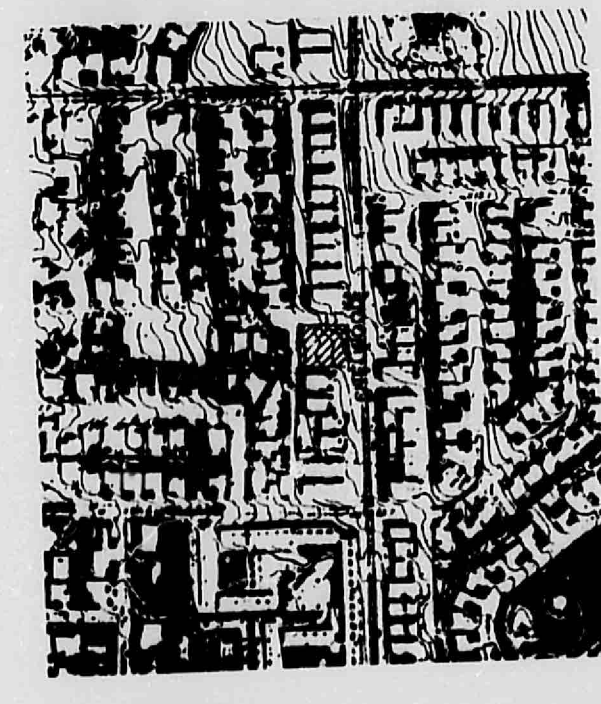
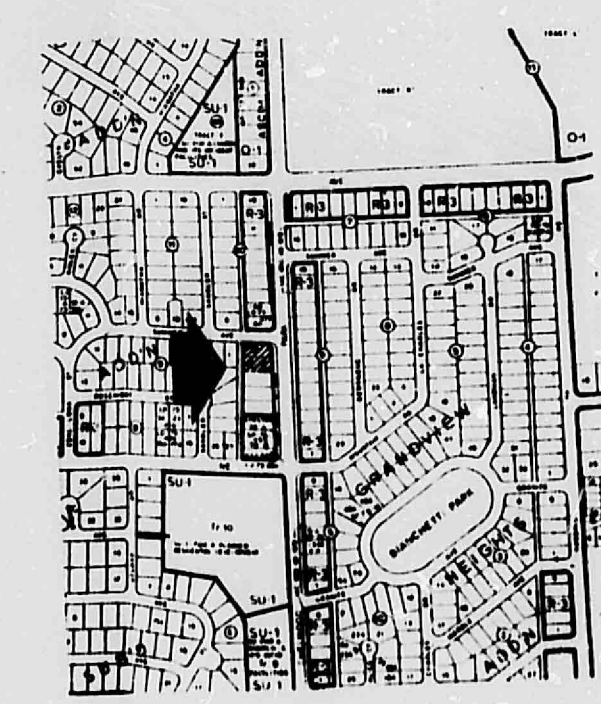
