HYDROLOGY

K22/D25

K22/D25

LOTS 1 + 2, BLOCK 3,

CHELWOOD PARK

ADD'N.

2 PLANS

K22-D25

GRADING AND DRAINAGE PLAN

RECEIVED NOV 07 1983

IMPORTANT SHEET

PROJECT TITLE	HAROLD CUEVAS APTS.
ZONE ATLAS	K-22
CITY ADDRESS	13405 FRUIT AVE. N.E
LEGAL DESCRIPTION	LOT 6, BLOCK 4, CHELWOOD PARK ADDITN
ENGINEERING FIRM (SURVEYOR)	HALL ENGINEER CO. 2520 PROSP. AVE N.E., SUITE 330 PHONE 884-6200
CONTACT	RICHARD HALL
ARCHITECT	DONALD A. KRUEGER & ASSC. INC. 100 GOSH CHERRYHILL N.E. PHONE (505) 883-7888
CONTRACTOR	
OWNER	CUEVAS AND ASSOCIATES, INC. 1100 ELIZABETH N.E. (505) 293-0766
CONTACT	HAROLD C. CUEVAS
TYPE OF SUBMITTAL	GRADING & DRAINAGE PLAN
SUBMITTED BY	RICHARD HALL
DATE	OCT 31st, 1983

CALCULATIONS

EXISTING CONDITIONS
TOTAL AREA 7500 ft²
Q = 0.34 x 5.4 x 0.172
= 0.32 cfs

DEVELOPED CONDITIONS
TOTAL AREA OF BLDG
= 5,810 ft²
Q = 1.0 x 5.4 x 1,810 / 43,560
= 0.24 cfs

& GARAGES
TOTAL AREA 842.7 ft²
Q = 1.0 x 5.4 x 842.7 / 43,560
= 0.10 cfs

ASPHALT PARKING 1908 ft²
Q = 1.0 x 5.4 x 1908 / 43,560
= 0.18 cfs

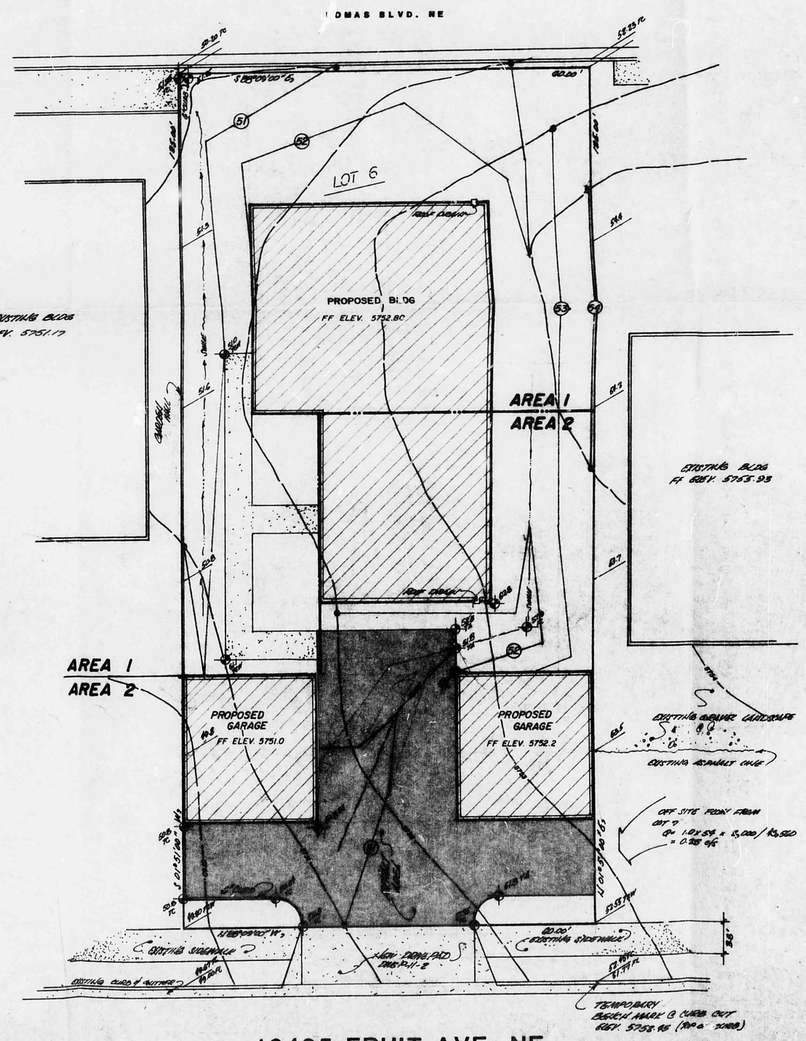
SIDEWALK & PATIO
SIDEWALK 160 ft²
PATIO 100 ft²
Q = 1.0 x 5.4 x 1.00 = 260 / 43,560
= 0.03 cfs

