ENGINEER'S SEAL

NO	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DATE 10/86
DRAWN BY RW



AS BUILT INFORMATION

CONTRACTOR
SUBCONTRACTOR
SURVEYOR
INSPECTOR
DATE STARTED
DATE FINISHED

BENCH MARKS

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SURVEY INFORMATION

FIELD NOTES

NO	BY	DATE
1728	M. MARTINEZ	1-86
1724	J. AYERS	12-85
1711	D. FRANZEN	10-85
1704	D. FRANZEN	9-85

ENGINEER'S SEAL

REVISIONS

NO.	DATE	REMARKS	BY

DESIGN

DESIGNED BY R.W.J.
DATE 10/86

GREINER ENGINEERING
2601 WYOMING BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87112
(505) 292-1936

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ALBUQUERQUE, NEW MEXICO 87106
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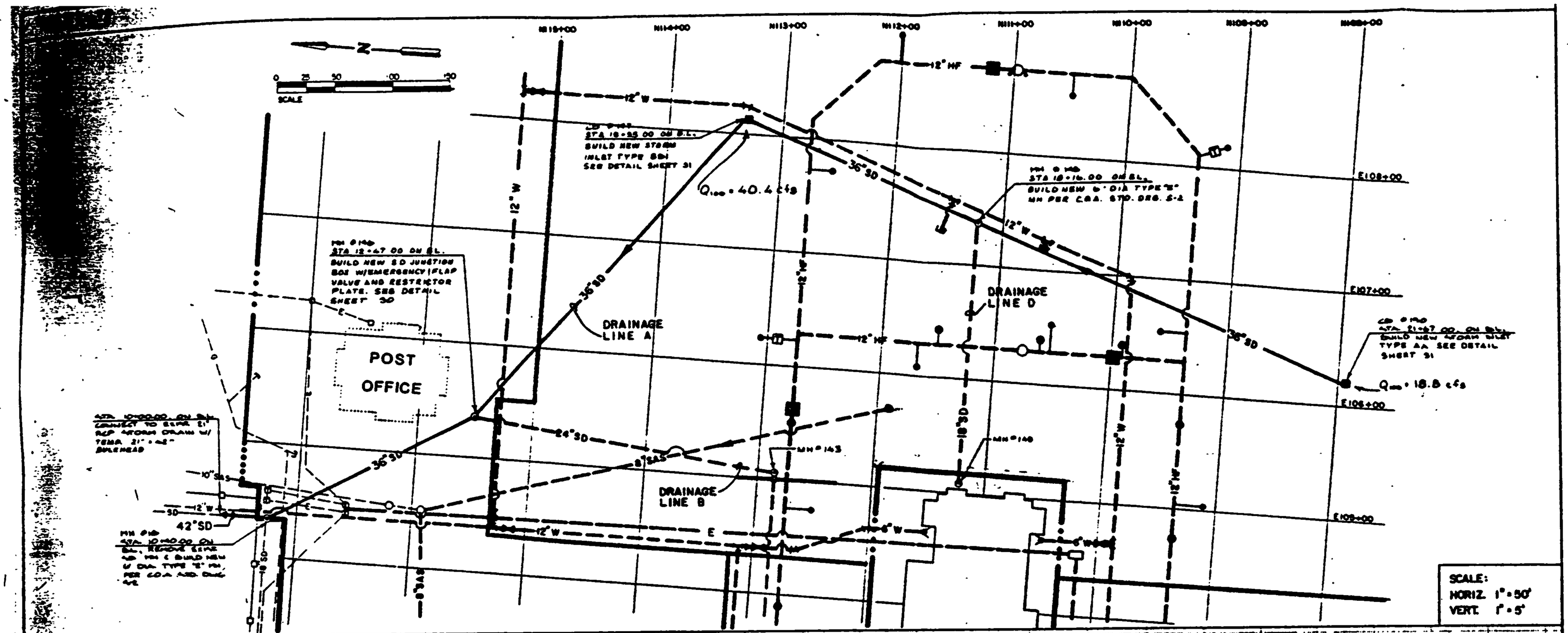
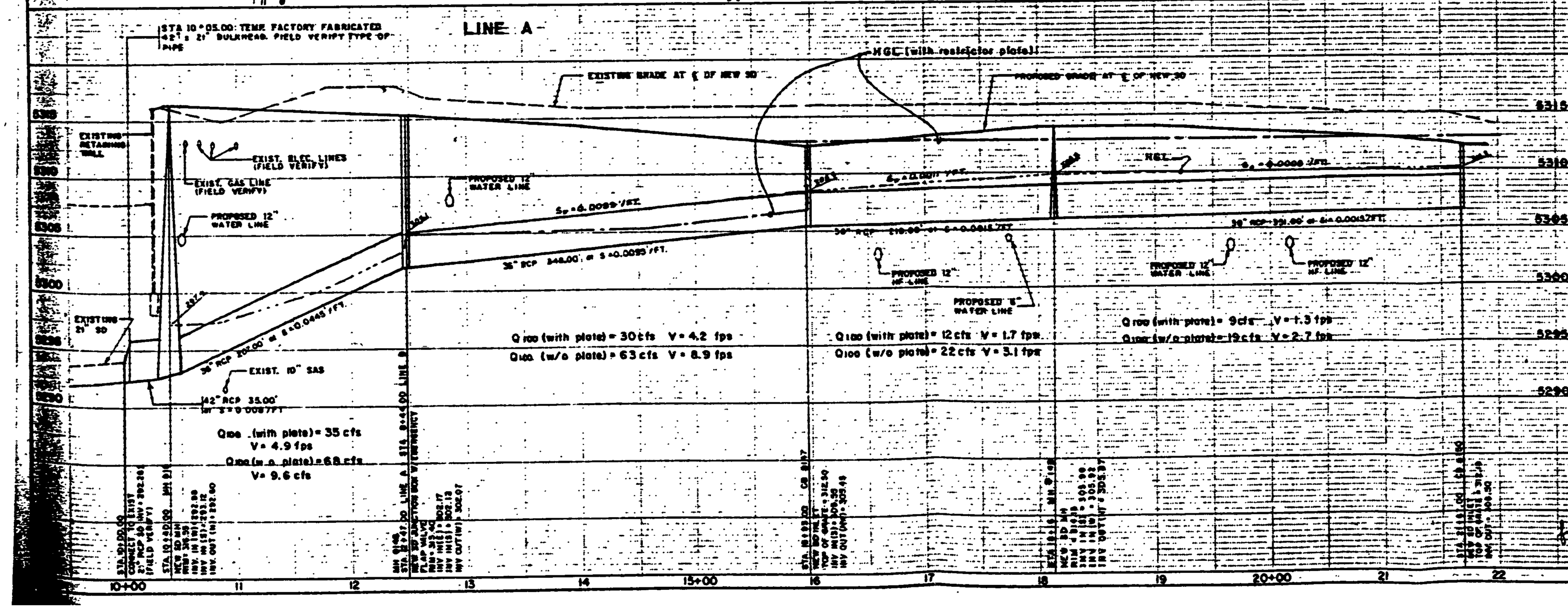
CITY OF ALBUQUERQUE
AVIATION DEPARTMENT

TITLE: ALBUQUERQUE INTERNATIONAL AIRPORT
MASTER PLAN IMPROVEMENTS 1986
UTILITIES PLAN - EAST

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer			Legal		
Aviation Director			Traffic		
Public Works Director			Water		
Aviation					

DRAWING NO. 2910 | MAP NO. M-16 | SHEET 24 OF 6





AS BUILT INFORMATION

CONTRACTOR | DATE
FIELD VERIFICATION | DATE
RECEIVED BY | DATE
DRAWING CORRECTED BY | DATE
CONNECTED BY | DATE

BENCH MARKS

"SMO", A CHISELED □ LOCATED ON THE NORTH SIDE OF SUNPORT BLVD., THE WEST END OF THE TERMINAL BLDG., TOP OF CONCRETE SIDEWALK, APPROX. 120' EAST OF INTERSECTION CURVE OF SUNPORT BLVD

