

WATER PERMIT NO. 2441-2

Name of Applicant: Ben Krogman

Address: HCR 78, Box 220A, White River SD 57579

Phone: 605 259-3672

Amount of Water Claimed: 32 AF

Total Acres: NA

Source of Water Supply: runoff

Water to be used for: livestock watering

County: Mellette

Type of Waste Disposal System:

Location: 12 miles southwest of White River

PRIORITY Date Received: 6-19-2000

Fee: \$150

Corrected Application Received: 7-3-2000

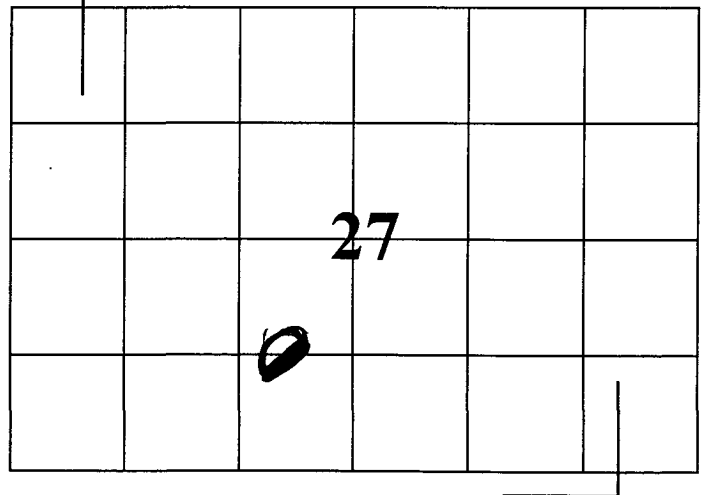
Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: E ½ SW ¼ Sec 22-T40N-R30W

Water Impounded: E ½ SW 1/4

Sec 22-T40N-R30W



Depth of Well: NA

Well Driller: : NA

Remarks:

Type of Map: plat

Prepared by: Steven Quissell, SCS

Reviewed and the Number Assigned on: 7-5-2000

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

FORM 2: Application for uses other than irrigation
(type or print)

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>2441-2</u>	(office use only) Hydrologic Unit <u>10140203</u>
	Basin <u>White River</u>	
	Newspaper <u>Mellette Co. News, Mission SD</u>	



Application

For Permit To

Appropriate Water Within The State Of South Dakota

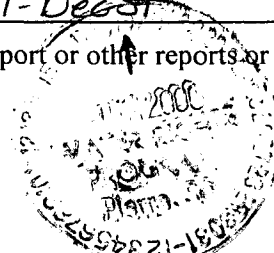
Check use(s) of water:

☐ Municipal	☐ Suburban Housing	☐ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☐ Fish & Wildlife	☐ Geothermal Heat
☒ Domestic (over 18 gpm)	☐ Industrial	☐ Other	

Type of Application: ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
(check one) ☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.) _____

- Name of Applicant Ben Ferguson Phone 259-3672
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address HCR 78 BOX 220A White River State SD 57579
(Street, RR. or Box) (Zip Code)
- Amount of water claimed _____ *CFS or _____ **GPM 32.6 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply RUNOFF FROM DRY DRAW
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
STOCK DAM LOCATED IN E 1/2 SW 1/4 S. 27 T 40 N R 30 W
Water impounded: E 1/2 SW 1/4 County Mellette
- County or counties where water will be used Mellette Co.
- Annual period during which water is to be used Grazing Season Jan 1 - Dec 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)
9,000 cu. yd EARTH FILL
21.8 ft height
24" PRINCIPAL SPILLWAY

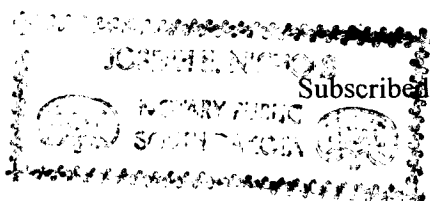


STATE OF SOUTH DAKOTA)
County of Mellette) SS

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Attach map and any other technical information. (see instructions)

I, Ben Ferguson, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Signed Ben Ferguson
Subscribed and sworn to before me this 16 day of June 2000



SOUTH DAKOTA
WATER PERMIT NO. 2441-2

Date of first receipt of application June 19, 2000.