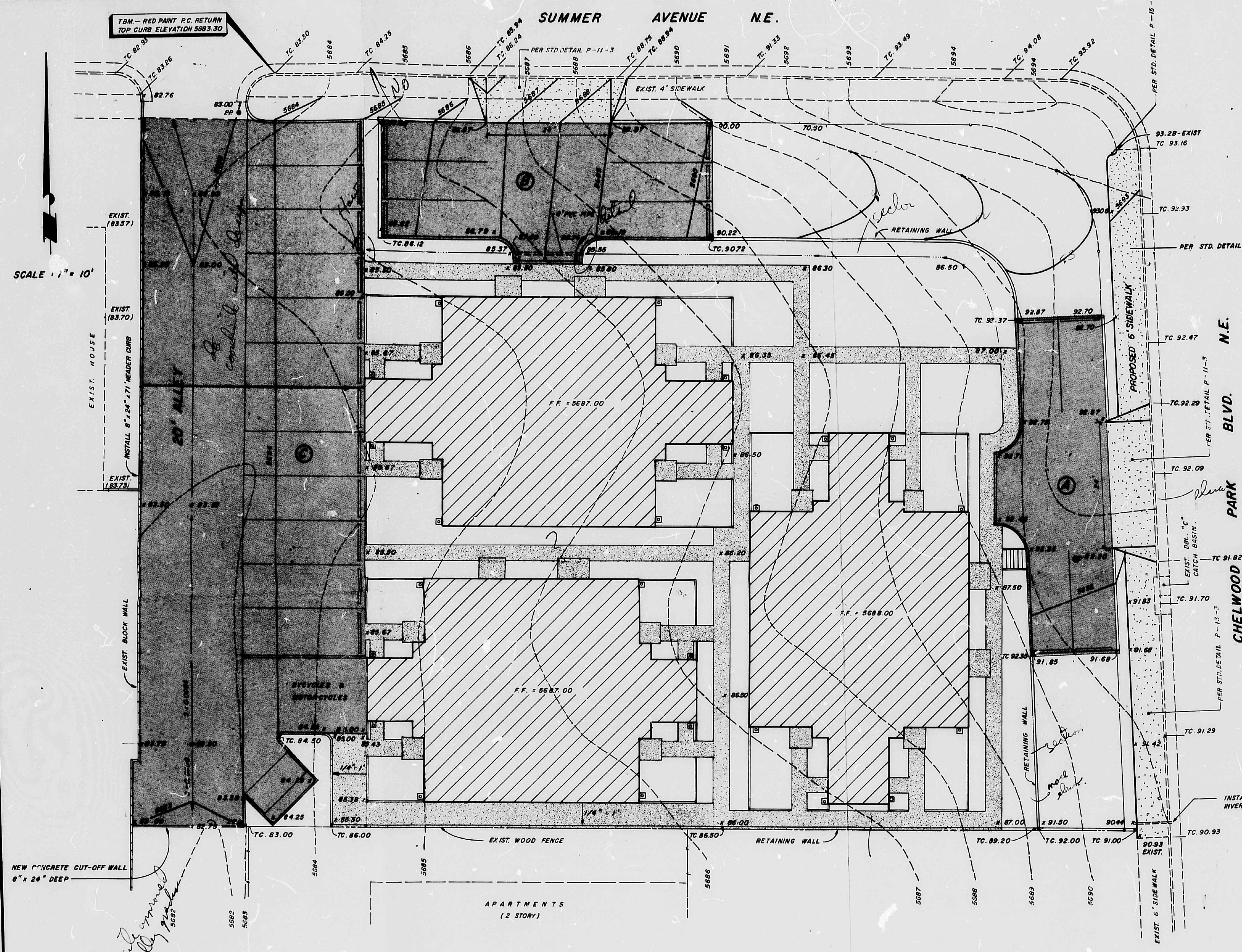




