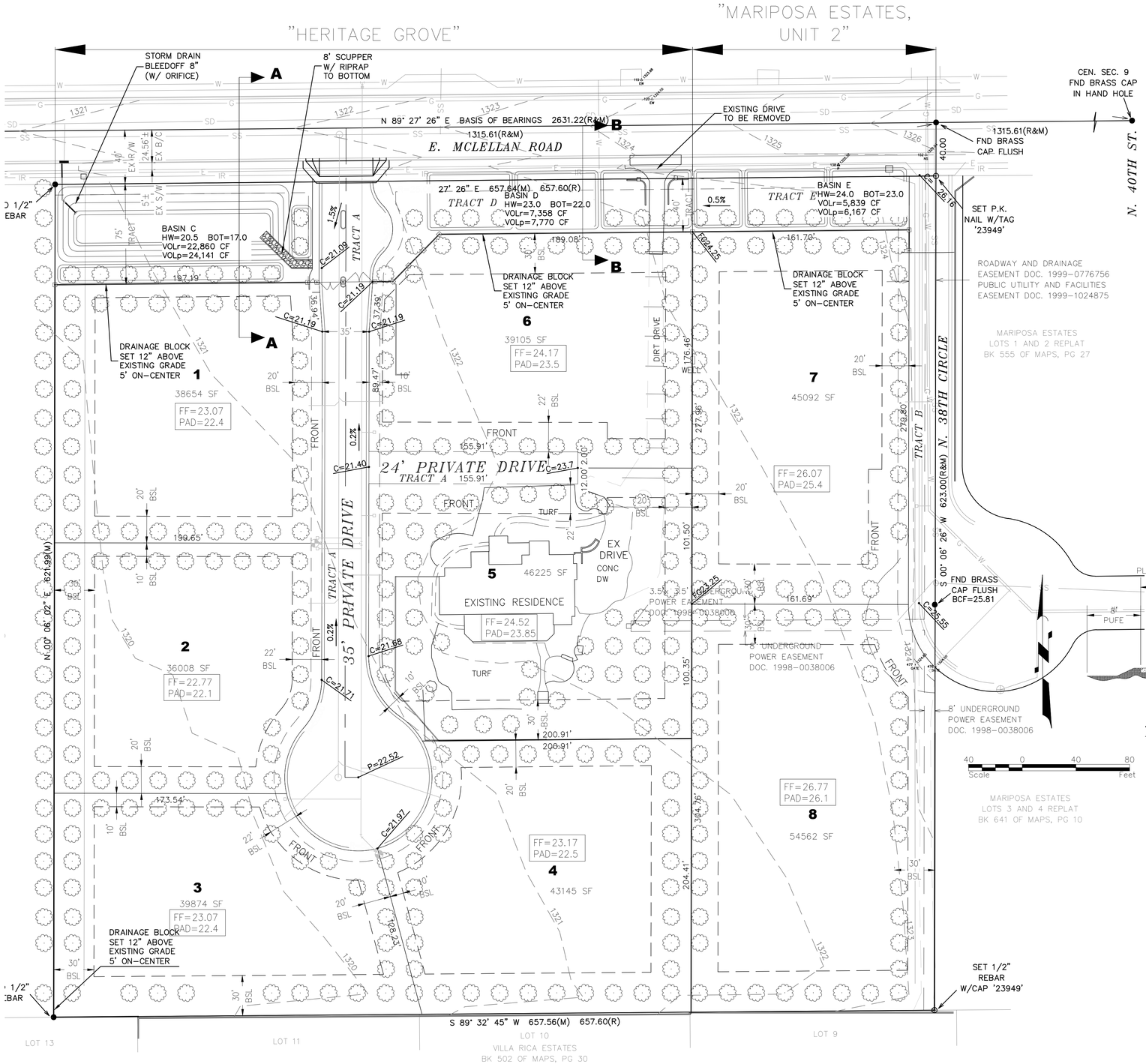
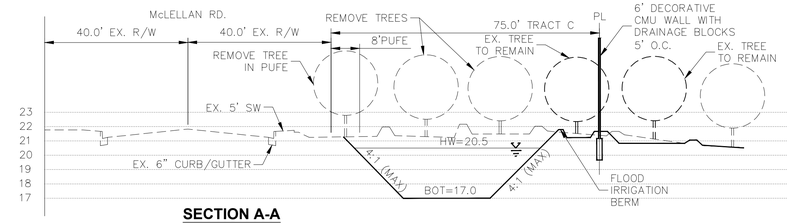
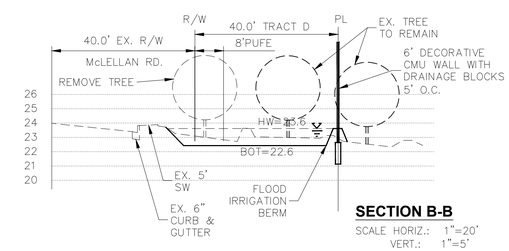
PRELIMINARY GRADING AND DRAINAGE PLAN
FOR
"HERITAGE GROVE" AND "MARIPOSA ESTATES, UNIT 2"





