AGENDA REGULAR DRAINAGE MEETING October 30, 2019 8:30 AM

- 1. Open Meeting
- 2. Approve Agenda
- 3. Approve Minutes
 - Regular Meeting October 23, 2019
- 4. Approve Claims For Payment Claims with pay date of 11/01/2019.

Documents:

PAYABLES-DRAINAGE PUBLICATION 11-1-19.PDF

5. Discuss W/ Possible Actions, Wind Turbine Ordinance/Drainage Utility Permit Language Request for clarification in language regarding Wind Turbine Ordinance and Drainage Utility Permit Application.

Documents:

EMAIL RE DAMAGES LANGUAGE FOR WIND TURBINE INSTALLATION 10-22-19.PDF UTILITY PERMIT APPLICATION ACROSS DRAINAGE DISTRICT.PDF

6. DD 9 - Discuss W/ Possible Action

Ron Sailer responded to our request for an easement through his property.

Documents:

RON SAILER RESPONSE 10-29-19.PDF

7. Update - IRUA Correspondance

Update - Letter from Davis Brown Law to IRUA

Documents:

LETTER TO IRUA ATTORNEY FRANK SMITH 10-25-19 .PDF

8. Discuss W/ Possible Action - IRUA Invoices

Discuss tabled issue of payment method of invoices for IRUA issues, with report from Smith on potential minimum assessment on all DD's.

Documents:

2019-10-24 LIST OF PARCELS FOR MIN ASSESSMENT DRAFT.PDF

Discuss W Possible Action - Set Bid Date For Open Ditch Brush Control
 Set bid date for 2020 Open Ditch Bid Brush Control, suggested bid due date; December

18, 2019. Previous 2016 bid's due date was December 21, 2016.

Documents:

OPEN DITCH SPRAYING NOTICE TO CONTRACTORS 2019 DRAFT.DOCX DRAINAGE DITCH SPRAYING.XLSX OPEN DITCH BRUSH CONTROL BIDS.XLSX

- DD 25 Update WO #1 On RR Crossing Update provided by Mike Richards
- 11. Other Business
- 12. Adjourn Meeting



Description	Vendor	Amount
DD 102 Wetlands Consult, and attend meeting.	The Davis Brown Law Firm	880.00
DD 9 - Email w/ Lee possible easement vs annex	The Davis Brown Law Firm	25.00

Total Regular Payables: 880.00

Total Stamped Warrants: 25.00

10/28/2019 4:07:19 PM Page 1 of 1

Denise Smith

From: Denise Smith

Sent: Tuesday, October 22, 2019 12:48 PM

To: Jessica Sheridan

Subject: RE: Wind Turbine Ordinance

Attachments: Utility Permit Application Across Drainage District.pdf

Hi Jessica,

Attached is our Utility Permit Application, which may answer your questions on language. I agree, it does look like that language needs to be more thorough. I would like direction from the BOS would like in regards to language and if this application/process is the one they would like use for the wind turbines (at least on the Drainage side).

I will put this topic on our agenda for next Wednesday's meeting, we usually meet at 8:30, and I will keep you posted should that change. Maybe it would be best to have that discussion with you there, so you can answer any questions they may have and vice versa.

Thank you, Denise



From: Jessica Sheridan <JSheridan@hardincountyia.gov>

Sent: Tuesday, October 22, 2019 10:44 AM **To:** Denise Smith dsmith@hardincountyia.gov

Subject: Wind Turbine Ordinance

Hi Denise,

I am working on amending our existing wind turbine ordinance. As part of the ordinance, it addresses damages that might happen to drainage systems which stem from construction, operation, or maintenance of the wind turbines.

This is how it is currently worded:

The applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of the WECS.

I feel like something more should be put in place to guarantee the repair of the systems. Would you like to add something to this which requires that the applicant attend a drainage meeting and sign an agreement for repair of the systems?

Let me know what you think.

Thanks!



JESSICA SHERIDAN, REHS/RS
ENVIRONMENTAL HEALTH SPECIALIST & ZONING ADMINISTRATOR

HARDIN COUNTY 1215 EDGINGTON AVENUE ELDORA, IOWA 50627 ENVIRONMENTAL HEALTH & ZONING DEPARTMENT OFFICE: 641.939.8135 CELL: 641.849.7372

HTTP://WWW.HARDINCOUNTYIA.GOV



HARDIN COUNTY DRAINAGE DISTRICT UTILITY PERMIT APPLICATION

Applicant:				
• •	Company Name			
	Address			
	City	State	Zip	
Applicant Contact:	Name		(Phone	
	Email			
Utility Type:				
Drainage District(s) Cro	ossed:			
Facilities Crossed (spec	cific tile, open ditch):			
Description of Work:				
(Location plan of proposed utility must be attached.)				
operate and maintain utattached Requirements	tilities on, over, acros for Construction On	approval is hereby requested fo ss or beneath established Hardi n, Over, Across or Beneath Estab revocation of the permit by the H	n County Drain blished Draina	ge District. Failure to comply
Applicant Signa	ature		Date	
Submit Form and Locat	tion Plan To:	Hardin County Auditor's Or Attn: Drainage Clerk 1215 Edgington Ave, Suite Eldora, IA 50627 Fax (641) 939-8225 drainage@hardincountyia.	e 1	For Office Use Only
Application Approval:				TO OTHER DESCRIPTION
By: Board of Supervisor C	Chairman, Acting as Dr	rainage District Trustee	ate:	
	APPROVE	O PERMIT #:		_

REQUIREMENTS FOR CONSTRUCTION ON, OVER, ACROSS OR BENEATH ESTABLISHED DRAINAGE DISTRICT

Upon issuance of a permit for utilities on, over, across or beneath established Hardin County Drainage Districts, the applicant shall be governed by these requirements and shall comply with all conditions contained herein.

- 1. The Applicant shall furnish the Drainage District, or its representative, plats showing the exact location of the proposed construction. If it is found that such locations are in conflict with the present or proposed facilities and that a more desirable location is possible, the Applicant shall review such possible alignment changes. **No construction is to commence with the drainage facility without an approved application.**
- 2. Applicant shall comply with Iowa One-Call requirements prior to commencing any work.
- 3. The Drainage District shall provide Applicant access to maps or other information regarding the location of all known drainage district facilities so that reasonable care may be taken by Applicant to avoid un-necessary damage to said drainage district facilities.
- 4. The Applicant shall hold the Drainage District harmless from any damage that may result to the Drainage District facility because of the construction or maintenance of the utility, and shall reimburse the Drainage District for any expenditures that the Drainage District may have to make on said Drainage District facilities resulting from Applicant's construction and installation of utilities, or their subsequent repair or modification.
- 5. The Applicant shall take all reasonable precaution during the construction of said utility to protect and safeguard the lives and property of the public and adjacent property owners and shall hold the Drainage District harmless from any damages or losses that may be sustained by adjacent property owners on account of such construction operations. Further, Applicant agrees to replace, repair or reimburse all damages to private property occasioned by Applicant's installation of subsequent modification or repairs.
- 6. The Drainage District assumes no responsibility for damages to the Applicants property occasioned by any construction or maintenance operation of said Drainage District facilities, subsequent to Applicants installation.
- 7. A copy of a certificate of insurance naming the County/Drainage District as additional insured for their permit work shall be provided to the County Auditor prior to installation. The limit of liability under the insurance policy shall not be less than \$1,000,000 per occurrence.
- 8. The Applicant agrees to give the Drainage District twenty-four (24) hours (Saturday and Sunday excluded) notice of its intention to commence construction on any lands within the jurisdiction of the Drainage District. Said notice shall be made in writing to the County Auditor or to the designated Drainage District representative.
- The Applicant agrees to place permanent, visible markers or monuments at locations where utility crosses
 Drainage District facilities. These monuments or markers shall identify the owners name, address and phone
 number.
- 10. The Drainage District Trustees may appoint a representative to inspect and approve all construction across Drainage District facilities as part of this permit. All compensation, wages, mileage and other expenses for this representative will be paid by the Applicant. It will be the responsibility of the Applicant to make all contacts with private parties (adjacent owners/operators) to determine the location of private drainage facilities. Said representative will also inspect all crossing of Drainage District facilities and may, if required, observe the crossing of private drainage facilities, and shall have the authority to require the Applicant to excavate and expose the crossing of any Drainage District facility where the representative believes it prudent to visually examine Applicants crossing of the Drainage District facility. Further, said representative has the authority to suspend construction and installation by the Applicant within any Drainage District jurisdiction by verbal order to the contractor at the site and a telephone call to Applicants contact person listed on page 1 within six (6) hours of the verbal order.



