AGENDA

PUBLIC HEARING ON COMPLETION OF CONTRACT ON REPAIRS TO MAIN TILE, OUTLET, AND WATERWAY MAIN TILE OF DRAINAGE DISTRICT 1, HARDIN COUNTY MARCH 7, 2018 AT 11:00 A.M.

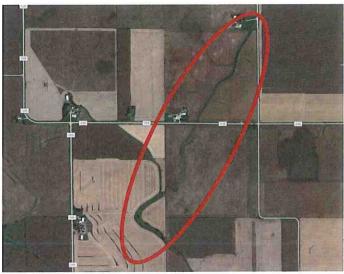
- 1. Open Meeting
- 2. Approve Agenda
- 3. Introductions/Attendance
- 4. Open Public Hearing
- 5. Verify Publication
 Published in the Eldora Herald Index on February 13, 2018
- 6. Explanation Of Project

Documents:

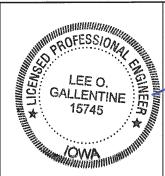
DD 1 COMPLETION REPORT 01-2018.PDF

- 7. Written Or Verbal Comments/Discussion
- 8. Damage Claims
- 9. Close Public Hearing
- Possible Action
 Approve Completion of Project
 Approve Final Pay Estimate
 Approve Damage Claims
- 11. Other Business
- 12. Adjourn Meeting





COMPLETION REPORT
ON REPAIRS TO
MAIN TILE, OUTLET,
AND WATERWAY
MAIN TILE OF
DRAINAGE DISTRICT 1
HARDIN COUNTY, IOWA



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

LOCALLENTINE, P.E. DATE

LICENSE NUMBER: 15745 MY LICENSE RENEWAL DATE IS DECEMBER 31, 2018 PAGES OR SHEETS COVERED BY THIS SEAL: SHOWN ON TABLE OF CONTENTS



OFFICE LOCATIONS

739 Park Avenue Ackley, IA. 50601 Phone: 641-847-3273 Fax: 641-847-2303 103 East State Street, Ste 430 Mason City, IA 50401 Phone: 641-423-1451 Fax: 641-423-1659 511 Bank Street Webster City, IA 50595 Phone: 515-832-1876 Fax: 515-832-1932

Completion Report on Repairs to Main Tile, Outlet, and Waterway Main Tile of Drainage District No. 1 Hardin County, Iowa

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Final Pay Estimate	App. B
Lien Waivers	App. C

Completion Report on Repairs to Main Tile, Outlet, and Waterway Main Tile of Drainage District No. 1 Hardin County, Iowa

PROJECT TIMELINE: The Hardin County Board of Supervisors, acting as District Trustees, requested Ryken Engineering to investigate and report concerning repairs and improvements of the existing main tile of Drainage District No. 1. As a result, Ryken Engineering generated an Engineer's Report dated August 9th, 2016 summarizing past improvements and repairs, investigating the necessity and feasibility of repairs to the existing main tile, and presenting opinion of construction costs associated with said repairs. A hearing concerning said report was conducted. As a result of the hearing, the Trustees authorized Ryken Engineering to proceed with completion of project plans and specifications for said repairs and proceed with a bid letting.

Ryken Engineering completed the authorized plans and specifications and a bid letting date of March 29, 2017 was set. The project was advertised and bids were received from qualified contractors. The following bids for polypropylene tile were received:

1. McDowell and Sons Contractors, Inc. of Iowa Falls, Iowa Bid = \$121,380.50

2. Gehrke, Inc. of Eldora, Iowa Bid = \$149,749.00

The District Trustees identified Gehrke, Inc. as the lowest responsible bidder for the repair to district facilities and awarded the project. The contract was signed on April 27, 2017. Construction activities were started on September 12, 2017. Weather and working conditions for this type of construction were favorable and the contractor worked until the main tile was repaired and the only work remaining was site cleanup and repair of the farmer's fence. This was achieved November 10, 2017 (approximately 2 weeks before the November 30, 2017 contract completion date).

PROJECT DEVIATIONS: - This project followed the authorized plans and specifications fairly well with only the following deviations (for reference, see as-built plans included in Appendix A):

- 1. During construction it was discovered that galvanized CMP was used at the main tile outlet instead of aluminized CMP as specified in the plans and specifications. This resulted in a decrease of \$200.
- 2. During construction, it was discovered that more spot repairs (polypropylene tile and concrete collars) needed be performed and an intake removed and replaced. This resulted in an increase of \$18,073.75
- 3. During construction, additional lengths of existing tile were removed in order to perform the additional spot repairs. This resulted in an increase of \$905.
- 4. During construction, additional private tile connections were encountered during spot repairs than planned. This resulted in an increase of \$600.
- 5. A reduced amount of CCTV was performed. This resulted in a decrease of \$20.
- 6. During construction, it was determined that traffic control was not needed as no repairs were performed in road right of way. This resulted in a decrease of \$500.
- 7. During construction, it was determined that the open ditch construction and seeding were extended 100' upstream to allow for a smoother transition with the existing ground. This resulted in an increase of \$4,100.
- 8. During construction, it was determined that the waterway cleanout and seeding were extended 100' to allow for a smoother transition with the existing ground. This resulted in an increase of \$1,195.