Date of return to applicant for corrections, amendments or changes June 20, 2000.

Date of receipt of corrected application July 3, 2000.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2441-2 to Ben Krogman, HCR 78 Box 220A, White River SD 57579 authorizing the construction of the dam and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2441-2 authorizes impoundment of 32 acre-feet of water from runoff by constructing a dam located in the E ½ SW ¼ Section 27 with water impounded in the E ½ SW ¼ Section 27; all in T40N-R30W. This permit authorizes impoundment of sufficient water to maintain water at the outlet elevation.
2. The water appropriated shall be used for the purpose of supplying water for livestock use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 2441-2 is August 14, 2000.
5. The date from which applicant may claim right is June 19, 2000.
6. One-fifth of the construction is to be completed on or before February 14, 2003.
7. All construction is to be completed on or before August 14, 2005.
8. Water is to be put to beneficial use on or before August 14, 2009.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Water Permit No. 2441-2 authorizes a dam with a storage capacity of 32 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

WATER MANAGEMENT BOARD

By: Garland Erbele

Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

AUG 25 2000

date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well: _____

On applicants property _____ On property owned by others _____

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System _____

3. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

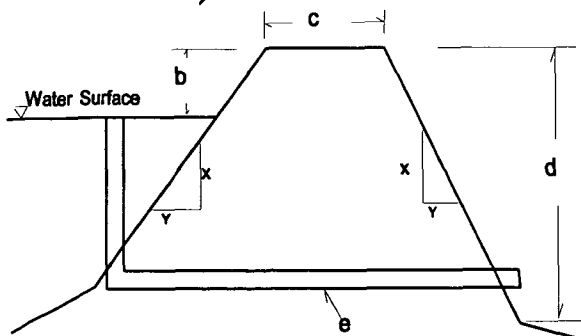
4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:

NRCS, 1530 SAMCO Rd, suite #4

Rapid City So. Dak.



- b) Freeboard 3' (E.S. to top of Dam)
- c) Crest Width 12'
- Crest Length 305'
- d) Height 21.8'
- e) Primary Outlet Capacity 65 cfs
- If pipe, diameter 24"
- f) Secondary Spillway Capacity 1195 cfs
- Spillway Width 160 ft.
- g) X & Y Slope 3:1, 3:1
- Upstream 3:1
- Downstream 3:1
- h) Surface Area of Impoundment 5.5 Ac.
- i) Storage 32.0 Acre Feet
- j) Drainage Area Above Dam 788 Acres

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

N^o 416562

Pierre, July 3, 2000

RECEIVED OF Ben or Wanda Krogman, HC 78, BBox 220A, White River, SD 57579
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct
and to put water to beneficial use _____

Fee for Application for Permit No. _____ to Appropriate Water, for Future
Use _____

Fee to retain Future Use Permit No. _____ after period of seven years.

Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water
License No. 2441-2

Fee for Filing Transfer Form _____

Fee for Filing Extension Request _____

Fee for _____

(Any Other Work Provided by Law)

Total

50 00

By Alexander E. Ebel
Chief Engineer

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

N2 416549

Pierre, June 19, 2000

RECEIVED OF Ben Krogman, HC 78 Box 220A, White River SD 57579

the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>2441-2</u> to Appropriate Water, to construct and to put water to beneficial use _____	150	00
Fee for Application for Permit No. _____ to Appropriate Water, for Future Use _____		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____		
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	150 00

By

Garland Erbale

Chief Engineer

(K5)



United States
Department of
Agriculture

Natural Resources
Conservation
Service

Federal Building, Room 239
515 9th Street
Rapid City, SD 57701-2663

March 21, 2000



Tim Schaal
DENR, Safety of Dams
Foss Building
523 East Capitol
Pierre, SD 57501-3182

Tim,

Attached for review and approval by your staff is a set of plans and specifications for a stock pond for Ben Krogman, SW1/4 S23 T40N R30W, Mellette County South Dakota. The dam is classified as "hazard class a" as per NRCS criteria. Structure Data is as follows:

Drainage Area - 788 ac.
Storage - principal spillway elev. 96.7 - 32.0 ac-ft.
 emergency spillway elev. 98.3 - 42.0 ac-ft.
 top of dam elev. 101.3 - 66.0 ac-ft.
Fill Height - 21.8 ft.
Water Depth - 17.2 ft.
Storage X Height - 817
Principal Spillway Storm - 2 yr.
Emergency Spillway Design Storm - 25 yr.
Freeboard Hydrograph - 50 yr. (passes with 2.0 ft. depth in E.S.)
Structure Capacity (with 1 ft. freeboard) - 1256 cfs
Principal Spillway - 24" PE (65 cfs capacity)

Steve Quissell
Field Support Engineer,
Natural Resources Conservation Service
1530 Samco Rd, suite 4
Rapid City, SD 57702-8007

cc. David George, DC, NRCS, White River

Water Permit Application #2441-2

Ben Krogman

Top of Dam Elev. - 101.3
 2nd Spillway Elev. - 98.3
 P. Spillway Elev. - 96.7
 D/S Toe Elev. - 79.5

Cat. 3 - Low Hazard Dam

Ht. = 21.8 ft.

Max. Storage Capacity = 66 Ac-Ft
 Int. Storage Capacity = 42
 Normal Storage Capacity = 32

Int. Capacity x Eff Height = $42 \times 18.8 = 789 < 3000 \therefore 25 \text{ yr}$
Min. Spillway Design

From USGS INRI 80-80 "Tech. for Est. Flood Peaks ... in SD"

DA = 788 Ac = 1.23
 Slope = 180 ft/mi
 SI = 1.90 2.50

$$Q_{100} = 83.4 A^{.65} S^{.46} S_i^{-.67}$$

$$= 83.4 (1.23)^{.65} (180)^{.46} (2.50)^{-.67}$$

$$= 83.4 (1.13) (9.82) (0.5170)$$

$$= 480 \text{ cfs} *$$

$$Q_{100} = 132 A^{.65} S^{.46} S_i^{-.67}$$

$$= 132 (1.23)^{.65} (180)^{.46} (2.50)^{-.67}$$

$$= 132 (1.14) (10.9) (0.5412)$$

$$= 890 \text{ cfs}$$

* The NRCS has a Q_{100} Peak of 1016.5 cfs using a high CN value (81) and Precip. = 4.10 in ??

Secondary Spillway Flow

$$Q = CLH^{3/2} \quad C = 2.6$$

$$= 2.6 (160)^{1.5} \quad L = 160$$

$$= 2162 \text{ cfs} \quad H = 3 \text{ ft}$$

Section 74:02:08:09

1. Topo Map - OK
2. Dam Axis Profile - OK
3. Dam Max X-sec. - OK
4. Area Capacity - OK
5. Outlet Details - OK
6. Spillway Rating - OK
7. Spillway Details - OK
8. Specs. std. NRCS - OK
9. EPP - N/A Cat. 3 - OK

NRCS Annual Yield

DA = 788 CN = 81 ISO = 2.0

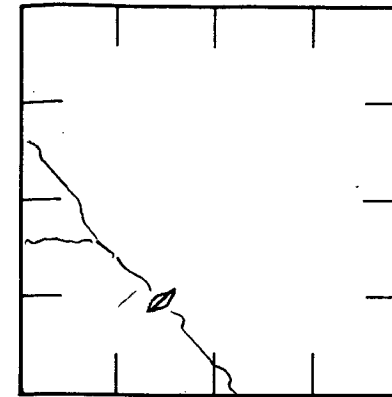
80% chance = 0.3
 $0.3 \times 788/12 = 20 \text{ Ac-Ft}$

