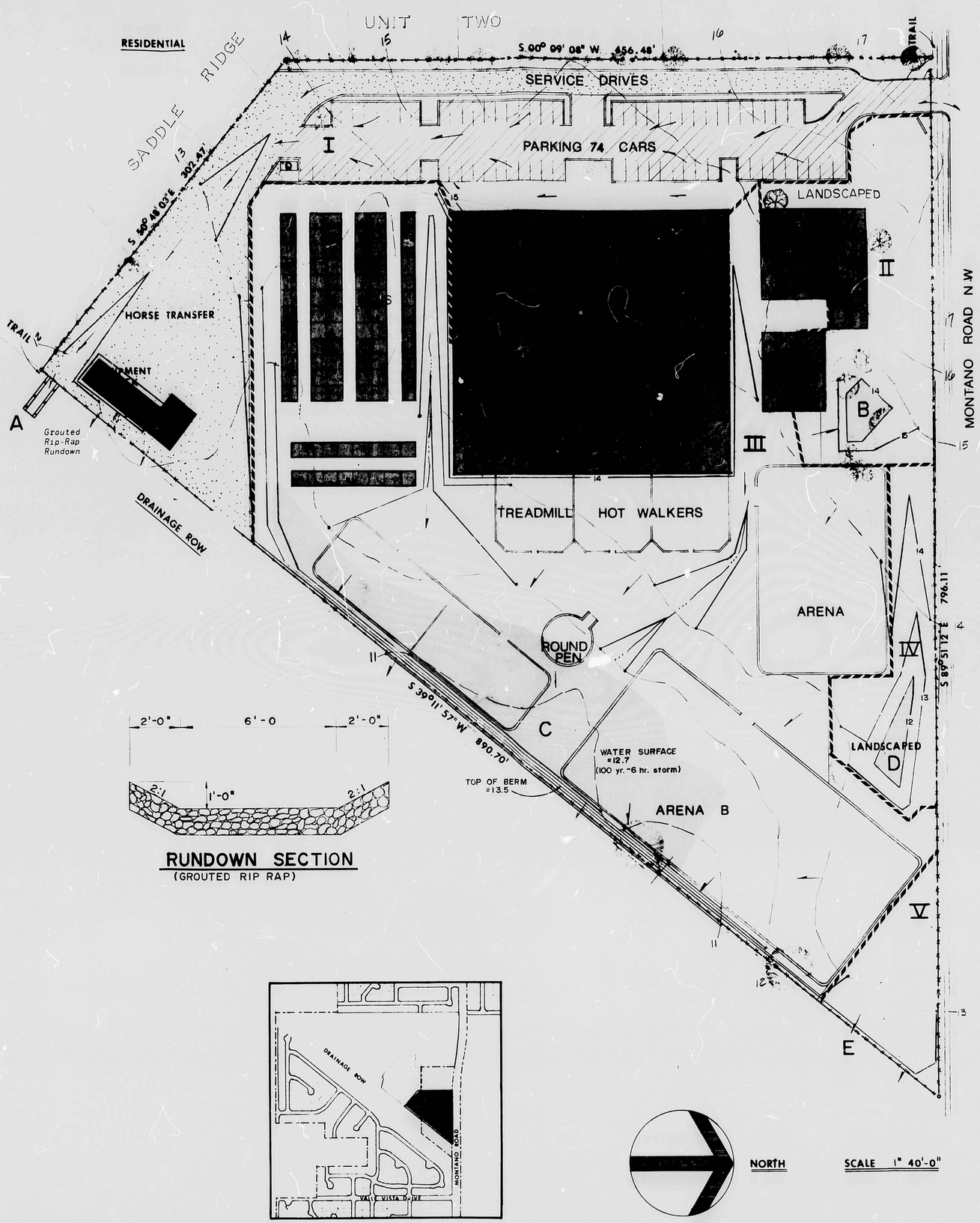
HYDROLOGY E11/D7a SADDLE RIDGE EQUESTRAIN CENTI

E11 / D7A

SADDLE RIDGE

EQUESTRIAN CENTER

1 PLAN



RUNDOWN SECTION
(GROUTED RIP RAP)

NORTH

SCALE 1" 40'-0"

I UNDEVELOPED DRAINAGE CHARACTERISTICS

Q = CIA, where C=0.35, I=5.4, A=7.74 Acres
= (0.35)(5.4)(7.74)
= 14.6, Use 15 cfs

V = CDA, where D=0.183'
= (0.35)(0.183)(337,050)
= 21,590 cu.ft.

II DEVELOPED DRAINAGE CONDITIONS

TABLE I

VOLUME CALCULATIONS

Drainage Area Designation	Area (acres)	Amount of Rainfall	Area Running off @ 0.95	Area Running off @ 0.50	Area Running off @ 0.50	Area Running off @ 0.35	Composite C	Allowed to Runoff (cu.ft.)	Volume to be retained (cu.ft.)	Pond Capacity (cu.ft.)	Pond or Point of Departure Destination
I	2.30	2.2"	49	0	38	13	0.[illegible]	12,[illegible]	0	0	A
II	0.46	2.2"	0	68	0	34	0.22	0	810	1,200	B
III	4.40	2.2"	19	0	0	81	0.46	0	15,160	17,000	C
IV	0.42	[illegible]	0	100	0	0	0.15	0	00	600	D
V	0.16	2.2"	0	100	0	0	0.15	200	0	0	E
	7.74							13,086			

*This volume is (21,627-13,086) = 8,541 cu.ft. less than required. A decrease of runoff equal to 39%

LEGEND

- PONDING AREA
- IMPERVIOUS SURFACES
- ASPHALT PAVING
- LOOSE GRAVEL
- DRAINAGE AREA BOUNDARY
- EXISTING CONTOURS
- FINISHED CONTOURS

EQUESTRIAN CENTER
DRAINAGE STUDY

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CCIC
Crandall, Campbell, Isaacson, Crapin, Inc.

E11/D7