FINAL PROJECT COSTS: - The final project costs for construction (for reference, see final pay estimate included in Appendix B) and engineering (not including repair report) are estimated at \$206,938.80 which is approximately \$57,000 above those presented at the above mentioned hearing. These costs may vary depending upon any damage claims brought forth at the completion hearing. Pending no claims, the costs are as detailed below:

Project Bid by Contractor	\$	149,749.00
Change in CMP coating (Item #1 above)	-\$	200.00
Increased Bid Quantities (Item #2 above)	+\$	18,073.75
Increased Material Removal (Item #3 above)	+\$	905.00
Increased Private Tile Connections (Item #4 above)	+\$	600.00
Reduced CCTV Inspection (Item #5 above)	- \$	20.00
Removed Traffic Control (Item #6 above)	- \$	500.00
Increased Open Ditch Work (Item #7 above)	+\$	4,100.00
Increased Waterway Work (Item #8 above)	+\$	1,195.00
Engineering	+\$	33,036.05
TOTAL PROJECT COST	\$ 2	206,938.80

The total cost is above those contained in the above mentioned Engineer's Report. However, it should be noted that the amount of repair also exceeded that presented at the above mentioned hearing. It should be noted that the above costs do not include any administrative costs, legal costs, interest on construction warrants, or damage claims.

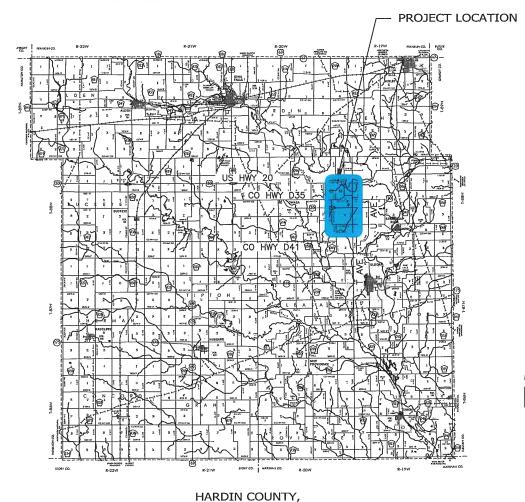
PENDING ITEMS: - As of the writing of this report, this project is complete (including punchlist items) in general accordance with the authorized plans and specifications and lien waivers for suppliers and subcontractors have been submitted by the general contractor (for reference see Appendix C). After the completion hearing, final payment needs to be authorized by the Trustees is shown on the final pay estimate. It is my recommendation that the project be accepted. I also recommend that the entire project be walked and reviewed just prior to the expiration of the contract warranty period for any warranty items that may need to be remedied by the contractor. It should be noted that if the Trustees decide to exercise this recommendation, there are no engineering fees included in the above Final Project Costs to cover this service.

MAIN TILE, OUTLET, AND WATERWAY REPAIRS DRAINAGE DISTRICT 1 HARDIN COUNTY, IOWA 2017 AS BUILT SHEET INDEX



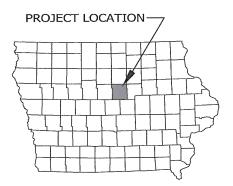
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NOTES:

- THE PLANS AND SPECIFICATIONS PREPARED BY RYKEN ENGINEERING SHALL GOVERN. ALL WORK SHALL COMPLY WITH THE DETAILS AND SPECIFICATIONS REFERENCED.
- 2. ALL ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON 2016 SURVEY. FOR CONVERSION TO OTHER PROJECT DATUMS, SEE "BENCHMARKS" ON PAGE 2.



SHEET NUMBER	SHEET TITLE		
1	COVER		
2	LEGEND NOTES ADDREVIATIONS VISUAL INDEX BENCHMARKS		
3	MAIN OPEN DITCH PLAN		
4	MAIN OPEN DITCH PROFILE		
5	HEADWALL PLAN		
6	WATERWAY PLAN & PROFILE		
7	MAIN TILE SPOT REPAIRS - PLAN & PROFILE		
8 .	DETAILS - SPOT REPAIRS		
9	DETAILS — SHEET PILE HEADWALL		
10	DETAILS — SHEET PILE HEADWALL		
14	TYPICAL SECTIONS		
	WATERWAY CROSS SECTIONS		
12	DD 1 WATERWAY STA 48:00 51:00		
- 13	DD-1 WATERWAY STA 52+00 - 55+00		
	DD 1 WATERWAY STA 56+00 59+00		
	DD 1 WATERWAY STA 60:00 63:00		
16 DD 1 WATERWAY STA 64+00 - 67+00			
17	DD 1 WATERWAY STA 68+00		
	MAIN OPEN DITCH CROSS SECTIONS		
18	MAIN OPEN DITCH STA 83+00 83+50		
10	MAIN OPEN DITCH STA 84+00 - 84+50		
20	MAIN OPEN DITCH STA 85+00 85+50		
21	MAIN OPEN BITCH STA 86+00 86+50		
.22	MAIN OPEN DITCH STA 87+00 87+50		
23 MAIN OPEN DITCH STA 88+00 88+50			
24	MAIN OPEN DITCH STA 89+00		

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF LOWA

LEE O. GALLENTINE, P.E.