- 11. The construction and maintenance of Applicants installation shall be carried on in such a manner as to not interfere with or interrupt the function of said Drainage District facilities without the express written consent of the Drainage District Representative. In the event it becomes necessary to temporarily stop the flow of water, the following shall be completed by the Applicant:
 - a. If the crossing involves a tile line, the replacement of tile with approved materials, in the manner approved by the Drainage Districts designated representative, shall be performed as rapidly as possible. If the approved method of repair is impossible and the volume of water flowing in the tile is sufficient to create the possibility of crop loss or property damage, the Contractor will be permitted to temporarily block the tile line to prevent the flow of this tile water into the pipeline, or tile line ditch. In the event this tile line is so temporarily blocked, the Contractor will be expected to provide sufficient pumping equipment to pump the impounded tile water across the construction ditch to the undisturbed tile line. Such temporary blockages of said Drainage District tile lines will be removed a rapidly as possible and any tile repairs caused by this blockage will be immediately repaired at the Applicants expense.
 - b. If the crossing involves an open ditch that is carrying sufficient flow of water to make it necessary to place a temporary dam across said open ditch, such temporary dams may be constructed only upon approval from the Drainage District designated representative. The maximum elevation of this impounded water shall be determined by the designated Drainage District representative and all excess water must be allowed to flow across the construction ditch through either a closed metal culvert pipe or by pumping. All temporary dam structures are to be removed as soon as the crossing is completed. The construction and removal of these dams shall be in such a manner that the smooth and efficient function of the drainage ditch is not impaired, with all costs and damages borne by Applicant.
- 12. The Applicant will at any time subsequent to the commencement of construction, and at Applicants sole expense, reconstruct or replace its installation as may be necessary to conform to new grade or alignments resulting from maintenance or construction operations by the Drainage District in connection with any of its drainage facilities. Applicant agrees to do this within forty-five (45) days of receipt of written request from the Drainage District, or such longer time period as the Drainage District may specify, without cost to the Drainage District. Such reconstruction or realignment of Applicants improvements shall be made in accordance with and approved by the Drainage District or its designated representative. If the Applicant is unable to comply within the time period specified above, the Drainage District may cause the work to be done and the Applicant will pay the cost thereof upon receipt of a statement of such costs.
- 13. CROSSING OF OPEN DITCH FACILITIES. Utility crossings shall be constructed as follows, as directed by the designated representative of the Drainage District:
 - a. Passage of installation in a horizontal plane five feet (5') below design grade of drainage ditch, as established by the Drainage District representative.
 - b. The above depth to extend to a point two (2) times the design base width of ditch either side of centerline of drainage ditch (measured along the centerline of utility) unless the existing base width is greater than the design bases width. If the existing base width is greater than the design with, the depth is to extend to a point two (2) times the existing width.
 - c. The rate of slope for transition from normal utility laying depth of crossings of drainage ditches shall not be steeper than 4:1.
 - d. If such ditch crossings occur at points of outlets of Drainage District or private tile lines or within twenty-five feet (25') of said outlets, such outlets must be relocated to a point not less than twenty-five feet (25') from such crossings. Such relocations shall be at the expense of the Applicant and as directed by the representative of the Drainage District.



- 14. CROSSING OF DRAINAGE DISTRICT TILE LINES. Utility crossings shall be constructed as follows, as directed by the designated representative of the Drainage District:
 - a. All proposed installations must be placed under the existing Drainage District tile lines. These requirements may be waived only upon the review by and approval of the designated representative of the Drainage District. Such waiver must be in writing.
 - b. A minimum of one foot (1') clearance below existing Drainage District facilities must be maintained.
 - c. At all crossings of Drainage District tile lines with the proposed utility, one of the following must be used:
 - i. Replace Drainage District tile with reinforced concrete pipe of same or larger diameter than existing tile. Concrete pipe to be 2,000 D strength (lowa Department of Transportation approved) with standard tongue and groove joints. Pipe to have a minimum of three (3) bolt-type connectors at each joint.
 - ii. Replace Drainage District tile with cathodic protected corrugated metal pipe. Diameter of corrugated metal pipe to be a minimum of two inches (2") larger than outside diameter of tile line being replaced. (Specifications regarding gage, cathodic protection and other details to be subject to review and approval.)
 - iii. Dual wall plastic with specific approval of Drainage District representative.
 - iv. Bore new utility installation; maintain existing tile in an undisturbed state.
 - d. The length of tile to be replaced by any of the above alternates is as follows:
 - i. Eight-inch (8") tile and smaller: Six feet (6') either side of centerline of proposed installation, measured at right angles to the centerline of installation.
 - ii. Ten inch (10") tile and larger: Ten feet (10') either side of centerline of proposed installation, measured at right angles to the centerline of installation.
 - e. At all crossings of Drainage District tile lines where the Drainage District and private tile lines are damaged by the construction, maintenance or repair of Applicants installation shall be repaired as directed by the Drainage Districts designated representative.
- 15. This permit is subject to existing regulations and statutes of the State of Iowa and future regulations, which may be promulgated or enacted.
- 16. This application is subject to revocation by Hardin County, if in its judgment it is necessary for legitimate purposes. In such event, written notice shall be provided to permit holder.
- 17. Applicant agrees to pay all other legitimate costs, fees and expenses associated with its crossing of the Drainage District facility, including but not limited to, publication costs, engineering costs and legal service costs. Said costs will be paid within thirty (30) days of the mailing of the statements to the Applicant.
- 18. Applicant agrees to provide a copy of as-built plan of the utility route and location, showing route changes that may have taken place during construction.
- 19. Applicant agrees to include a copy of these requirements to all bidding specifications; or if the construction and installation contract has been let by the time this permit is approved, Applicant agrees to provide a copy of these requirements to the contractor and to advise them that they are bound by the terms of these requirements.

Denise Smith

From: Ron Sailer <rgsace1020@gmail.com>
Sent: Monday, October 28, 2019 9:02 PM

To: Denise Smith
Cc: Ron Sailer
Subject: easement

I'm willing to sign the easement as long as I can connect on to it. I'm unsure when I would be able to make it over to Eldora, my current responsibilities at work along with upcoming holiday seasons, make it unlikely during regular hours. Can we do this via email?

Ron Sailer





MikeRichards@davisbrownlaw.com phone: 515-246-7986 Des Moines Office

October 25, 2019

Sent via e-mail to: franksmith@franksmithlawoffice.com

Frank Smith Frank Smith Law Office 4215 Hubbell Avenue Des Moines IA 50317

Hardin County Drainage District Utility Permitting Process and Conditions Re:

Dear Mr. Smith:

I represent the Hardin County Drainage Districts and its Board of Trustees (collectively as "Trustees"). On October 1, 2018, I sent a letter to the Iowa Regional Utilities Association (IRUA) regarding their failure to comply with drainage utility permitting requirements pursuant to Iowa Code section 468.186. You responded to my letter on October 5, 2018 indicating that you planned to meet with your client to discuss the contents of my letter. You also requested copies of certain documents, which my office sent to you by letter dated October 10, 2018.

