

VICINITY MAP D-19
SCALE 1" = 700'

ADDRESS

XXXX PALOMAS AVENUE NE

LEGAL DESCRIPTION

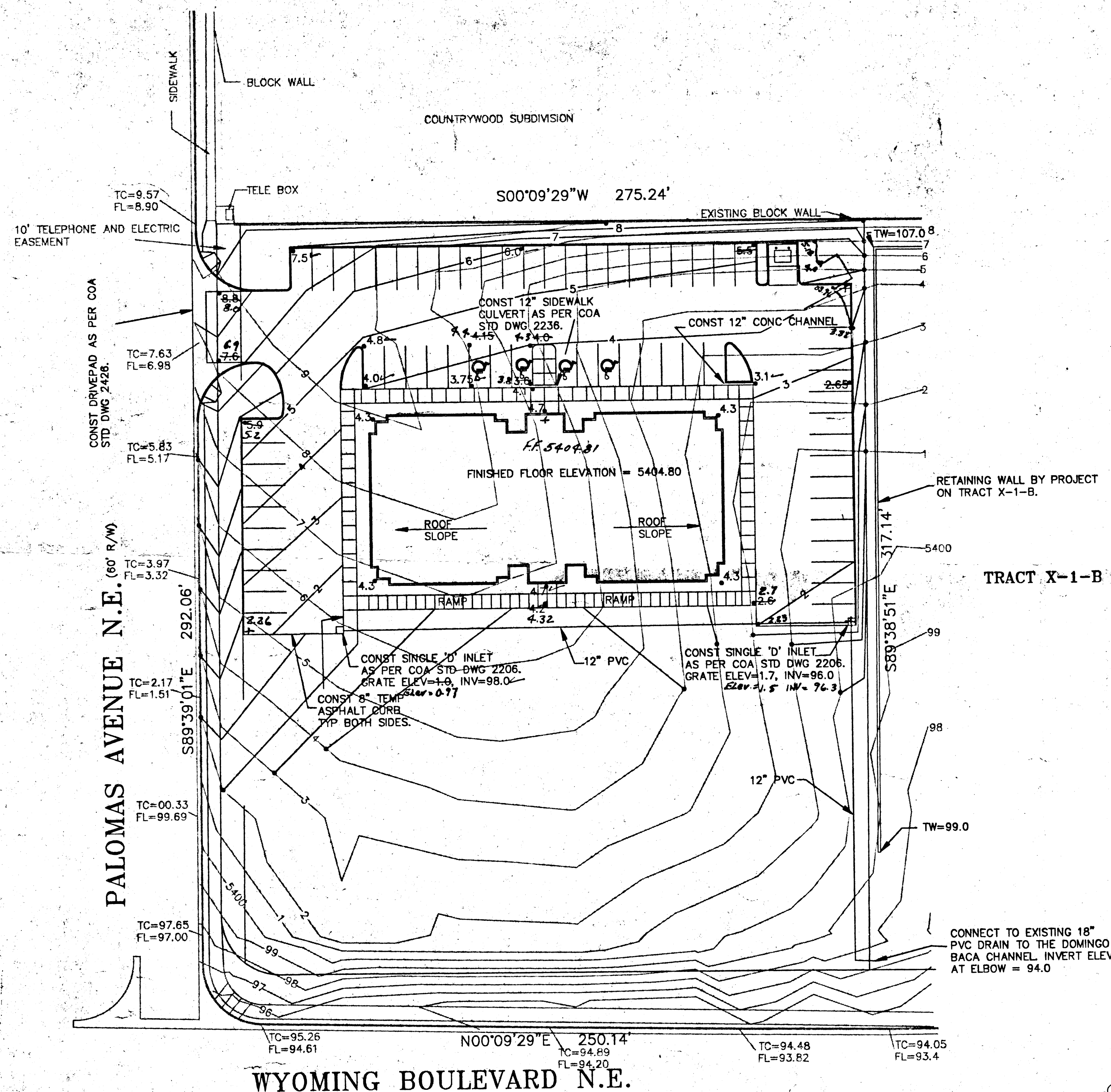
LOT X-1-A OF LOTS 1 THRU 5 BLOCK 22, TRACT A,
UNIT A, NORTH ALBUQUERQUE ACRES

BENCHMARK

ACS BRASSCAP "HEAVEN", LOCATED ON THE SOUTH SIDE OF
PASEO DEL NORTE, 800' WEST OF WYOMING BLVD.
ELEVATION = 5378.79

LEGEND

- 35.8 EXISTING SPOT ELEVATION
- 36.20 NEW SPOT ELEVATION
- 36 — EXISTING CONTOUR
- 35 — NEW CONTOUR
- SWALE
- ✓ VERIFIED ELEVATION
- 36.2 AS-BUILT ELEVATION
- BASIN BOUNDARY