P.E. LICENSE NUMBER: 15745 MY LICENSE RENEWAL DATE IS DECEMBER 31, 2018 PAGES OR SHEETS COVERED BY THIS SEAL: 1, 4,6,1

DRAWN BY: ZJS APPROVED BY: LOG REVISIONS:

DATE: 01/20/2017 PROJ. NO.: 6749

PLOTAG CADD/CDS/AS RUII T/6749—COVERASRUII DWG: 1/8/2018

IOWA VICINITY MAP



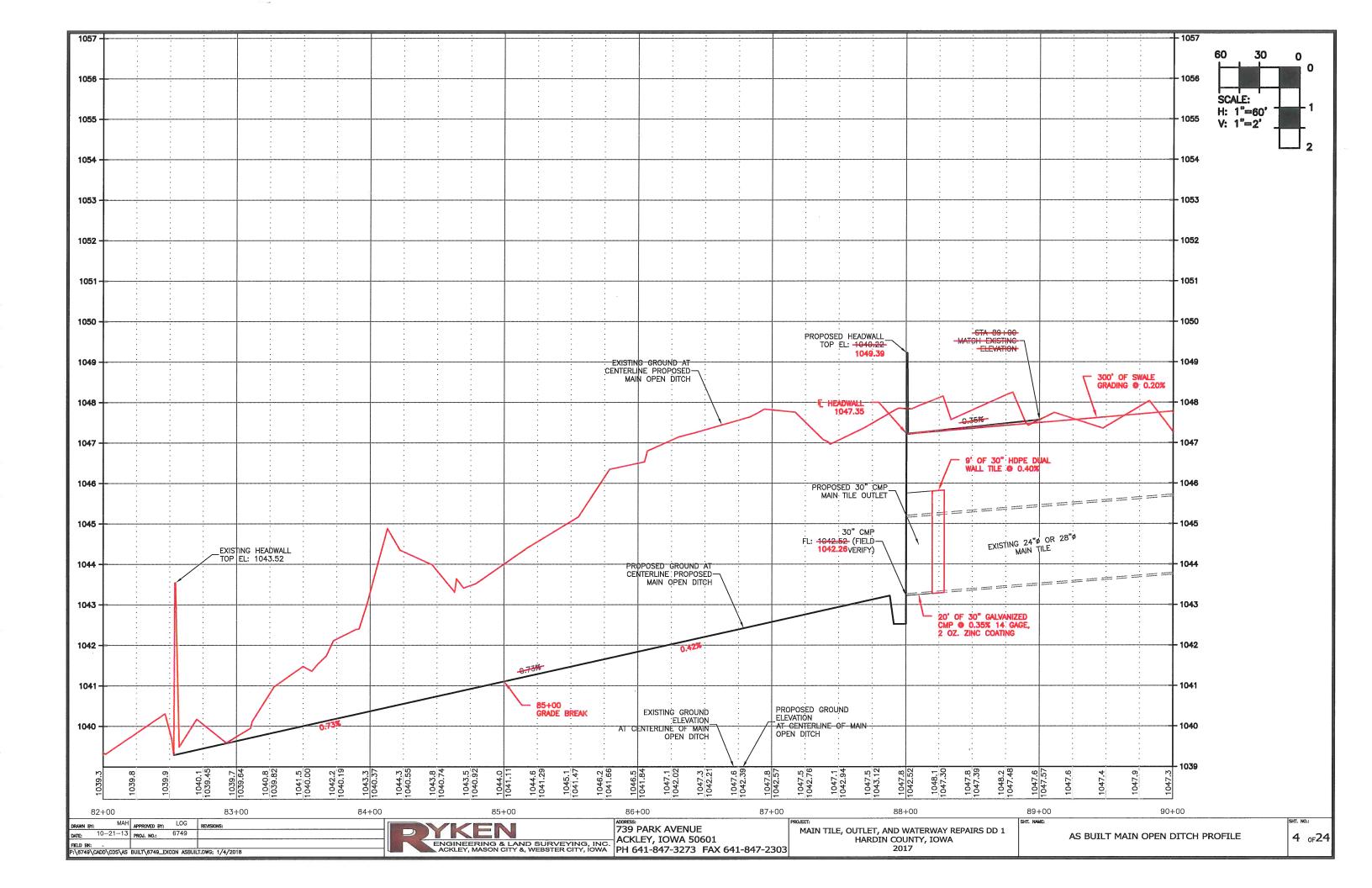
739 PARK AVENUE
- ACKLEY, IOWA 50601
- PH 641-847-3273 FAX 641-847-2303

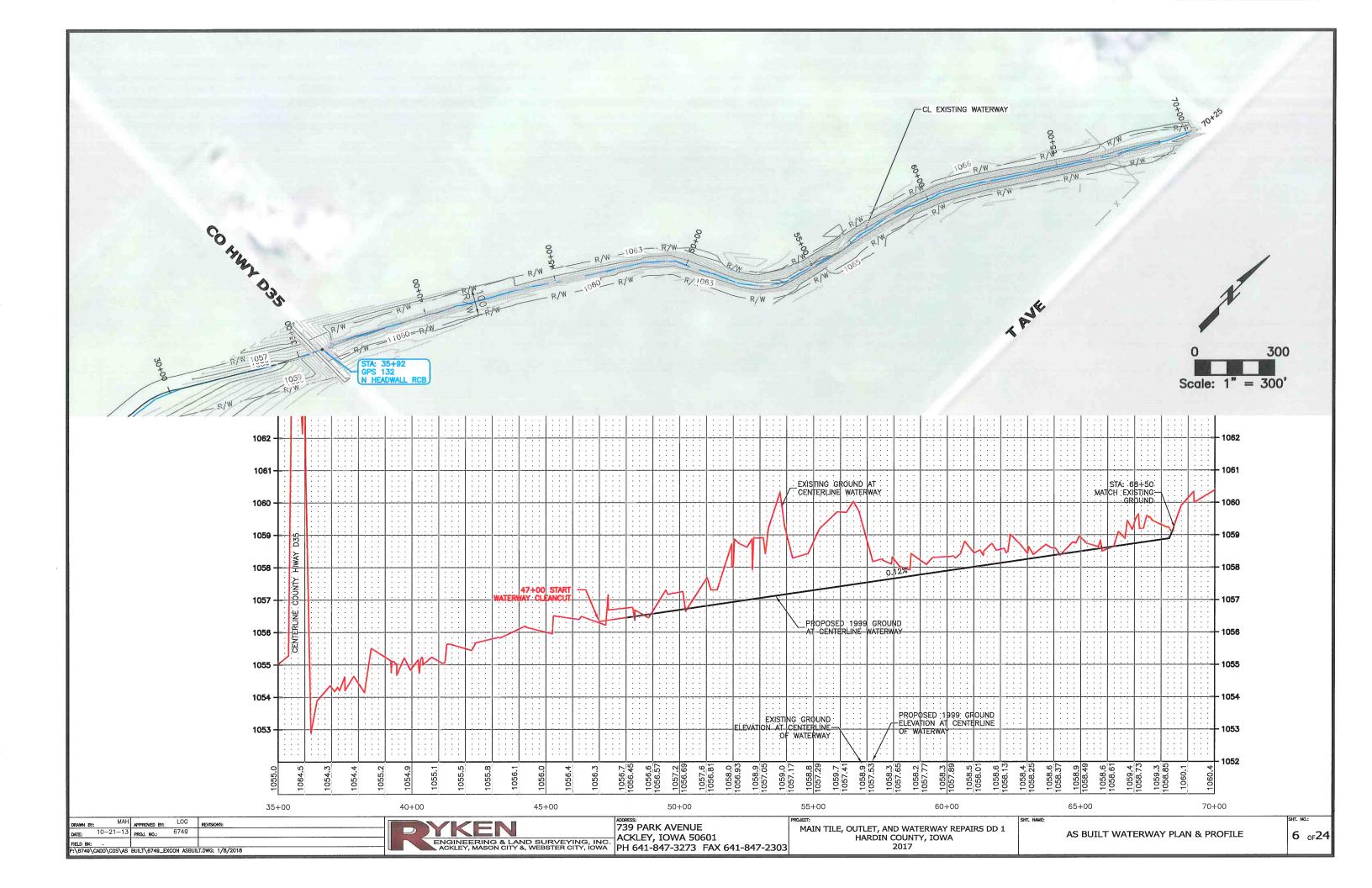
MAIN TILE, OUTLET, AND WATERWAY REPAIRS DD 1
HARDIN COUNTY, IOWA

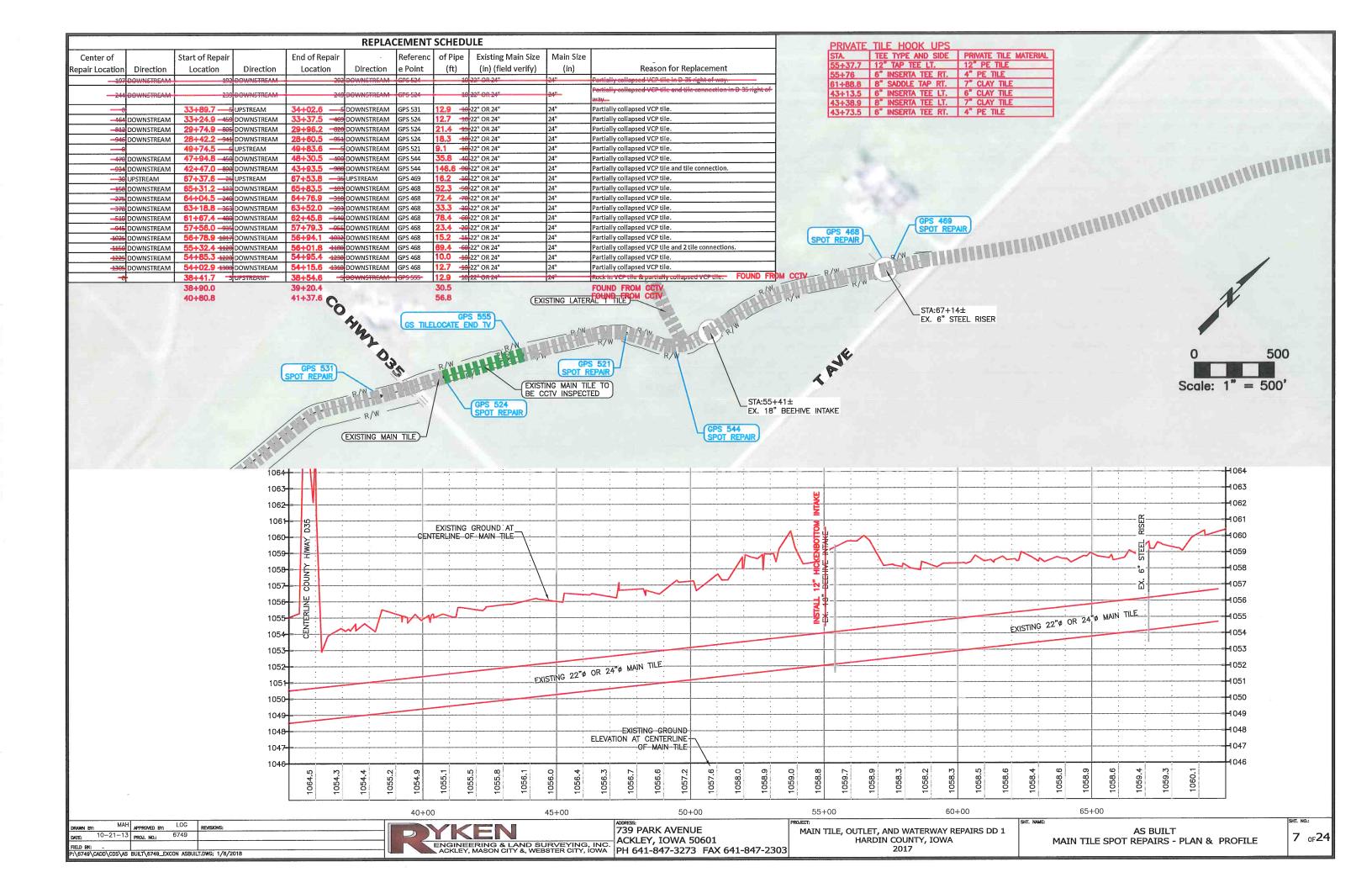
