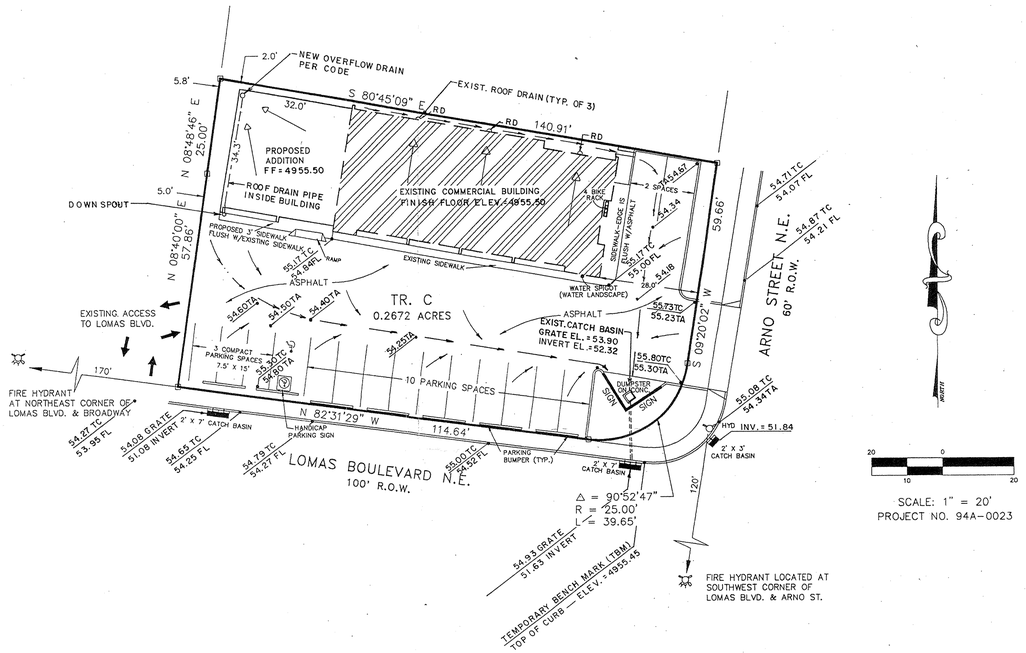
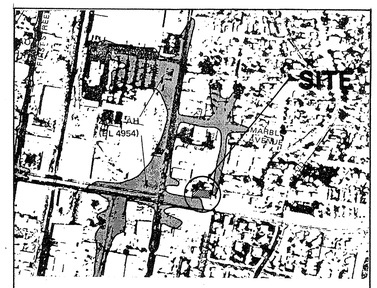
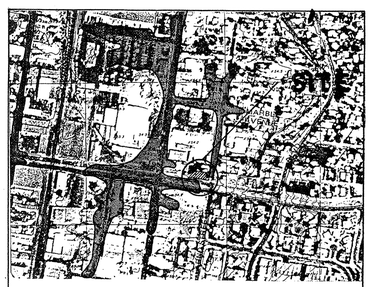
LEGAL DESCRIPTION

TRACT C, LANDS OF SOUTHWEST SURVEYING CO., OF THE PLAT OF LOMAS AND BROADWAY, UNIT 2, AS THE SAME IS SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON MAY 17, 1994 IN VOLUME 94C, FOLIO 158.

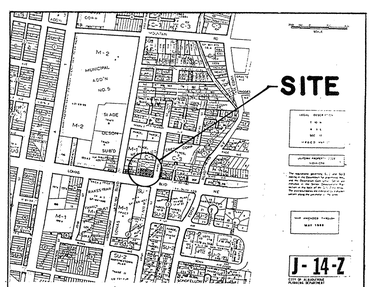




FIRM MAP PANEL 28 OF 50



FLOODWAY MAP PANEL 28 OF 50



VICINITY MAP

DRAINAGE CALCULATIONS

EXISTING CONDITIONS:

The site is located at the N.W. corner of Lomas Boulevard and Arno Street. The site is now covered with building and asphalt pavement with a certain amount of landscaping, as required. Both of the adjoining streets are paved with concrete curb and gutter and sidewalks. There is a catch basin on the corner approximately 10' south of the NNW curb return and a double catch basin near the WNW curb return. Another double catch basin is located near the SW corner of the site. The existing building and parking lot drains into an inlet located in the dumpster pad. There is an AH flood zone on Lomas and Arno that is adjacent to the north end of the site on Arno and to the west end of the site on Lomas. The FIRM map show an elevation of 4954 for this flood zone. The finish floor elevation of the existing building is 4955.50.