LANDSCAPE AREA
Q = 0.4 x 5.4 x 3572 / 43,560
= 0.17 cfs

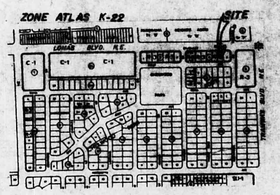
TOTAL 0.68 cfs

OFF SITE FLOW
(FROM LOT 7)
Q = 1.0 x 5.4 x 15,000 / 43,560
= 0.85 cfs

NOTE
85% OF TOTAL RUNOFF FLOWS INTO LOWER BLVD N.E. (AREA 1)
57% TO FRUIT AVE. (AREA 2)



13405 FRUIT AVE. NE



VICINITY MAP

SCALE 1" = 10'

LEGEND

EXISTING CONTOUR LINE
EXISTING SPOT ELEVATION
PROPOSED CONTOUR LINE
PROPOSED SPOT ELEVATION
FG = FLOWLINE
TC = TOP OF CURB
TSW = TOP OF SIDEWALK
TA = TOP OF ASPHALT

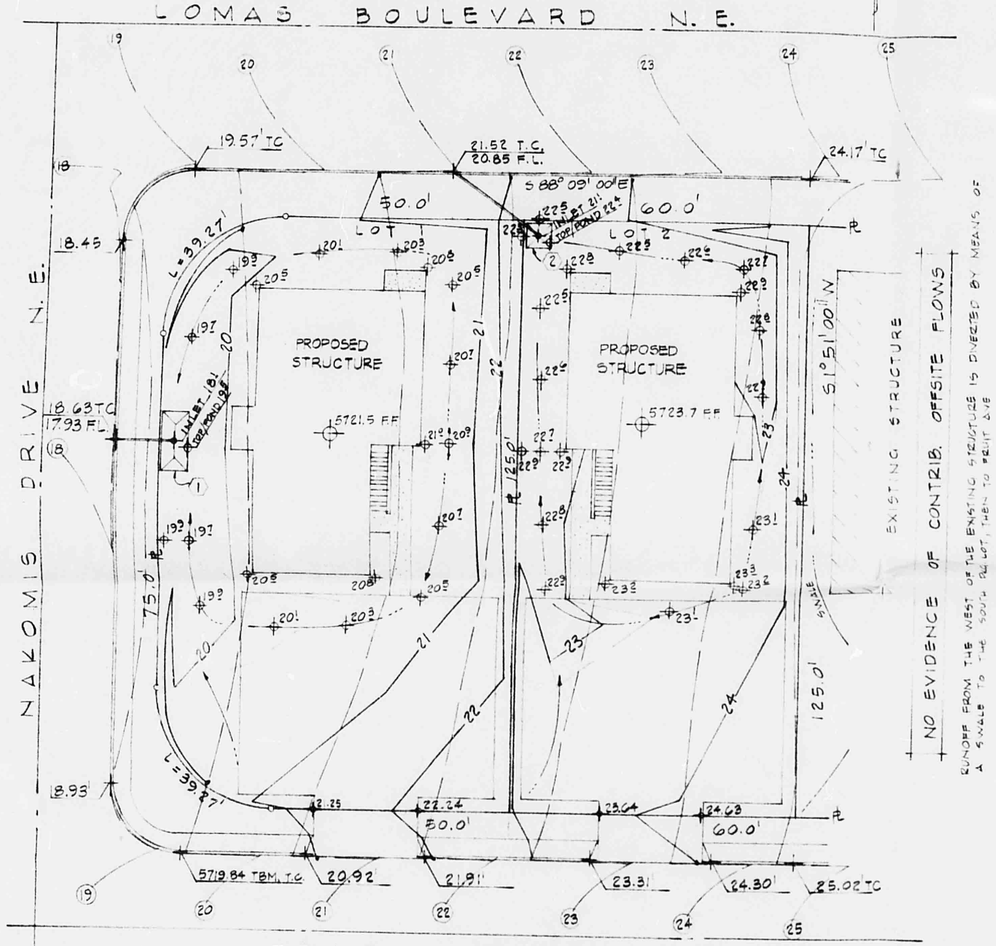
RICHARD V. HALL
NEW MEXICO
7918
REGISTERED PROFESSIONAL ENGINEER

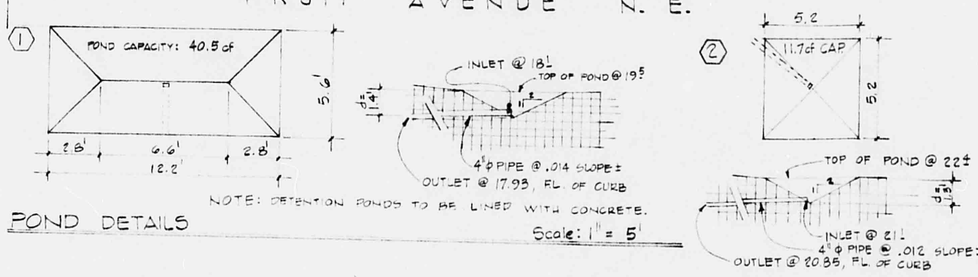
Oct 31, 1983

K22/D25

DRAINAGE PLAN

Scale 1" = 20'





NOTE: DETENTION PONDS TO BE LINED WITH CONCRETE.