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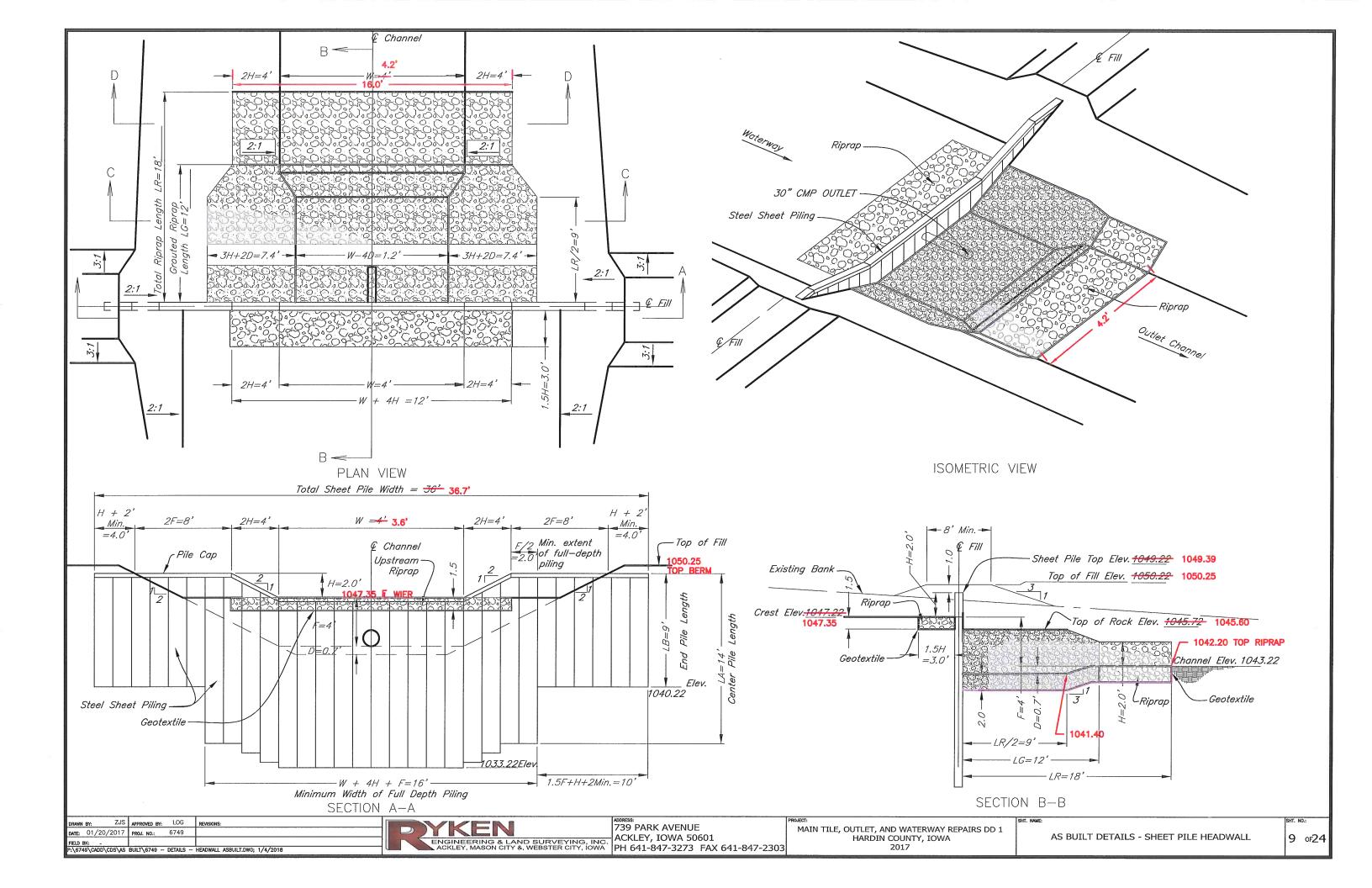
AS BUILT COVER SHEET