LOCATION MAP
J-22-Z

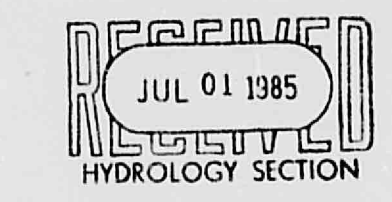
FLOODWAY
FLOODWAY BOUNDARY
FLOODWAY MAP
PANEL 31 OF 50 NO. 350002 0031

DISCUSSION AND ANALYSIS
THIS PROPOSED DEVELOPMENT IS AN INFILL LOT IN THE ROYAL HEIGHTS SUBDIVISION. EXCEPT FOR ONE OR TWO ISOLATED RESIDENTIAL LOTS, THE ENTIRE SUBDIVISION IS COMPLETELY DEVELOPED. THE LOT IS LOT A, BLOCK 9, A REPLAT OF LOTS 34 AND 35, BLOCK 9, ROYAL HEIGHTS SUBDIVISION, FILED 1/20/54 AND CONTAINS 0.5172 ACRES. THE AGREED UPON DRAINAGE IS RELEASE TO THE STREETS WITH ANALYSIS. AN AREA IN THE CORNER OF LOMAS AND JUAN TADO DOES FILL DURING THE 100 YEAR STORM; HOWEVER, ANY INCREMENTAL CHANGE IN THIS AREA DUE TO THIS DEVELOPMENT IS INFINITESIMAL. THE IMPERVIOUS AREA IS 66% AND THE LANDSCAPED AREA IS 34%. USING A C OF 1 FOR IMPERVIOUS AND 0.25 FOR LANDSCAPED, THE COMBINED COEFFICIENT OF RUNOFF IS 0.75. USING CIA, A 100 YEAR SIX HOUR STORM OF 2.5 INCHES AND AN AREA OF 0.5172 ACRES RESULTS IN A RUNOFF OF 0.16 CFS. IF A FACTOR OF 2.15 IS USED, THE MAX Q RUNOFF IS 0.34 CFS. THE CARRYING CAPACITY OF THE PROPOSED ALLEY AT THE WORST CROSS SECTION, USING MANNING'S EQUATION IS $Q = (1.49/n) AR^{2/3} S^{1/2}$ WHERE $n=0.013$, $A=1.70$ FE², $R=0.1249$ AND $S=0.0054$ OR Q CAPACITY = 3.55 CFS. THIS IS APPROXIMATELY 10 TIMES THE MAX FLOW OF 0.34 CFS. SINCE THE SOUTH 75% OF THIS ALLEY IS UNPAVED, THE ALLEY GRADES ARE PROPOSED TO DRAIN TO SUMMER AVENUE. THIS RESULTS IN AT MOST A 6 INCH FILL AGAINST THE EXISTING SOUTH BLOCK WALLS, WHICH CURRENTLY HAVE APPROXIMATELY THE SAME SOIL LEVEL ON EACH SIDE OF THE WALL. THIS PAVING WILL NOT ENDANGER THE EXISTING WALLS. A NEW 24 INCH CUT OF WALL IS PROPOSED FOR THE PORTION OF THE ALLEY NOT WALLED. THE EROSION CONTROL PROPOSED IS BALES OF HAY ON THE LOT SIDE OF A FENCE ALONG THE WEST PROPERTY LINE. THIS IS THE DIRECTION OF ALL FLOW FROM THIS LOT. WIND EROSION CAN BE CONTROLLED BY GOOD BUILDING PRACTICES AND SETTING THE SOIL DURING WINDY PERIODS OR WHEN DOING SITE GRADING. THESE MEASURES ARE ONLY TO BE IN EFFECT DURING CONSTRUCTION.

NOTE: THE RETAINING WALL OF PARKING LOTS A & B ARE 6" ABOVE THE PAVED PARKING AREA ON THE APARTMENT SIDE OF THE PARKING LOT.

LEGEND

- | | | | |
|--|---------------------------|--|-------------------|
| | ASPHALT | | TOP OF CURB ELEV. |
| | CONC. SIDEWALK | | POWER POLE |
| | BUILDING | | EXIST. CONTOUR |
| | LANDSCAPE AREA | | PROP. CONTOUR |
| | DOWNSPOUT W/ SPLASH BLOCK | | PROP. SPOT ELEV. |



C.A. COONCE & ASSOC.	
ENVIRONMENTAL, WATER RESOURCES, & SANITARY CONSULTING ENGINEERS	
12324 PINERIDGE N.E. ALBUQUERQUE, N.M. 87112 PH. (505) 296-1089	
TITLE: DRAINAGE AND GRADING PLAN	
PROJECT: CHELWOOD AND SUMMER N.E.	
DATE: 6-22-84	REVISION: 1
DRAWN: J.W.	CHECKED: C.A.C.
SHEET 1 of 1	