50% chance = 0.7
 $0.7 \times 788/12 = 46 \text{ Ac-Ft}$

10% chance = 2.7
 $2.7 \times 788/12 = 177 \text{ Ac-Ft}$

STRUCTURE DATA

DRAINAGE AREA	ANNUAL YIELD	PEAK RUNOFF	EMERG. SPLWY. CAPACITY	WATER DEPTH	SURFACE AREA	SEDIMENT STORAGE	TOTAL STORAGE
ACRES	AC. FT.	25-YR.	C.F.S.	FEET	ACRES	AC. FT.	AC. FT.
188	42.7	1017	1191	17	5.0	27.0	32.0



SEC. 27T. 40N. R. 30W.
T800 County

LOCATION

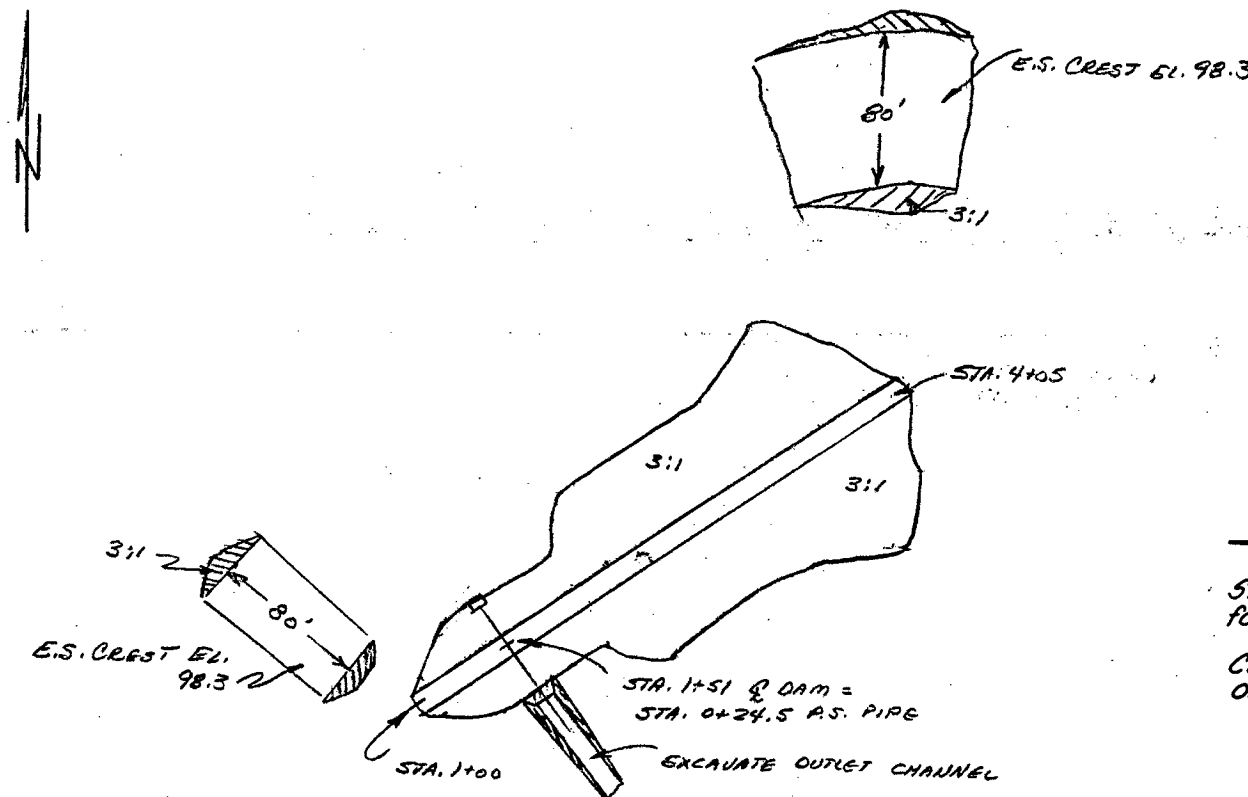
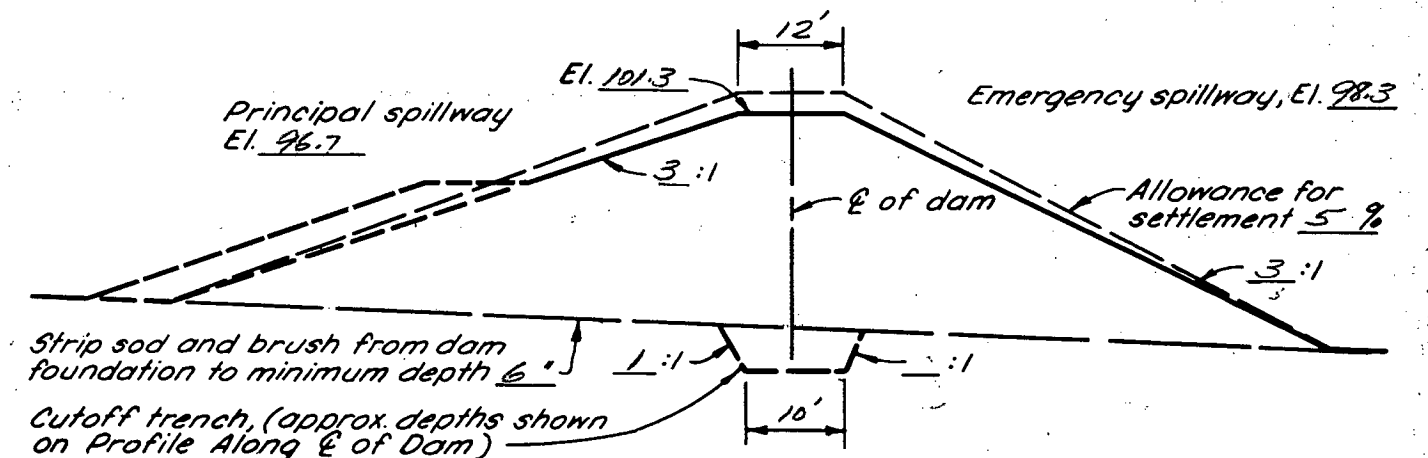


