

AGENDA
DD 22 LANDOWNER MEETING
FRIDAY, MARCH 2, 2018 AT 9:00 AM

1. Open Meeting
2. Approve Agenda
3. Attendance/Introductions
4. Discuss Project Modifications

Documents:

DD 22 - ALTERNATIVES FOR COMBINED MAIN AND SUPPLEMENTAL TILE
PROJECT_REDUCED.PDF

5. Comments/Discussion
6. Possible Action
7. Other Business
8. Adjourn Meeting

**OPINIONS OF PROBABLE COST
DRAINAGE DISTRICT NO. 22 OPTIONS**

Date: January 2017

Hardin County, Iowa



	LANDOWNER SHARE							COUNTY SHARE							GRAND TOTAL
	BASE BID CONSTRUCTION	PROFESSIONAL SERVICES ESTIMATE (BASE BID)	ALTERNATE BID (RCP) CONSTRUCTION	PROFESSIONAL SERVICES ADDER ESTIMATE FOR ALTERNATE BID	LAND / EASEMENT AGREEMENTS	CONTINGENCY	TOTAL	BASE BID CONSTRUCTION	PROFESSIONAL SERVICES ESTIMATE (BASE BID)	ALTERNATE BID (RCP) CONSTRUCTION	PROFESSIONAL SERVICES ADDER ESTIMATE FOR ALTERNATE BID	LAND / EASEMENT AGREEMENTS	CONTINGENCY	TOTAL	
30" Replacement w/ Spot Repair	\$ 417,774.44	\$ 87,123.00	\$ 122,752.00	\$ 33,695.00	\$ -	\$ 55,657.56	\$ 717,002.00	\$ 85,725.56	\$ 17,877.00	\$ 8,400.00	\$ 2,305.00	\$ -	\$ 9,690.44	\$ 123,998.00	\$ 841,000
Modification A	\$ 761,900.60	\$ 165,033.00	\$ 290,805.00	\$ 76,440.00	\$ -	\$ 95,920.40	\$ 1,390,099.00	\$ 69,099.40	\$ 14,967.00	\$ 13,545.00	\$ 3,560.00	\$ -	\$ 7,529.60	\$ 108,701.00	\$ 1,498,800
Modification B	\$ 594,384.56	\$ 148,187.00	\$ 169,712.00	\$ 46,331.00	\$ -	\$ 76,354.44	\$ 1,034,969.00	\$ 131,615.44	\$ 32,813.00	\$ 13,440.00	\$ 3,669.00	\$ -	\$ 14,493.56	\$ 196,031.00	\$ 1,231,000
Modification C	\$ 446,821.75	\$ 111,065.00	\$ 59,520.00	\$ 14,981.00	\$ 120,000.00	\$ 50,785.25	\$ 803,173.00	\$ 76,178.25	\$ 18,935.00	\$ 31,860.00	\$ 8,019.00	\$ -	\$ 10,834.75	\$ 145,827.00	\$ 949,000
Modification D	\$ 418,935.40	\$ 102,758.00	\$ 5,200.00	\$ 1,291.00	\$ 210,000.00	\$ 42,435.60	\$ 780,620.00	\$ 111,064.60	\$ 27,242.00	\$ 64,500.00	\$ 16,009.00	\$ -	\$ 17,564.40	\$ 236,380.00	\$ 1,017,000

Modification A: Replace both supplemental 30-inch and original main tile with a single, larger tile following old route.

Modification B: Replace supplemental 30-inch in place on 2011 alignment and replace original main tile with 24-inch in original alignment.

Modification C: Open Ditch to south side of Silvest acreage. From there upstream, replace supplemental 30-inch in place on 2011 alignment and tie-into original main tile with 24-inch.

Modification D: Open Ditch to replace 2011 supplemental 30-inch, connect original main tile with 18-inch.