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POSSIBLE REPRODUCTION DUE
TO THE POOR QUALITY OF THE
ORIGINAL DOCUMENT

D
24

C
20

B
16

A
12

CITY OF ALBUQUERQUE

C

D

DRAINAGE CALCULATIONS

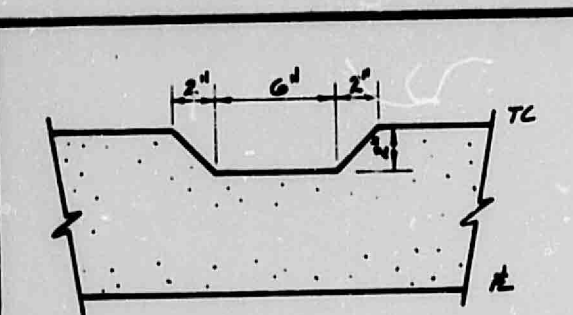
100 YEAR - 6 HOUR PRECIPITATION = 2.49 INCHES
 $C = 0.59$
 $A_{imp} = (2.49)(6.4)(10) = 9.78 \text{ in.}$
 HYDROLOGIC SOIL TYPE "B"

AREA 1
 $A = 6870 \text{ ft}^2 = 0.1577 \text{ ACRES}$, 55% IMPERVIOUS
 $C = 0.59$
 USING RUNOFF HYDROGRAPH, PLATE 22.2 E-1 FROM DPM:
 $V = (0.89)(2.49)(6870) = 1511 \text{ cu ft}$
 $C = 0.59$
 $V = (0.89)(2.49)(6870) = 1511 \text{ cu ft}$
 $V = (0.89)(2.49)(6870) = 1511 \text{ cu ft}$
 CONTROLLED DISCHARGE (4" Ø PVC THRU CURB @ 2% SLOPE):
 $Q_{max} = 0.67 \text{ cfs}$
 INLET CONTROL:
 $V = 4.27 \text{ ft}^3/\text{sec}$
 $Q_{max} = 0.3729 \text{ cfs}$
 USING MANNINGS, $n = 0.010$, $d/D = 0.95$
 $Q_{max} = 0.3729 \text{ cfs}$ (INLET CONTROL)
 VOLUME OF POND 2 AS SHOWN = 527 ft^3
 VOLUME OF DISCHARGE FROM POND 1 = 3310 ft^3
 VOLUME OF DISCHARGE FROM POND 1 (max) = 950 ft^3

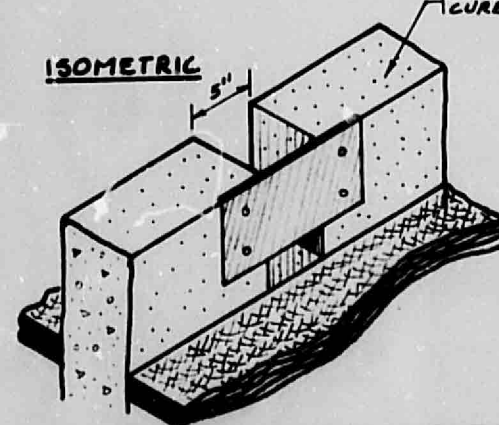
AREA 2
 $A = 15112 \text{ ft}^2 = 0.3461 \text{ ACRES}$, 80% IMPERVIOUS
 $C = 0.765$
 USING RUNOFF HYDROGRAPH, PLATE 22.2 E-1 FROM DPM:
 $V = (0.765)(2.49)(15112) = 2812 \text{ cu ft}$
 $C = 0.765$
 $V = (0.765)(2.49)(15112) = 2812 \text{ cu ft}$
 $V = (0.765)(2.49)(15112) = 2812 \text{ cu ft}$
 REQUIRED POND VOLUME = 950 ft^3 (AS SHOWN) OK
 CONTROLLED DISCHARGE (2" HIGH SLUICE GATE - SECTION B-B):
 $Q_{max} = 0.70 \text{ cfs}$
 TYPE "E" GATE (from KING'S) $C = 0.612$
 $Q = C A (2gH)^{3/2}$
 $0.2876 = 0.612 a [(2g)(0.7)]^{3/2}$
 $a = 0.70 \text{ ft}^2 = (21/2) \text{ ft}$
 $b = 0.42 \text{ ft}$ (width of sluice gate)