GRADING AND DRAINAGE PLAN FOR TRACT X-1-A

DRAINAGE PLAN

THE FOLLOWING ITEMS CONCERNING THE TRACT X-1-A GRADING AND DRAINAGE PLAN ARE
CONTAINED HEREON:

1. VICINITY MAP
2. GRADING PLAN
3. CALCULATIONS

THE PROPOSED IMPROVEMENTS, AS SHOWN BY THE VICINITY MAP, ARE LOCATED AT THE SOUTHEAST
CORNER OF THE INTERSECTION OF PALOMAS AVENUE NE AND WYOMING BLVD. NE. THE SITE IS
UNDEVELOPED AND SLOPES FROM EAST TO WEST. THE SITE DOES NOT LIE WITHIN A FLOOD
HAZARD ZONE. THE SITE IS HIGHER THAN THE LAND TO THE SOUTH AND THE STREETS TO THE
NORTH AND WEST. THE SITE IS LOWER THAN THE LAND TO THE EAST, BUT A BLOCK WALL
RUNOFF FROM ENTERING THE SITE. THEREFORE, OFFSITE FLOWS ARE NEGLIGIBLE.

THE SITE IS THE NORTHERN 2 ACRES OF A 5 ACRE PARCEL ZONED SU-1. THE GRADING PLAN
FOR THE SOUTHERN 3 ACRES IS BEING SUBMITTED CONCURRENTLY WITH THIS PLAN BY CHAVES
& GRIEVES. A DRAINAGE PLAN WAS APPROVED FOR THIS SITE IN 1998. THE APPROVED PLAN
REQUIRED THAT ALL RUNOFF BE CONVEYED TO THE DOMINGO BACA CHANNEL WITHOUT
DETAINING ANY OF THE FLOW. TRACTS X-1-A AND X-1-B WILL UTILIZE THE SAME CONCEPT
AS OUTLINED IN THE APPROVED PLAN.

THE GRADING PLAN SHOWS 1) EXISTING AND PROPOSED GRADES, INDICATED BY SPOT ELEVATIONS
AND CONTOURS AT 1'-0" INTERVALS, 2) CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS,
3) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS AND 4) THE LIMIT AND CHARACTER
OF THE PROPOSED IMPROVEMENTS. THE PROPOSED IMPROVEMENTS CONSIST OF AN OFFICE
BUILDING WITH ASSOCIATED PARKING AND LANDSCAPING. THE SITE WILL BE GRADED TO CONVEY
THE RUNOFF TO INLETS AT THE WEST EDGE OF THE PARKING AREAS. THE FLOW FROM THE
INLETS WILL BE CONVEYED TO AN EXISTING 18" STORM DRAIN AT THE SOUTHWEST CORNER
OF THE SITE. THE 18" WILL CONVEY THE FLOW TO THE DOMINGO BACA CHANNEL.

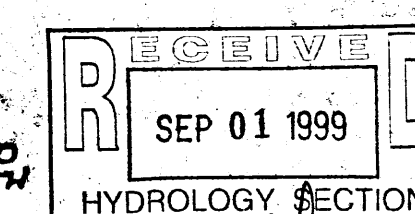
THE CALCULATIONS, WHICH APPEAR BELOW, ANALYZE THE EXISTING AND PROPOSED CONDITIONS
FOR THE 6-HOUR, 100-YEAR RAINFALL EVENT. THE ANALYSIS IS IN ACCORDANCE WITH THE
CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, VOLUME II. AS SHOWN BY THESE
CALCULATIONS, THE RATE OF RUNOFF AND THE VOLUME OF RUNOFF WILL INCREASE. THIS
PLAN IS IN ACCORDANCE WITH THE PREVIOUSLY APPROVED DRAINAGE PLAN.

CALCULATIONS

PRECIPITATION ZONE = 3
AREA = 2.00 ACRES
EXISTING CONDITIONS
LAND TREATMENT B=100%
E = 0.92*1.00 = 0.92 INCHES
V = 0.92*2.00/12 = 0.15 ACRE FEET
Q = 2.60*1.00*2.00 = 5.20 CFS
DEVELOPED CONDITIONS
LAND TREATMENT B=57% D=43%
E = 0.92*0.57+2.36*0.43 = 1.54 INCHES
V = 1.54*2.00/12 = 0.26 ACRE FEET
Q = (2.60*0.57+5.02*0.43)2.00 = 7.28 CFS
INCREASE IN RATE OF RUNOFF = 7.28-5.20 = 2.08 CFS
INCREASE IN VOLUME OF RUNOFF = 0.26-0.15 = 0.11 ACRE FEET

UNACCEPTABLE
9/1/99

THIS PROJECT WAS CONSTRUCTED
IN SUBSTANTIAL COMPLIANCE WITH
THE APPROVED DRAINAGE PLAN
8-23-99



Engineering &
Surveying
Associates, Inc.
6312 Northern Drive, NE, Albuquerque, NM 87111
(505) 266-4451

DRAWING SCALE: 1" = 30'

CALCULATIONS

THE FOLLOWING CALCULATIONS WERE DEVELOPED USING THE CITY OF ALBUQUERQUE DPM SECTION 22.2

SITE CHARACTERISTICS:

SITE LOCATION: ZONE 3
PRECIPITATION: P = 2.60 inches

LAND TREATMENT:

UNCOMPACTED SOIL - TREATMENT A
LANDSCAPE - TREATMENT B
COMPACTED SOIL - TREATMENT C
BUILDINGS & PAVING - TREATMENT D

EXCESS PRECIPITATION:

TREATMENT A E = 0.66 inches
TREATMENT B E = 0.92 inches
TREATMENT C E = 1.29 inches
TREATMENT D E = 2.36 inches

PEAK DISCHARGE:

TREATMENT A = 1.87 cfs/acre
TREATMENT B = 2.60 cfs/acre
TREATMENT C = 3.45 cfs/acre
TREATMENT D = 5.02 cfs/acre

TOTAL SITE TRACT X-1-A

	EXISTING	PROPOSED
TOTAL AREA = 2.00 AC.		
TREATMENT A	0.00 AC.	0.00 AC.
TREATMENT B	0.16 AC.	0.35 AC.
TREATMENT C	0.96 AC.	0.00 AC.
TREATMENT D	0.88 AC.	1.67 AC.

ONSITE - EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:

EXISTING RUNOFF:

WEIGHTED E = $[(0.66)(0.00) + (0.92)(0.16) + (1.29)(0.96) + (2.36)(0.88)] / 2.00$
= 1.73 inches

V100-6hr = $(1.73)(2.00) / 12 = 0.2885$ acre ft = 12,570 cf

DEVELOPED RUNOFF:

WEIGHTED E = $[(0.66)(0.00) + (0.92)(0.35) + (1.29)(0.00) + (2.36)(1.67)] / 2.00$
= 2.13 inches

V100-6hr = $(2.13)(2.00) / 12 = 0.3553$ acre ft = 15,470 cf

ONSITE - PEAK DISCHARGE:

EXISTING DISCHARGE:

Q100 = $(1.87)(0.00) + (2.60)(0.16) + (3.45)(0.96) + (5.02)(0.88) = 8.15$ cfs

DEVELOPED DISCHARGE:

Q100 = $(1.87)(0.00) + (2.60)(0.35) + (3.45)(0.00) + (5.02)(1.67) = 9.29$ cfs

RESULTS:

DEVELOPED VOLUMETRIC RUNOFF:

15,470 - 12,570 = 2,900 cf INCREASE IN RUNOFF VOLUME

DEVELOPED PEAK DISCHARGE:

9.29 - 8.15 = 1.14 cfs INCREASE IN PEAK DISCHARGE

PROPOSED BUILDING ON TRACT X-1-A-1

	EXISTING	PROPOSED
TOTAL AREA = 0.96 AC.		
TREATMENT A	0.00 AC.	0.00 AC.
TREATMENT B	0.00 AC.	0.19 AC.
TREATMENT C	0.96 AC.	0.00 AC.
TREATMENT D	0.00 AC.	0.77 AC.