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE
1725	M MARTINEZ	1-86
1724	J AYERS	12-85
1711	D FRANZEN	10-85

ENGINEER'S SEAL

NO.	DATE	REMARKS	BY
		REVISIONS	

GREINER ENGINEERING
2501 WYOMING BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87112
(505) 292-1936

THE BURNS/PETERS GROUP
OLD AIRPORT TERMINAL BUILDING
2920 TALE BLVD. S.E.
ALBUQUERQUE, NEW MEXICO 87106
(505) 842-4422

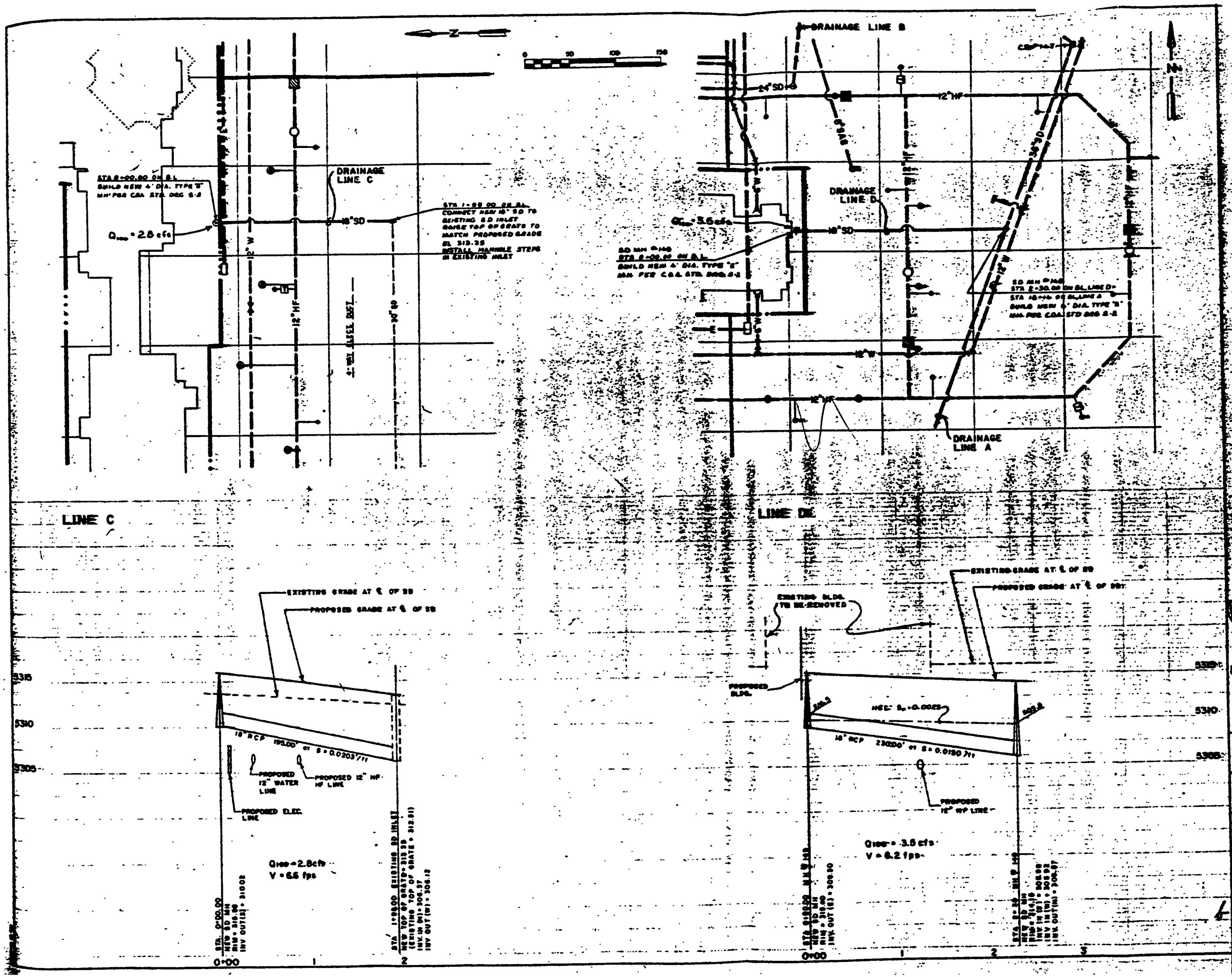
CITY OF ALBUQUERQUE
AVIATION DEPARTMENT

TITLE: ALBUQUERQUE INTERNATIONAL AIRPORT
MASTER PLAN IMPROVEMENTS 1986

DRAINAGE PLAN & PROFILE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER
City Engineer		11/3/86	Liquid Waste	NA
A.C.E.-Design		8/26/86	Traffic	NA DJ
A.C.E.-Hydrology		8/26/86	Water	NA
Aviation		8/26/86		

DRAWING NO. 2910 | MAP NO. M-16 | SHEET 26



GREINER ENGINEERING
2301 WYOMING BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87112
(505) 292-1936

THE BURNS/PETERS GROUP
OLD AIRPORT TERMINAL BUILDING
2330 YALE BLVD. S.E.
ALBUQUERQUE, NEW MEXICO 87106
(505) 842-4422

CITY OF ALBUQUERQUE
AVIATION DEPARTMENT

TITLE: ALBUQUERQUE INTERNATIONAL AIRPORT
MASTER PLAN IMPROVEMENTS 1986

DRAINAGE PLAN & PROFILE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER
City Engineer			Legal Divisor	
CODE-Design			Traffic	
CODE-Hydrology			Water	
Aviation				

DRAWING NO. 2910 | MAP NO. M-16 | SHEET 28 OF

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

ENGINEER'S SEAL

NO.	BY	DATE	REVISIONS
1228	M. MARTINEZ	1-86	THE TERMINAL BLDG., TOP OF CONCRETE
1724	J. AYERS	12-85	SIDEWALK, APPROX. 120' EAST OF
1711	D. FRANZEN	10-85	INTERSECTION CURVE OF SUNPORT BLVD.
1704	D. FRANZEN	9-85	ELEVATION=5300.00

SURVEY INFORMATION
FIELD NOTES

"AS BUILT" INFORMATION
CONTRACTOR
CODE
ISSUED BY
INSPECTOR
CONSTRUCTION BY
FIELD ENGINEER
CONSTRUCTION BY
MICRO-FILM INFORMATION
MICROFILMED BY

APPENDIX C

ALBUQUERQUE
INTERNATIONAL AIRPORT

STORM DRAINAGE MASTER PLAN

Project No. 4255.01

City of Albuquerque, NM
Aviation Department

June, 1994

MOLZEN-CORBIN & Associates

MC File ABQ11-14 P-01

C. **Basin N17.** This 0.4119 square mile basin extends along Runway 17-35 from the Runway 8-26 intersection up to the north runway end. This area also includes the main parking structure, car rental parking area, the loop road, the main terminal ramp and commercial development areas just north of the parking structures to Alamo Drive. Drainage is conveyed to the Yale Blvd. storm sewer system and eventually discharged into the Kirtland Channel. Problems with storm sewer flows surfacing have been experienced just north of the parking structure near the commercial development. Furthermore, the terminal expansion project included installation of a restrictor plate in the storm sewer conveying flows from the ramp through the terminal area. This restrictor plate causes ponding on the aircraft parking ramp south of the terminal. The restrictor plate was installed to correct the first problem described above, that is the flooding near the commercial development caused by stormwater exiting the storm drain.