It has come to the Trustees' attention that IRUA has again committed violations of permits granted to them by the Trustees. The failures include but are not limited to a failure to obtain proper locates, failure to inspect the tile after repairs are completed, failure to pay all costs of any reconstruction, relocation, modification, or reinstallation of the drainage or levee district's facility which may be necessary as a result of construction of the installation for which the easement was granted, and other such failures. These are the same violations cited in my October 1, 2018 letter.

Iowa Regional Utilities Association is hereby put on notice that it must immediately cease and desist any and all conduct which is in violation of the permitting process and conditions established pursuant to Iowa Code section 468.186.

In addition, the Trustees would like to schedule a meeting with the IRUA. As the Trustees would like an attorney from my office present, you should plan to attend the meeting as well. Please provide me with some dates of availability.

#3116599

DAVIS BROWN KOEHN SHORS & ROBERTS P.C.

Frank Smith October 17, 2019 Page 2

The Trustees reserve any and all claims and causes of action against Iowa Regional Utilities Association related to these matters, and this correspondence shall not be deemed a waiver of any rights.

Very truly yours,

DAVIS, BROWN, KOEHN, SHORS & ROBERTS, P.C.

Michael C. Richards

meril

cc: Denise Smith

DD# (Trustee-Orange;) (Inactive-Gray)	Sub or Lateral	PARCELS
1	334 11 200000	109
2		
3	20.0	
	Div 1 Div 2	
	Div 3	
4		
4	Main	
4	Lat 2	
4	Lat 3	•
4	Lat 4	
4	Lat 5	•
4	Lat 6 Lat A	
4	Lat B	•
4	Lat C	•
5		
6		75
7		. 95
	Div 1	. 19
8	Div 2	. 44
9		38
10		. 80
11		133
	Main	25
	Lat A	
	Lat B	
13	Lat C	
14		l 27
15		34
16		
17		21
18		
18	Main Lat 1	
	Lat 2	
	Lat 3	
18	Lat 4	
	Lat 5A	
	Lat 5B	
	Lat 6	22
19		. 32 89
21		. 60
22		- 59
23		18
24		25
25		168
26		. 435
26	Lat 2	•

26 Lat	
27	20
28	15
29	26
30	
31	34
32	25
33	
34	
34 Lat	
34 Lat	
34 Lat	t 65
35	
36	47
37	36
38	46
39	
40	12
41	46
42	33
43	18
44	32
45	
46	22
48	281
48 Lat	
49	50
50I(Su	ub of DD 3)
	<mark>ub of DD 3)</mark> 18
51	18
51 52	18 146
51 52 54	18
51 52 54 55	18 146 45
51 52 54 55 55 Div	18 146 45 v 1
51 52 54 55 55 Div	18 146 45 v 1 v 1/Lat 2
51 52 54 55 55 55 Div 55 Div 55 Div	18 146 45 v 1 v 1/Lat 2 v 2
51 52 54 55 55 55 Div 55 Div 55 Div 55 Div	18 146 45 v 1 v 1/Lat 2 v 2 v 2/Lat 6 & 6A
51 52 54 55 55 55 Div 55 Div 55 Div 55 Div 55 Div	18 146 45 V 1 V 1/Lat 2 V 2/Lat 6 & 6A V 2/Lat 33G
51 52 54 55 55 55 Div 55 Div 55 Div 55 Div 55 Div 55 Div 55 Div	18 146 45 v 1 v 1/Lat 2 v 2 v 2/Lat 6 & 6A v 2/Lat 33G v 3 787
51 52 54 55 55 55 Div 55 Div 55 Div 55 Div 55 Div 55 Div 55 Div 55 Div	18 146 45 v 1 v 1/Lat 2 v 2 v 2/Lat 6 & 6A v 2/Lat 33G v 3 v 3/Lat 9 56
51 52 52 54 55 55 Div 5	18 146 45 V 1 V 1/Lat 2 V 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A 23
51 52 52 54 55 55 Div	18 146 45 V 1 V 1/Lat 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A V 3/Lat 9C 8
51 52 52 54 54 55 Div	18 146 45 V 1 V 1/Lat 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A V 3/Lat 9C V 3/Lat 10 18 146 146 15 17 18 18 146 18 18 146 18 18 146 18 18 146 18 18 11 18 11 18 11 18 11 18 11 18 11 11
51 52 52 54 54 55 55 Div 56	18 146 45 V 1 V 1/Lat 2 V 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A V 3/Lat 9C V 3/Lat 10 18 146 146 146 146 145 146 146 146 146 146 146 146 146 146 146
51 52 54 54 55 55 55 55 55 55 55 55 55 55 55	18 146 45 V 1 V 1/Lat 2 V 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A V 3/Lat 9C V 3/Lat 10 18 146 146 146 146 145 146 146 146 146 146 146 146 146 146 146
51	18 146 45 V 1 V 1/Lat 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A V 3/Lat 9C V 3/Lat 10 169 V 1
51	18 146 45 V 1 V 1/Lat 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A V 3/Lat 9C V 3/Lat 10 131 169 V 1
51 52 54 54 55 55 55 55 55 55 55 55 55 55 55	18 146 45 V 1 V 1/Lat 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9C V 3/Lat 10 131 169 V 1 33 91
51	18 146 45 V 1 V 1/Lat 2 V 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A V 3/Lat 9C V 3/Lat 10 131 169 V 1 33 91 38
51 52 54 55 55 55 55 55 55 55 55 55	18 146 45 v 1 v 1/Lat 2 v 2 v 2/Lat 6 & 6A v 2/Lat 33G v 3 v 3/Lat 9 v 3/Lat 9A v 3/Lat 9C v 3/Lat 10 131 169 v 1 33 91 38 13
51 52 54 55 55 55 55 55 55 55 55 55	18 146 45 v 1 v 1/Lat 2 v 2 v 2/Lat 6 & 6A v 2/Lat 33G v 3 v 3/Lat 9 v 3/Lat 9A v 3/Lat 9C v 3/Lat 10 169 v 1 33 91 38 13 ub of DD 3)
51	18 146 45 V 1 V 1/Lat 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A V 3/Lat 9C V 3/Lat 10 131 169 V 1 33 91 38 13 Ub of DD 3)
51	18 146 45 V 1 V 1/Lat 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A V 3/Lat 9C V 3/Lat 10 131 169 V 1 33 91 38 13 Jub of DD 3)
51	18 146 45 V 1 V 1/Lat 2 V 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9 V 3/Lat 9C V 3/Lat 10 169 V 1 33 91 38 13 Ub of DD 3) Ub of DD 3) Ub of DD 3)
51	18 146 45 V 1 V 1/Lat 2 V 2/Lat 6 & 6A V 2/Lat 33G V 3 V 3/Lat 9 V 3/Lat 9A V 3/Lat 9C V 3/Lat 10 131 169 V 1 33 91 38 13 Jub of DD 3)

69		11
70		103
70 Orig Lat 1		
70 Orig Lat 2		
70 Orig Lat 3		
70 Orig Lat 4		
70 Lat 1		
70 Lat 2		
70 Lat 3		
70 Lat 4		
70 Lat 5		
70 Lat 6		
70 Lat 7		
70 Lat 8		
70 Lat 9		
70 Lat 10		
70 Lat 11		
70 Lat 12		
70 Lat 13		
70 Lat 14		
70 Lat 15		
70 Lat 16		
70 Lat 17		
70 Lat 18		
70 Lat 19		
70 Lat 20		
72		76
73		24
74		15
76		
77		12
78		35
79		10
80		17
81		16
82		89
83		16
85		16
86		104
	Several	
	Lat 1	15
90		
91		
92		
93		29
94		26
95		49
97		
98		
99		14
100		17
101	(Sub of DD 3)	
102		55
103	(Sub of DD 3)	