1 of 24



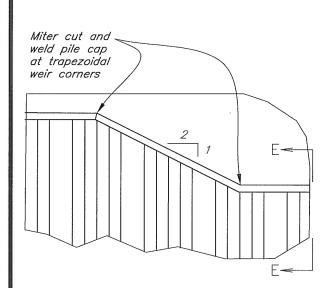






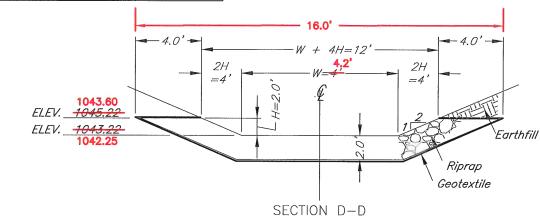
	SHEET PIL	E REQUIRE	EMENTS -	MINIMU	JM VALUE	S
	Basin	Full-Depth Pile	Side Pile	Pile	Section	Moment
Drop	Depth	Length	Length	Thickness	Modulus	of Inertia
F, ft	D, ft	LA, ft	LB, ft	t, inches	S, in ³ /ft	I, in ⁴ /ft
2	0.3	7.0	5.0	0.205	0.0	0.3
- 3	0.5	16.0	7.0	0.203	0.0	0.3
4	0.7	14.0	9.0	0.209	2.0	3.3
- 5	0.0	17.0	11.0	0.250	7.7	5.1
	1.0	22.0	11.0	0.250	8.2	20.1

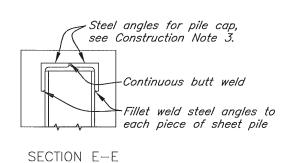
STRUCTURE DIMENSIONS		
Fall = F =	<i>4</i> - 5.2	ft
Weir Notch Height = H =	2	ft
Weir Crest, Channel Width = W =	/ 4.2	ft
Center Sheet Pile Length = LA = 1	4	ft
Side Sheet Pile Length = LB =	9	ft
DS Riprap Length = LR = 4	<i>&</i> 19.5	ft
Grouted Riprap Length = LG = 4	<i>2</i> 12.8	ft
Riprap Basin Depth = D = $\frac{\partial}{\partial x}$	7 0.8	ft
Est. tailwater at design storm = $TW = 2$.	6	ft

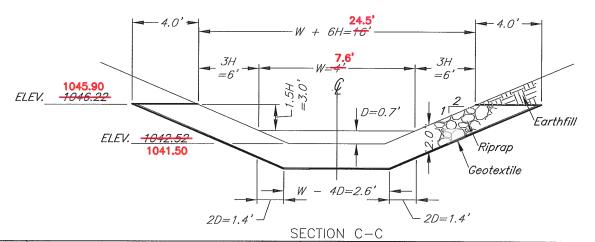


DOWNSTREAM RIPRAP AND GROUT REQUIREMENTS					
Drop	Total Riprap Length	Grouted Length			
F, ft	F, ft LR, ft				
2	10	9			
	43	9 1			
4	18	12			
- 5	22	75			
	20	10			

QUANTITY SUMM	MARY	
Materials	Quantity	Units
Full depth Sheet Piles,14_ft long	224	Sq. Ft.
Side Sheet Piles,9_ft long	180	Sq. Ft.
Angle Iron for pile cap	37	Lin. Ft.
Riprap	7.5	Cu. Yd.
Grouted Riprap	14	Cu. Yd.
Geotextile	33	Sq. Yd.







<u>NOTES</u>

CONSTRUCTION:

- 1. All riprap shall be IDOT Class E.
- Top of sheet pile shall be trimmed as needed to obtain elevations indicated and to remove any damage caused by driving.
- 3. Shop drawings shall be provided for proposed construction of pile cap.

DRAWN	BY:	ZJS	APPROVED BY:	LOG	REVISIONS:
DATE:	01	/20/2017	PROJ. NO.:	6749	
FIELD	BK:	_			
P:\67	49\C	ADD\CDS\AS	BUILT\ 6749 -	DETAILS -	HEADWALL ASBUILT DWG: 1/4/2018

DYKEN
ENGINEERING & LAND SURVEYING, INC ACKLEY, MASON CITY &, WEBSTER CITY, IOWA

739 PARK AVENUE ACKLEY, IOWA 50601 PH 641-847-3273 FAX 641-847-2303

MAIN TILE, OUTLET, AND WATERWAY REPAIRS DD 1 HARDIN COUNTY, IOWA 2017

AS BUILT DETAILS - SHEET PILE HEADWALL

SHT. NO.: 10 OF24

PAY ESTIMATE NO. 3 (FINAL)