ONSITE - EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:

EXISTING RUNOFF:

WEIGHTED E = $[(0.66)(0.00) + (0.92)(0.00) + (1.29)(0.96) + (2.36)(0.00)] / 0.96$
= 1.29 inches

V100-6hr = $(1.29)(0.96) / 12 = 0.1032$ acre ft = 4,495 cf

DEVELOPED RUNOFF:

WEIGHTED E = $[(0.66)(0.00) + (0.92)(0.19) + (1.29)(0.00) + (2.36)(0.77)] / 0.96$
= 2.08 inches

V100-6hr = $(2.08)(0.96) / 12 = 0.1660$ acre ft = 7,230 cf

ONSITE - PEAK DISCHARGE:

EXISTING DISCHARGE:

Q100 = $(1.87)(0.00) + (2.60)(0.00) + (3.45)(0.96) + (5.02)(0.00) = 3.31$ cfs

DEVELOPED DISCHARGE:

Q100 = $(1.87)(0.00) + (2.60)(0.19) + (3.45)(0.00) + (5.02)(0.77) = 4.36$ cfs

RESULTS:

DEVELOPED VOLUMETRIC RUNOFF:

7,230 - 4,495 = 2,735 cf INCREASE IN RUNOFF VOLUME

DEVELOPED PEAK DISCHARGE:

4.36 - 3.31 = 1.05 cfs INCREASE IN PEAK DISCHARGE

TOTAL DISCHARGE FROM TRACT X-1-A-1 & X-1-A-2 = 9.29cfs

CAPACITY OF EXISTING 18" SD = 10.67cfs

TOTAL DISCHARGE FROM TRACT X-1-B = 13.4cfs

THEREFORE THE TOTAL FLOW TO THE DOMINGO BACA CHANNEL = 22.69cfs

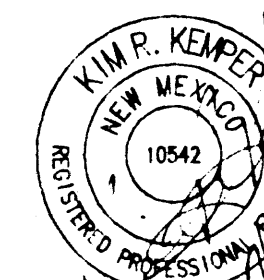
CAPACITY OF EXISTING 24" SD = 22.67cfs

BENCH MARK

CITY OF ALBUQUERQUE CONTROL STATION
"heaven", A BRASS CAP LOCATED ON THE SOUTH
SIDE OF PASEO DEL NORTE, 800' WEST OF
WYOMING BLVD.
ELEVATION = 5378.79

LEGAL DESCRIPTION

LOT X-1-A OF LOTS 1 THROUGH 5, BLOCK 22,
TRACT A, UNIT A, NORTH ALBUQUERQUE ACRES.



SCALE: 1" = 30'

ONE FOOT CONTOUR INTERVAL

NEW 5.5" WIDE CONC. RUNDOWN
TO NEW INLET WITH 8" CURBING
EACH SIDE. INSTALL 8"
CURBING ON SOUTH AND WEST
SIDES OF NEW INLET.

NEW SINGLE D INLET
PER COA. STD. DWG #2206
GRATE ELEV=97.0
REMOVE EXISTING 90° ELBOW
AND CONSTRUCT OVER
EXISTING 18" LINE TO THE
DOMINGO BACA CHANNEL
(INV. = 91.74±)