108 108 109 110 110	104		
109 23 110 110 Ex 110 Main 110 Lat 1 111 (Sub of DD 3) 113 114 116 119 47 120 Ext of DD 5 64 121 53 122 12 123 165 123 124 29 125 15 127 19 128 13 129 9 130 Ext 2 131 132 132 133 135 135 135 136 136 136 136 136 136 136 136 136 136			14
110 110 110 110 110 110 110 110 111			
110 EX 110 Main 110 Lat 1 110 Lat 1 111 Lat 1 111 Lat 1 111 Lat 1 113 Lat 1 La			23
110 Main 110 Lat 1			
110 Lat 1 111 (Sub of DD 3) 113 114 116 116 119 120 Ext of DD 5 64 121 122 123 165 123Lat 1 124 125 127 128 130 130 Ext 2 131 130 130 Ext 2 133 136 137 138 (Sub of DD 3) 139 140 144 145 148 148 148 148 148 148 148 148 148 148			
111 (Sub of DD 3) 113 114 114 116 119 120 Ext of DD 5 64 121 122 122 123 123 125 123 Lat 1 124 29 125 127 128 130 130 Ext 1 130 Ext 2 133 136 136 137 138 (Sub of DD 3) 139 140 144 144 145 144 145 146 144 147 148 148 148 148 148 148 148 148 148 148			
113 114 116 119 47 120 Ext of DD 5 64 121 53 122 122 123 135 130 Ist 1 129 128 129 129 130 130 Ext 1 131 142 132 133 133 130 Ext 2 1331 135 136 137 138 (Sub of DD 3) 139 140 142 143 144 145 146 148 148 148 Sub 1 147 16 148 148 Sub 1 149 155 Lat 2 155 Lat 2 155 Lat 3 155 Lat 5 154 4 41			
114 116 119 119 47 120Ext of DD 5 64 121 53 122 123 165 123Lat 1 124 29 125 127 19 128 130 129 9 130 130Ext 1 8 130Ext 2 131 133 22 134 135 135 136 137 138 (Sub of DD 3) 139 140 141 142 141 143 144 145 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 88 147 146 95 152 Main 95 152 Lat 3 152 Lat 3 152 Lat 3 155 Lat 3			
116			
119			
120 Ext of DD 5			47
121			
122			
123			
123 Lat 1 124 29 125 15 127 19 128 13 129 9 130 Ext 1 13 130 Ext 2 131 132 133 134 135 136 137 138 (Sub of DD 3) 139 9 140 142 141 145 146 148 148 (Sub of DD 3) 150 152 Lat 1 152 Lat 2 152 Lat 5 154 155 154 144 145			
124 125 125 127 128 128 130 129 130 130 Ext 1 131 42 132 133 134 135 135 136 137 138 (Sub of DD 3) 139 140 142 141 143 144 145 146 144 145 146 148 Sub 1 148 Sub 1 148 Sub 1 148 Sub 1 149 (Sub of DD 3) 150 150 152 Lat 1 152 Lat 2 152 Lat 3 155 Lat 5 154 155 154 141			
125			29
127			
128			
129 130 130 130 Ext 1	128		13
130 Ext 1 8 131 Ext 2 42 132 Ext 33 22 134 Ext 34 Ext 34 23 135 Ext 34 Ex	129		9
130 Ext 2 131 132 133 134 135 23 136 137 138 (Sub of DD 3) 139 9 140 142 143 444 145 146 147 148 Sub 1 149 (Sub of DD 3) 150 33 152 Lat 1 152 Lat 2 152 Lat 3 152 Lat 3 152 Lat 5 154 41 155 17			
131 42 132 22 134 22 135 26 137 26 137 38 (Sub of DD 3) 139 9 140 133 142 11 143 486 144 486 144 886 144 886 144 886 144 886 147 166 148 Sub 1 62 149 (Sub of DD 3) 150 33 152 Main 95 152 Lat 1 152 Lat 2 152 Lat 3 152 Lat 3 152 Lat 5 154 41 155			8
132 133 134 135 23 136 137 138 (Sub of DD 3) 139 140 140 143 142 11 143 144 145 145 146 147 148 148 148 Sub 1 149 (Sub of DD 3) 150 152 Main 152 Lat 3 152 Lat 3 152 Lat 3 152 Lat 5 154 141	130	Ext 2	
133 22 134 35 23 135 26 137 36 26 137 38 (Sub of DD 3) 139 9 140 13 142 11 143 486 144 486 144 88 145 147 16 148 Sub 1 62 149 (Sub of DD 3) 150 33 152 Main 95 152 Lat 1 152 Lat 3 152 Lat 3 152 Lat 3 152 Lat 5 154 41 155 41			42
134 135 23 136 26 137 138 (Sub of DD 3) 139 9 140 142 11 143 144 145 145 146 148 148 148 Sub 1 148 Sub 1 149 (Sub of DD 3) 150 152 Main 152 Lat 1 152 Lat 2 152 Lat 3 152 Lat 3 152 Lat 3 152 Lat 5 154 141 141 141 141 141 141 141 141 14			
135 23 136 26 137 26 138 (Sub of DD 3) 9 140 13 142 11 143 486 144 486 145 88 147 16 148 30b 1 62 149 (Sub of DD 3) 62 150 33 152 Lat 1 95 152 Lat 2 152 Lat 3 152 Lat 3 152 Lat 3A 152 Lat 5 41 155 17			22
136 26 137 138 (Sub of DD 3) 139 9 140 13 142 11 143 486 144 486 145 88 147 16 148 148 Sub 1 62 149 (Sub of DD 3) 33 150 33 152 Lat 1 95 152 Lat 2 152 Lat 3 152 Lat 3 152 Lat 3A 152 Lat 5 41 155 17			
137 138 (Sub of DD 3) 139 9 140 133 142 11 143 486 144			
138 (Sub of DD 3) 9 139 9 140 13 142 11 143 486 144 486 145 88 147 16 148 62 149 (Sub of DD 3) 62 150 Main 95 152 Lat 1 95 152 Lat 2 95 152 Lat 3 95 152 Lat 3 41 152 Lat 5 41 155 17			26
139 9 140 13 142 11 143 486 144			
140 13 142 11 143 486 144 486 145 88 147 16 148 16 149 (Sub of DD 3) 62 149 (Sub of DD 3) 33 150 33 152 Main 95 152 Lat 1 95 152 Lat 2 152 Lat 3 152 Lat 3A 152 Lat 5 154 41 155 17			0
142 11 143 486 144 486 145 88 147 16 148 62 149 (Sub of DD 3) 33 150 33 152 Main 95 152 Lat 1 95 152 Lat 2 95 152 Lat 3 152 Lat 3 152 Lat 5 41 155 17			
143 486 144 486 145 88 147 16 148 62 149 (Sub of DD 3) 33 150 33 152 Main 95 152 Lat 1 95 152 Lat 2 152 Lat 3 152 Lat 3A 41 155 17			
144 145 146 148 148 148 149 (Sub of DD 3) 150 152 Main 152 Lat 1 152 Lat 2 152 Lat 3 152 Lat 3 152 Lat 3 154 155 17			
145 146 88 147 16 148 62 149 (Sub of DD 3) 33 150 33 152 Main 95 152 Lat 1 95 152 Lat 2 95 152 Lat 3 95 152 Lat 5 41 155 17			480
146 88 147 16 148 148 Sub 1 62 149 (Sub of DD 3) 33 150 33 152 Main 95 152 Lat 1 95 152 Lat 2 95 152 Lat 3 95 152 Lat 5 41 155 17			
147 16 148			QQ
148 148 Sub 1 62 149 (Sub of DD 3) 33 150 33 152 Main 95 152 Lat 1 95 152 Lat 2 95 152 Lat 3 95 152 Lat 3 95 152 Lat 3 95 152 Lat 3 95 154 41 155 17			
148 Sub 1 149 (Sub of DD 3) 150 33 152 Main 95 152 Lat 1 152 Lat 2 152 Lat 3 152 Lat 3 152 Lat 5 154 41			10
149 (Sub of DD 3) 150 33 152 Main 95 152 Lat 1 152 Lat 2 152 Lat 3 152 Lat 3A 152 Lat 5 154 41 155 17			62
150 33 152 Main 95 152 Lat 1 152 Lat 2 152 Lat 3 152 Lat 3A 152 Lat 5 154 41 155 17			02
152 Main 95 152 Lat 1 152 Lat 2 152 Lat 3 152 Lat 3A 152 Lat 5 154 41 155 17			33
152 Lat 1 152 Lat 2 152 Lat 3 152 Lat 3A 152 Lat 5 154 41 155 17			
152 Lat 2 152 Lat 3 152 Lat 3A 152 Lat 5 154 41 155 17			
152 Lat 3 152 Lat 3A 152 Lat 5 154 41 155 17			
152 Lat 3A 152 Lat 5 154 41 155 17			
154 41 155 17			
155 17	152	Lat 5	
156 (Sub of DD 3)			17
	156	(Sub of DD 3)	

