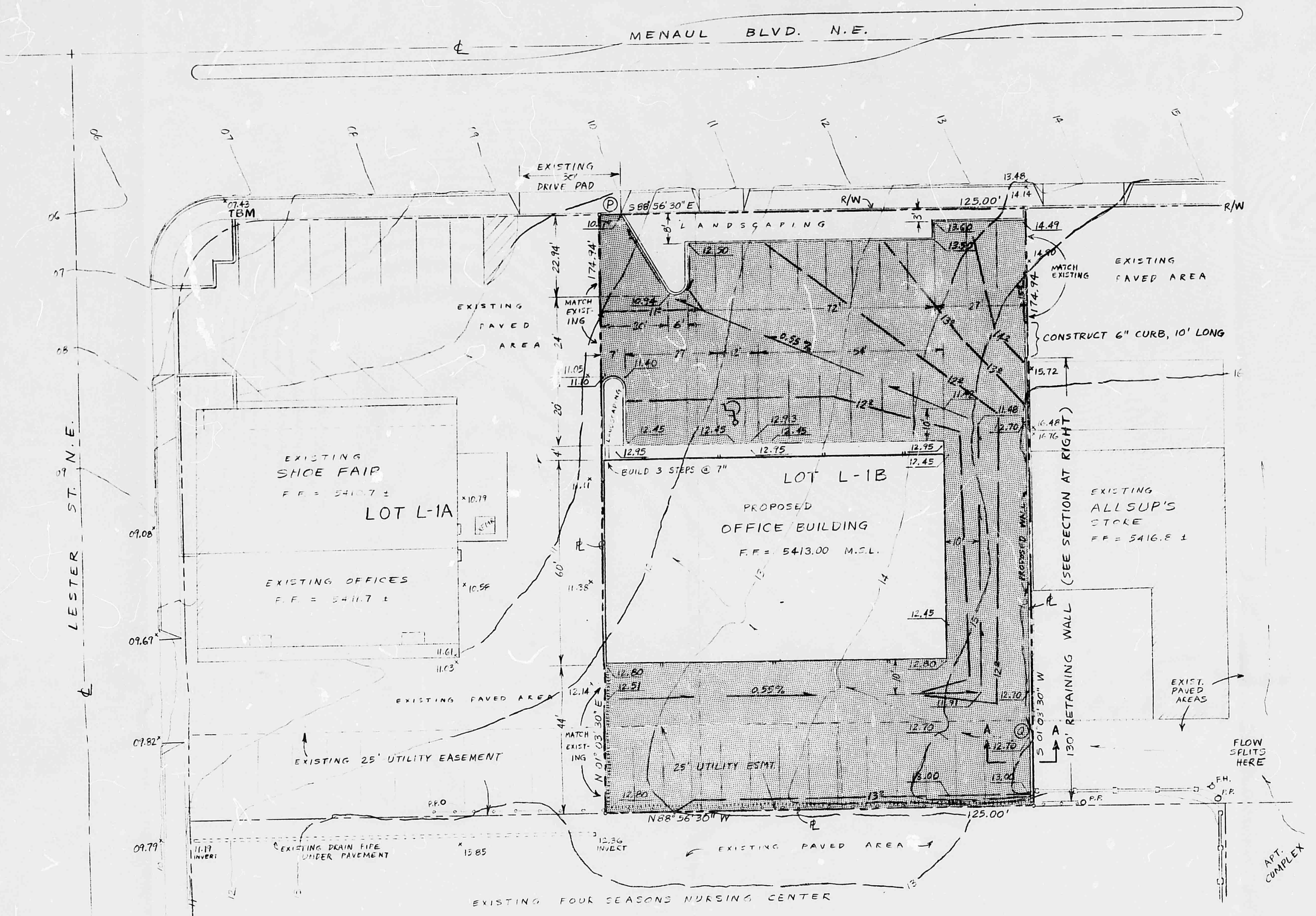
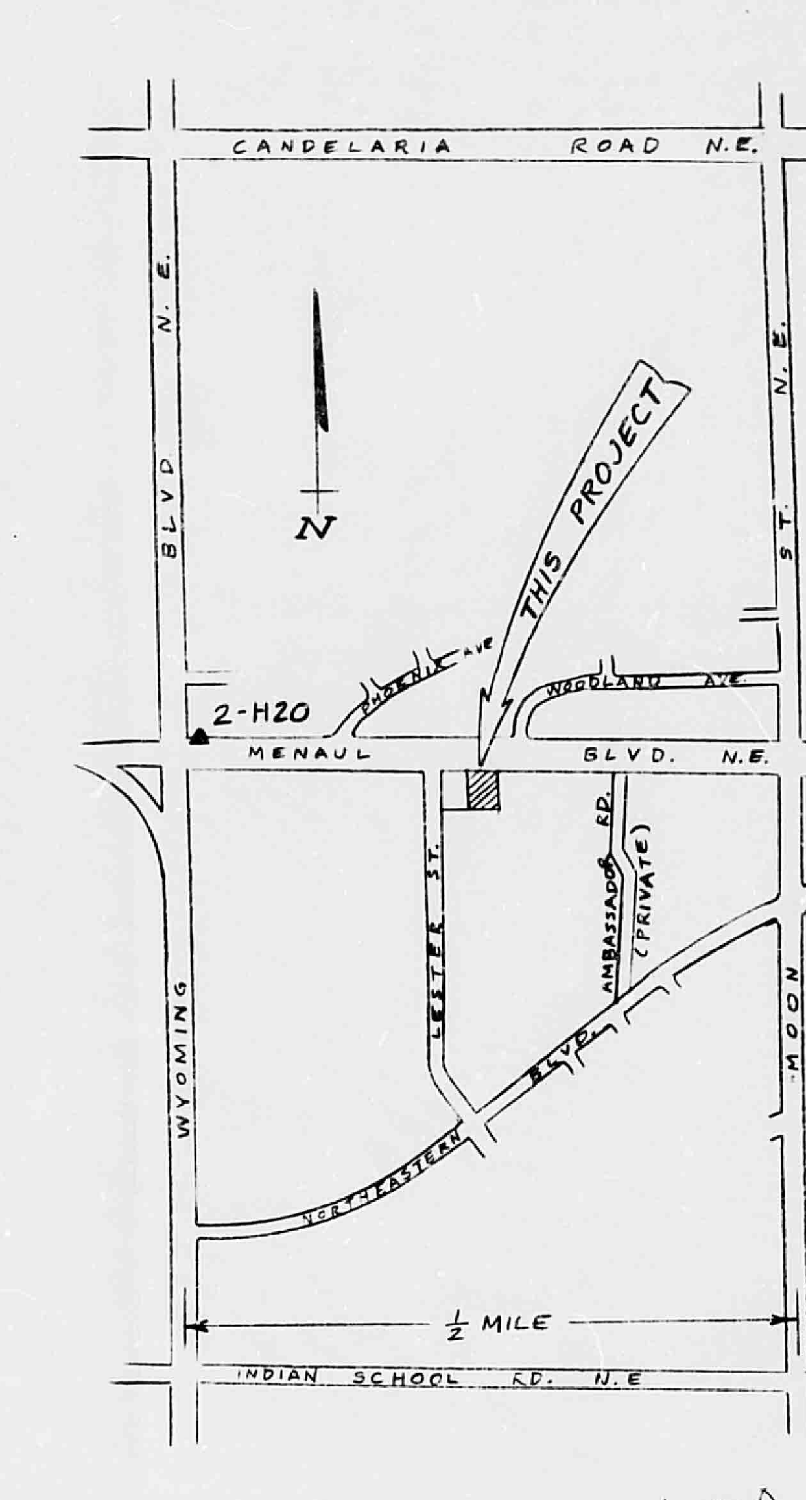


LEGEND

14	Existing contours
14	Proposed contours
× 15.72	Existing spot elevations
13.04	Proposed elevations
	Existing flow line
	Proposed flow line
	New asphalt parking
	Proposed roof drain
	Proposed drainage divide

VICINITY MAP



RECEIVED
JUN 30 1983
ENGINEERING

H20-D10

NOTICE TO CONTRACTOR

Use extreme care in grading parking area. Follow design carefully, to ensure parking surface will drain to the street in the manner shown. Adjust top of wall at Point (Q), if necessary, to allow free flow of off-site water over the wall and onto the new paving.

BENCH MARK INFORMATION

Elevations on this plan are derived from City control station 2-H20, a brass cap on the top of the curb on the north side of Menaul Blvd. near the northeast corner of Menaul and Wyoming, elevation 5390.057 feet above mean sea level.

The temporary bench mark (TBM) is a painted red 'X' on the curb at the southeast corner of Menaul and Lester Street.

NOTE: Add 5400 feet to all elevations except those indicated "M. S. L.".

LEGAL DESCRIPTION

Lot L-1B, Block 'A', Snow Heights Addition

EXISTING CONDITIONS

The area is NOT in a flood hazard area on the Flood Hazard Boundary Map. Just downstream from the site on Menaul Blvd., a 78" storm drain begins, resulting in City permission for uncontrolled runoff.

The subject parcel, Lot L-1B, has recently been split from Lot L-1A which contains the Shoe Fair store to the west. The westerly 28 feet of L-1B is paved with asphalt.

From S. C. S. Soil Survey, soil at the site is 'EtC' which is in Group B. Plate 22.2 C-1 of the Development Process Manual shows a 'c' factor of 0.44 for 22% impervious.

From Plate 22.2 D-1, 100-year rainfall - 2.38"

$Q_{100} = 0.44 \times \frac{2.38"}{12"/ft.} \times 125' \times 174.94'$

$= 1908$ cu. ft. runoff from Lot L-1B into Menaul Blvd.

$s = \frac{16.1 - 10.7}{215} = 0.025$

From 22.2 B-1, v = 2.13 fps

$T_c = 0.0078 \frac{L^{0.77}}{s^{0.385}} = 2.02$ min. (use 10 min.)

From 22.2 D-2,

$i_{100} = 2.16 \times 2.38 = 5.14$ in./hr.

$i_{10} = 5.14 \times 0.657 = 3.38$ in./hr.

Existing onsite peak flow rate

Area = 125 x 174.94
= 21,868 sq. ft. = 0.50 acres

$Q_{100} = c\ i_{100}\ A = 0.44\ (5.14)(0.50) = 1.13$ cfs

$Q_{10} = 0.657\ (1.13) = 0.74$ cfs sheet flow into Menaul Blvd.

Off-site contribution

The existing drainage pattern is very complex, with numerous crossings of property lines. This site receives drainage from the Allsup's parcel directly east, which receives runoff from further east and from a large apartment complex to the southeast.

It is estimated that one-fourth of the apartment complex, 33,000 sq. ft., drains onto Lot L-1B at point (Q). Also 6240 sq. ft. of the Allsup's lot contributes.

$Q_{100} = 0.9 \times \frac{2.38}{12} \times 39{,}240 = 7004$ cu. ft.

$Q_{10} = 0.657\ (7004) = 4602$ cu. ft.

Offsite peak flow rate

Area = 39,240 sq. ft. = 0.90 acres

$Q_{100} = c\ i_{100}\ A = 0.9\ (5.14)(0.90)$

= 4.16 cfs mostly at point (Q)

$Q_{10} = 2.74$ cfs

DEVELOPED CONDITIONS

All developed runoff will be directed to the existing drivepad on Menaul Boulevard. The sizable offsite flows entering the site at point (Q) will be directed north in an asphalt swale around the building and into Menaul gutters.

Due to grade problems, a retaining wall 130 feet long will be built along the east property line, as detailed on this plan. At point (Q), the wall is to be constructed so as not to block the entrance of off-site flows.

Developed onsite peak flow rate

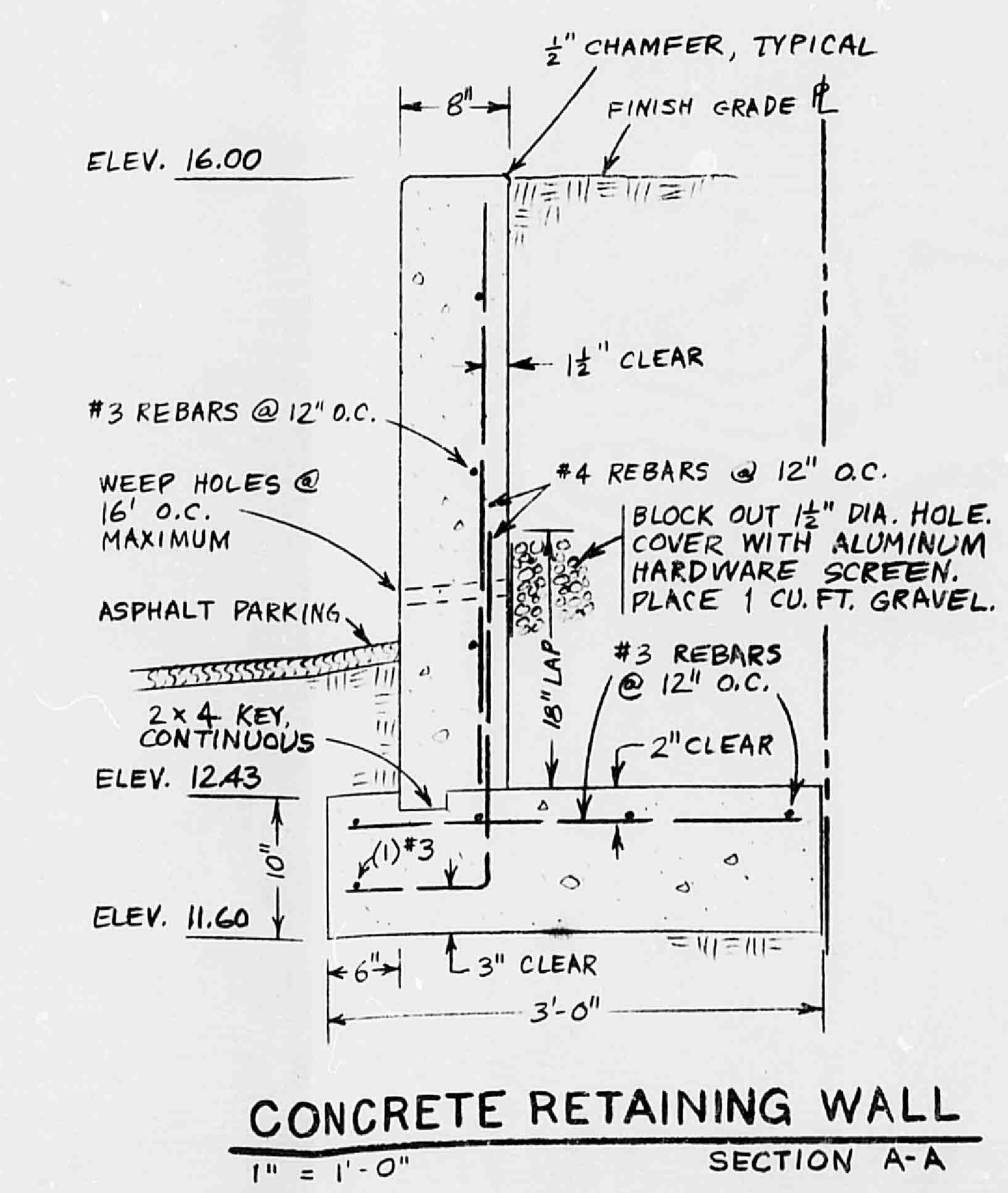
$Q_{100} = c\ i_{100}\ A = 0.92\ (5.14)(0.50) = 2.36$ cfs

$Q_{10} = 1.55$ cfs into Menaul, at point (P)

Total flow at point (P)

Area contributing = onsite + offsite
= 0.50 acre → + 0.90 acre
= 1.40 acres

$Q_{100} = c\ i_{100}\ A$
$= 0.92\ (5.14)(1.4) = 6.62$ cfs at (P)



CONCRETE RETAINING WALL
1" = 1'-0" SECTION A-A

ENGINEER'S CERTIFICATION

I, Richard C. Bryant, certify that this drainage plan and the existing grades were prepared by me or under my direct supervision and are true and correct to the best of my knowledge and belief.

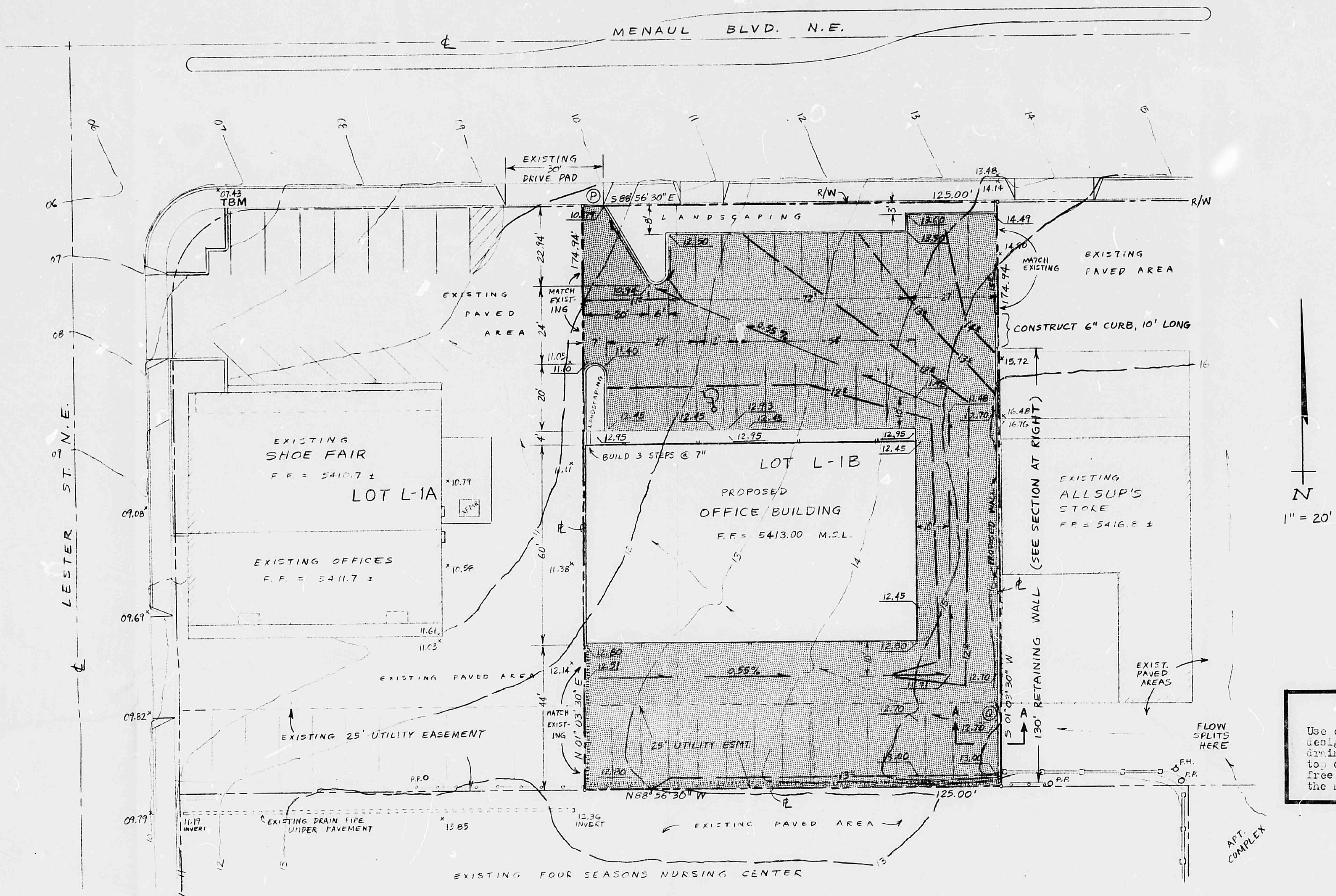
Richard C. Bryant, P. E.
Box 4604, Albuquerque, NM 87196 (505) 836-6455

DRAINAGE PLAN
H20-D10

AN OFFICE BUILDING
for
CLAUDE SANCHEZ

AN OFFICE BUILDING for CLAUDE SANCHEZ

DRAINAGE PLAN H20-D10



LEGEND

- Existing contours
- Proposed contours
- Existing spot elevations
- Proposed elevations
- Existing flow line
- Proposed flow line
- New asphalt parking
- Proposed roof drain
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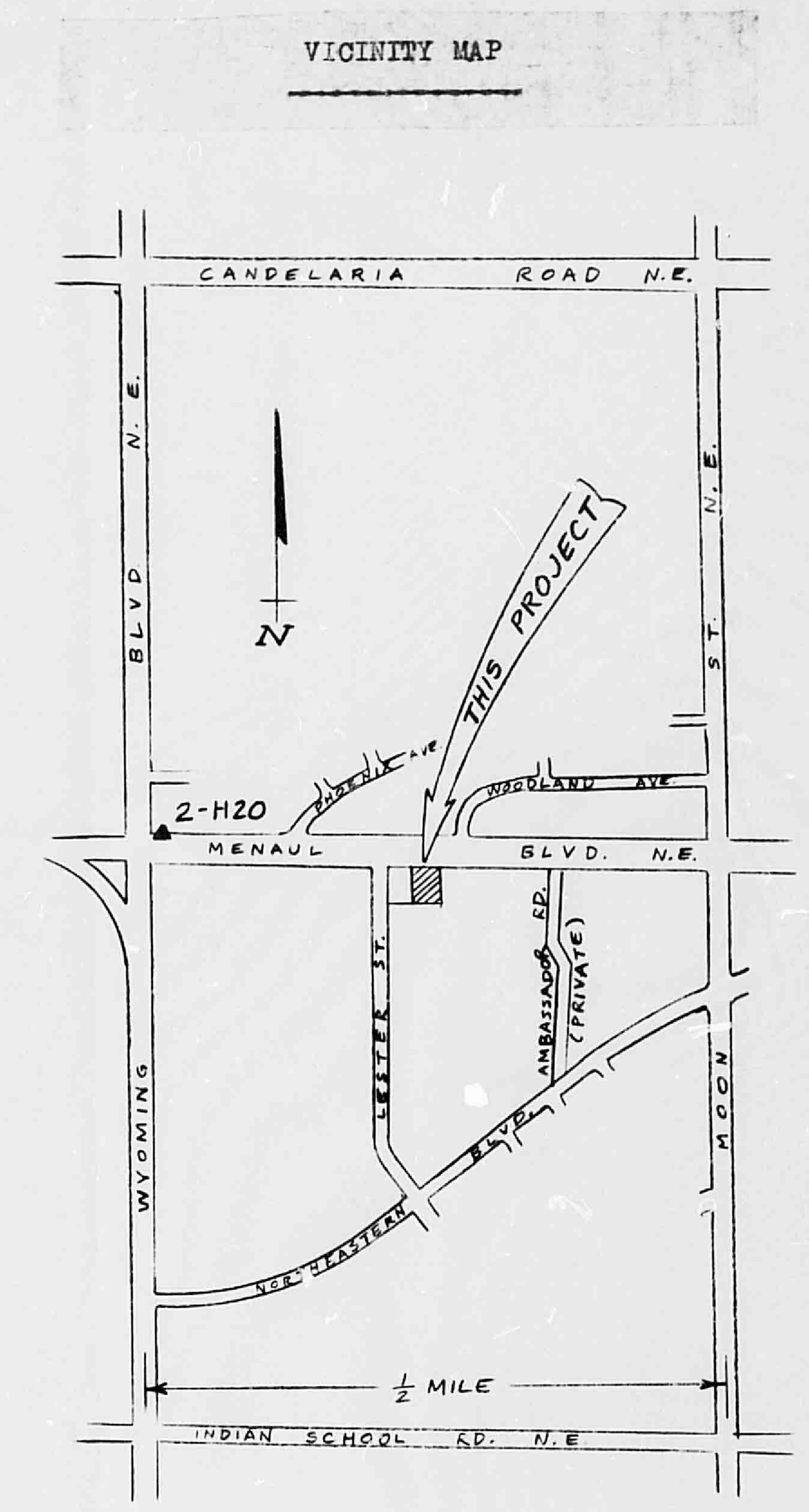
VICINITY MAP



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$= \underline{1908\ cu.\ ft.}$ runoff from Lot L-1B into Menaul Blvd.

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$$i_{10} = 5.14 \times 0.657 = 3.38 \text{ in./hr.}$$

Existing onsite peak flow rate

Area = 125 x 174.94
= 21,863 sq. ft. = 0.50 acres

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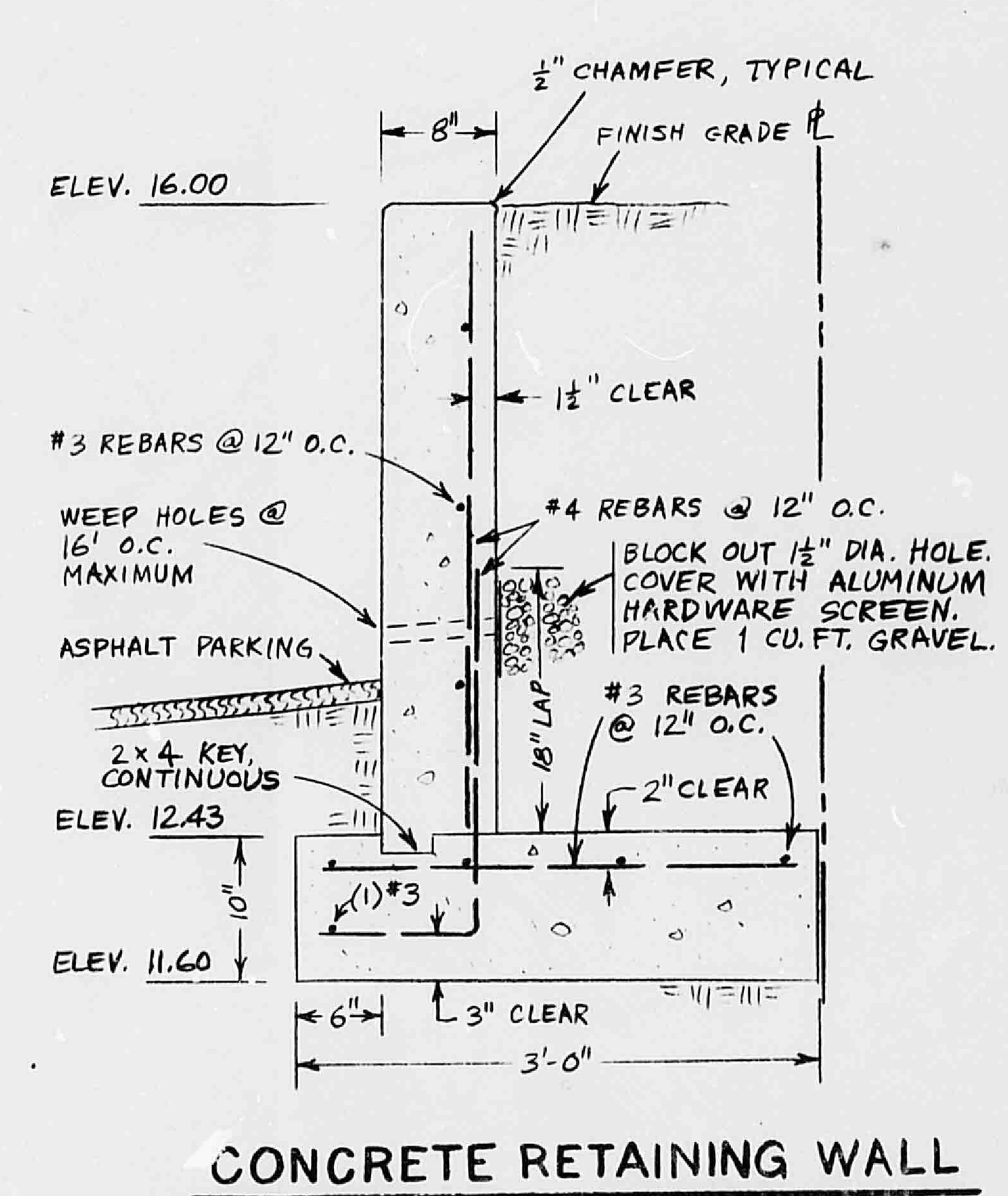

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I, Richard C. Bryant, certify that this drainage plan and the existing grades were prepared by me or under my direct supervision, and are true and correct to the best of my knowledge and belief.

Richard C. Bryant, P. E.
Box 4604, Albuquerque, NM 87196 (505) 836-6455

RICHARD C. BRYANT NEW MEXICO 6208 REGISTERED PROFESSIONAL ENGINEER 5-24-83

REV. 6-14-83
REV. 6-29-83