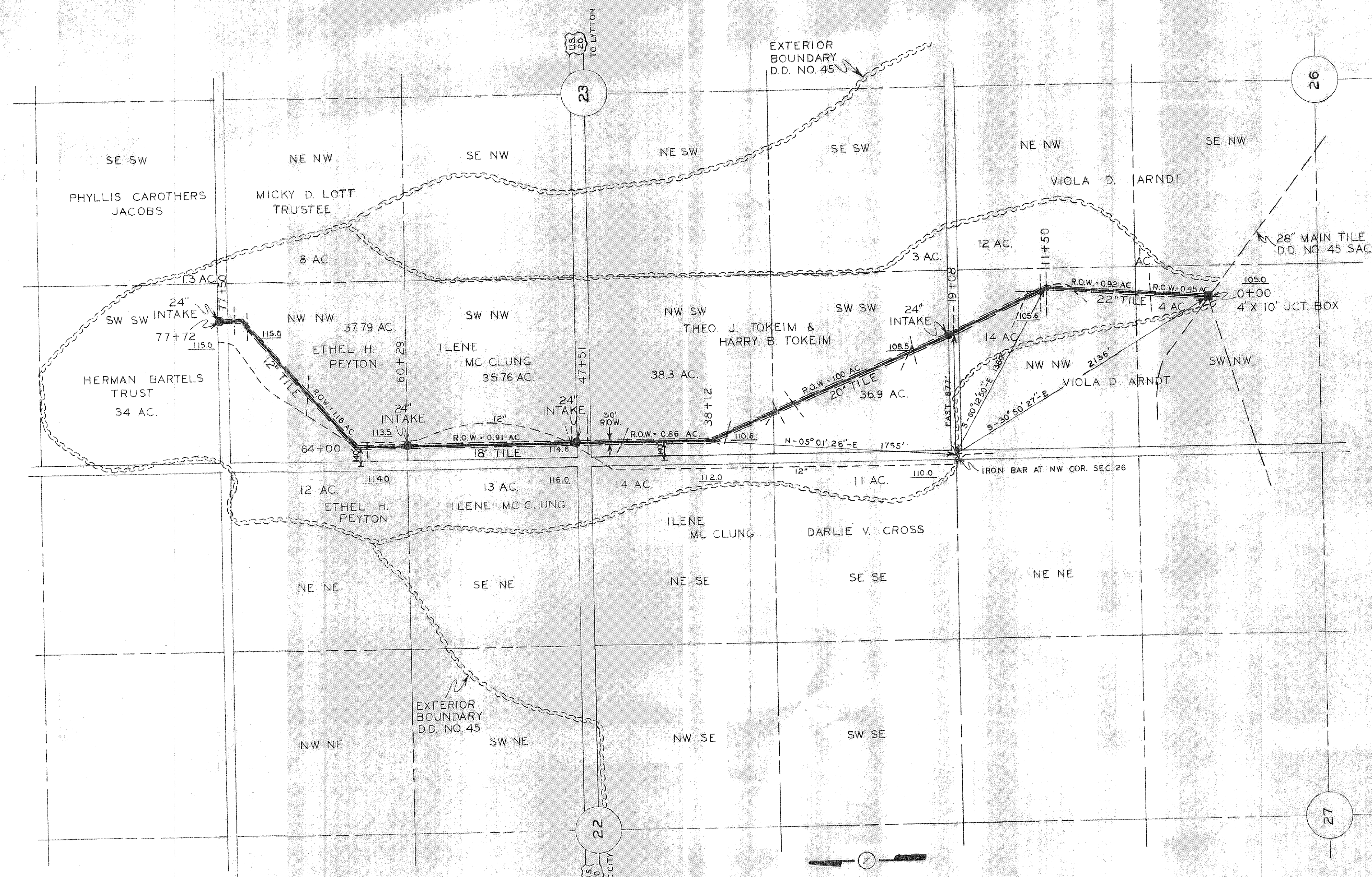
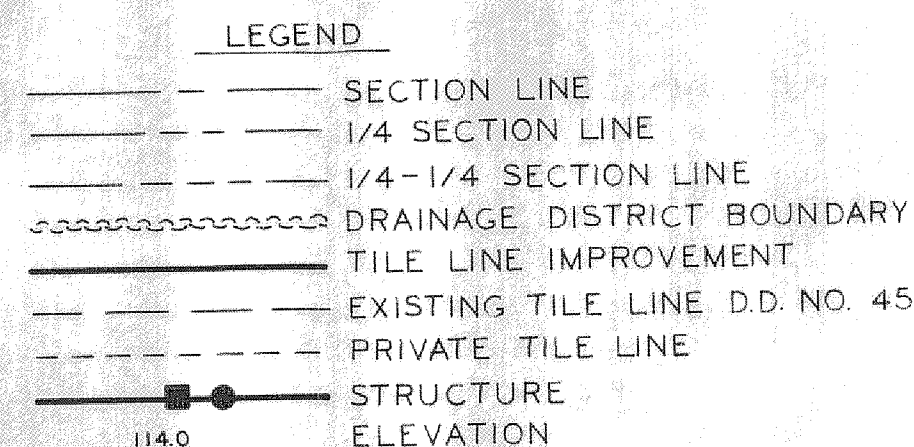




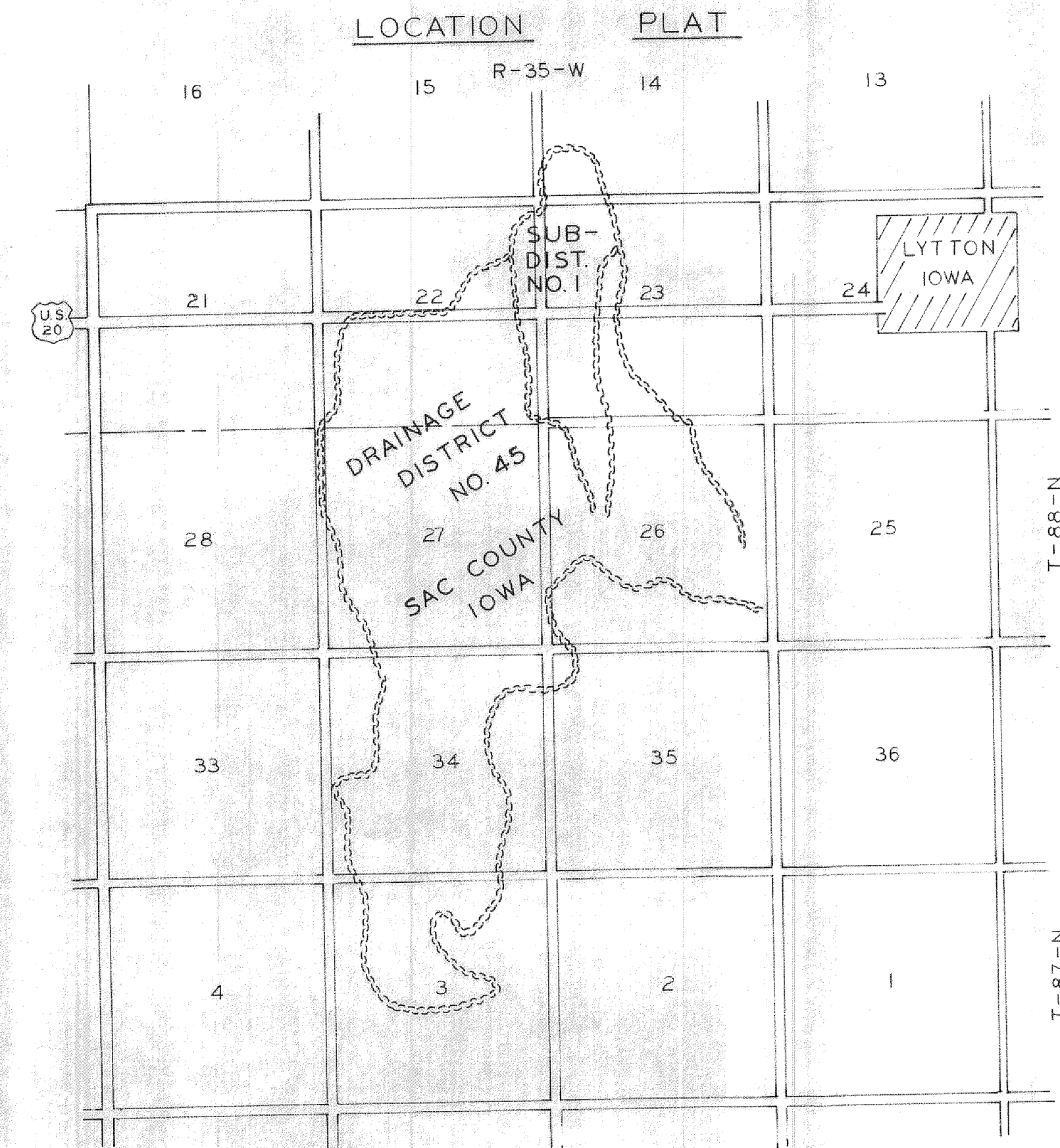
PRIVATE TILE LINES CONNECTED
TO NEW MAIN LINE TILE
DURING CONSTRUCTION 1983

STA.	DIA.	DIR. FLOW	DEPTH	OTHER DATA
4+20	5"	EAST TO WEST	3'	
9+75	10"	NE TO SW	4'	1" SILT
11+30	10"	NW TO SE	3'	3" SILT
11+40	5"	EAST TO WEST	3'	
11+93	5"	EAST TO WEST	3'	
12+20	10"	NORTH TO SOUTH	3'	2" SILT
13+20	8"	NW TO SE	3'	3" SILT
19+08	5"	EAST TO WEST	5'	UNDER ROADWAY
22+40	5"	SW TO NE	3'	
22+95	5"	NW TO SE	3'	3" SILT
31+70	5"	SW TO NE	2.5'	1" SILT
33+30	5"	NW TO SE	2.5'	1" SILT
37+08	5"	W-NW TO E-SE	3.5'	
44+90	5"	W-NW TO E-SE	3'	
47+27	5"	EAST TO WEST	3.5'	SOUTH SLOPE OF HWY. 20
48+42	5"	EAST TO WEST	3.5'	
48+56	6"	NE TO SW	3.5'	
48+93	12"	NE TO SW	5'	
63+35	8"	WEST TO EAST	3.5'	3" SILT
64+45	12"	N-NE TO S-SW	3.5'	8" SILT
NOTE: 8" TILE WAS INSTALLED FROM THIS POINT AND OUTLETTED INTO THE 18" DIA. TILE AT STA 64+00				
69+20	5"	EAST TO WEST	3'	
75+60	5"	EAST TO WEST	2.5'	
76+80	5"	EAST TO WEST	2.5'	