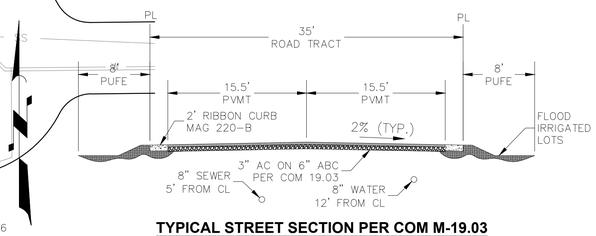
SECTION A-A

SCALE HORIZ.: 1"=20'
VERT.: 1"=5'



SECTION B-B

SCALE HORIZ.: 1"=20'
VERT.: 1"=5'



TYPICAL STREET SECTION PER COM M-19.03

SCALE: 1"=8'

RUNOFF VOLUME CALCULATION

V= A x C x d
Lot Composite "C" = 0.45
Citrus Tract "C" = 0.31
Street Composite "C" = 0.95
(inches) d= 2.2

	Area (SF)	"C" Factor	Rainfall Depth (FT)	Runoff Volume (CF)
Tract A (road)	28212	0.95	0.183	4914
Tract B (road)	7046	0.95	0.183	1227
Tract C (ldsc)	14788	0.31	0.183	840
Tract D (ldsc)	10154	0.31	0.183	577
Tract E (ldsc)	6468	0.31	0.183	368
Lot 1	38654	0.45	0.183	3173
Lot 2	36008	0.45	0.183	2956
Lot 3	39874	0.45	0.183	3274
Lot 4	43145	0.45	0.183	3542
Lot 5	46225	0.45	0.183	3795
Lot 6	39105	0.45	0.183	3210
Lot 7	45092	0.45	0.183	3702
Lot 8	54562	0.45	0.183	4479
Area=	409333	TOTAL RUNOFF (CF) =		36058
		VOLUME PROVIDED (CF) =		38077
		EXCESS VOLUME (CF) =		2019
				5%

BASIN VOLUME CALCULATIONS

Average End Method
V= d x (Area1 + Area2)/2

Tract C1 - Citrus Grove

Elevation	Area	Avg. Area	Depth	Volume P
20.5	2896	2448	1	**2448 CF**
19.5	2000			

Tract C2 - Retention Basin

Elevation	Area	Avg. Area	Depth	Volume
20.5	9641	8605.5	1	8606
19.5	7570	6602	1	6602
18.5	5634	4754.5	1	4755
17.5	3875	3461	0.5	1731
17	3047			
			Basin C2	**21693 CF**

Tract D - Citrus Grove

Elevation	Area	Avg. Area	Depth	Volume
23	8383	7770	1	**7770 CF**
22	7157			

Tract E - Citrus Grove

Elevation	Area	Avg. Area	Depth	Volume
24	6704	6166.5	1	**6167 CF**
23	5629			
			TOTAL RETENTION VOLUME =	**38077 CF**

RUNOFF COEFFICIENT ("C" FACTOR)

Average Lot = 42,833

Item	Area	C Factor	Adj Area
Roof	6000	0.95	5700
Driveway	2000	0.95	1900
Sidewalk	1000	0.95	950
Pool	750	0.5	375
Flood Irrigated	10000	0.31	3100
Grass Ldsc	23,083	0.31	7155.76875
		Composite C =	**0.45**

Private Street

Item	Area	C Factor	Adj Area
Pavement	31	0.95	29.45
Driveway	1783	0.95	1693.85
Sidewalk	390	0.95	370.5
		Composite C =	**0.95**

Registered Professional Engineer (Civil) CERTIFICATE NO. 38112 JARED SCOTT COX Date 12/31/20 ARIZONA U.S.A.

REVISION	DATE
1	
2	
3	

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PRELIMINARY GRADING AND DRAINAGE PLAN
"HERITAGE GROVE" & "MARIPOSA ESTATES, UNIT 2"
3725 E. McLELLAN ROAD
MESA, AZ 85205

JOB NUMBER 19006
DRAWING GD01
DATE 12/31/2020
SHEET 7 OF 8

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