TABLE OF QUANTITIES

ITEM	UNIT	QUANTITY
EARTH Fill		
Embankment & Stripping	CU. YD.	8065
Core Trench		
EXCAVATION		
Core Trench		
Emergency Spillways		
Stripping	CU. YD.	460
Outlet Channel	CU. YD.	100
Concrete Riser 4'x4'x4' (SEE JOB PLAN 5.4A)	EA.	1
ANTI-VORTEX BARRIER (SEE JOB PLAN 5.4B)		
24" PE PIPE - DOUBLE WALL CORRUGATED W/SMOOTH INTERIOR & WATER TIGHT GASKETS	Lin. Ft.	80
24" PE CUSTOM ELBOW, 7° BEND	EA.	1
SAND ANTI-SEEP DRAIN (SEE JOB PLAN 5.8 P)	EA.	1
Timber Pipe Support (SEE JOB PLAN 4.4)	EA.	1



TYPICAL CROSS SECTION OF DAM

HAZARD CLASS "A"

EARTH DAM

S.D. CONSTRUCTION AND MATERIAL SPECIFICATIONS:

SD 15	- EARTH Fill
SD 5	- EXCAVATION
SD-4	- Stripping
SD-9	Drain Fill & Filter
SD-12B	Concrete
SA-13	Steel Reinforcement
SD-14	Wood & Steel Structures
RC-15	HDPE PIPE Conduits

SKETCH PLAN OF DAM AND RESERVOIR AREA

Approximate scale 1" = 100'