158 27 159 15 160 13 161 19 162 36 165 27 165 165 27 165 1		
159 15 160 13 161 161 17 162 36 165 37 36 36 36 36 36 36 36	157	27
160 13 161 162 36 165 365 27 165 Lat 1 1 165 Lat 2 1 165 Lat 3 166 Main 109 166 Open 166 Lat 2 166 Lat 3 166 Lat 4 166 Lat 5 166 Lat 5 166 Lat 5 167 27 168 169 21 168 169 21 168 169 21 168 169 169 169 169 169 169 169 169 169 169		
161 19 162 36 36 36 165 27 165 27 165 21 27 165 21 27 165 21 27 27 27 27 27 27 27		
162 36 165 27 165 281 1 165 281 1 165 281 2 165 281 2 165 281 3 166 Main 109 166 Open 166 Main 160 281 2 166 281 2 166 281 2 166 281 2 166 281 2 2 2 2 2 2 2 2 2		
165 Lat 1 165 Lat 2 165 Lat 2 165 Lat 3 165 Main 160 Main 160 Qpen 166 Qpen 166 Lat 1 166 Lat 2 166 Lat 3 166 Lat 3 166 Lat 4 166 Lat 3 166 Lat 4 166 Lat 5 167 168 169 21 8ig 4 Lat 1 8ig 4 Lat 1 8ig 4 Lat 2 8ig 4 Lat 3 81 81 Quat C 8ig 4 Lat B 8ig 4 Lat C 8ig 4 Lat D 8ig 4 Lat E 8ig 4 Main 169 Lat E 8ig 4 Main Drain-Wilke 169 Big 4 Upper Main Drain 170 H-F 1 Lat 1 171 H-F 1 Main 171 H-F 1 Main 171 H-F 1-S3 172 H-F 4-53 173 H-F 4-53 174 H-F 4-53 175 H-H 1-103 176 H-H 1-103 177 H-H 1-104 178 H-H 1-104 179 H-H 1-104 170 H-H 1-105 170 H-H 1-104 170 H-H 1-104 170 H-H 1-105 170 H-H 1-104 170 H-H 1-105 1		
165 Lat 1 165 Lat 2 165 Lat 3 166 Main 109 166 Open 166 Lat 1 166 Lat 1 166 Lat 1 166 Lat 3 166 Lat 3 166 Lat 4 166 Lat 5 167 67 168 169 169 18iq A Lat 1 18ig 4 Lat 2 18ig 4 Lat 4 18ig 4 Lat 4 18ig 4 Lat C 18ig 4 Lat C 18ig 4 Lat C 18ig 4 Lat C 18ig 4 Main 52 18ig 4 Upper Main Drain 18 H+F 1 Natin 18 H+F 1 Add'1 18 H+F 3-47 18 H+F 3-75 19 H+H 1-103 19 H+H 3-110 Main Tile 19 H+H 1-104 19 H+H 1-104 10 H+H 3-110 Main Tile 11 H+H 10 Main Open 18 H+H 1-102 19 H+H 1-104 10 H+H 1-104 10 H+H 1-104 11 H+G-222 11 H+H 118-232 11 H+H 118-232 11 H+H 118-232 11 H+H 118-232 11 H+H 116-244 Main 15 H+H 16-294 Main 16 H+H 16-294 Main		
165 Lat 2 166 Main 166 Open 166 Open 166 Lat 1 166 Lat 2 166 Lat 2 166 Lat 3 166 Lat 2 166 Lat 2 166 Lat 2 166 Lat 3 166 Lat 3 166 Lat 4 166 Lat 5 167 168 46 169 21 Big 4 Lat 1 Big 4 Lat 2 Big 4 Lat 3 Big 4 Lat 3 Big 4 Lat A Big 4 Lat A Big 4 Lat C Big 4 Lat C Big 4 Lat E Big 4 Wain Drain-Wilke Big 4 Upper Main Drain H-F 1 Total H-F 1 Lat 1 H-F 347 H-F 4-53 H-F 5-75 H-H 1-103 H-H 2-104 H-H 3-110 Main Tile H-H 3-110 Main Tile H-H 3-22 H-H 13-232 H-H 118-232 Div 2 H-H 116-294 Main H-H 164-294 Main		
165 Lat 3 166 Main 169 Open 166 Open 166 Lat 1 166 Lat 2 166 Lat 3 166 Lat 3 166 Lat 4 166 Lat 5 167 67 67 168 46 169 21 18iq 4 Lat 1 18iq 4 Lat 2 18iq 4 Lat 2 18iq 4 Lat 3 18iq 4 Lat 4 18iq 4 Lat 8 18iq 4 Lat B 18iq 4 Lat C 1		
166 Main 160 Open 166 Lat 1 166 Lat 1 166 Lat 2 166 Lat 3 166 Lat 3 166 Lat 4 166 Lat 5 167 67 168 46 169 21 160 21 160 2		
166 Open 166 Lat 1 166 Lat 2 166 Lat 2 166 Lat 3 166 Lat 3 166 Lat 4 166 Lat 5 167 67 168 46 169 21 169		
166 Lat 1 166 Lat 2 166 Lat 3 166 Lat 4 166 Lat 5 167 67 188 46 169 21 Big 4 Lat 1 Big 4 Lat 2 Big 4 Lat 3 Big 4 Lat 3 Big 4 Lat 4 Big 4 Lat 6 Big 4 Lat B Big 4 Lat C Big 4 Lat D Big 4 Lat E Big 4 Main Drain-Wilke Big 4 Upper Main Drain H-F 1 Total H-F 1 Total H-F 1 Main H-F 1 Add'l H-F 3-75 H-H 1-103 H-H 2-104 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 18-232 Div 1 H-H 18-232 Div 1 H-H 18-232 Div 2 H-H 18-244 Main H-H 164-294 Lat 1		
166 Lat 2 166 Lat 3 166 Lat 4 166 Lat 5 167 168 169 21 8		•
166 Lat 3 166 Lat 4 166 Lat 5 167 168 169 21 8ig 4 Lat 1 8ig 4 Lat 2 8ig 4 Lat 3 81 81 Big 4 Lat 4 8ig 4 Lat A 8ig 4 Lat C 8ig 4 Lat D 8ig 4 Lat D 8ig 4 Lat E 8ig 4 Main Prain-Wilke 8ig 4 Warin Drain-Wilke 8ig 4 Warin Drain H-F 1 Total H-F 1 Main H-F 2 21 H-F 3-47 H-F 3-55 H-H 1-103 H-H 2-104 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 18-232 H-H 118-232 Div 1 H-H 118-232 Div 2 H-H 118-244 Lat 1		
166 Lat 4 166 Lat 5 167 168 169 21 169 21 18	166	Lat 2
166 Lat 5 167 168 169 169 21 Big 4 Lat 1 Big 4 Lat 2 Big 4 Lat 3 Big 4 Lat 4 Big 4 Lat A Big 4 Lat C Big 4 Lat D Big 4 Lat E Big 4 Main Drain-Wilke Big 4 Main Drain-Wilke Big 4 Main Drain-Wilke Big 4 Main Drain-Wilke Big 5 Main Drain Drain H-F 1 Total H-F 1 Lat 1 H-F 1 Main H-F 1 Add'l H-F 2 21 H-F 3-47 H-F 4-53 H-F 5-75 H-H 1-103 H-H 1-103 H-H 2-104 H-H 3-110 Main Tile H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 104-222 H-H 105-216 H-H 118-232 H-H 118-232 Div 1 H-H 118-232 Div 2 H-H 164-294 Main H-H 164-294 Main H-H 164-294 Main H-H 164-294 Lat 1	166	Lat 3
167 168 169 169 21 Big 4 Lat 1 Big 4 Lat 2 Big 4 Lat 2 Big 4 Lat 3 Big 4 Lat 4 Big 4 Lat A Big 4 Lat C Big 4 Lat D Big 4 Lat D Big 4 Lat E Big 4 Main Drain-Wilke Big 4 Main Drain H-F 1 Total H-F 1 Main H-F 1 Main H-F 1 Add'l H-F 2 H-F 3-47 H-F 4-53 H-F 5-75 H-H 1-103 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 3-110 Main Open H-H 1-122 H-H 105-216 H-H 118-232 H-H 118-232 H-H 118-232 Div 2 H-H 164-294 Main 528 Big 4 Lat C Big 4 Lat C Big 4 Lat D Big 4 Lat C	166	Lat 4
168 169 169 169 169 169 169 169 169 169 169	166	Lat 5
169 169	167	67
Big 4 Lat 1 Big 4 Lat 2 Big 4 Lat 3 Big 4 Lat 4 Big 4 Lat B Big 4 Lat B Big 4 Lat C Big 4 Lat C Big 4 Lat D Big 4 Lat E Big 4 Main Big 5 Main Drain-Wilke Big 6 Main Drain H-F 1 Total H-F 1 Main H-F 1 Main H-F 1 Add'l H-F 2 H-F 3-47 H-F 4-53 H-F 5-75 H-H 1-103 H-H 2-104 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 105-216 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 H-H 164-294 H-H 164-294 H-H 164-294 H-H 164-294 Lat C Big 4 Lat C Big 4 Lat C Big 4 Lat D Big 4 Lat C Big 4	168	46
Big 4 Lat 2 Big 4 Lat 3 Big 4 Lat 4 Big 4 Lat A Big 4 Lat B Big 4 Lat C Big 4 Lat D Big 4 Lat D Big 4 Main Big 4 Main Big 4 Main Big 4 Main Drain-Wilke Big 4 Upper Main Drain H-F 1 Total H-F 1 Main H-F 1 Main H-F 1 Add'l H-F 2 1H-F 3-47 H-F 4-53 H-F 5-75 H-H 1-103 H-H 2-104 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 4-122 H-H 105-216 H-H 105-220 H-H 118-232 H-H 118-232 H-H 118-232 Div 1 H-H 164-294 Main H-H 164-294 Lat 1	169	21
Big 4 Lat 2 Big 4 Lat 3 Big 4 Lat 4 Big 4 Lat A Big 4 Lat B Big 4 Lat C Big 4 Lat D Big 4 Lat D Big 4 Main Big 4 Main Big 4 Main Big 4 Main Drain-Wilke Big 4 Upper Main Drain H-F 1 Total H-F 1 Main H-F 1 Main H-F 1 Add'l H-F 2 1H-F 3-47 H-F 4-53 H-F 5-75 H-H 1-103 H-H 2-104 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 4-122 H-H 105-216 H-H 105-220 H-H 118-232 H-H 118-232 H-H 118-232 Div 1 H-H 164-294 Main H-H 164-294 Lat 1	Big 4	Lat 1