TABLE III-2
Basin N17

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	DESCRIPTION
201	0.0129	5.38	9.67	0.538	1.000	24" SD	E. Side T/W D
202							eliminated
203	0.0210	28.89	48.83	0.951	1.713	24" SD	Between R/W 17-35 & T/W D
204	0.0217	31.28	52.67	0.973	1.759	24" SD	Between R/W 17-35 & T/W D
205	0.0267	20.35	34.26	1.169	2.131	24" SD	Between R/W 17-35 & T/W D
206	0.0405	20.50	25.67	1.861	3.337	36" SD	Between R/W 17-35 & T/W C
207	0.1267	66.58	91.50	5.913	10.570	36" SD	Between R/W 17-35 & T/W C
208	0.0435	22.95	30.82	2.029	3.620	24" SD	Between R/W 17-35 & T/W C
209	0.1408	75.33	107.05	6.545	11.689	42" SD	Between T/W C & Access Road
210	0.1449	77.03	109.64	6.730	12.019	42" SD	Between Access Road & Girard
211	0.0268	38.18	60.46	1.637	2.687	24" SD	Girard Airport Entrance
212	0.0058	11.58	17.64	0.414	0.654	24" SD	Rental Car Parking
213	0.0480	59.98	75.86	3.327	5.299	24" SD	Rental Car Parking
214	0.1084	141.64	204.43	7.213	11.597	24" SD	S. Side Airport Loop Road
214.1	0.2533	193.20	281.40	13.943	23.616	10" SD	S. Side Airport Loop Road
214.2	0.2839	220.09	332.63	15.079	25.819	36" SD	S. Side Airport Loop Road
215	0.0124	10.52	22.05	0.270	0.642	surface	W. side of Girard
216	0.0134	7.00	18.49	0.193	0.535	Surface	W. Side of Girard; N. of 215
217	0.0535	15.46	37.22	0.766	2.310	Surface	Business complex
217.1	0.3374	232.83	358.61	15.845	21.130	Surface	S. Side of Alamo Drive

218	0.0932	116.18	165.12	6.224	9.995	24" SD	Lower parking lot
219	0.664	105.46	105.46	4.587	7.309	Surface	Parking Structure
220	0.0327	97.81	97.81	2.260	3.603	36" SD	E. Terminal Ramp
221	0.0370	46.43	46.43	2.542	4.058	36" SD	Terminal Entrance, East
222	0.0215	45.55	45.55	1.351	2.196	24" SD	Terminal Entrance, West
223	0.3651	418.23	418.23	17.521	30.882	60" SD	Areas E. of Alamo/Yale
224	0.2612	295.18	295.18	14.315	24.274	24" SD	Amfac Hotel, East
225	0.0227	49.80	49.80	0.765	1.545	Surface	Amfac Hotel, North
226	0.0428	87.14	87.14	2.397	4.003	Surface	Amfac Hotel, West
227	0.0353	70.75	70.75	2.011	3.344	24" SD	Airport Entrance by Yale
228	0.4119	514.03	514.03	20.169	35.293	24" SD	E. side of Yale
Σ	0.4119	328.37	514.53	20.169	35.293	2-42" CMP	to Basin KC

D. **Basin KC.** This 0.6810 square mile basin extends from Yale Blvd to the South Diversion Channel and includes commercial development on each side of Randolph. The principal drainage feature of this basin is the Kirtland Channel which begins just west of the Yale/Alamo intersection and discharges to the South Diversion Channel via a baffle chute drop structure west of Mulberry. The principal problems experienced in this basin are in the lower reaches of the Kirtland Channel where the concrete lined channel makes two rather severe horizontal bends. Very high velocities which exist in the channel have resulted in the flows overtopping the channel banks in this area.

The Kirtland Channel has experienced some problems near the box culvert crossing on Mulberry. These problems have been noted through visual observations and some damages that have occurred during past rainfall events. The Kirtland Channel in this area makes two horizontal bends on what appears to be rather severe horizontal curves. Both of these bends occur just upstream from the Mulberry to form an "S" curve. The downstream curve immediately upstream of the Mulberry crossing has experienced overtopping along the southern channel bank encroaching on some existing homes in this area. In addition to this curvilinear alignment, there is a side channel discharging into the Kirtland Channel just upstream of the Mulberry crossing. The Mulberry crossing itself is a two cell 6'X6' box culvert. Downstream of this culvert is a short segment of channel and then a baffle drop spillway discharging into the South Diversion Channel.

From visual observation it appears that the problem of flow overtopping the channel is caused by superelevation of flows with high velocities around this second curve. Additional freeboard was added to this area by constructing a one foot high concrete retaining wall along this channel

APPENDIX D

The existing EEND Basin is considered fully developed under this study. The portion within Airport property was expanded under the Taxiway E and Taxiway A projects. Under the master plan, two connector taxiways are planned in the south central portion of the basin. The addition of these taxiways will not significantly impact the recently constructed system. The discharges from the EEND Basin fall within KAFB property. Improvements are planned by KAFB for both of these discharge points due to their impact on an abandoned landfill. The improvements are not considered in this study since they fall downstream of the Airport and are within KAFB jurisdiction.

The Far East End Basin lies predominantly within KAFB property off the east end of the Airport. Improvements made during the Taxiway E project were sized to handle developed conditions on the airfield. If future development occurs on Air Force property, KAFB should be responsible for any increase in discharge or volume to the Airport system.

C. <u>G-17 Basin.</u> The existing conditions in Basin G17 is are assumed to be fully developed under this study. Subbasins 101 and 102 lie within KAFB and are predominantly vacant. Capacity of the storm drainage system serving these areas will not allow additional flows to be discharged. Diversion to the storm sewer system in Gibson Blvd. is not an option according to City of Albuquerque Public Works because of the existing stress on the system from current conditions. Diversion of subbasins 101, 102, 103 and 104 to N17 Basin at subbasin 206 is recommended after improvements are made within N17 Basin. The diversion will help relieve capacity problems in subbasin 108 at the 90-degree bend upstream of the basin discharge to Gibson Blvd.

Downstream of subbasin 104, the existing storm sewer system serves a light industrial and business park. It does not appear that additional significant development can occur in these subbasins. The existing drainage system is adequate for the 10-year event with the exception of the 90 degree turn in subbasin 108. Improvement to this bend will relieve flooding problems on the surrounding private property. Appendix H contains a conceptual scope for the improvements in this area.

D. <u>N17 - KC Basins.</u> Significant changes are proposed for N-17 Basin in the AIA master plan. Most significant is the proposed terminal expansion in the upper reaches of N-17 basin, specifically in subbasins 203, 204, 207, 208, 209, 210, 211, 212, 213, and 220. Currently, this area contains most of the northern portion of Runway 17-35 and Taxiway C. If Runway 17-35 is closed and the terminal is expanded into this area, it is assumed that the majority of the area will be impervious.

Under the proposed conditions outlined in the master plan, the new aircraft parking apron which will surround the new terminal area will cover subbasins 203, 204, 207, 208 and 209. Subbasin 209 is a consolidation of subbasins 209, 210, 212, 213 and a portion of 211. An increase in the storm drain system will be required to carry the increased flows from the apron and terminal as outlined below in Table IV-1. Doesnot include or effect 220

To initiate the analysis of the lower reaches of the Kirtland Channel, general flow characteristics of the channel were computed. These are as follows:

Q	=	950 cfs			
Yn	=	2.58'	Yc	=	4.92'
n	=	0.016			
B	=	10'			
H/V	=	1.74			
Vn	=	25.44 fps	Vc	=	10.41 fps
S	=	0.0334 ft/ft	Sc	=	0.00282 ft/ft
TWn	=	18.98'			
An	=	37.38sf			

Obviously, flow in the channel is well within the supercritical flow regime and velocities are quite high. Using the DPM criteria, superelevation of the water surface was checked as follows:

$$Se = 1.3 \frac{V^2(b+2zD)}{(g)(r)} (1.3) \frac{(25.44^2)(10+(2)(1.74)(2.58)}{(32.2)(800)} 1.3$$

Based on these calculations, the problems experienced with the overtopping the channel side should not be occurring as the maximum outside radius depth of flow is only 3.20 feet. The channel has a lined depth of five feet. Additional freeboard is needed to maintain a two foot minimum but the overtopping of flows should not be occurring strictly from the superelevation.