MAIN TILE, OUTLET, AND WATERWAY

DRAINAGE DISTRICT 1

(PROJECT 6749 AND 6749.1) DATE: January 8, 2018

CONTRACTOR

Gehrke Inc. 1405 21st Ave. PO Box 228 Eldora, IA 50627 **OWNER**

17,390.27

Trustees of Drainage District #1 Hardin County Courthouse 1215 Edgington Ave., Suite 1 Eldora, Iowa 50627 **ENGINEER**

Ryken Engineering 739 Park Avenue Ackley, Iowa 50601

MAI	N BID			* . 11 1	** **	D . 1.1
Item		Estimated	** **	Installed	Unit	Extended
<u>No.</u>	<u>Description</u>	Quantity	<u>Unit</u>	Quantity	<u>Price</u>	<u>Price</u>
1*	24" Ø Polypropylene Tile	741	LF	741	\$ 86.25	\$ 63,911.25
2*	Type PC-2 Concrete Collar	43	EA	43	\$ 300.00	\$ 12,900.00
3*	Private Tile Connection	6	EA	6	\$ 300.00	\$ 1,800.00
4*	Tile Removal	1391	LF	1391	\$ 5.00	\$ 6,955.00
5^	30" Ø CMP Tile	20	LF	20	\$ 65.00	\$ 1,300.00
6	Sheet Pile Headwall	404	SF	404	\$ 41.00	\$ 16,564.00
7	Riprap	7.5	CY	7.5	\$ 70.00	\$ 525.00
8	Grouted Riprap	14	CY	14	\$ 165.00	\$ 2,310.00
9*	Open Ditch Construction and	8.5	STA	8.5	\$ 1,800.00	\$ 15,300.00
10*	Open Ditch Seeding	8.5	STA	8.5	\$ 250.00	\$ 2,125.00
11*	Waterway Cleanout	21.5	STA	21.5	\$ 1,025.00	\$ 22,037.50
12*	Waterway Seeding	21.5	STA	21.5	\$ 170.00	\$ 3,655.00
13	Seeding Warranty	1	LS	1	\$ 2,500.00	\$ 2,500.00
14*	Traffic Control	0	LS	0	\$ 500.00	\$ -
15*	CCTV Existing Tile	510	LF	510	\$ 2.00	\$ 1,020.00
16	Tree Removal	1	LS	1	\$ 20,000.00	\$ 20,000.00
17*	12" Hickenbottom Intake	1	EA	1	\$ 1,000.00	\$ 1,000.00

I have reviewed the work claimed to be completed by the Contractor as reflected above and recommend payment of to the Contractor.

Lee Gallentine, Project Engineer

TOTAL WORK COMPLETED TO DATE \$ 173,902.75

10% RETENTION \$
AMOUNT DUE LESS RETENTION \$ 173,902.75

PREVIOUISLY PAID \$ 156,512.48

AMOUNT DUE AT THIS TIME \$ 17,390.27



^{^ -} Approved as part of Change Order #1

^{* -} Approved as part of Change Order #2

515 289 1272

P.001 P.01/01

WAIVER OF LIEN

Date: 11/29/17 State of Iowa

Quick Supply,

I/We, the undersigned, have been employed by Gehrke Inc. P.O. Box 228, Eldora, Iowa 50627 to furnish labor and/or materials as described below for the construction, repair or reconstruction of the property or improvements to the property known as DD# 1, in Hardin County, State of Iowa.

Description	of work or	materials provide	ed: <u>Geote</u>	extile	
Amount \$	300.00	to date sh	own above.	Final X	Partial

For and in consideration of my/our employment to furnish said labor and/or materials. I/We do hereby waive and release any and all my/our rights, or claim of rights, to file and establish a mechanics lien against the above mentioned property, and improvements to the property, given to me/us under the provisions of the statutes and laws of the State of Iowa, relating to mechanic's liens on account of labor or materials, or both furnished, or which may be furnished by me/us for, and on, the above mentioned property and improvements to the same.

Executed at Des Moints, Iowa, this 6th day of Delember 2017. Accountant

State of Iowa	Date: <u>11/29/17</u>					
Williams Excavation,						
I/We, the undersigned, have been employed by Gehrke Inc. P.O. Box 228, Eldora, Iowa 50627 to furnish labor and/or materials as described below for the construction, repair or reconstruction of the property or improvements to the property known as <u>DD# 1</u> , in <u>Hardin County</u> , State of Iowa.						
Description of work or mater	rials provided: <u>CCTV</u>					
Amount \$ 850.00	to date shown above. Final X Partial					
materials. I/We do hereby we claim of rights, to file and est mentioned property, and impunder the provisions of the semechanic's liens on account may be furnished by me/us to improvements to the same.	ny/our employment to furnish said labor and/or vaive and release any and all my/our rights, or stablish a mechanics lien against the above provements to the property, given to me/us statutes and laws of the State of Iowa, relating to of labor or materials, or both furnished, or which for, and on, the above mentioned property and					
Bull Wol	Title					
JESSICA SCHIPPER COMMISSION NUMBER 73093 MY COMMISSION EXPIRES:						