CONC. RUNDOWN RELOCATED. SEE
SUPPLEMENTAL DRAWING ATTACHED

GENERAL NOTES

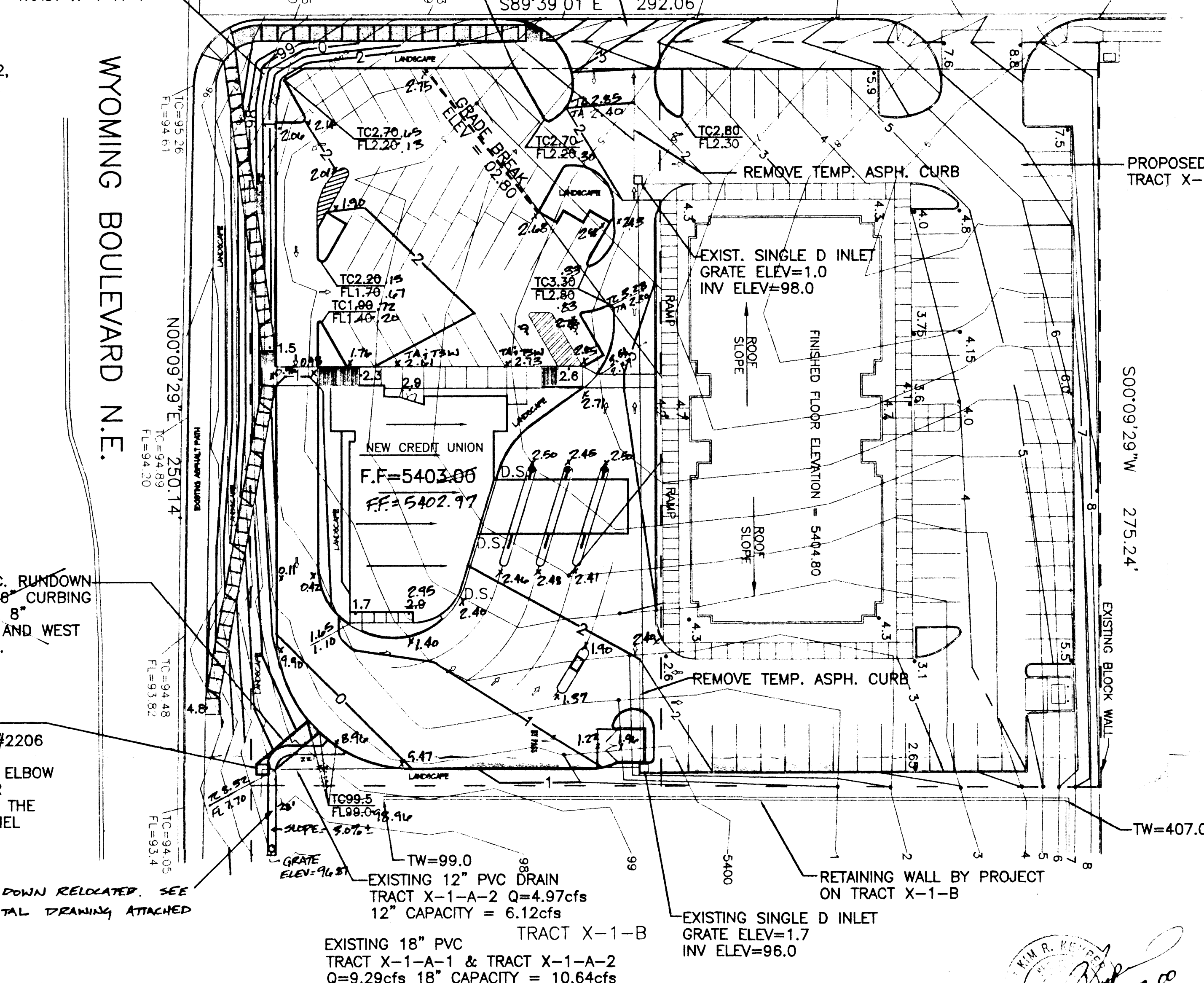
- PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE TO RESOLVE THE CONFLICT WITH A MINIMUM AMOUNT OF DELAY.
- ALL WORK ON THIS PLAN SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OWNER OR FROM EXISTING PLANS, AND THIS INFORMATION MAY BE INCOMPLETE, OR OBSOLETE AT THE TIME OF CONSTRUCTION. THE ENGINEER HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THESE LOCATIONS, LINE SIZES OR MATERIAL TYPE, MAKES NO REPRESENTATION THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND INSTALLATION IN OR NEAR THE AREA IN ADVANCE OF AND DURING ANY EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND FACILITIES. IN PLANNING AND CONDUCTING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE CONTRACTOR SHALL INSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHTS-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AND BY WETTING THE SOIL TO KEEP IT FROM BLOWING.
- THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE CITY OF ALB. FOR THE COMPLETION OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.