Another source of the problem could involve the box culvert capacity. Using the DPM criteria, the pier losses were calculated and the results show that this box does, indeed, have proper capacity. Constructing a HEC-2 (Water surface profiles analysis) was not done as it was felt that HEC-2 would not accurately model the complex variables occuring at this location.

It is somewhat apparent that the problem is being caused by the reverse curves in the channel alignment. Since the flow in the channel is supercritical, the box itself cannot be causing a backwater affect unless the box has insufficient capacity. Calculations show that the box does have capacity. Therefore, the only affect that the box has on the flow is some disturbance at the center pier, an affect which cannot be recognized further upstream. If the flow in the channel were subcritical, then such an affect would be felt some distance upstream. While some effort has been made to increase freeboard along the channel, the success of these improvements is limited due to the presence of an additional channel discharge just upstream of the box culvert. This side channel cannot be blocked by increasing freeboard on the Kirtland Channel.

The problems experienced in this area are complex. Solutions cannot be achieved by computer analysis, but rather by a more logical approach. The Kirtland Channel should be reconstructed in a new location, further south of the existing alignment. This reconstruction should occur between the most upstream horizontal curve and the South Diversion Channel. This area is currently undeveloped and some flexibility would exist in both horizontal and vertical alignment. This reconstruction would allow the two horizontal curves to be lengthened causing less superelevation or eliminated completely. Furthermore, the side discharge from the residential areas to the north could be realigned to enter the Kirtland Channel at a more desirable location, without the potential of Kirtland flows backing up into this side channel. The box culvert could also be eliminated with this channel realignment. This is dependent upon the future planning of

the undeveloped areas surrounding the Mulberry crossing. If Mulberry will not be extended south in the future, no channel crossing will be needed.

TABLE IV-1
Improvements to N17 Basin

SUBBASIN NO.	PIPE DIAMETER	FLOW, 10 and 100 year, cfs	COMMENTS
204-207	30-inch	19.6 (10), 32 (100)	North N17 to center N17.
203-208	36-inch	24 (10), 37 (100)	Flow from 203 to 208
208-207	48-inch	49.3 (10), 76.2 (100)	South N17 to center N17
207-209	66-inch	164 (10), 255 (100)	Flow from 207 to 209
216-215	30-inch	13.8 (10), 20.3 (100)	Currently vacant parcel
220	60-inch	272.3 (10), 430.7 (100)	Flow from east terminal area
209-215-220	66-inch	272.3 (10), 430.7 (100)	Flow from new apron and terminal
214.2	42-inch	112 (10)	Flow from exist. terminal area, parking, rental lots, Craddock.
214.2-Alamo	72-inch	403 (10) 558 (100)	Flow from exist. terminal area, parking, rental lots, and new loop road curbside to new terminal.

Future
220

The proposed terminal expansion will be drained through subbasin 207 collecting flows from the northern and southern portion of N17 Basin with new 30-inch and 48-inch drains, respectfully. Subbasin 209, consolidated, will accept the flow from subbasin 207 and discharge through a new 60-inch drain. This drain will increase in size to a 66-inch drain running west on the south side of the Craddock Business Park. After flow is collected from subbasin 214.2, incorporating discharges from the existing terminal area, parking area and rental car lots, a 72-inch drain will carry the 10-year flow to Alamo St. The existing 60-inch drain in Alamo St. will discharge across Yale Blvd. into the upstream reaches of the Kirtland Channel.

The current storm sewer system serving the existing terminal, parking, loop road, and rental car lot subbasins are restricted by the capacity of the 36-inch drain across subbasin 214.2 An orifice plate was installed at the discharge point of subbasin 220 when the existing terminal was expanded to control the discharge to approximately 30 cfs. Removal of this plate is recommended with the increase in capacity of the downstream system in subbasin 214.2 where the 36-inch drain will be replaced with a new 42-inch drain through subbasin 214.2. A new 72-

inch drain from northwest corner of subbasin 214.2 to Alamo St. is recommended to replace the existing 60-inch drain.

Subbasins 227 and 228, which serve the south end of Yale Blvd., will continue to discharge into the Kirtland Channel system through the 60-inch Yale crossing near Alamo St. and Yale Blvd. The conditions in the Yale system will be relieved with the construction of Sunport Blvd. which diverts a significant amount of the storm water from the north and west side of the existing terminal. This diversion is discussed in and Section IV-E.

E. **SP Basin.** SP Basin contains Sunport Boulevard, George Road, a portion of University Blvd., and various commercial tracts of land between the airport and the South Diversion Channel. Sunport Blvd. and the relocation of George Road are currently under design with construction scheduled to start Fall, 1994.

Incorporated into the Sunport Blvd. project is a system which will collect storm water runoff from the new roadways from the terminal building to Interstate 25 and from surrounding property. The storm drainage system within the Sunport right of way was designed using the 100-year, 6-hour event. Sunport Blvd. will be an elevated roadway from the Interstate to a point approximately 700-feet east of University Blvd. The drainage system will be installed at an elevation which will enable a significant amount of the surrounding properties to discharge into it. Discharge from the new Sunport System will be through existing crossing points at Interstate 25.

A major diversion is proposed in the Sunport project at its eastern terminus with Yale Blvd. The existing system which transports storm flows from the west terminal area, subbasin 222 on Plate 1, will be severed by the new Sunport system. The diversion will amount to approximately 77 cfs and 3.2 a-f under present conditions. Storm runoff from the old airport terminal building and the USPS Air Mail Facility will be collected by the new system installed during the relocation of George Road.

A detention basin is proposed south of Sunport Blvd. and west of University Blvd. for the attenuation of peak flows discharged from subbasins 400, 401, 401.1, 401.2, 402, 401.1 and 402.3. The basin is required to protect the existing 3-36" RCP culverts under Interstate 25 west of subbasin 404. Without the detention basin, an additional crossing would be required at the Interstate. Discharge from the basin through a riser with an orifice plate will be controlled at approximately 85 cfs. Total pond storage volume to the emergency spillway crest is approximately 7.6 a-f. This facility was designed using the 100-year, 24-hour event per the City of Albuquerque and New Mexico State Highway and Transportation Department.

The Master Plan identifies the parcels of land adjacent to the relocated George Road as future airport support areas. The design of the drain systems in the Sunport project have taken into account the development of these properties. In addition, property within the SP Basin was considered fully developed for the design of the Sunport storm drainage system an as such, this study does not incorporate any additional development scenarios for analysis. Reference is made to the Sunport Boulevard Drainage Report, February, 1994, Molzen-Corbin & Associates, for additional and specific information regarding the design of the Sunport storm drainage system.

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 2, 1994

Mr. John Provine
Moltzen-Corbin & Associates
2701 Miles Road SE
Albuquerque, NM 87106

RE: ALBUQUERQUE INTERNATIONAL AIRPORT DRAINAGE MASTER PLAN (M16-D24)

Dear Mr. Provine:

I have reviewed the referenced plan and forward the following comments:

1. Show the proposed drainage improvements for runway 3-21. Greiner Engineering has completed the construction drawings.

2. Show the proposed drainage improvements for Sunport Blvd. drainage area.

3. Are the table quantities going to be completely filled in in future submittals? An example would be Table III-1.

4. The Master Plan needs to address downstream capacity of Basins WE, GA & University Golf Course in terms of erosion, maintenance, 100-year hydraulic capacity, frequency, volume and public easements and not in terms of existing conditions.

5. The Master Plan needs to address in more detail the outfall Basins MIDDLE, EEND, AIR GUARD, & FAR EAST END. Downstream of the airport we have problems with an old landfill and erosion. Improvements at the runway were sufficiently addressed.