AREA 3
 $A = 588 \text{ ft}^2 = 0.0135 \text{ ACRES}$, 80% IMPERVIOUS
 $C = 0.765$
 $V = (0.765)(2.49)(588) = 1091 \text{ cu ft}$
 $V = (0.765)(2.49)(588) = 1091 \text{ cu ft}$
 $V = (0.765)(2.49)(588) = 1091 \text{ cu ft}$

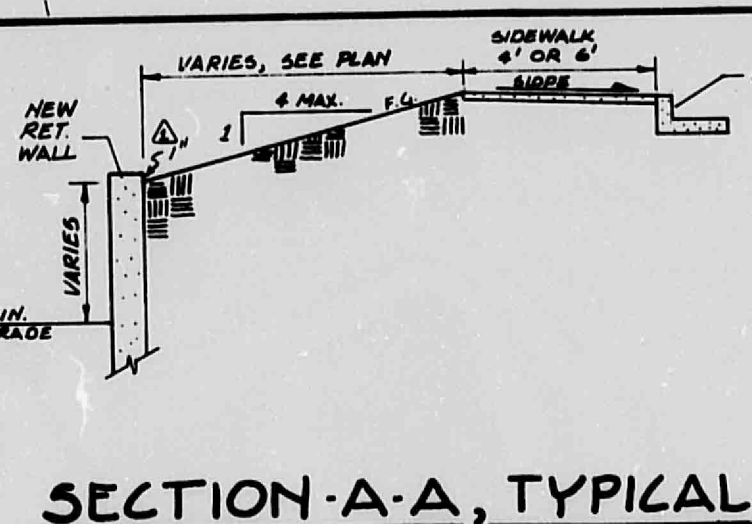
POND	CONT'D	ΔH	AREA	ΔH	VOL.	REMARKS
#1	01.52	0	0	0	0	INV. - WEIR
	02.00	0.08	81	2	2	VOL. AS PYRAMID
	03.00	0.10	446	26	28	
	04.00	0.10	1055	75	103	
	05.00	0.10	1913	148	251	
	06.00	0.10	3057	249	500	
	07.00	0.10	4054	355	856	
	08.00	0.10	4778	440	1296	
	09.00	0.10	4778	476	1371	
#2	02.98	0	0	0	0	INV. - 4" Ø PIPE
	03.00	0.02	4	1	1	VOL. AS PYRAMID
	04.00	0.10	136	70	8	
	05.00	0.10	340	238	32	
	06.00	0.10	559	450	77	
	07.00	0.10	821	670	146	
	08.00	0.10	1129	975	243	
	09.00	0.10	1448	1278	373	
	10.00	0.10	1615	1561	527	



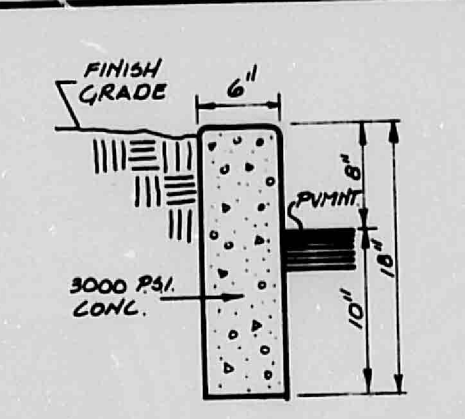
DETAIL 'F'