PALOMAS AVENUE N.E.

NEW PRIVATE ENTRANCE PER (60' R/W)
COA STD. DWG. # 2426

PROPOSED
TRACT X-1-A-1

WYOMING BOULEVARD N.E.



PROPOSED SITE IMPROVEMENTS

This site is in substantial compliance with the approved grading and drainage plan with engineer's seal dated 7-14-99 (with the revisions as reflected in the record drawing elevations shown hereon). The site drainage will function as originally proposed.

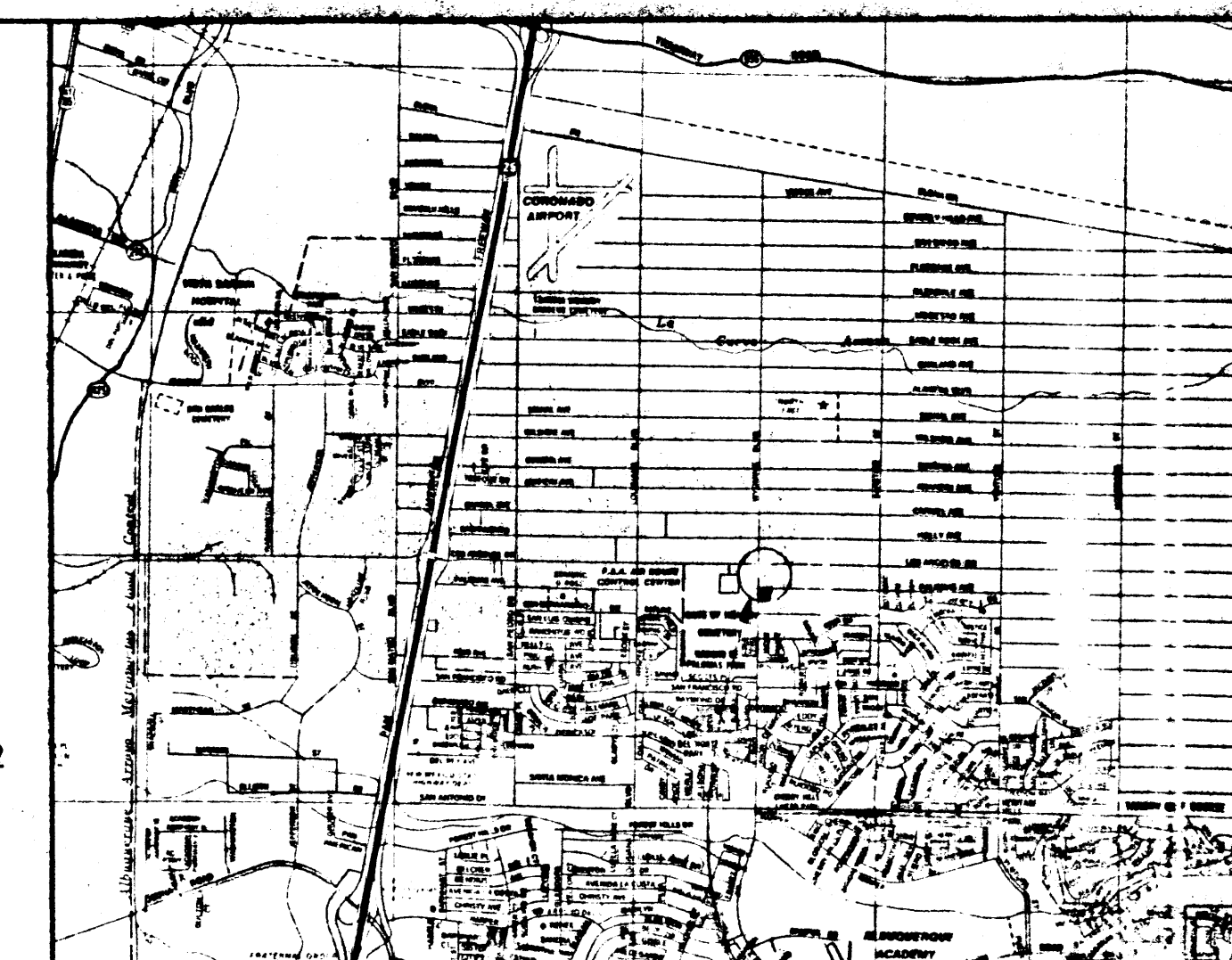
DRAINAGE PLAN

THIS SITE IS LOCATED ON THE NORTHWEST CORNER OF PALOMAS AND WYOMING BLVD IN NORTHEAST ALBUQUERQUE. AS SHOWN ON PANEL 141 OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY "FIRM" MAP, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD AREA. IN TOTAL THE SITE, TRACT X-1-A CONSISTS OF 2.0 ACRES. IT IS PROPOSED TO SUBDIVIDE THIS PARCEL INTO TO LOTS. THESE LOTS ARE IDENTIFIED AS X-1-A-1 AND X-1-A-2. THIS PLAN WILL SERVE AS BOTH A GRADING AND DRAINAGE PLAN FOR SUBDIVISION AND A GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT FOR THE PLANNED IMPROVEMENTS ON X-1-A-1 AS SHOWN ABOVE.