State of Iowa Date: 11/29/17 Lakeside Construction, I/We, the undersigned, have been employed by Gehrke Inc. P.O. Box 228, Eldora, Iowa 50627 to furnish labor and/or materials as described below for the construction, repair or reconstruction of the property or improvements to the property known as <u>DD# 1</u>, in <u>Hardin County</u>, State of Iowa. Description of work or materials provided: Seeding Amount \$ 4570.00 to date shown above. Final X Partial ___ For and in consideration of my/our employment to furnish said labor and/or materials. I/We do hereby waive and release any and all my/our rights, or claim of rights, to file and establish a mechanics lien against the above mentioned property, and improvements to the property, given to me/us under the provisions of the statutes and laws of the State of Iowa, relating to mechanic's liens on account of labor or materials, or both furnished, or which may be furnished by me/us for, and on, the above mentioned property and improvements to the same. Executed at forest City Iowa, this 1 day of Dec 2017.

President

DEC/01/2017/FRI 06:52 PM Midwest Pipe Supply

FAX No. 6414233805

P.001 P. 001/001

WAIVER OF LIEN

State of Iowa	Da	te: <u>11/</u>	/29/17

Midwest Pipe Supply,

I/We, the undersigned, have been employed by Gehrke Inc. P.O. Box 228, Eldora, Iowa 50627 to furnish labor and/or materials as described below for the construction, repair or reconstruction of the property or improvements to the property known as DD# 1, in Hardin County, State of Iowa.

Description of	of work or mate	rials provided:	Pipe & Fittings	49
Amount \$	628,00	to date shown at	pove. Final X	Partial

For and in consideration of my/our employment to furnish said labor and/or materials. I/We do hereby waive and release any and all my/our rights, or claim of rights, to file and establish a mechanics lien against the above mentioned property, and improvements to the property, given to me/us under the provisions of the statutes and laws of the State of Iowa, relating to mechanic's liens on account of labor or materials, or both furnished, or which may be furnished by me/us for, and on, the above mentioned property and improvements to the same.

Executed at Clear Lake, Iowa, this 1 day of December 2017.

Mindul Pace Secretary/Officer

Date: <u>11/29/17</u>

State of Iowa

Gehrke Quarries,	
I/We, the undersigned, have been employed by Gehrke Inc. P.O. Box 228, Eldora, Iowa 50627 to furnish labor and/or materials as described below for the construction, repair or reconstruction of the property or improvements to the property known as $\underline{DD\#1}$, in $\underline{Hardin\ County}$, State of Iowa.	
Description of work or materials provided: Rock	
Amount \$6588.53 to date shown above. Final X Partial	
For and in consideration of my/our employment to furnish said labor and/or materials. I/We do hereby waive and release any and all my/our rights, or claim of rights, to file and establish a mechanics lien against the above mentioned property, and improvements to the property, given to me/us under the provisions of the statutes and laws of the State of Iowa, relating to mechanic's liens on account of labor or materials, or both furnished, or which may be furnished by me/us for, and on, the above mentioned property and improvements to the same.	
Executed at Eldora, Iowa, this 29 th day of Navember 2017. Signature Title	/
<i>//</i>	

T-163 P0001/0001 F-494

WAIVER OF LIEN

State of Iowa	· · · · · · · · · · · · · · · · · · ·	Date: 11/29	<u> </u>
Contractor Solutions,			
I/We, the undersigned, has Eldora, Iowa 50627 to furthe construction, repair or the property known as DD	nish labor and/or reconstruction of	materials as describe the property or impi	d below for
Description of work or ma	terials provided: _	Sheeting/Angle Iro	1
. Amount \$ 5275.60.	to date shown	above. Final <u>X</u> P	artial
For and in consideration of materials. I/We do hereby claim of rights, to file and mentioned property, and is under the provisions of the mechanic's liens on accour may be furnished by me/u improvements to the same Executed at Dlamov	y waive and releast establish a mecha mprovements to the statutes and law not of labor or maters for, and on, the estatutes.	se any and all my/our enics lien against the the property, given to is of the State of Iowa erials, or both furnish above mentioned pro	rights, or above me/us a, relating to ed, or which operty and

Date: 11/29/17

State of Iowa

Concrete Inc.,
I/We, the undersigned, have been employed by Gehrke Inc. P.O. Box 228, Eldora, Iowa 50627 to furnish labor and/or materials as described below for the construction, repair or reconstruction of the property or improvements to the property known as $\underline{DD\# 1}$, in $\underline{Hardin\ County}$, State of Iowa.
Description of work or materials provided: Concrete
Amount \$ 6051.97 to date shown above. Final X Partial
For and in consideration of my/our employment to furnish said labor and/or materials. I/We do hereby waive and release any and all my/our rights, or claim of rights, to file and establish a mechanics lien against the above mentioned property, and improvements to the property, given to me/us under the provisions of the statutes and laws of the State of Iowa, relating to mechanic's liens on account of labor or materials, or both furnished, or which may be furnished by me/us for, and on, the above mentioned property and improvements to the same. Executed at Marshallan, Iowa, this day of Dec. 2017.

State of Iowa	Date: <u>11/29/17</u>
Brown Supply Co.,	
Eldora, Iowa 50627 to furthe construction, repair or	ave been employed by Gehrke Inc. P.O. Box 228, nish labor and/or materials as described below for reconstruction of the property or improvements to