Big 4 Lat 3 Big 4 Lat 4 Big 4 Lat A Big 4 Lat B Big 4 Lat C Big 4 Lat D Big 4 Lat E Big 4 Main Big 528 Big 4 Main Drain-Wilke Big 4 Upper Main Drain H-F 1 Total Big 4 Upper Main Drain H-F 1 Main H-F 3-47 H-F 3-47 H-F 4-53 F12 H-F 5-75 H-H 1-103 F13 F14 F15-75 F15 F19 H-H 1-103 F19 H-H 3-110 Main Tile H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 104-222 H-H 105-216 H-H 118-232 H-H 118-232 H-H 118-232 Div 2 H-H 118-232 Div 2 H-H 1164-294 Main H-H 164-294 Main H-H 164-294 Main H-H 164-294 Lat 1		
Big 4 Lat 4 Big 4 Lat A Big 4 Lat B Big 4 Lat C Big 4 Lat D Big 4 Lat E Big 4 Main Drain-Wilke Big 4 Upper Main Drain H-F 1 Total H-F 1 Main H-F 1 Add'l H-F 2 H-F 3-47 H-F 4-53 H-F 4-53 H-H 1-103 H-H 1-103 H-H 1-103 H-H 2-104 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 1-10-22 H-H 105-216 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 Div 2 H-H 164-294 Main H-H 164-294 Main H-H 3-10 Big 4 Lat A Big 4 Lat B Big 4 Lat B Big 4 Lat C Big 4 Lat D Big 4 Lat C Big 4 Lat D Big 4 Lat D Big 4 Lat C Big 6 Lat B Big 4 Lat B Big 4 Lat C Big 6 Lat B Big 4 Lat C Big 6 Lat B Big 6 Lat D Big 6 Lat B Big 6 Lat D Big 6 Lat B Big 6 Lat Lat L Big 6 Lat Lat B Big 6 Lat Lat B Big 6 Lat		
Big 4 Lat A Big 4 Lat B Big 4 Lat C Big 4 Lat D Big 4 Lat E Big 4 Main Big 4 Main Big 4 Main Drain-Wilke Big 4 Upper Main Drain H-F 1 Total H-F 1 Total H-F 1 Main H-F 1 Main H-F 1 Add'l H-F 2 H-F 3-47 H-F 4-53 H-F 5-75 H-H 1-103 H-H 1-103 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 3-110 Main Open H-H 4-122 H-H 104-222 H-H 105-216 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 H-H 164-294 Main H-H 164-294 Lat 1		
Big 4 Lat B Big 4 Lat C Big 4 Lat D Big 4 Lat E Big 4 Main		
Big 4 Lat C Big 4 Lat D Big 4 Lat E Big 4 Main Sex		
Big 4 Lat D Big 4 Main Big 4 Main Big 4 Main Drain-Wilke Big 4 Upper Main Drain H-F 1 Total H-F 1 Nain H-F 1 Main H-F 1 Add'l H-F 2 21 H-F 3-47 H-F 4-53 H-F 5-75 H-H 1-103 H-H 1-103 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 4-122 H-H 4-122 H-H 104-222 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-234 H-H 164-294 Main H-H 164-294 Main H-H 164-294 Main H-H 164-294 Lat 1		
Big 4 Lat E Big 4 Main Big 4 Main Drain-Wilke Big 4 Upper Main Drain H-F 1 Total H-F 1 Total H-F 1 Main H-F 1 Add'I H-F 2 11 H-F 3-47 H-F 5-75 H-H 1-103 H-H 2-104 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 105-216 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 H-H 164-294 Main F 320 Big 4 Main F 528 528 528 Big 4 Main F 528 528 528 528 528 528 528 528		
Big 4 Main 528 Big 4 Main Drain-Wilke 100 Big 4 Upper Main Drain 100 H-F 1 Total 100 H-F 1 Main 100 H-F 1 Add'l 100 H-F 2 Main 100 H-F 3-47 Main 100 H-F 4-53 Main 100 H-F 5-75 Main 100 H-H 1-103 Main Tile 100 H-H 3-110 Main Tile 100 H-H 3-110 Main Open 100 H-H 4-122 Main Open 100 H-H 118-232 Main 100 H-H 118-232 Div 1 100 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Main 5		
Big 4 Main Drain-Wilke Big 4 Upper Main Drain H-F 1 Total 100 H-F 1 Lat 1 100 H-F 1 Main 100 H-F 2 Main 21 H-F 3 Main 72 H-F 4-53 72 H-F 5-75 19 H-H 1-103 9 H-H 2-104 32 H-H 3-110 Main Tile 24 H-H 3-110 Hardin Branch 24 H-H 3-110 Main Open 32 H-H 4-122 16 H-H 104-222 21 H-H 118-232 25 H-H 118-232 Div 1 32 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1 5		
Big 4 Upper Main Drain		
H-F 1 Total H-F 1 Lat 1 H-F 1 Main H-F 1 Add'I H-F 2 21 H-F 3-47 H-F 4-53 72 H-F 5-75 9 19 H-H 1-103 9 9 H-H 2-104 32 H-H 3-110 Main Tile 24 H-H 3-110 Hardin Branch H-H 3-110 Main Open H-H 4-122 16 H-H 104-222 17 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5		
H-F 1 Lat 1 H-F 1 Main H-F 1 Add' H-F 2 21 H-F 3-47		•
H-F 1 Main H-F 1 Add'l H-F 2 21 H-F 3-47 72 H-F 4-53 72 H-F 5-75 19 H-H 1-103 9 H-H 2-104 32 H-H 3-110 Main Tile 24 H-H 3-110 Hardin Branch 41 H-H 3-110 Main Open 16 H-H 104-222 21 H-H 105-216 25 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-F 1 Add'I H-F 2 H-F 3-47 H-F 3-47 H-F 4-53 H-F 5-75 H-H 1-103 9 H-H 1-104 32 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 3-110 Main Open H-H 4-122 H-H 104-222 H-H 105-216 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-F 2 H-F 3-47 H-F 4-53 H-F 5-75 H-H 1-103 H-H 2-104 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 104-222 H-H 105-216 H-H 118-232 H-H 118-232 H-H 118-232 H-H 118-232 H-H 164-294 Main H-H 164-294 Lat 1		
H-F 3-47 H-F 4-53 H-F 5-75 H-H 1-103 H-H 2-104 32 H-H 3-110 Main Tile H-H 3-110 Main Open H-H 4-122 H-H 104-222 H-H 105-216 H-H 118-232 H-H 118-232 H-H 118-232 Div 2 H-H 164-294 Main 5 172 172 173 174 175 175 175 175 175 175 175		
H-F 4-53 72 H-F 5-75 19 H-H 1-103 99 H-H 2-104 32 H-H 3-110 Main Tile 24 H-H 3-110 Hardin Branch H-H 3-110 Main Open 16 H-H 4-122 16 H-H 104-222 21 H-H 105-216 25 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		21
H-F 5-75 19 H-H 1-103 9 H-H 2-104 32 H-H 3-110 Main Tile 24 H-H 3-110 Main Open 16 H-H 4-122 16 H-H 104-222 21 H-H 105-216 25 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		72
H-H 1-103 9 H-H 2-104 32 H-H 3-110 Main Tile 24 H-H 3-110 Hardin Branch H-H 3-110 Main Open 16 H-H 4-122 16 H-H 104-222 21 H-H 105-216 25 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 2-104 32 H-H 3-110 Main Tile 24 H-H 3-110 Hardin Branch H-H 3-110 Main Open 16 H-H 4-122 16 H-H 104-222 21 H-H 105-216 25 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 3-110 Main Tile H-H 3-110 Hardin Branch H-H 3-110 Main Open H-H 4-122 H-H 104-222 H-H 105-216 H-H 118-232 H-H 118-232 Div 1 H-H 118-232 Div 2 H-H 164-294 Main H-H 164-294 Lat 1		
H-H 3-110 Hardin Branch H-H 3-110 Main Open H-H 4-122 16 H-H 104-222 21 H-H 105-216 25 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 3-110 Main Open H-H 4-122 16 H-H 104-222 21 H-H 105-216 25 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 4-122 16 H-H 104-222 21 H-H 105-216 25 H-H 118-232 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 104-222 21 H-H 105-216 25 H-H 118-232 IV 1 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 105-216 25 H-H 118-232 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 118-232 H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 118-232 Div 1 H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 118-232 Div 2 18 H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 164-294 Main 5 H-H 164-294 Lat 1		
H-H 164-294 Lat 1		
H-S 3-58 22		
	H-S 3-58	22