OPINION OF PROBABLE COST
CURRENT PROPOSED PLAN w/ SPOT REPAIR ON ORIGINAL
MAIN TILE - DRAINAGE DISTRICT NO. 22

Date: January 2017

Hardin County, Iowa



BASE BID

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>EXTENSION</u>
1	30" Ø POLYPROPYLENE TILE	6,397 LF	\$47.00	\$300,659.00
2	CCTV INSPECTION OF ROADWAY CROSSING TILE	300 LF	\$5.00	\$1,500.00
3	30" Ø POLYPROPYLENE TILE - ROAD CROSSING	300 LF	\$100.00	\$30,000.00
4	CONNECTION TO ROAD CROSSING TILE TO REMAIN	8 EACH	\$400.00	\$3,200.00
5	CONNECTION TO EXISTING STRUCTURE	2 EACH	\$800.00	\$1,600.00
6	PRIVATE TILE OR INTAKE CONNECTION	10 EACH	\$400.00	\$4,000.00
7	INTAKE, ROAD ROW	10 EACH	\$3,500.00	\$35,000.00
8	REMOVAL AND DISPOSAL OF SUPPLEMENTAL TILE	6,697 LF	\$7.00	\$46,879.00
9	CLEANUP, SHAPING, AND SEEDING	1 LS	\$4,268.00	\$4,268.00
10	CCTV INSPECTION OF TILE - POST CONSTRUCTION	6,697 LF	\$2.00	\$13,394.00
11	SPOT REPAIR WITH PP - ORIGINAL MAIN TILE (EST 1500 LF)	1 LS	\$63,000.00	\$63,000.00
Total Budgeted Construction Costs (PE PIPE):				\$503,500

ALTERNATE BID PROJECT QUANTITIES

1A	30" 2000D RCP IN PLACE OF 30" POLYPROPYLENE	6,397 LF	\$18.00	\$115,146
3A	30" 2000D RCP IN PLACE OF 30" POLYPROPYLENE	300 LF	\$18.00	\$5,400
DEDUCT 10	CCTV INSPECTION OF TILE - POST CONSTRUCTION	6,697 LF	-\$2.00	-\$13,394
11A	SPOT REPAIR WITH RCP - ORIGINAL MAIN TILE	1 LS	\$24,000.00	\$24,000
Total Budgeted Construction Costs (RCP PIPE):				\$634,652

10% +/- Contingency	\$	65,348
Professional Services Estimate (Base Bid)	\$	105,000
Professional Services Estimate (Additional Construction Observation for Alternate Bid - Slower Construction)	\$	36,000

TOTAL \$841,000

	Landowner Share	County Share
Base Bid	\$ 417,774.44	\$ 85,725.56
Alternate Bid	\$ 122,752.00	\$ 8,400.00
Contingency	\$ 55,657.56	\$ 9,690.44
Professional Services (Base Bid)	\$ 87,123.00	\$ 17,877.00
Professional Services (Alternate Bid)	\$ 33,695.00	\$ 2,305.00
	\$ 717,002.00	\$ 123,998.00

**OPINION OF PROBABLE COST
MODIFICATION A - DRAINAGE DISTRICT NO. 22**

Date: January 2017

Hardin County, Iowa



BASE BID

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>EXTENSION</u>
1	42" Ø POLYPROPYLENE TILE	4,570 LF	\$80.00	\$365,600.00
2	36" Ø POLYPROPYLENE TILE	1,750 LF	\$65.00	\$113,750.00
3	30" Ø POLYPROPYLENE TILE	700 LF	\$47.00	\$32,900.00
4	24" Ø POLYPROPYLENE TILE	1,400 LF	\$43.00	\$60,200.00
5	48" Ø OUTLET	1 EACH	\$6,000.00	\$6,000.00
6	42" Ø POLYPROPYLENE TILE - ROAD CROSSING	180 LF	\$160.00	\$28,800.00
7	NEW JUNCTION STRUCTURES	5 EACH	\$5,000.00	\$25,000.00
8	PRIVATE TILE OR INTAKE CONNECTION	20 EACH	\$400.00	\$8,000.00
9	PRIVATE TILE LINE EXTENSIONS	1 LS	\$30,000.00	\$30,000.00
10	INTAKE, ROAD ROW	6 EACH	\$3,500.00	\$21,000.00
11	DISCONNECT AND CRUSH SUPPLEMENTAL TILE	6,697 LF	\$10.00	\$66,970.00
12	REMOVAL AND DISPOSAL OF MAIN TILE	7,200 LF	\$7.00	\$50,400.00
13	CLEANUP, SHAPING, AND SEEDING	1 LS	\$5,180.00	\$5,180.00
14	CCTV INSPECTION OF TILE - POST CONSTRUCTION	8,600 LF	\$2.00	\$17,200.00

Total Budgeted Construction Costs (PE PIPE): \$831,000

ALTERNATE BID PROJECT QUANTITIES

1A	42" 2000D RCP IN PLACE OF 42" POLYPROPYLENE	4,570 LF	\$45.00	\$205,650
2A	36" 2000D RCP IN PLACE OF 36" POLYPROPYLENE	1,750 LF	\$40.00	\$70,000
3A	30" 2000D RCP IN PLACE OF 30" POLYPROPYLENE	700 LF	\$18.00	\$12,600
4A	24" 2000D RCP IN PLACE OF 24" POLYPROPYLENE	1,400 LF	\$18.00	\$25,200
6A	42" 2000D RCP IN PLACE OF 42" POLYPROPYLENE	180 LF	\$45.00	\$8,100
DEDUCT 14	CCTV INSPECTION OF TILE - POST CONSTRUCTION	8,600 LF	-\$2.00	-\$17,200

Total Budgeted Construction Costs (RCP PIPE): \$1,135,350

	10% +/- Contingency	\$	103,450
	Professional Services Estimate (Base Bid)	\$	180,000
	Professional Services Estimate (Additional Construction Observation for Alternate Bid - Slower Construction)	\$	80,000

TOTAL \$1,498,800

	Landowner Share	County Share
Base Bid	\$ 761,900.60	\$ 69,099.40
Alternate Bid	\$ 290,805.00	\$ 13,545.00
Contingency	\$ 95,920.40	\$ 7,529.60
Professional Services (Base Bid)	\$ 165,033.00	\$ 14,967.00
Professional Services (Alternate Bid)	\$ 76,440.00	\$ 3,560.00
	\$ 1,390,099.00	\$ 108,701.00

**OPINION OF PROBABLE COST
MODIFICATION B - DRAINAGE DISTRICT NO. 22**

Date: January 2017

Hardin County, Iowa



BASE BID

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>EXTENSION</u>
1	30" Ø POLYPROPYLENE TILE	6,397 LF	\$47.00	\$300,659.00
2	24" Ø POLYPROPYLENE TILE	4,570 LF	\$43.00	\$196,510.00
3	CCTV INSPECTION OF ROADWAY CROSSING TILE	300 LF	\$5.00	\$1,500.00
4	30" Ø POLYPROPYLENE TILE - ROAD CROSSING	300 LF	\$100.00	\$30,000.00
5	24" Ø POLYPROPYLENE TILE - ROAD CROSSING	180 LF	\$90.00	\$16,200.00
6	NEW JUNCTION STRUCTURE	1 EACH	\$5,000.00	\$5,000.00
7	CONNECTION TO ROAD CROSSING TILE TO REMAIN	8 EACH	\$400.00	\$3,200.00
8	CONNECTION TO EXISTING STRUCTURE	3 EACH	\$800.00	\$2,400.00
9	PRIVATE TILE OR INTAKE CONNECTION	18 EACH	\$400.00	\$7,200.00
10	INTAKE, ROAD ROW	16 EACH	\$3,500.00	\$56,000.00
11	REMOVAL AND DISPOSAL OF SUPPLEMENTAL TILE	6,697 LF	\$7.00	\$46,879.00
12	REMOVAL AND DISPOSAL OF MAIN TILE	4,750 LF	\$7.00	\$33,250.00
13	CLEANUP, SHAPING, AND SEEDING	1 LS	\$4,308.00	\$4,308.00
14	CCTV INSPECTION OF TILE - POST CONSTRUCTION	11,447 LF	\$2.00	\$22,894.00

Total Budgeted Construction Costs (PE PIPE): \$726,000

ALTERNATE BID PROJECT QUANTITIES

1A	30" 2000D RCP IN PLACE OF 30" POLYPROPYLENE	6,397 LF	\$18.00	\$115,146
2A	24" 2000D RCP IN PLACE OF 24" POLYPROPYLENE	4,570 LF	\$18.00	\$82,260
4A	30" 2000D RCP IN PLACE OF 30" POLYPROPYLENE	300 LF	\$18.00	\$5,400
5A	24" 2000D RCP IN PLACE OF 24" POLYPROPYLENE	180 LF	\$18.00	\$3,240
DEDUCT 14	CCTV INSPECTION OF TILE - POST CONSTRUCTION	11,447 LF	-\$2.00	-\$22,894

Total Budgeted Construction Costs (RCP PIPE): \$909,152

10% +/- Contingency \$ 90,848
Professional Services Estimate (Base Bid) \$ 181,000
Professional Services Estimate (Additional Construction Observation for Alternate Bid - Slower Construction) \$ 50,000

TOTAL \$1,231,000

	Landowner Share	County Share
Base Bid	\$ 594,384.56	\$131,615.44
Alternate Bid	\$ 169,712.00	\$ 13,440.00
Contingency	\$ 76,354.44	\$ 14,493.56
Professional Services (Base Bid)	\$ 148,187.00	\$ 32,813.00
Professional Services (Alternate Bid)	\$ 46,331.00	\$ 3,669.00
	\$ 1,034,969.00	\$ 196,031.00

MODIFICATION C
2011 30-INCH & OLD 22-INCH TILE
REPLACEMENTS W/ PARTIAL OPEN DITCH

CONNECT OLD ALIGNMENT TO OPEN DITCH WITH 24-INCH

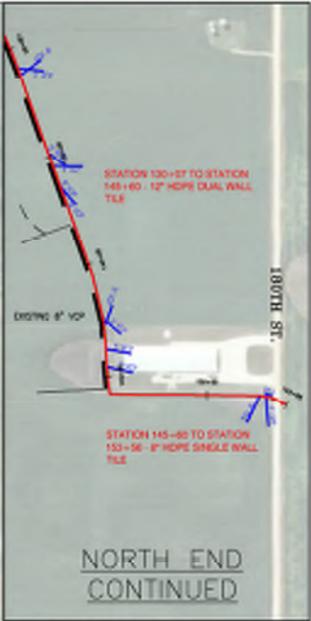
PERIODIC PLUG/COLLAPSE OF EXISTING TILE

24-INCH

30-INCH

REPLACE 30-INCH TILE IN PLACE

OPEN DITCH WITH ONE ROAD CROSSING



LEGEND:
 - NEWLY INSTALLED DISTRICT TILE
 - EXISTING DISTRICT TILE
 - CONNECTED TILE
 - APPROXIMATE EXISTING DISTRICT TILE, EXACT LOCATION UNKNOWN



NO.	REVISION	BY	DATE	NO.	REVISION	BY	DATE

CGA
 C:\paul\B-C\carter\Associates, Inc.
 15 East Main Street
 Marshalltown, Iowa 50158
 Ph 641-792-4700
 www.cgaconsultants.com

DESIGNED: [] DATE: []
 DRAWN: [] DATE: []
 CHECKED: [] DATE: []
 APPROVED: [] DATE: []

DRAINAGE DISTRICT 22
 HARDIN COUNTY, IOWA

IMPROVEMENT OPTIONS

PROJECT NO. 8712
 SHEET NO. 1

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**OPINION OF PROBABLE COST
MODIFICATION C - DRAINAGE DISTRICT NO. 22**

Date: January 2017

Hardin County, Iowa



BASE BID

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>EXTENSION</u>
1	30" Ø POLYPROPYLENE TILE	2,670 LF	\$47.00	\$125,490.00
2	24" Ø POLYPROPYLENE TILE	1,140 LF	\$43.00	\$49,020.00
3	OPEN DITCH CONSTRUCTION (EST AVG 10' DEEP)	3,425 LF	\$35.00	\$119,875.00
4	30" Ø POLYPROPYLENE TILE - ROAD CROSSING	120 LF	\$100.00	\$12,000.00
5	96" Ø CMP - ROAD CROSSING	60 LF	\$475.00	\$28,500.00
6	96" Ø CMP APRON	2 EACH	\$3,000.00	\$6,000.00
7	36" Ø OUTLET	1 EACH	\$1,800.00	\$1,800.00
8	30" Ø OUTLET	1 EACH	\$1,500.00	\$1,500.00
9	CONNECTION TO EXISTING STRUCTURE	1 EACH	\$800.00	\$800.00
10	EXTENSION OF PRIVATE TILE TO NEW ALIGNMENT	8 EACH	\$4,000.00	\$32,000.00
11	PRIVATE TILE OR INTAKE CONNECTION	5 EACH	\$400.00	\$2,000.00
12	INTAKE, ROAD ROW	4 EACH	\$3,500.00	\$14,000.00
13	REMOVAL AND DISPOSAL OF SUPPLEMENTAL TILE	2,790 LF	\$7.00	\$19,530.00
14	DISCONNECT AND CRUSH SUPPLEMENTAL TILE	3,907 LF	\$10.00	\$39,070.00
15	DISCONNECT AND CRUSH MAIN TILE	4,860 LF	\$10.00	\$48,600.00
16	CLEANUP, SHAPING, AND SEEDING	1 LS	\$14,955.00	\$14,955.00
17	CCTV INSPECTION OF TILE - POST CONSTRUCTION	3,930 LF	\$2.00	\$7,860.00

Total Budgeted Construction Costs (PE PIPE): \$523,000

ALTERNATE BID PROJECT QUANTITIES

1A	30" 2000D RCP IN PLACE OF 30" POLYPROPYLENE	2,670 LF	\$18.00	\$48,060
2A	24" 2000D RCP IN PLACE OF 24" POLYPROPYLENE	1,140 LF	\$18.00	\$20,520
4A	30" 2000D RCP IN PLACE OF 30" POLYPROPYLENE	120 LF	\$18.00	\$2,160
5A	96" RCP IN PLACE OF 96" CMP	60 LF	\$425.00	\$25,500
6A	96" RCP APRON IN PLACE OF 96" CMP APRON	2 EACH	\$1,500.00	\$3,000
7A	EXTEND 30" Ø RCP AS OUTLET	1 EACH	\$0.00	\$0
8A	EXTEND 24" Ø RCP AS OUTLET	1 EACH	\$0.00	\$0
DEDUCT 17	CCTV INSPECTION OF TILE - POST CONSTRUCTION	3930 LF	-\$2.00	-\$7,860

Total Budgeted Construction Costs (RCP PIPE): \$614,380

10% +/- Contingency	\$	61,620
Land/Easement Agreements (Estimated 8 acres @ \$15K/acre)	\$	120,000
Professional Services Estimate (Base Bid)	\$	130,000
Professional Services Estimate (Additional Construction Observation for Alternate Bid - Slower Construction)	\$	23,000

TOTAL \$949,000

	Landowner Share	County Share
Base Bid	\$ 446,821.75	\$ 76,178.25
Alternate Bid	\$ 59,520.00	\$ 31,860.00
Contingency	\$ 50,785.25	\$ 10,834.75
Land & Easements	\$ 120,000.00	\$ -
Professional Services (Base Bid)	\$ 111,065.00	\$ 18,935.00
Professional Services (Alternate Bid)	\$ 14,981.00	\$ 8,019.00
	\$ 803,173.00	\$ 145,827.00

**OPINION OF PROBABLE COST
MODIFICATION D - DRAINAGE DISTRICT NO. 22**

Date: January 2017

Hardin County, Iowa



BASE BID

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>EXTENSION</u>
1	18" Ø POLYPROPYLENE TILE	400 LF	\$35.00	\$14,000.00
2	OPEN DITCH CONSTRUCTION (EST AVG 10.5' DEEP)	5,930 LF	\$38.00	\$225,340.00
3	96" Ø CMP - ROAD CROSSING	60 LF	\$475.00	\$28,500.00
4	96" Ø CMP APRON	2 EACH	\$3,000.00	\$6,000.00
5	72" Ø CMP - ROAD CROSSING	120 LF	\$400.00	\$48,000.00
6	72" Ø CMP APRON	4 EACH	\$2,800.00	\$11,200.00
7	30" Ø OUTLET	2 EACH	\$1,500.00	\$3,000.00
8	24" Ø OUTLET	1 EACH	\$1,200.00	\$1,200.00
9	EXTENSION OF PRIVATE TILE TO NEW ALIGNMENT	10 EACH	\$4,000.00	\$40,000.00
10	REMOVAL AND DISPOSAL OF SUPPLEMENTAL TILE	2,790 LF	\$7.00	\$19,530.00
11	DISCONNECT AND CRUSH SUPPLEMENTAL TILE	3,907 LF	\$10.00	\$39,070.00
12	DISCONNECT AND CRUSH MAIN TILE	7,060 LF	\$10.00	\$70,600.00
13	CLEANUP, SHAPING, AND SEEDING	1 LS	\$22,760.00	\$22,760.00
14	CCTV INSPECTION OF TILE - POST CONSTRUCTION	400 LF	\$2.00	\$800.00

Total Budgeted Construction Costs (PE PIPE): \$530,000

ALTERNATE BID PROJECT QUANTITIES

1A	18" 2000D RCP IN PLACE OF 18" POLYPROPYLENE	400 LF	\$15.00	\$6,000
3A	96" RCP IN PLACE OF 96" CMP	60 LF	\$425.00	\$25,500
4A	96" RCP APRON IN PLACE OF 96" CMP APRON	2 EACH	\$1,500.00	\$3,000
5A	72" RCP IN PLACE OF 72" CMP	120 LF	\$250.00	\$30,000
6A	72" RCP APRON IN PLACE OF 72" CMP APRON	4 EACH	\$1,500.00	\$6,000
DEDUCT 14	CCTV INSPECTION OF TILE - POST CONSTRUCTION	400 LF	-\$2.00	-\$800

Total Budgeted Construction Costs (RCP PIPE): \$599,700

10% +/- Contingency	\$	60,000
Land/Easement Agreements (Estimated 14 acres @ \$15K/acre)	\$	210,000
Professional Services Estimate (Base Bid)	\$	130,000
Professional Services Estimate (Additional Construction Observation for Alternate Bid - Slower Construction)	\$	17,300

TOTAL \$1,017,000

	Landowner Share	County Share
Base Bid	\$ 418,935.40	\$ 111,064.60
Alternate Bid	\$ 5,200.00	\$ 64,500.00
Contingency	\$ 42,435.60	\$ 17,564.40
Land & Easements	\$ 210,000.00	\$ -
Professional Services (Base Bid)	\$ 102,758.00	\$ 27,242.00
Professional Services (Alternate Bid)	\$ 1,291.00	\$ 16,009.00
	\$ 780,620.00	\$ 236,380.00