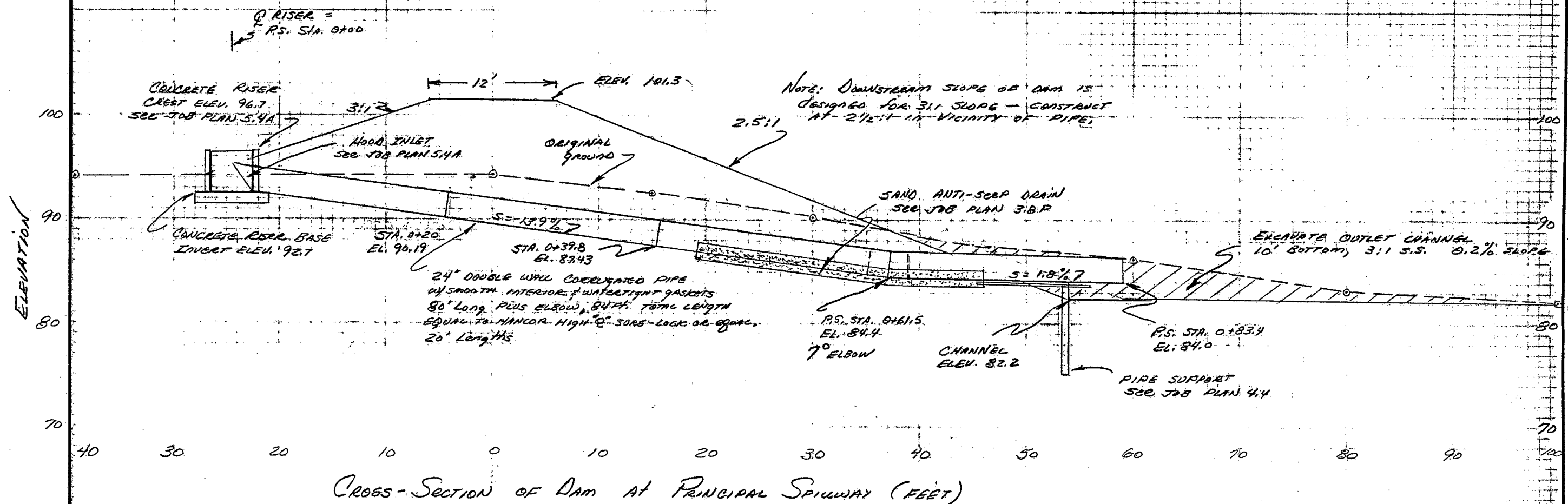
REFERENCE: GUIDE PLAN NO. 1.0

JOB PLAN NO. 1.0

OPERATOR: <u>Ben Krogmann</u>	
CONSERVATION DISTRICT: <u>MILLETT Co</u>	
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed: <u>S. Quinell</u> 3/1000	Approved: <u>[Signature]</u>
Drawn: <u>S. Quinell</u> 3/1000	Title: <u>[Signature]</u>
Traced: _____	Sheet: <u>1</u> of <u>6</u>
Checked: _____	Drawing No. _____