28	H-S 4-112
211	H-S 35-1

Minimum Total amount generated at \$5.00 assessment per parcel is \$5.00 each parcel.

TOTAL **7877** \$5.00 **\$39,385.00**

NOTICE TO BIDDERS FOR TREE AND BRUSH CONTROL OF OPEN DITCHES IN HARDIN COUNTY DRAINAGE DISTRICTS

Notice is hereby given that sealed bids will be received by the **County Auditor of Hardin County, Iowa, at their office in the Hardin County Courthouse, 1215 Edgington Ave., Suite 1, Eldora, Iowa 50627, until 11:30 a.m. on December 18, 2019** for open ditch tree and brush control of Hardin County Drainage Districts 3, 7 & Sub 1, 18, 26, 34, 48, 55 Div 2, 55 Div 3 Main, 55 Div 3 Lat 9, 55 Div 3 Lat 9A, 55 Div 3 Lat 9G, 55 Div 3 Lat 10, 55 Div 3 Lat 12, 56, 70, 72, 82, 94, 120, 123, 143, 148, 152, 154, 155, 166, 168, Big 4 Lat 1, Big 4 Lat 2, Big 4 Lat 3, Big 4 Lat 4, Big 4 Lat A, Big 4 Lat C, Big 4 Lat D, H-H 104-222, H-H 2-104, H-H 118-232 and H-F 1. Specifications and form of contract are on file in the office of the County Auditor and describe the work involved and the conditions under which it is to be performed. Bids will be opened by the Board of Supervisors of Hardin County (acting as District Trustees) at a meeting to be held in the Hardin County Courthouse at 11:30 a.m. on December 18, 2019. Said bids will be acted on at a time and date to be determined at said bid opening.

The proposed work is located in Hardin County, Iowa; and consists of the furnishing of all materials, labor, and equipment to complete the approximate quantities of work, all as described in the plans and specifications and as listed below. One contract will be awarded for this project.

The proposed work consists of a spraying program to prevent any type of tree, brush, noxious plant or invasive species from growing in and on the ditch banks or its right-of-way. This vegetation control is executed so the water will flow at its full capacity and to reduce future repair and maintenance costs. The spraying program will be on a three year rotation cycle. Only State and Federal approved chemicals shall be applied.

All bids must be filed with the County Auditor on or before the time herein stated. All bids must be enclosed in a sealed envelope and plainly identified. The contractor must enter into a contract and provide a certificate of insurance within ten (10) days after the acceptance of their proposal. If awarded, one (1) contract will be awarded to the lowest, responsible bidder.

Published upon the order of the Board of Supervisors of Hardin County (acting as District Trustees), who also reserve the right to reject any or all proposals and to waive informalities and technicalities.