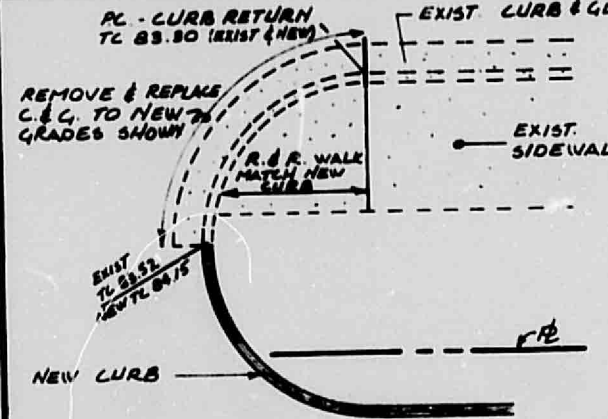
SECTION B-B 1" = 1'-0"



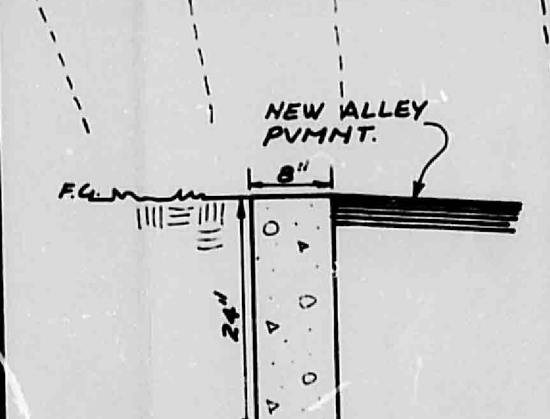
SECTION A-A, TYPICAL



CURB DETAIL



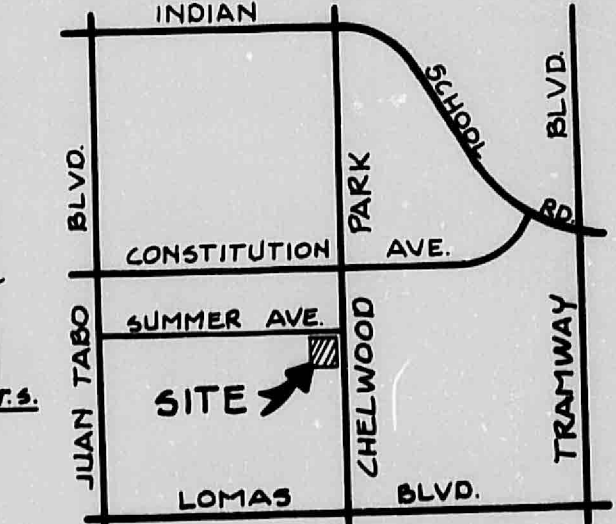
DETAIL 'C'