If you have any questions, please contact me at 768-2654.

Sincerely,

Carlos A. Montoya, P.E.
PWD/Hydrology Division

CAM/dl/WPHYD/8935

File

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 12, 1995

Guy Jackson
BPLW
2400 Louisiana Blvd. AFC #5
Suite 400
Albuquerque, NM 87110

RE: EAST CONCOURSE EXPANSION (M16-D24E) ENGINEER'S STAMP DATED 4/4/95.

Dear Mr. Jackson:

The drainage plan dated 4/4/95 is approved for Building Permit. Please attach copies of the approved draiange to each set of the building plans.

An engineer's certification per the D.P.M. checklist will be required for Certificate of Occupancy approval by Hydrology.

If you have any questions, please feel free to contact me at 768-2668.

Sincerely,

Fred J. Aguirre, PE
PWD/Hydrology

FJA/dl

c: Andrew Garcia
File

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

CITY OF
Albuquerque

November 22, 1996

Martin J. Chávez, Mayor

Guy Jackson
BPLW
2400 Louisiana Blvd. AFC #5
Suite 400
Albuquerque, NM 87110

RE: AIA EAST CONCOURSE EXPANSION (M16-D24E)ENGINEER'S CERTIFICATION STATEMENT DATED 10/18/96.

Dear Mr. Jackson:

The Grading and Drainage Certification by Bruce Schneider dated 10/18/96, is acceptable for release of the Certificate of Occupancy.

If I can be of further assistance, feel free to contact me at 768-2668.

Sincerely,

Fred J. Aguirre, PE
PWD/Hydrology Division

FJA/dl

c: Andrew Garcia
File

DRAINAGE INFORMATION SHEET

PROJECT TITLE Albuquerque International Sunport East Concourse Expansion ZONE ATLAS/DRWG. FILE # M-16 / A24E

DRB#: 95-107 EPC # Z-1449-1 WORK ORDER # NA

LEGAL DESCRIPTION: NA

CITY ADDRESS: 2200 Sunport Blvd. SE, Albuquerque, New Mexico

ENGINEERING FIRM: BPLW CONTACT: Guy Jackson

ADDRESS: 2400 Louisiana Blvd. AFC#5, Suite 400 PHONE: 881-2759

OWNER: City of Albuquerque CONTACT: Jim Hinde

ADDRESS: P.O. Box 1293 PHONE: 842-4366

ARCHITECT: BPLW CONTACT: Dave Ellin

ADDRESS: 2400 Louisiana NE PHONE: 881-2759

SURVEYOR: Molzen-Corbin & Associates CONTACT: Mike Provine

ADDRESS: 2701 Miles Rd. SE PHONE: 242-5700

CONTRACTOR: NA CONTACT: NA

ADDRESS: NA PHONE: NA

TYPE OF SUBMITTAL:

__ DRAINAGE REPORT
X DRAINAGE PLAN
__ CONCEPTUAL GRADING & DRAINAGE PLAN
X GRADING PLAN
__ EROSION CONTROL PLAN
__ ENGINEER'S CERTIFICATION
OTHER _____

PRE-DESIGN MEETING:

X YES
__ NO
X COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

__ SKETCH PLAT APPROVAL
__ PRELIMINARY PLAT APPROVAL
__ S. DEV. PLAN FOR SUB'D APPROVAL
__ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
__ SECTOR PLAN APPROVAL
__ FINAL PLAT APPROVAL
__ FOUNDATION PERMIT APPROVAL
X BUILDING PERMIT APPROVAL
__ CERTIFICATE OF OCCUPANCY APPROVAL
__ GRADING PERMIT APPROVALS
__ PAVING PERMIT APPROVAL
__ S.A.B. DRAINAGE REPORT
__ DRAINAGE REQUIREMENTS
OTHER _____ (SPECIFY)

DATE SUBMITTED: May 10, 1995

BY: Guy Jackson

MAY 2 2 1995

BPLW

Architects & Engineers, Inc.

American Financial Center #5
2400 Louisiana Blvd NE
Suite 400
Albuquerque, New Mexico 87110
(505) 881-BPLW (2759)
FAX (505) 881-1230

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Jeffrey A Stone, MIES
Maureen M Walter, AIA, CCS
W Paul Waters, AIA

May 19, 1995

Mr. Fred Aguirre, PE
Hydrology Department
City of Albuquerque, Public Works
PO Box 1293
Albuquerque, NM 87103

Re: Albuquerque International Sunport East Concourse Expansion
Zone Atlas Page M-16
BPLW Project Number: 95004

Dear Mr. Aguirre:

Attached is the Drainage Report for the Albuquerque International Sunport East Concourse Expansion for building permit approval. Included in this package are the following:

- Drainage Information Sheet
- Drainage Report

We appreciate your review of this submittal. If you have any questions, please contact Guy Jackson or me.

Sincerely,

BPLW ARCHITECTS & ENGINEERS, INC.

Freeman G. Leaming, EI
Civil Engineering

xc: Dave Ellin, BPLW Architects & Engineers, Inc.
Guy Jackson, BPLW Architects & Engineers, Inc.

195004.005

MAY 2 2 1995

Mr. Fred Aguirre
City of Albuquerque
Hydrology Department
P.O. Box 1293
Albuquerque New Mexico 87103

August 4,1996

Subject. Engineering Certification for Plans prepared by Jeffrey R. Bergmann P E

Dear Fred:

As you may know, I have taken employment out of State and am no longer at BPLW Architects & Engineers Inc. However, a number of projects with approved drainage plans were bidding and the construction of several projects was on going at the time of my departure from Albuquerque. It is generally the engineer of record who completes the certification process or permission is granted to another engineer to use plans prepared under another's seal. Unfortunately, my move out of New Mexico prohibits an expedient and cost effective method in which to provide this certification. In order to fulfill the City of Albuquerque's Engineers Certification process I give permission to BPLW Architects & Engineers Inc. and in particular Guy Jackson, Jason Weaver or Bruce Schneider to use plans initially prepared and sealed under my name and registration to complete the certification process.

If you have any questions in regard to this letter please feel free to contact me either at home or at work.

Jeffrey R. Bergmann P.E.

14391 Blackberry Dr.
Wellington, Florida 33414

Home Phone : (561) 798-4451
Home Fax : (561) 790-7253
Work Phone : (561) 683-3113 ext. 241

cc: Guy Jackson P.E. / BPLW
Jason Weaver P.E. / BPLW
Bruce Schneider P.E. / BPLW

RECEIVED
OCT 2 2
HYDROLOGY SECTION

DRAINAGE INFORMATION SHEET

PROJECT TITLE AIA East Concorse Expansion ZONE ATLAS/DRWG. FILE # M-16 / U24E

DRB#: 95-107 EPC # Z-1149-1 WORK ORDER #

LEGAL DESCRIPTION: NA

CITY ADDRESS: 2200 SUNPORT BLVD. SE ALBUQUERQUE, NM

ENGINEERING FIRM: BPLW CONTACT: Guy Jackson

ADDRESS: 2400 Louisiana Blvd. AFC#5, Suite 400 PHONE:

OWNER: CITY OF ALBUQUERQUE CONTACT: JIM HINDE

ADDRESS: P.O. BOX 1293 PHONE: 842-4366

ARCHITECT: BPLW CONTACT: DAVE ELLIN

ADDRESS: 2400 LOUISIANA NE PHONE: 881-2759

SURVEYOR: MOLTZEN-CORBIN CONTACT: MIKE PROVINE

ADDRESS: PHONE: 242-5700

CONTRACTOR: -- CONTACT:

ADDRESS: -- PHONE:

TYPE OF SUBMITTAL:

__ DRAINAGE REPORT
__ DRAINAGE PLAN
__ CONCEPTUAL GRADING & DRAINAGE PLAN
__ GRADING PLAN
__ EROSION CONTROL PLAN
X ENGINEER'S CERTIFICATION
OTHER _____

PRE-DESIGN MEETING:
X YES
__ NO
X COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

__ SKETCH PLAT APPROVAL
__ PRELIMINARY PLAT APPROVAL
__ S. DEV. PLAN FOR SUB'D APPROVAL
__ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
__ SECTOR PLAN APPROVAL
__ FINAL PLAT APPROVAL
__ FOUNDATION PERMIT APPROVAL
__ BUILDING PERMIT APPROVAL
X CERTIFICATE OF OCCUPANCY APPROVAL
__ GRADING PERMIT APPROVALS
__ PAVING PERMIT APPROVAL
__ S.A.B. DRAINAGE REPORT
__ DRAINAGE REQUIREMENTS
OTHER _____ (SPECIFY)

DATE SUBMITTED: ~~AUGUST 8, 1996~~ October 21, 1996
BY: GUY JACKSON

RECEIVED
OCT 22 1996
HYDROLOGY DIVISION

BPLW

Architects & Engineers, Inc.