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

CHARLES E. WALLER P.E.
DATED: _____ REG. NO. 4064



INSTALLED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	EXTRA QUALITY DRAIN TILE	L.F.	
	22" DIAMETER		1480
	20" DIAMETER		2360
	18" DIAMETER		594
	12" DIAMETER		430
	10" DIAMETER		40
2	HEAVY DUTY EXTRA QUALITY DRAIN TILE	L.F.	
	20" DIAMETER		800
	18" DIAMETER		1066
	12" DIAMETER		900
3	2000-D CONCRETE CULVERT PIPE	L.F.	
	21" DIAMETER		40
	12" DIAMETER		42
4	3000-D CONCRETE CULVERT PIPE	L.F.	
	18" DIAMETER		60
5	REINFORCED CONCRETE JCT. BOX - 5.5' HIGH	EACH	
	10' X 4' I.D.		1
6	24" DIA. TYPE R-A-16 INTAKES COMPLETE / GRATE	EACH	4
7	GRANULAR BACKFILL - 2 ROADWAYS	TON	60
8	GRANULAR STABILIZATION MATERIAL	TON	79.225

NOTE: SEE SHEET 2 OF 2 (PROFILE) OF ORIGINAL PLANS DATED MARCH 1983 FOR GRADE DETAIL

RECORD DRAWING
DRAINAGE IMPROVEMENTS
SUB-DISTRICT NO. 1 OF DRAINAGE DISTRICT NO. 45
SAC COUNTY, IOWA

OCT. 3, 1983

DD 45 SAC - Sub 1