HYDROLOGY

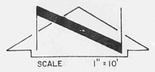
L15/D2
ONE PLAN

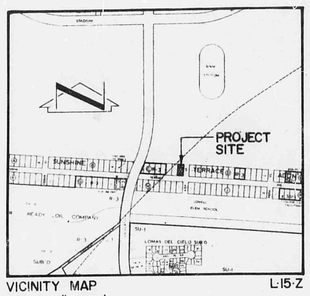
L15-D2

1 PLAN

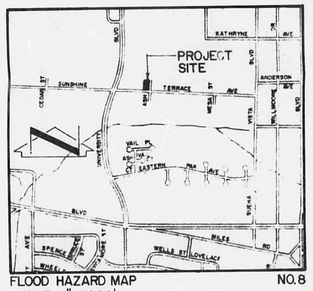
LEGEND

- EXISTING ELEVATION
- PROPOSED ELEVATION





VICINITY MAP
SCALE: 1" = 800'



FLOOD HAZARD MAP
SCALE: 1" = 1000'

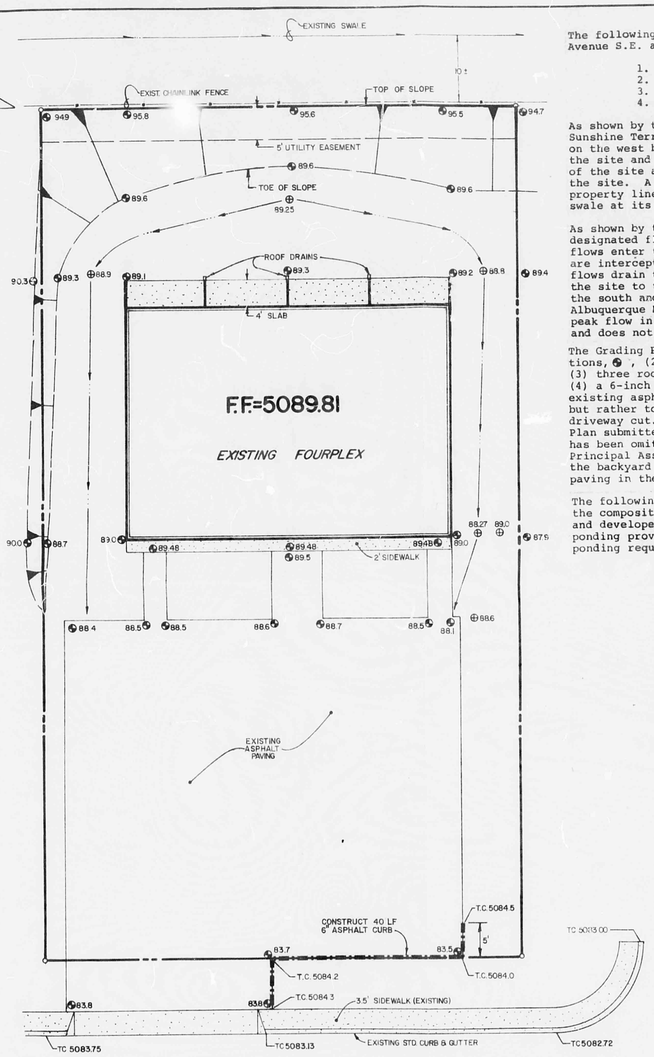
LEGAL DESCRIPTION:

Lot 11, Block "C"
Sunshine Terrace Addition
Albuquerque, New Mexico

PROJECT BENCHMARK (6-L15):

A square ☐ chiseled on top of concrete curb at the ENE curb return at the intersection of Gibson Boulevard and Mulberry Street, SE.

Elevation: 5039.81 feet (M.S.L.D. 1929)



SUNSHINE TERRACE AVE. S.E.

DRAINAGE PLAN

The following items concerning the Drainage Plan for 1625 Sunshine Terrace Avenue S.E. are contained hereon:

1. Vicinity Map
2. Flood Hazard Map
3. Grading Plan
4. Calculations

As shown by the Vicinity Map, the project site is Lot 11, Block C of the Sunshine Terrace Addition, Albuquerque, New Mexico. The site is bounded on the west by a vacant lot. Sunshine Terrace Avenue lies to the south of the site and is a fully improved City street. Ash Street lies to the east of the site and is unimproved. Existing tennis courts lie to the north of the site. A 20-foot wide swale draining to the east lies between the north property line of the site and the south edge of the tennis courts. This swale at its shallowest point is one foot deep.

As shown by the Flood Hazard Map, the project site does not lie within a designated flood hazard zone. Field observation reveals that no offsite flows enter the project site. Flows generated by the site to the north are intercepted by the previously mentioned swale. These intercepted flows drain to the east away from the project site. Runoff generated on the site to the west and in the unimproved portion of Ash Street flow to the south and do not enter the project site. Study of Plate L-15 of the Albuquerque Master Drainage Study, Volume 2, indicates that the 100-year peak flow in Sunshine Terrace Avenue stays within the limits of the street and does not flood adjacent properties.

The Grading Plan shows (1) existing grades indicated by spot elevations, ⊗ , (2) proposed grades indicated by spot elevations, ⊕ , (3) three roof drains draining to the backyard of the site and (4) a 6-inch curb provided to prevent the sheetflow from the existing asphalt paving from leaving the site over the sidewalk, but rather to be channeled so that it exits the site via the driveway cut. The pond shown on the previously approved Drainage Plan submitted by William Phillip Buckley, Registered Architect, has been omitted by variance granted by Charles M. Easterling, Principal Assistant City Engineer, on June 22, 1981. Instead, the backyard drains via two (2) swales to the existing asphalt paving in the front yard.

The following calculations demonstrate the total area, the impervious area, the composite 'C' factor, the 100-year peak flow for both the undeveloped and developed states, the volume of ponding required and the volume of ponding provided for the site. The 100-year peak flows and the volume of ponding required have been determined on the basis of the Rational Formula.

CALCULATIONS

Area of site = 70 (124.99) = 8749.3 sf

$A = \frac{8749.3}{43,560} = 0.20$ Ac

Building area = 47(40) = 1880 sf
Paved area = 2(3)(10)+7(10)+50(59) = 3080 sf

Impervious area (total) = 4960 sf

Composite 'C' = $\frac{4960}{8749.3}(0.95) + \frac{3789.3}{8749.3}(0.40) = \underline{0.71}$

By Rational Formula, Q = CiA, where C = 0.40 (undeveloped), C = 0.95 (developed), i = 5.4 in/hr, and A = 0.20 Ac_1

Q_{100}, undeveloped = 0.40(5.4)(0.20) = 0.43 cfs
Q_{100}, developed = 0.71(5.4)(0.20) = 0.77 cfs
ΔQ_{100} = 0.77 - 0.43 = 0.34 cfs

APPROVED FOR DRAINAGE
6-24-81
DATE
SUPERVISOR
ADVISE DRAINAGE INSPECTOR WHEN GRADING EXECUTED

REGISTERED PROFESSIONAL ENGINEER
STATE OF NEW MEXICO
AND LAND SURVEYOR

1625 Sunshine Terrace Dr. S.E.

Tom Mann & Associates, Inc.
811 DALLAS N.E. · ALBUQUERQUE · NEW MEXICO · 87110
ENGINEERS
Job No. 1-060

GRADING & DRAINAGE PLAN FOR 1625 SUNSHINE TERRACE AVE. SE

L15/D2