American Financial Center #5
2400 Louisiana Blvd. NE
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Albuquerque, New Mexico 87110
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Michael J. Melichar, PE
Maureen M. Walter, AIA, CCS
Jason M. Weaver, PE

October 21, 1996

Mr. Fred Aguirre, PE
Hydrology Department
City of Albuquerque, Public Works
P.O. Box 1293
Albuquerque, New Mexico 87103

RE: Albuquerque International Sunport
East Concourse Expansion
Zone Atlas Page M-16
BPLW Project Number: 95004

Dear Mr. Aguirre:

Attached are the certified as-builts as obtained by a Licensed New Mexico Surveyor for the Albuquerque International Sunport East Concourse Expansion for Certificate of Occupancy. Included in this package are the following:

- Drainage Information Sheet
- As-builts with Engineer's Certification
- Copy of Letter from Jeff Bergmann (Engineer of Record)

We appreciate your review of this submittal. If you have any questions, please call me.

Sincerely,

BPLW ARCHITECTS & ENGINEERS, INC.

Guy Jackson, PE
Civil Engineering Department

xc: Dave Ellin, BPLW Architects & Engineers, Inc.

L95004.046 gah

RECEIVED
OCT 22
HYDROL

MEMORANDUM:

January 22, 1987

ENGINEERING GROUP

TO: Tom Aragon, Transportation System Division

FROM: Fred J. Aguirre, Hydrologist; Engineering Division/PWD

SUBJECT: PRIVATE DRAINAGE FACILITIES WITHIN PUBLIC RIGHTS-OF-WAY/EASEMENT
THE FRAME FACTORY (M-16/D26)

Transmitted herewith, is a copy of the approved drainage plan for the referenced projects incorporating the S.O. 19 design.

In accordance with the new process, this plan is being submitted to you for permitting and inspection. Please provide this section with a signed-off copy per the signature block upon construction and acceptance by your office.

As you are aware, the signed-off S.O. 19 is required by this office for Certificate of Occupancy release; hence your expeditious processing of this plan would be greatly appreciated and would avoid any unnecessary delay in the release of the Certificate of Occupancy.

Thank you for your cooperation, and if you should have any questions and/or comments regarding the process, please feel free to call me at 768-2650.

FJA/bsj

Enclosures

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 21, 1987

Richard Hall
Hall Engineering
6840 Second Street, NW Suite 306
Alouquerque, New Mexico 87107

RE: REVISED DRAINAGE PLAN FOR THE FRAME FACTORY
(M-16/D26) REVISION DATE JANUARY 15, 1987

Dear Mr. Hall:

Based on the information provided on your resubmittal of January 19, 1987, the referenced drainage plan is approved for Building Permit.

Please advise your client that a separate permit is required for construction within City Right-of-Way.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj

PROJECT TITLE: FRAME FACTORY ZONE ATLAS/DRNG. FILE #: M-16/D26

LEGAL DESCRIPTION: TRACT A-1 BLOCK 2 AIRPORT INDUSTRIAL PARK

CITY ADDRESS: 2430 BAYLOR DR. S.E.

ENGINEERING FIRM: HALL ENGINEERING CONTACT: PARVIZ EFTEKHARI

ADDRESS: 6840 2ND ST. N.W. SUITE 306 PHONE: 345-1064

OWNER: N/A CONTACT: _____

ADDRESS: N/A PHONE: _____

ARCHITECT: N/A CONTACT: _____

ADDRESS: N/A PHONE: _____

SURVEYOR: HALL ENGINEERING CONTACT: PARVIZ EFTEKHARI

ADDRESS: 6840 2ND ST. N.W. SUITE 306 PHONE: 345-1064

CONTRACTOR: RNR CONSTRUCTION CONTACT: RICK TRUJILLO

ADDRESS: 1507 EDITH NE PHONE: 1-864-0790 OR 842-8959

RECEIVED JAN 19 1987 HYDROLOGY SECTION

PRE-DESIGN MEETING:

✓ YES

✓ NO

_____ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJECT NO. _____

TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT

✓ DRAINAGE PLAN

_____ CONCEPTUAL GRADING & DRAINAGE PLAN

_____ GRADING PLAN

_____ EROSION CONTROL PLAN

_____ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

_____ SKETCH PLAT APPROVAL

_____ PRELIMINARY PLAT APPROVAL

_____ SITE DEVELOPMENT PLAN APPROVAL

_____ FINAL PLAT APPROVAL

✓ BUILDING PERMIT APPROVAL

_____ FOUNDATION PERMIT APPROVAL

_____ CERTIFICATE OF OCCUPANCY APPROVAL

_____ ROUGH GRADING PERMIT APPROVAL

_____ GRADING/PAVING PERMIT APPROVAL

_____ OTHER (SPECIFY) _____

DATE SUBMITTED: JAN. 19, 1987

BY: PARVIZ EFTEKHARI

2450 BAYLOR

12-9-86

2450 BAYLOR

12-9-86

PROJECT TITLE: FRAME FACTORY ZONE ATLAS/DRNG. FILE #: M-16 / D 26

LEGAL DESCRIPTION: TRACT A-1 BLOCK 2 AIRPORT INDUSTRIAL PARK

CITY ADDRESS:

ENGINEERING FIRM: HALL ENGINEERING CONTACT: PARVIZ EFTEKHARI

ADDRESS: 6840 2ND ST. N.W. SUITE 306 PHONE: 345-1064

OWNER: N/A CONTACT:

ADDRESS: N/A PHONE:

ARCHITECT: N/A CONTACT:

ADDRESS: N/A PHONE:

SURVEYOR: HALL ENGINEERING CONTACT: PARVIZ EFTEKHARI

ADDRESS: 6840 2ND ST., N.W. SUITE 306 PHONE: 345-1064

CONTRACTOR: RNR CONSTRUCTION CONTACT: RICK TRUJILLO

ADDRESS: 1507 EDITH NE PHONE: 1-864-0790 OR 842-8959

PRE-DESIGN MEETING:

✓ YES

___ NO

✓ COPY OF CONFERENCE RECAP SHEET PROVIDED

RECEIVED JAN 05 1987 HYDROLOGY SECTION

DRB NO. —

EPC NO.

PROJECT NO.

TYPE OF SUBMITTAL:

___ DRAINAGE REPORT

✓ DRAINAGE PLAN

___ CONCEPTUAL GRADING & DRAINAGE PLAN

___ GRADING PLAN

___ EROSION CONTROL PLAN

___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

___ SKETCH PLAT APPROVAL

___ PRELIMINARY PLAT APPROVAL

___ SITE DEVELOPMENT PLAN APPROVAL

___ FINAL PLAT APPROVAL

✓ BUILDING PERMIT APPROVAL

___ FOUNDATION PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY APPROVAL

___ ROUGH GRADING PERMIT APPROVAL

___ GRADING/PAVING PERMIT APPROVAL

___ OTHER (SPECIFY)

DATE SUBMITTED: JAN. 5th, 1987

BY: PARVIZ EFTEKHARI

contact Engineer when comments are ready

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

December 12, 1986

RNR Construction
1507 Edith, NE
Albuquerque, New Mexico 87102

RE: ADDITION TO 2450 BAYLOR DRIVE, SE

Dear Sir:

We will require a submittal of a drainage plan by a professional engineer for approval, prior to release of a building permit for the subject addition. The following reasons were used to establish our request:

1. The Drainage Ordinance requires a drainage plan for building over 500 square feet in area. Your building addition contains 1800 square feet.