AN APPROVED GRADING AND DRAINAGE PLAN IS ON FILE AT THE CITY, FILE D19/D24, FOR THE IMPROVEMENTS SHOWN ABOVE ON X-1-A-2. THESE IMPROVEMENTS ARE CURRENTLY UNDER CONSTRUCTION. THAT PLAN INCLUDED THE INSTALLATION OF TWO NEW SINGLE D INLETS AND A STORM DRAIN CONNECTION TO THE DOMINGO BACA CHANNEL. "CROSS LOT" DRAINAGE EASEMENTS ARE TO BE PROVIDED ON THE PLAT IN ORDER FOR BOTH PARCELS TO UTILIZE THESE IMPROVEMENTS. IN ACCORDANCE WITH PREVIOUSLY APPROVED PLANS FOR THIS SITE, ALL STORM WATERS WILL BE CONVEYED TO THE DOMINGO BACA CHANNEL. ALL THE IMPROVEMENTS CURRENTLY UNDERWAY ON THE PROPOSED X-1-A-2 ARE IDENTIFIED AS "EXISTING" ON THIS PLAN. FURTHER, THE TOPOGRAPHY SHOWN INCLUDES THE EXISTING CONTOURS PRIOR TO AND CONSTRUCTION ACTIVITIES, THE PROPOSED CONTOURS AS SHOWN ON THE APPROVED PLAN FOR X-1-A-2, (FILE D19/D24) AND THE PROPOSED CONTOURS FOR THE PLANNED IMPROVEMENTS ON X-1-A-1.

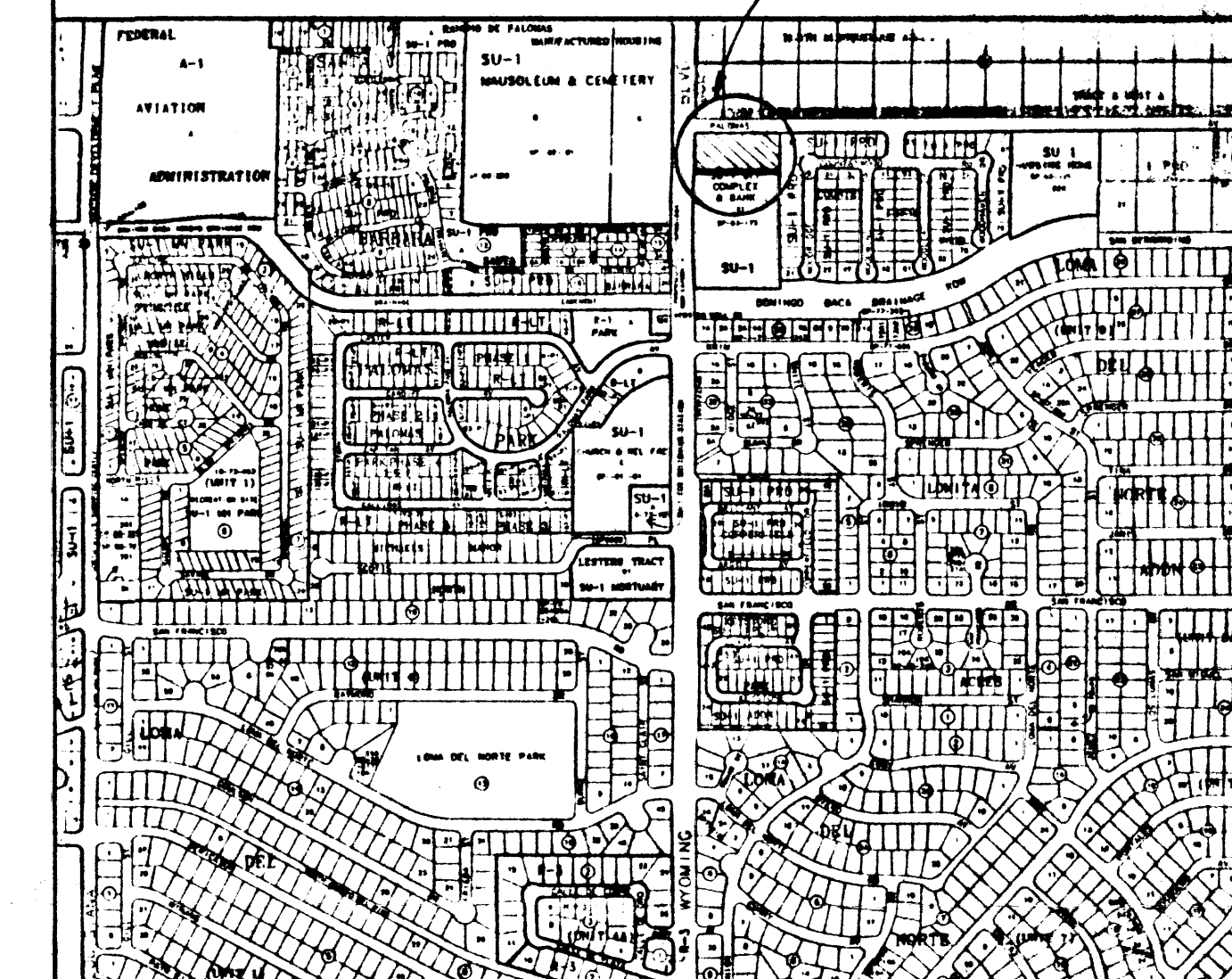
TWO SETS OF CALCULATIONS ARE PROVIDED HEREON, ALL IN ACCORDANCE WITH THE CITY'S DPM SECTION 22.2. THE FIRST SET OF CALCULATIONS INCLUDE THE ENTIRE TRACT X-1-A. (INCLUSIVE OF BOTH PROPOSED LOTS). THE SECOND SET OF CALCULATIONS REFLECT BOTH EXISTING AND PROPOSED CONDITIONS ON X-1-A-1 WHERE THE SUBJECT IMPROVEMENTS ARE PROPOSED.

ALL THE SURVEY INFORMATION SHOWN WAS PROVIDED BY ENGINEERING AND SURVEYING ASSOCIATES, AND AS STATED ABOVE GRADING ON THIS SITE IS CURRENTLY UNDERWAY.



LOCATION MAP

PROJECT LOCATION



ZONE MAP

D-19

GENERAL LEGEND

EXISTING CONTOUR

PROPOSED CONTOUR (X-1-A-1) 3

PROPOSED CONTOUR (X-1-A-2) 4

PROPOSED SPOT ELEVATION 56.4

FLOWLINE

FLOW DIRECTION ARROW

PROPOSED CONCRETE

TOP OF CURB ELEVATION TC

TOP OF WALL ELEVATION TW

FLOWLINE ELEVATION FL

TOP OF ASPHALT TA

POWER POLE PP

ROOF DRAIN/DOWN SPOUT D.S.

RECORD DRAWING ELEV. 98.96

SANDIA CREDIT UNION
GRADING AND DRAINAGE PLAN

KEMPER-VAUGHAN

CONSULTING ENGINEERS

3700 COORS RD. N.W. • ALBUQUERQUE, NEW MEXICO 87120 • (505) 831-4520

Designed KRK Drawn KRK Checked KRK Sheet of

File PALOMAS G&D Date JULY 1999

C2