B & W Control		itrol			
Open Ditches	20	13 Quote		Actual	Comments
3 (Trustee)					Trustee
7 & Sub 1		1,000.00	\$	812.50	
18 (Trustee)			\$	2,810.63	Trustee
26		8,500.00	\$	2,548.00	
34					
48	\$	5,500.00	\$	4,969.00	
55 Div 1 (Trustee)		NO		NO	Trustee-No want bids
55 Div 2 (Trustee)					Trustee
55 Div 3 Main					
55 Div 3 Lat 9					
55 Div 3 Lat 9A					
55 Div 3 Lat 9G					
55 Div 3 Lat 10					
55 Div 3 Lat 12					
56					
70					
72					
82					
94					
110 (Trustee)		NO		NO	Trustee-No want bids
120					
123	\$	500.00			
143					
148	\$	1,500.00	\$	578.13	
152					
154					
155	\$	2,500.00	\$	949.38	
166		2,500.00	\$	529.88	
168	\$	2,500.00	\$	977.00	
Big 4 Lat 1	\$	3,500.00	\$	1,707.50	
Big 4 Lat 2	\$	3,500.00	\$	2,532.50	
Big 4 Lat 3		3,500.00		2,585.00	
Big 4 Lat 4	\$	3,500.00	_	2,835.75	
Big 4 Lat A	\$	2,500.00		216.75	
Big 4 Lat C		3,000.00		2,566.50	
Big 4 Lat D	\$	1,000.00		239.63	
Big 4 Main	\$	20,000.00	\$	18,182.25	
H-H 104-222					
H-H 2-104			\Box		
H-H 118-232					
H-F 1					

Open Ditches	Comments
3 (Trustee)	See Map
7 & Sub 1	Section 5-86-22
18 (Trustee)	Sections 24, 23, 26, 27, 34 of 89-22
26	Sections 30, 32, 33 of 88-22; Sections 1-4 of 87-22
34	Section 20-86-22
48 (Trustee)	Sections 8, 9, 16, 22, 23 & 24 of 88-21
55 Div 2 (Trustee)	Section 20-87-22 thu 25-87-22; Section 30-87-21 thru 32-87-21
55 Div 3 Main	Section 34-87-22 through 36-87-22
55 Div 3 Lat 9	Section 1-86-22 (NW 1/4)
55 Div 3 Lat 9A	Section 1-86-22 (SW 1/4)
	Section 1-86-22 (NE1/4 NE1/4)
55 Div 3 Lat 10	Section 36-87-22
55 Div 3 Lat 12	Section 34-87-22 & 3-86-22
56	Section 1-87-22
70	Section 4-87-20
72	Section 28-86-20
82	Section 17-87-21
94	Section 12 -88-19
120	Section 16 of 89-20
123	Section 3-87-22
143	Section 34-87-22
148 (Trustee)	Section 8-89-19
152	Section 14-87-22
155	Section 11-89-19
166	Section 21-87-22
168	Section 18-87-22 through 21-87-22
Big 4 Lat 1	Section 9-89-22 & 10-89-22
Big 4 Lat 2	Section 17-89-22 & 18-89-22
Big 4 Lat 3	Sections 20, 17, 16, 21, 22 of 89-22
Ü	Section 30-89-22 & 32-89-22
Big 4 Lat A	Section 4-89-22
Big 4 Lat C	Section 31-89-22
	Section 30-89-22
Big 4 Main	See Map
	Section 31-88-22
H-H 2-104	Section 6-87-22
H-H 118-232	Section 6-88-22
H-F 1	Section 7-89-20

On an Ditabas	Joe Harrah				Lacation				
Open Ditches	2016 Quote	2016 Quote	2013 Quote	2013 Actual	2010 Quote	2010 Actual	2007 Quote	2007 Actual	Location
3 (Trustee)	\$ 8,500.00	\$ 8,500.00							See Map
7 & Sub 1	\$ 200.00	\$ 1,000.00	\$ 1,000.00	\$ 812.50	\$ 750.00	\$ 342.50			Section 5-86-22
18 (Trustee)	\$ 4,000.00	\$ 5,500.00							Sections 24, 23, 26, 27, 34 of 89-22
26	\$ 5,000.00	\$ 6,500.00	\$ 8,500.00	\$ 2,548.00	\$ 8,500.00	\$ 4,134.25	\$ 7,500.00	\$ 6,381.88	Sections 30, 32, 33 of 88-22; Sections 1-4 of 87-22
34	\$ 200.00	\$ 1,000.00							Section 20-86-22
48	\$ 5,000.00	\$ 5,500.00	\$ 5,500.00	\$ 4,969.00	\$ 5,500.00	\$ 3,633.63	\$ 5,000.00	\$ 1,920.50	Sections 8, 9, 16, 22, 23 & 24 of 88-21
55 Div 2 (Trustee)	\$ 6,500.00	\$ 9,500.00							Section 20-87-22 thru 25-87-22; 30-87-21 thru 32-87-21
55 Div 3 Main	\$ 2,500.00	\$ 9,500.00							Section 34-87-22 through 36-87-22
55 Div 3 Lat 9	\$ 500.00	NdsTreeRemoval							Section 1-86-22 (NW 1/4)
55 Div 3 Lat 9A	\$ 500.00	NdsTreeRemoval							Section 1-86-22 (SW 1/4)
55 Div 3 Lat 9G	\$ 500.00	NdsTreeRemoval							Section 1-86-22 (NE1/4 NE1/4)
55 Div 3 Lat 10	\$ 1,000.00	\$ 5,500.00							Section 36-87-22
55 Div 3 Lat 12	\$ 500.00	\$ 2,500.00							Section 34-87-22 & 3-86-22
56	\$ 500.00	\$ 2,500.00							Section 1-87-22
70	\$ 200.00	\$ 1,000.00							Section 4-87-20
72	\$ 400.00	NdsTreeRemoval							Section 28-86-20
82	\$ 800.00								Section 17-87-21
94	\$ 200.00	\$ 1,500.00							Section 12 -88-19
120	\$ 500.00	NdsTreeRemoval							Section 16 of 89-20
123	\$ 200.00	\$ 500.00	\$ 500.00						Section 3-87-22
143	\$ 500.00	\$ 1,500.00							Section 34-87-22
148 (Trustee)	\$ 1,000.00	\$ 1,500.00	\$ 1,500.00	\$ 578.13	\$ 1,500.00	\$ 593.00	\$ 1,500.00	\$ 727.00	Section 8-89-19
152	\$ 500.00	\$ 1,500.00							Section 14-87-22
154	\$ 200.00	\$ 1,000.00							Section 29-86-21
155	\$ 800.00	\$ 2,500.00	\$ 2,500.00	\$ 949.38	\$ 2,500.00	\$ 601.88	\$ 2,000.00	\$ 458.50	Section 11-89-19
166	\$ 2,000.00	\$ 1,500.00	\$ 2,500.00	\$ 529.88	\$ 1,500.00	\$ 985.00	\$ 1,500.00	\$ 387.25	Section 21-87-22
168	\$ 2,500.00	\$ 1,500.00	\$ 2,500.00	\$ 977.00	\$ 1,500.00	\$ 882.50	\$ 15,001.00	\$ 450.16	Section 18-87-22 through 21-87-22
Big 4 Main	\$ 11,000.00	\$ 15,000.00	\$ 20,000.00	\$ 18,182.25	\$ 6,000.00	\$ 1,807.00	\$ 5,000.00	\$ 1,249.34	See Map
Big 4 Lat 1		\$ 3,500.00		\$ 1,707.50		\$ 691.00	\$ 2,000.00	\$ 1,427.00	Section 9-89-22 & 10-89-22
Big 4 Lat 2									Section 17-89-22 & 18-89-22
Big 4 Lat 3		·							Sections 20, 17, 16, 21, 22 of 89-22
Big 4 Lat 4	\$ 2,000.00	\$ 3,500.00			·			\$ 2,034.63	Section 30-89-22 & 32-89-22
Big 4 Lat A							\$ 1,500.00		Section 4-89-22
Big 4 Lat C					·	\$ 441.75			Section 31-89-22
Big 4 Lat D		·		·	·				Section 30-89-22
H-H 104-222		·							Section 31-88-22
H-H 2-104									Section 6-87-22
H-H 118-232									Section 6-88-22

H-F 1 \$	1,500.00	\$ 1,500.00										Section 7-89-20
COUNTY TOTALS \$	51,700.00	\$ 93,500.00	\$ 65,000.0	0 \$	42,229.77	\$ 44,000.00	\$	18,194.58	\$ 49,751.00	\$	25,255.40	
TRUSTEE TOTALS \$	19,000.00	\$ 23,500.00	\$ -	\$	-	\$ -	\$	-	\$ -	\$	-	
GRAND TOTALS \$	70,700.00	\$ 117,000.00	\$ 65,000.0	0 \$	42,229.77	\$ 44,000.00	\$	18,194.58	\$ 49,751.00	\$	25,255.40	
				65%		41	%		51	%		