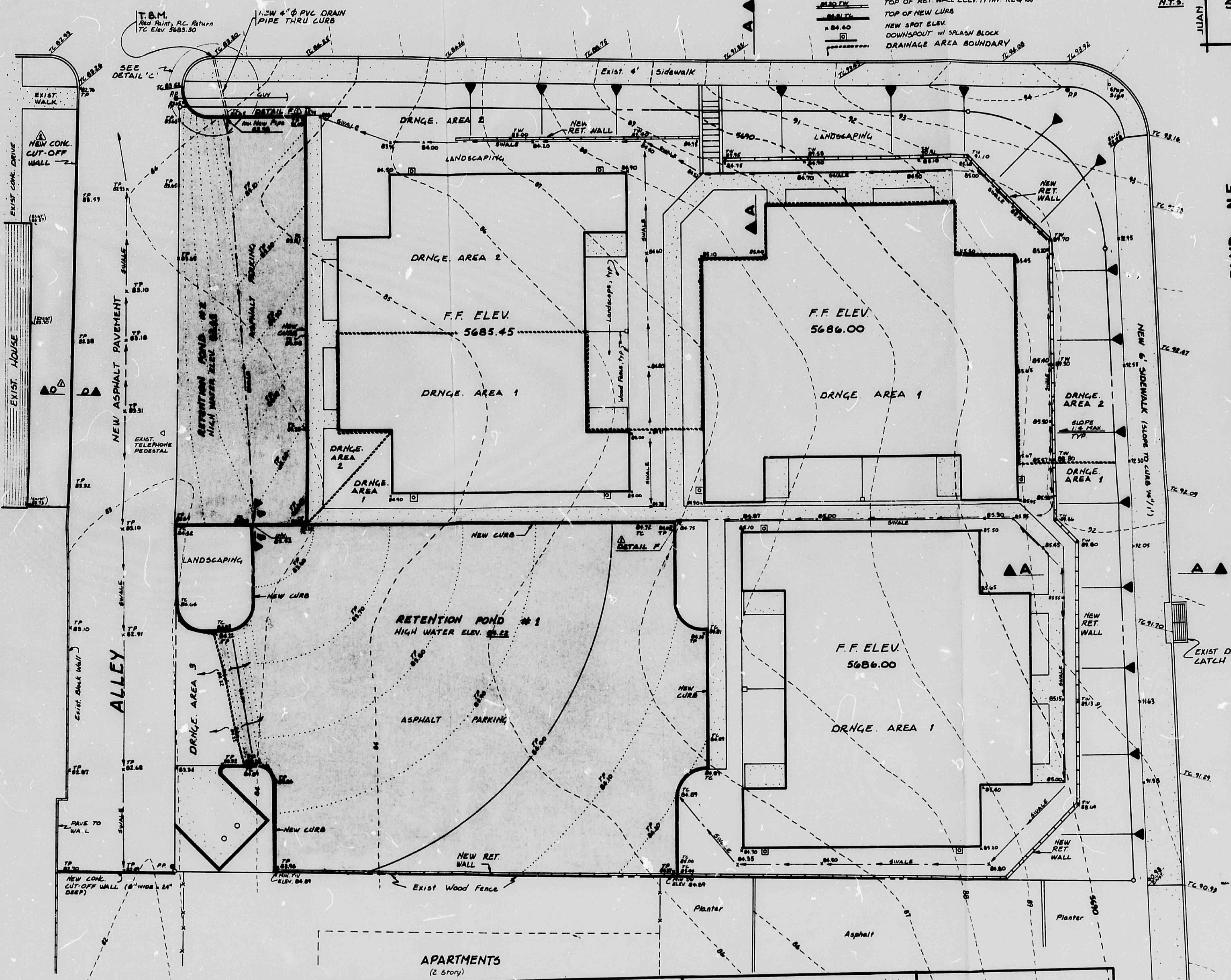
SECTION D-D

NOTE:
 DEPRESS ALL LANDSCAPE AREAS 1" BELOW SIDEWALKS TO PREVENT NUISANCE FLOWS

LEGEND
 EXISTING CONDITIONS:
 --- TOP OF CURB ELEV.
 --- EXIST. CONTOUR
 PROPOSED CONSTRUCTION:
 --- FINISH GRADE CONTOUR
 --- FINE CONTOUR (F.G.)
 --- TOP OF PAVEMENT ELEV. (MIN. REQ'D)
 --- TOP OF NEW CURB
 --- NEW SPOT ELEV.
 --- DOWNSPOUT W/ SLASH BLOCK
 --- DRAINAGE AREA BOUNDARY



VICINITY MAP
 ZONE ATLAS MAP J-22
 ZONED R-3



CHELWOOD PARK BLVD. N.E.

scale: 1" = 10'

4- PLEX BUILDINGS FOR HENSHAW / WILCOX CO.
GRADING & DRAINAGE PLAN
ARMSTRONG ENGINEERING, INC. 345-2133
FEBRUARY 24, 1983



REVISED 3-16-83

DR-1

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