POND DETAILS

Scale: 1" = 5'

CALCULATIONS

HYDROLOGIC SOILS GROUP "B"; NO IMPROVEMENTS ON SITE
0% IMPERVIOUS, C = .34 TIME OF CONCENTRATION: 10 min.

I_{100} = 2.46 x 6.84 x 10^-.31 = 5.20 in/hr

I_{10} = 5.20 x .657 = 3.42 in/hr

LOT 1 9107 s.f.

EXISTING:

Q_{10} = 9107/43560 x .34 x 3.42 = .24 cfs

Q_{100} = 9107/43560 x .34 x 5.20 = .37 cfs

DEVELOPED: 49% IMPERVIOUS, C = .57

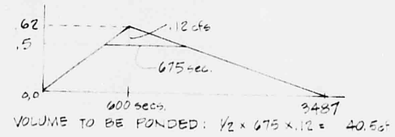
Q_{10} = 9107/43560 x .57 x 3.42 = .41 cfs

Q_{100} = 9107/43560 x .57 x 5.20 = .62 cfs

V = 9107 x .57 x 2.5/12 = 1081 cf

T = 2(1081)/.62 = 3487 sec.

FLOW IN 4" ϕ PIPE w/ 1.5' HEAD = .5 cfs



VOLUME TO BE PONDED: 1/2 x 675 x .12 = 40.5 cf

LOT 2 7500 s.f.

EXISTING:

Q_{10} = 7500/43560 x .34 x 3.42 = .20 cfs

Q_{100} = 7500/43560 x .34 x 5.20 = .31 cfs

DEVELOPED: 60% IMPERVIOUS, C = .63

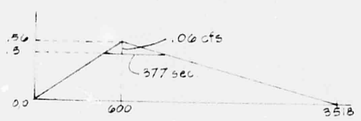
Q_{10} = 7500/43560 x .63 x 3.42 = .37 cfs

Q_{100} = 7500/43560 x .63 x 5.20 = .56 cfs

V = 7500 x .63 x 2.5/12 = 985 cf

T = 2(985)/.56 = 3518 sec.

FLOW IN 4" ϕ PIPE w/ 1.5' HEAD = .5 cfs



VOLUME TO BE PONDED: 1/2 x 377 x .06 = 11.3 cf.

LEGEND

CONTOUR INTERVALS: 1 ft.

+ EXISTING SPOT ELEVATIONS

+ PROPOSED SPOT ELEVATIONS

23 EXISTING CONTOURS

23 PROPOSED CONTOURS

EXISTING STRUCTURES

PROPOSED CONTOURS & SPOT ELEVATIONS INDICATE FINISH SURFACES.

FIELD NOTES TAKEN 7-18-83

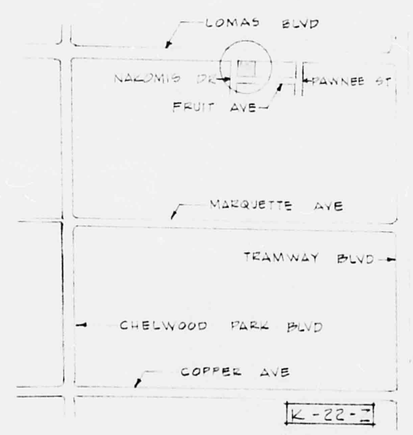
TBM

EL. 5719.84'

TOP OF CURB AT E, NE RETURN OF THE FRUIT AVE. & NAKOMIS DR. INTERSECTION

BENCH MARK

A STANDARD ACS BRASS TABLET STAMPED "2-K 22" SET IN TOP OF A CONC. POST FLUSH WITH THE GROUND. LOCATED AT THE SOUTHEAST CORNER OF CHELWOOD PARK (CITY) IN THE NORTHWEST QUADRANT OF THE JUNCTION OF SAN JUAN AVE. AND PAWNEE ST., NE; 46 ft NORTH OF CENTERLINE OF SAN JUAN, AND 51 ft WEST OF CENTERLINE OF PAWNEE ST. EL. 5730.166



VICINITY MAP No Scale

DRAINAGE PLAN

LOTS 1 & 2, BLOCK 3
CHELWOOD PARK ADDITION
ALBUQUERQUE, NEW MEXICO

for

WARREN C. SHAFFER

prepared by

ENCHANTMENT ENGINEERING
9910 INDIAN SCHOOL RD N.E., SUITE 105
ALBUQUERQUE NEW MEXICO
294-8859

JULY, 1983; REVISED SEPTEMBER 27, 1983

K22/D25