2. Runoff from the site drains to adjacent private property.

3. Sediment erosion appears to be a problem on site.

If you should have any questions regarding my request, please call 768-2650.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

CITY OF ALBUQUERQUE
ICIPAL DEVELOPMENT DEPARTMENT
ENGINEE...G DIVISION/DESIGN HYDROLOGY SE...ON

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: M-16 DATE: 12/17/86

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: Building Addition

STREET ADDRESS (IF KNOWN): _____

SUBDIVISION NAME: Tract A-1 Blk 2 Airport Industrial Park

APPROVAL REQUESTED:

_____	PRELIMINARY PLAT	_____	FINAL PLAT
_____	SITE DEVELOPMENT PLAN	X	BUILDING PERMIT
_____	OTHER	_____	ROUGH GRADING

	WHO	REPRESENTING
ATTENDANCE:	Parviz Ektefhari	Hall Engineering
	Billy Goolsby	City Hydrology

FINDINGS:

- Please provide a drainage plan per the DPM showing existing development and what is proposed. This office does not have any record of existing facilities on this property.

- Discharge rate shall be determined by analysis of downstream capacity.

- An erosion control plan for the period of construction shall be provided to ensure no sediment is wash into public R/W.

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED:	Billy J. Goolsby	SIGNED:	[signature]
TITLE:	CE/Hydrology	TITLE:	
DATE:	12/17/86	DATE:	12/17/86

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

Pre-Design Investigation
(Additions)

DATE 12-9-86

ADDRESS 2450 BAYLOR ZONE ATLAS #

LEGAL DESCRIPTION TR. A-1 BLK 2 AIRPORT INDUSTRIAL PK.

OWNER

ARCHITECT/ENGINEER

LOT SIZE

ZONING

PROPOSED DEVELOPMENT ADDITION

	YES	NO	NA	COMMENTS
FLOOD HAZARD AREA				
PART OF AN APPROVED REPORT		X		
CONSTRUCTION PLANS ON MICRO-FILM		X		
FIELD INSPECTION	X			

COMMENTS:

CURRENTLY, RUN-OFF FROM ADDITION AREA DRAINS TO ADJACENT PROPERTY TO WEST CUTTING GULLEY THRU EMPTY LOT. ALSO CARRIES SEDIMENT TO STREET

DRAINAGE REQUIREMENTS:

PROJECT TITLE: _____ ZONE ATLAS/DRNG. FILE #: _____

LEGAL DESCRIPTION: _____

CITY ADDRESS: 2450 Baylor Dr. SE

ENGINEERING FIRM: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

OWNER: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: RNR Construction CONTACT: Rick or Natalie

ADDRESS: 1507 Edith NE PHONE: 842-8959

PRE-DESIGN MEETING:

____ YES

X NO

____ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB NO. _____

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

____ DRAINAGE PLAN

____ CONCEPTUAL GRADING & DRAINAGE PLAN

____ GRADING PLAN

____ EROSION CONTROL PLAN

____ ENGINEER'S CERTIFICATION

X Request inspection

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL

____ PRELIMINARY PLAT APPROVAL

____ SITE DEVELOPMENT PLAN APPROVAL

____ FINAL PLAT APPROVAL

X BUILDING PERMIT APPROVAL

____ FOUNDATION PERMIT APPROVAL

____ CERTIFICATE OF OCCUPANCY APPROVAL

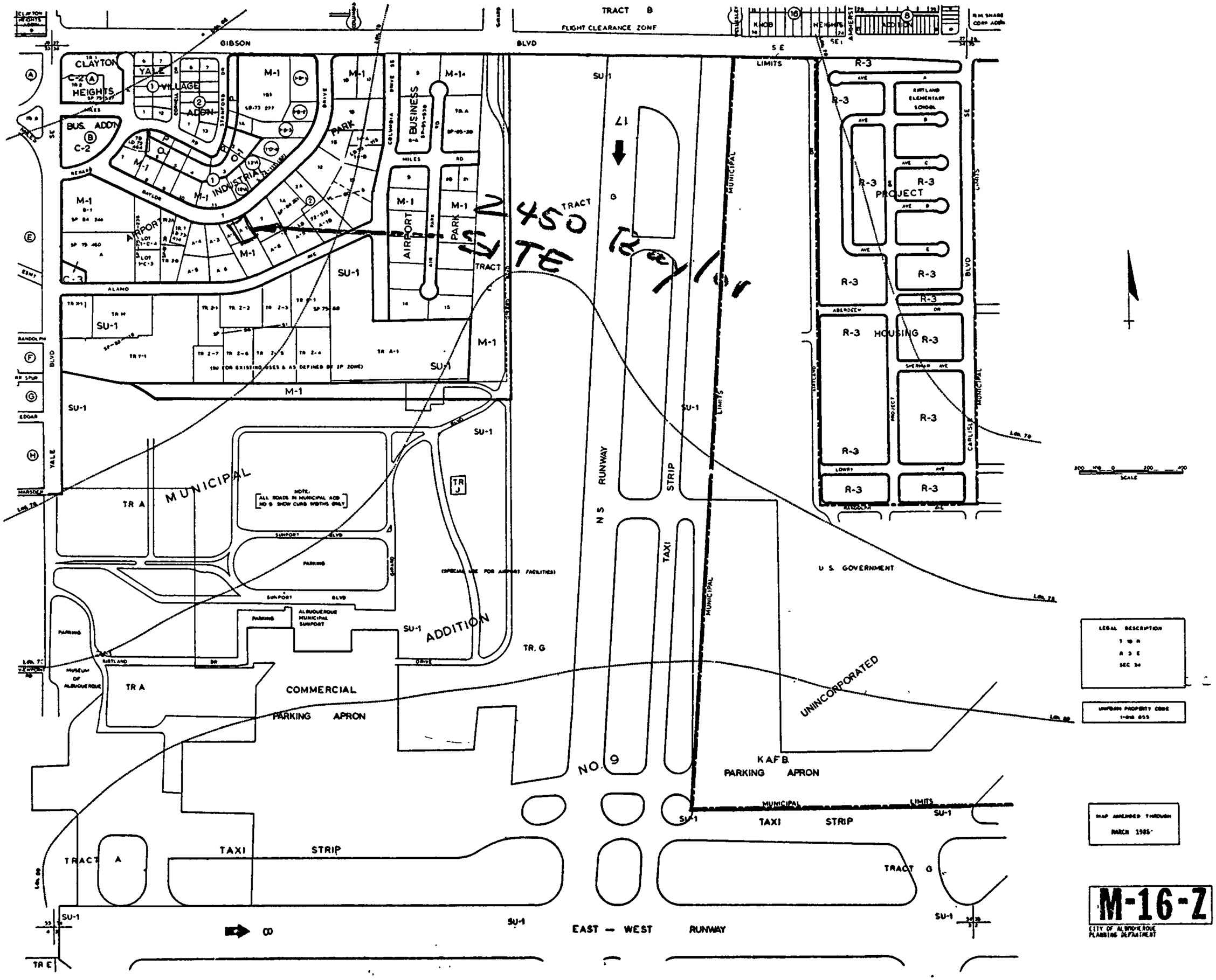
____ ROUGH GRADING PERMIT APPROVAL

____ GRADING/PAVING PERMIT APPROVAL

____ OTHER _____ (SPECIFY)

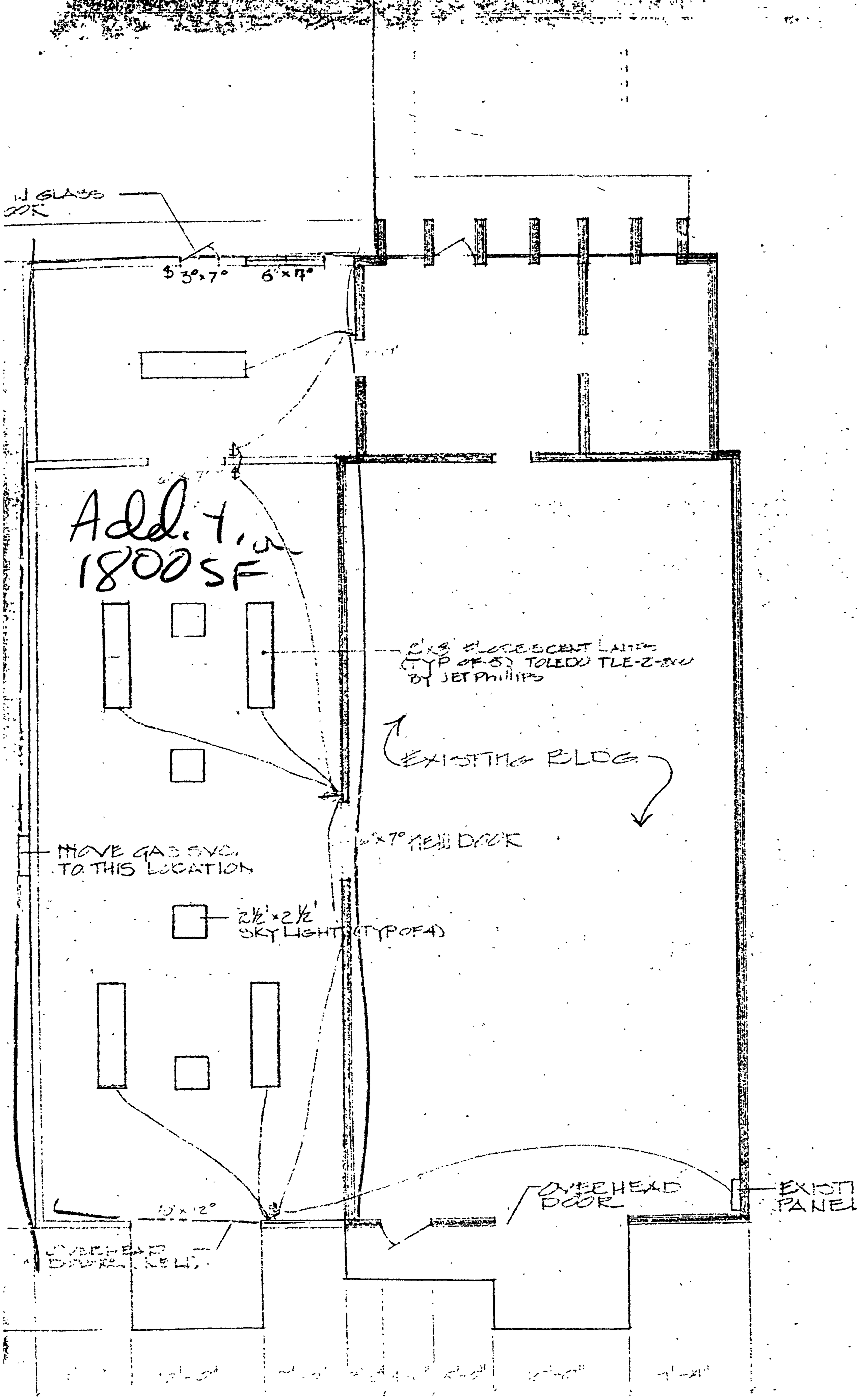
DATE SUBMITTED: _____

BY: _____


GIBSON
BLVD
TRACT B
FLIGHT CLEARANCE ZONE
CLAYTON HEIGHTS
YALE VILLAGE ADDN
BUS. ADDN
C-2
M-1
INDUSTRIAL PARK
BUSINESS
AIRPORT PARK
SU-1
TRACT
450
TRACT
MUNICIPAL
ADDITION
TR A
TR J
TR. G
COMMERCIAL
PARKING APRON
MUSEUM OF ALBUQUERQUE
ALBUQUERQUE MUNICIPAL SUNPORT
PARKING
NO. 9
RUNWAY
TAXI STRIP
KAFB
PARKING APRON
U.S. GOVERNMENT
UNINCORPORATED
MUNICIPAL LIMITS
R-3
RIOTLAND ELEMENTARY SCHOOL
PROJECT
HOUSING
CARLISLE
TRACT A
TRACT G
EAST — WEST RUNWAY
TR E
LEGAL DESCRIPTION
T 10 N
R 3 E
SEC 34
UNIFORM PROPERTY CODE
1-010 055
MAP AMENDED THROUGH
MARCH 1985
M-16-Z
CITY OF ALBUQUERQUE
PLANNING DEPARTMENT

AN ADDITION
2450 BAYLOR SE

LEGAL DESCRIPTION:
TRACT A-1 IN BLK #2 OF AIRPORT INDUSTRIAL PARK
ALB., N.M. AS THE SAME IS SHOWN & DESIGNATED
ON THE AMENDED, CORRECTED & REVISED PLAT OF
SAID SUBDIVISION, FILED IN THE OFFICE OF THE
COUNTY CLERK OF BERNALILLO CO., N.M. ON DEC. 29, 1972
IN MAP BOOK D-5, FOLIO 78


INJ GLASS
DR
3'x7'
6'x8'
Add. 1,
1800 SF
FLUORESCENT LAMPS
(TYP OF 5) TOLEDO TLE-2-8
BY JET PHILIPS
EXISTING BLDG
7' ROLL DOOR
MOVE GAS SVC.
TO THIS LOCATION
2½'x2½'
SKYLIGHT (TYP OF 4)
OVERHEAD
DOOR
EXIST
PANEL
12'x12'
OVERHEAD
DOOR ROLL

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 14, 1987

Richard Hall
Hall Engineering
6840 Second Street, NW Suite 306
Albuquerque, New Mexico 87107

RE: DRAINAGE PLAN FOR THE FRAME FACTORY
(M-16/D26) RECEIVED JANUARY 5, 1987

Dear Mr. Hall:

Based on the information provided on your submittal of January 5, 1987, listed you will find certain items of concerns that will need to be addressed before final approval:

1. All applicable information from the notes portion of the S.O. #19 format must be included in the plan drawing. Also, we will require two copies.

2. T.B.M. must be identified by either a curb notch or painted.

3. We recommend that you include a clean out within your 4" pvc line.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya

Bernie J. Montoya, C.E.
Engineering Assistant

BJM/bsj

HALL ENGINEERING COMPANY, INC.
ENGINEERING • SURVEYING • PLANNING • CONSTRUCTION

RECEIVED
JAN 05 1987
HYDROLOGY SECTION

City of Albuquerque
Hydrology Section
P.O. Box 1293
Albuquerque, N.M. 87103

RE: DRAINAGE PLAN FOR TRACT A-1, BLOCK 2.
AIRPORT INDUSTRIAL PARK

Dear Mr. Goolsby:

Based on our calculation, since development of the referenced site does not contribute additional runoff; we recommend a free discharge will have a minimum impact on the downstream capacity. We did not provide you an analysis of downstream capacity. A 4" pipe will control and reduce the discharge rate at a level below the existing condition.

If you have any questions, please call me at 345-1064.

Sincerely,

Parviz Eftekhari

PE/jt

6840 2ND ST., N.W., SUITE 306 • ALUBUQUERQUE, NEW MEXICO 87107 • PHONE: (505) 345-1064