DEVELOPED CONDITIONS:

It is proposed to construct an addition to the existing building as shown on the plan. The site of the proposed addition is now paved with asphalt pavement so there will be no increase in impervious area. The site will continue to drain via the existing inlet in the parking lot. Runoff from the site will be in the storm sewer system and likely through the Broadway Pump Station before flooding occurs at Broadway and Lomas. Therefore, uncontrolled discharge is justified.

DRAINAGE CRITERIA;

The calculations shown on this plan were prepared in accordance with Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque in cooperation with Bernalillo County, New Mexico and the Albuquerque Metropolitan Arroyo Flood Control Authority, January 1993.

PRECIPITATION ZONE:

The site is between San Mateo Boulevard and the Rio Grande River and is, therefore, in Precipitation Zone 2.

LAND TREATMENTS:

The developed land treatment areas are shown in the following table including values for peak discharge per acre (q) and excess precipitation (E).

Land Treatment	q 100-yr.	q 10-yr.	E 100-yr.	E 10-yr.	Percent of Site	Area of Site Sq.Ft.	Area of Site Acres
A	1.56	0.38	0.53	0.13	0.0	-	0.0
B	2.28	0.95	0.78	0.28	7.3	850	0.0195
C	3.14	1.71	1.13	0.52	0.0	-	0.0
D	4.70	3.14	2.12	1.34	92.7	10,789	0.2477
Totals					100.0	11,639	0.2672

VOLUME, 100-YEAR AND 10-YEAR, 6-HOUR:

Existing Conditions:

The area of the site has increased slightly since the original drainage plan was prepared. It was 10,580 sf when the existing building was constructed. The runoff volume generated by the site according to the rational method used at that time was 1567 cf. Although the area of the lot has increased slightly, there is no increase in impervious area since the proposed addition is to be constructed over an area that is presently paved.

Developed Conditions:

V100 = (0.78 X 850 + 2.12 X 10,789)/12 = 1,961 CF

V10 = (0.28 X 850 + 1.34 X 10,789)/12 = 1,225 CF

PEAK DISCHARGE, 100-YEAR AND 10-YEAR:

Existing Conditions:

The peak discharge generated by the site according to the runoff coefficients used in 1983 was Q_{100} = 0.91 cfs.

Developed Conditions:

Q100 = 2.28 X 0.0195 + 4.70 X 0.2477 = 1.21 CFS

Q10 = 0.95 X 0.0195 + 3.14 X 0.2477 = 0.80 CFS

OFF-SITE FLOW:

There is no off site flow associated with this site. All upstream flow is conveyed away from the site by the adjacent streets.

DISCHARGE INTO STORM SEWER:

It is assumed that the peak runoff for the site will be discharged into the storm sewer long before the flow in the storm sewer reaches its peak flow. Check the discharge rate by Orifice Equation. 6" pipe is in place. Invert elevation = 52.32 Springline elevation = 52.52 Pond overflow = 54.6
H = 54.6 - 52.57 = 2.03 feet.

$$Q = CA\ (2\ G\ H)^{1/2}$$
$$C = 0.6 \quad A = 0.1963$$
$$Q = 0.6 \times 0.1963\ (2 \times 32.2 \times 2.03)^{1/2} = 1.34 \text{ cfs}$$
1.34 cfs > 1.21 cfs
Capacity is adequate.

LEGEND:

EXISTING	NEW		DESCRIPTION
— — —	———		CONTOUR
			SPOT ELEVATION
			PROPERTY LINE
→ — → — →			SWALE
——→			SHEET FLOW
		TA	TOP OF ASPHALT
		TC	TOP OF CURB/CONCRETE
		FL	FLOWLINE
		PP	POWER POLE

LEGAL DESCRIPTION:

Tract C, Lands of Southwest Surveying Company, of the plat of Lomas and Broadway Unit 2, as the same is shown and designated on the plat thereof, filed in the office of the County Clerk of Bernalillo County, New Mexico on May 17, 1994 in Volume 94C, Folio 158.

BENCH MARK:

A.C.S. Station 5-J15, located at the intersection of Lomas Boulevard NE and Edith Street NE in the NW quadrant of the intersection. A square chiseled on the top of concrete curb at the WNW curb return. Elevation = 4967.336.

TEMPORARY BENCH MARK:

Top of curb elevation at the WNW curb return at the intersection of Lomas Boulevard and Arno Street. Elevation = 4955.45 feet.

FRANK D. LOVELADY NEW MEXICO 6512 10/25/94 REGISTERED PROFESSIONAL ENGINEER

OCT 31

GRADING AND DRAINAGE PLAN
OFFICE AND STORAGE ADDITION TO
SOUTHWEST SURVEYING CO., INC.
333 LOMAS BLVD. N.E.
ALBUQUERQUE, NEW MEXICO

FRANK D. LOVELADY, P.E.
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