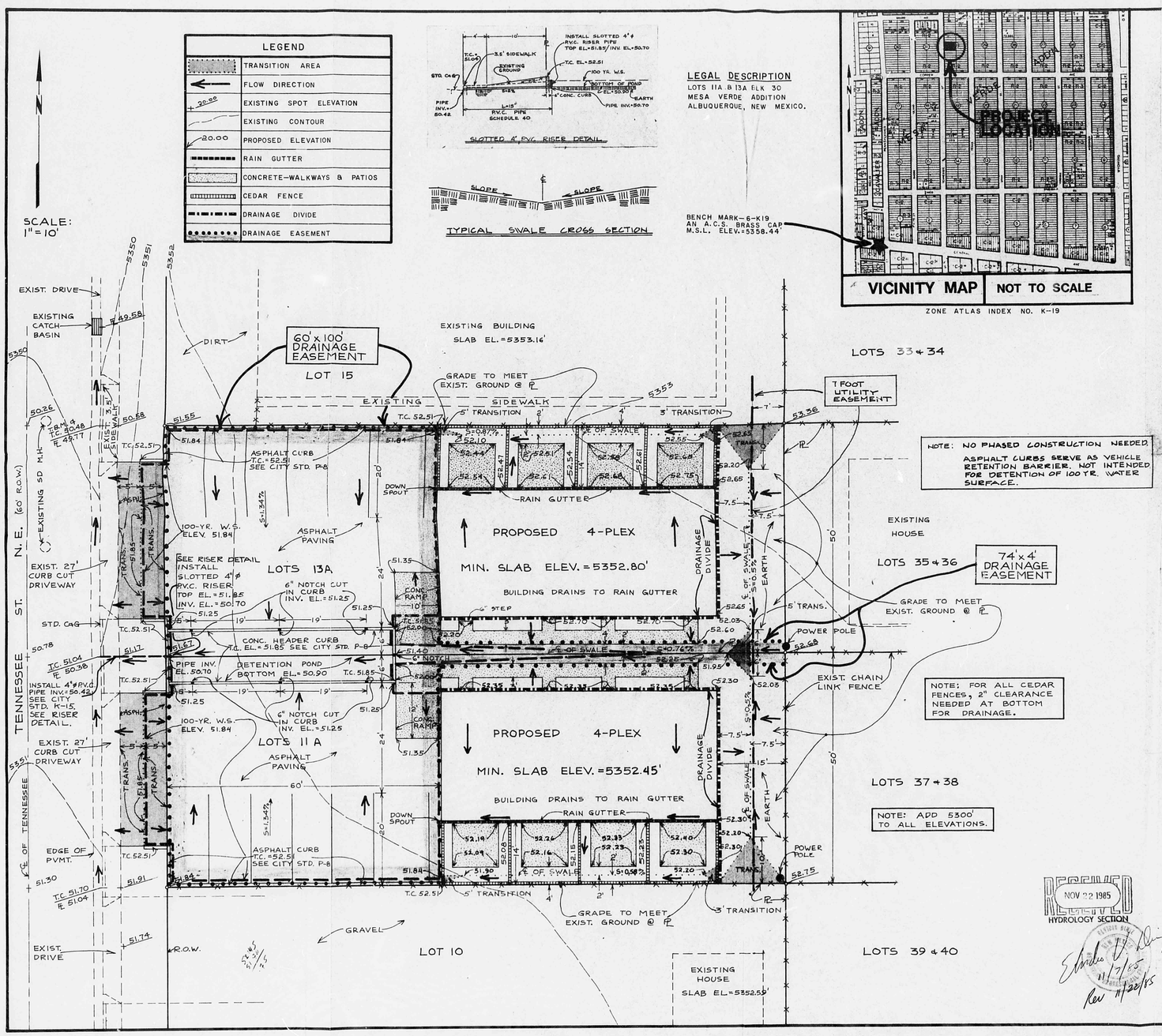
HYDROLOGY K19/D68 1 PLAN

K19/D68

1 Plan

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D



GENERAL

Zone Atlas Page K-19, Flood Hazard Zone C

LAND USE
Present - Two undeveloped lots with frontage onto Tennessee Street NE. Street is paved with standard curb and gutter. A storm drain is constructed in Tennessee Street.

Proposed - To be developed as two 4-plex apartment buildings.

SOIL TYPE
Embudo - gravelly fine sandy loam and gravelly sandy loam. Hydrologic Soil Group B

Total Lot Area -- 135.0 ft. x 100 ft. = 13,500 sq. ft. (0.3099 acres for both lots)

HYDROLOGY

TIME OF CONCENTRATION
Flow length across lot = 168.00 ft.
Elevation difference = 1.52 ft.
Time of Concentration = 2.47 min.; use 10 min.

6-HOUR RAINFALL DEPTH
10-yr. = 1.54 in.
100-yr. = 2.35 in.

RAINFALL INTENSITY
10-yr. = 3.34 in./hr.
100-yr. = 5.10 in./hr.

RUNOFF COEFFICIENTS
Present conditions C = 0.34
Future conditions C = 0.70

RUNOFF RATES
Present conditions
10-yr. = 0.18 cfs
100-yr. = 0.27 cfs

Future conditions
10-yr. = 0.36 cfs
100-yr. = 0.55 cfs

RUNOFF VOLUMES
Present conditions
10-yr. = 589 cf
100-yr. = 899 cf

Future conditions
10-yr. = 1,213 cf
100-yr. = 1,851 cf

OFF-SITE FLOWS
There are no off-site flows involved. All lots in the general area drain to the street. There are no drainage patterns to indicate flow into the study lots.

STREET CAPACITY
Runoff is transported out of the area where the study lots are located utilizing storm sewers. There is a catch basin approximately 20 feet north of the property line. The storm sewer in the street is a 24-inch pipe on a 0.2 percent slope with a pipe capacity of approximately 9.9 cfs. Total 100-yr. inflow into this storm sewer from the contributing area is 14.87 cfs. Therefore, the proposed drainage plan provides for controlled release from the parking lots which can detain the 100-yr. volume.

HYDRAULICS

STORAGE CAPACITY IN PARKING LOT AREA
Total volume = 2,065 cf
Average depth = 0.34 ft.
Maximum depth = 0.94 ft.
Free board = 0.67 ft.
Water surface area = 6,000 sf

Discharge will be through a 4-inch pipe through the existing curb, with the driveways performing as weirs for emergency overflows.

EROSION CONTROL DURING CONSTRUCTION
The detention pond will be constructed first along with the slotted riser and outlet pipe. During construction, the site will have to be graded to drain to the pond and parking lots. The last construction phase will be to reshape the pond and clean out any sediment.

RECEIVED NOV 22 1985 HYDROLOGY SECTION

DESIGNED BY: R.G. E.D.	**DRAINAGE & GRADING PLAN 4-PLEXES ON TENNESSEE STREET N. E.**
DRAWN BY: C.M.	
CHECKED BY: E.D.	
NOV. 1985	PREPARED BY: RESOURCE TECHNOLOGY, INCORPORATED

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT