

Freeborn County CD J-21 North Improvement

REPAIR AND IMPROVEMENT OF BRANCH A, LATERAL A-3, LATERAL A-5 AND LATERAL A-8 TILES TO COUNTY DITCH NO. J21 FREEBORN COUNTY, MINNESOTA.

County Ditch No. J21, (CD J21) was established in 1948, and consists of open ditch and tile. CD J21 outlets into CD-63 in the NW ¼ SW ¼ Section 5, Bancroft Township.

A separable part of CD J21 designated as Branch A and Laterals A-3, A-5 and A-8 Tiles have insufficient capacity, resulting in inundation of low depression areas during periods of moderate to heavy rainfall. Low-lying lands have subsided resulting in insufficient cover and inadequate outlets.

Branch A tile is undersized, shallow and frequently requires repair. Portions of the tile in the SE ¼ SE ¼, NE ¼ SW ¼ and the SE ¼ NW ¼ Section 1, Manchester Township have been replaced with dual wall tile but the repairs have been unsuccessful. Branch A tile crosses a 24 inch and 16 inch gas line in the SE ¼ Section 1, Manchester. The current vertical separation between the tile and gas lines is less than two feet. Lateral A-3, Lateral A-5 and Lateral A-8 tiles are undersized and lacks adequate depth. Lateral A-3 crosses a 24 inch gas line near the west line of Section 6, Bancroft Township

Viewers completed a re-determination of benefits on the Freeborn County CD J-21 drainage system in February of 2020. The following information is the Viewers report for the proposed north improvement.

Freeborn County CD J-21 North Improvement Viewers Report February 28, 2020 (Draft)

Valuation prior to drainage

Beginning land use, property value, and economic productivity have been determined with the consideration that the benefited properties within the watershed originally did not have an adequate outlet for artificial drainage.

- “A” – Standing water or cattails, wetland classification with economic productivity for agriculture purposes of \$0 per acre, and a market value of \$1,000 to \$2,000
- “B” – Seasonally flooded/pasture ground. Pasture classification with economic productivity of \$70 per acre based on grazing days and/or hay values, and a market value of \$2,500 to \$3,500.
- “C” – Wet subsoil – Generally farmable land with moderate crop potential, with annual economic productivity of \$459 per acre based upon average annual yield of 80% of optimum with \$335 production costs, and a market value of \$4,000 to \$5,000.
- “D” – Upland areas not needing artificial drainage and intermixed with wetter soils, with annual economic productivity of \$517 per acre based upon an average annual yield of 90% of optimum with \$335 production costs, and a market value of \$5,000 to \$6,000.

Valuation with NRCS recommended drainage

Potential land use, property value, and an increase in economic productivity, after public and private drainage have been installed as NRCS design standards as recommended in the Minnesota Drainage Guide, using current crop rotation, income, and expense:

- “A” – Drained slough area, medium classification land with economic productivity of \$517 per acre based upon average production of 90% of optimum with \$335 per acre production costs, and a market value of \$5,000 to \$6,000.
- “B” – Well drained ground, high land classification with economic productivity of \$528 per acre based upon average annual production of 92% of optimum with \$335 production costs, and a market value of \$6,000 to \$7,000.
- “C” – Well drained ground, highest land classification with economic productivity of \$545 per acre based upon average annual production of 95% of optimum with \$335 production costs, and a market value of \$6,500 to \$8,000.
- “D” – Well drained ground, high land classification with improved farm ability, with economic productivity of \$563 per acre based upon average production of 98% of optimum with \$335 production costs, and a market value of \$6,000 to \$7,000.

Utilizing these productive values, potential benefit values were determined for the system based upon a 25 year effective life with proper maintenance, private tile improvement cost were depreciated over the same 25 year period, and an allowance of 0.5% return on the system investment. A three year average County yield was used for the benefit value calculations along with an average sale price for the corn and beans.

Increased productivity

<u>Crop</u>	<u>Yield</u>	<u>Value</u>	<u>Income</u>	<u>%</u>	<u>Adjusted</u>
Corn	189.7	\$3.62	\$687	50%	\$343
Beans	55.2	\$8.36	\$462	50%	\$231
					\$574

Production costs

Corn	\$474 X 50% = \$237
Beans	\$195 X 50% = \$98
	\$335

Potential Benefit value

	<u>“A”</u>	<u>“B”</u>	<u>“C”</u>	<u>“D”</u>
	90% of \$574	92% of \$574	95% of \$574	98% of \$574
	\$517	\$528	\$545	\$563
Minus cost of production	<u>\$335</u>	<u>\$335</u>	<u>\$335</u>	<u>\$335</u>
Net income	\$182	\$194	\$211	\$228
Previous income	\$0	\$70	\$125	\$182
Increased income	\$182	\$124	\$86	\$46
Private tile costs	<u>\$56</u>	<u>\$31</u>	<u>\$27</u>	<u>\$18</u>
Annual increase	\$126	\$93	\$59	\$28

Capitalized for 25 years @ ½ %	\$2,959	\$2,173	\$1,386	\$655
% of potential Benefit	85%	88%	91%	95%
Reduced benefit Value (East 1,160.93 acres)	\$2,515	\$1,912	\$1,261	\$622
	15%	25%	35%	55%
Benefit Value Before Improvement (North 770.35 acres) (South 516.11 acres)	\$377	\$478	\$441	\$342

The potential benefit values have been reduced to reflect a less than optimum yield.

Petition for an Improvement

Two petitions for an improvement have been filed for Freeborn CD J-21. The Re-determination of Benefits is determining benefits as they are in February of 2020. (Without any improvement) If the improvements are implemented in the future, the benefits will be adjusted accordingly.

Summary

Freeborn County CD J-21 consists of 2,447.39 acres of farmland, roads, and building sites with benefits of \$1,940,282

- a. 2,390.09 acres of farmland and building sites in Freeborn County in Manchester and Bancroft Townships
- b. 57.30 acres of County, and Township roads
- c. 2,447.39 total acres

East 1,160.93 acres

Average land benefits, (reduced) over a 25 year period are **\$1,578** per acre

- a. A soil \$2,515
- b. B soil \$1,912
- c. C soil \$1,261
- d. D soil \$622

Building site benefits

- a. (Average of B + C + D soils) X 1.5 = **\$1,898**

Ponds, woodland, and non-benefited acres

- a. **\$0**

Pasture benefits

- a. (Average land benefit) X 0.5 = **\$789**

Road benefits

- a. Gravel roads, County or Township
(Average land benefit) X 1.0 = **\$1,578**
- b. Paved roads, County
(Average land benefit) X 1.5 = **\$2,366**

Tile benefits (East acres)

- a. A tile benefit was given for most County tile at a rate of \$2.00 per linear foot. This value was given because of the ease of access for private tile, and also for the drainage the County tile may provide. 6,460 feet of County tile, **\$11,600 of tile benefits**

Crop damages

Crop damages will be paid per acre on standing crops damaged by construction or repair on the County open ditch or County tile system as determined by the engineer or the Freeborn County Ditch Inspector.

North and South Improvement Acres

(North 770.35 acres)

(South 516.11 acres)

Average land benefits, (reduced) over a 25 year period are **\$410** per acre

- a. A soil \$377
- b. B soil \$478
- c. C soil \$441
- d. D soil \$342

Building site benefits

- a. 80% of east benefit value = **\$1,518**

Ponds, woodland, and non-benefited acres

- a. **\$0**

Pasture benefits

- a. (Average land benefit) X 0.5 = **\$205**

Road benefits

- a. Gravel roads, County or Township
(Average land benefit) 80% of east value = **\$1,262**
- b. Paved roads, County
(Average land benefit) 80% of east value = **\$1,893**

Tile benefits (Improvement acres)

- a. No tile benefit was given for the north and south improvement area. The tile is not working as designed and provides little to no benefit. 26,000 feet of County tile, **\$0 of tile benefits**
- b. If the improvement is approved the tile benefit will be \$2.00 per linear foot

Crop damages

Crop damages will be paid per acre on standing crops damaged by construction or repair on the County open ditch or County tile system as determined by the Engineer or the Freeborn County Ditch Inspector.

Land benefits, (East 1,160.93 acres) (over a 25 year period)

Before Improvement		After Improvement	
A soil	\$2,515	A soil	\$2,515
B soil	\$1,912	B soil	\$1,912
C soil	\$1,261	C soil	\$1,261
D soil	\$622	D soil	\$622

Land benefits, (North improvement area 770.35 acres) (over a 25 year period)

Before Improvement		After Improvement	
A soil	\$377	A soil	\$2,515
B soil	\$478	B soil	\$1,912
C soil	\$441	C soil	\$1,261
D soil	\$342	D soil	\$622

Freeborn County CD J-21 North Improvement (cost versus benefits)

The Engineer has estimated the project cost to be \$591,376. In accordance with Minnesota Statute 103E.215 Subdivision 6, the repair cost allocation for the project is 63.3%. (\$374,341) This repair allocation will be assessed to all landowners in CD J-21, based on the February 2020 Redetermination of Benefits. (2,447.39 acres) The improvement portion of the project is 36.7%. (\$217,035) This amount will be paid by the landowners in the north improvement area (770.35 acres) listed on the excel spreadsheet for the CD J-21 improvement.

North Improvement Benefits

\$1,067,672	After improvement benefits
\$297,670	Before improvement benefits (From the February 2020 Redetermination)
\$770,002	Increased benefits
\$217,035	Improvement cost
\$552,967	Difference (The benefits outweigh the cost of the project)

Benefits and damages statement

This report covers the redetermination for a previously constructed drainage system. The basis for determining benefits and damages is therefore, based upon a comparison of the conditions that would have existed prior to the County open ditch and County tile systems construction, with those that do exist with the drainage system in a reasonable state of repair. Supporting documentation for the analysis and conclusions of the report are contained in our files and are available for inspection. The figures stated herein are based on a full and fair comparison of all pertinent facts and information that the viewers were aware of at the time of this redetermination process. The following aids were used in this viewing process.

- Freeborn County online GIS parcel information site
- USDA web soil survey
- Google Earth aerial satellite photos
- Yield averages taken from USDA national agriculture statistics service
- Production costs taken from University of Minnesota FinBin
- Average commodity sale prices from local elevators
- Sales data from the Freeborn County Assessor office and website
- Visual inspection of each 40 acre parcel or less
- Consultation with Freeborn County Auditor / Treasurer and the Freeborn County ditch inspector

The Viewers determined that the lands affected by the drainage system are generally similar and that the following comments refer to all such tracts.

1. **Existing land use, property value and economic productivity:**

Land is presently used for building sites, roads, and for agricultural purposes. The property value is consistent with most agricultural land sales within Freeborn County. Agricultural lands are primarily used for the production of corn and soybeans. The land has good economic productivity when properly drained.

2. **Potential land use, property value and economic productivity from the drainage system:**

The drainage system has been in existence for many years and provides drainage for agricultural purposes. The property value is consistent with most agricultural land sales within Freeborn County. Land affected by the drainage system has the potential to produce above average yields.

3. **The benefits or damages from the drainage system:**

Benefits derived by lands affected by the drainage system are due to (A) Improved capacity to remove surface waters due to previous construction and maintenance of the County open ditch and County tile system, which results in an increase in the current market value of property; or (B) an increase in the potential for agricultural production as a result of the previous construction and continued maintenance of the drainage system; or (C) increased value of the property as a result of potential different land use.

4. There is no damage to any riparian rights.

5. There are no acres added to any tract or lot and there are no public waters, wetlands, and other areas not currently being cultivated, that are proposed to be drained in this proceeding.

6. There are no acres which before the drainage benefits could be realized would require a public waters work permit to work in public waters under 103G.245 to excavate or fill a navigable water body under United States Code, Title 33, Section 403, or a permit to discharge into waters of United States under United States Code, Title 33, Section 1344.

7. There are no acres being assessed for drainage of areas that would be considered conversion of a wetland under United States Code, Title 16, Section 3821, if the area was placed in agricultural production.

This report is respectfully submitted to the County Commissioners of Freeborn County by:

Mark Behrends _____

Robert M. Hansen _____

Joseph Mutschler _____

Submitted this 28th day of February 2020