2440-2

2441-2

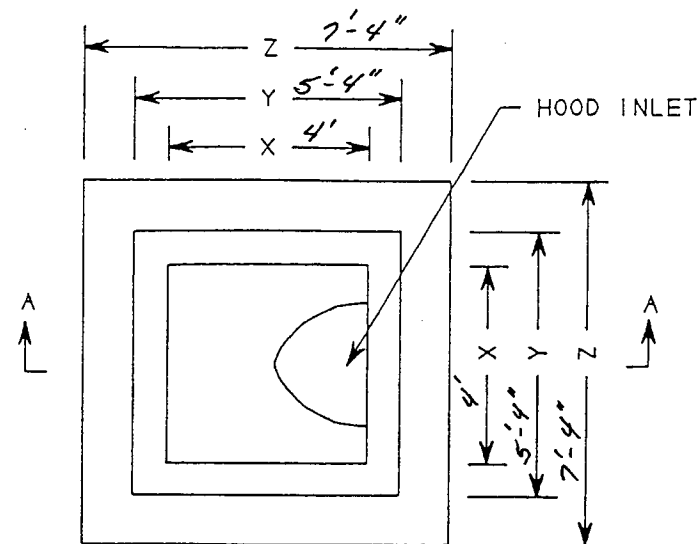


PRINCIPAL SPILLWAY DETAILS

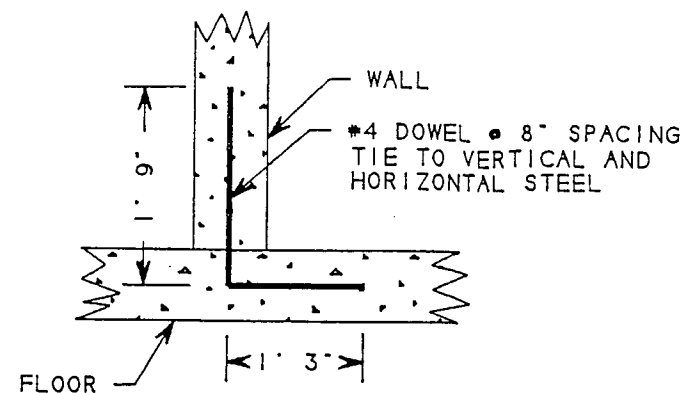
BEN KROGMAN
FARM POND
MELETTE COUNTY SO. DAK.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

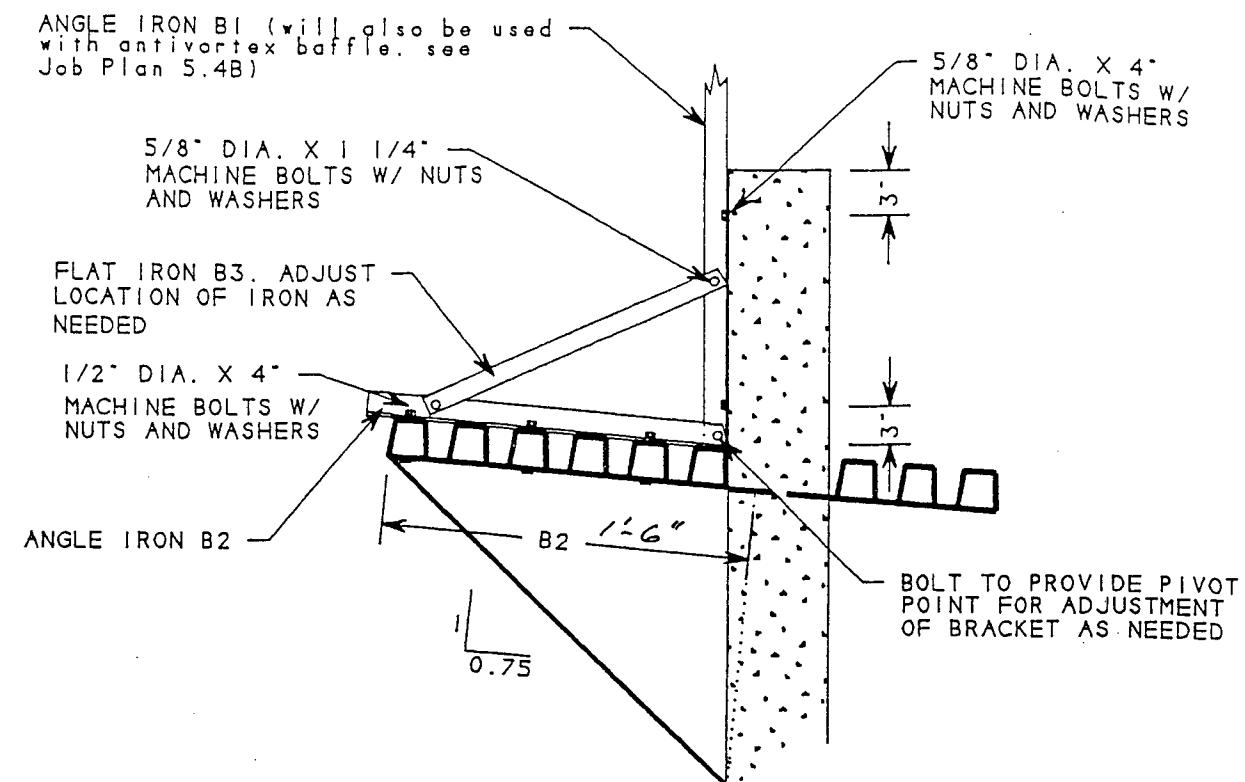
Designed <i>S. Quissell</i>	Date <i>3/2000</i>	Approved by _____	Title _____
Drawn <i>S. Quissell</i>	Date <i>3/2000</i>	Traced _____	Sheet No. <i>2</i>
Checked _____			Drawing No. _____



PLAN VIEW

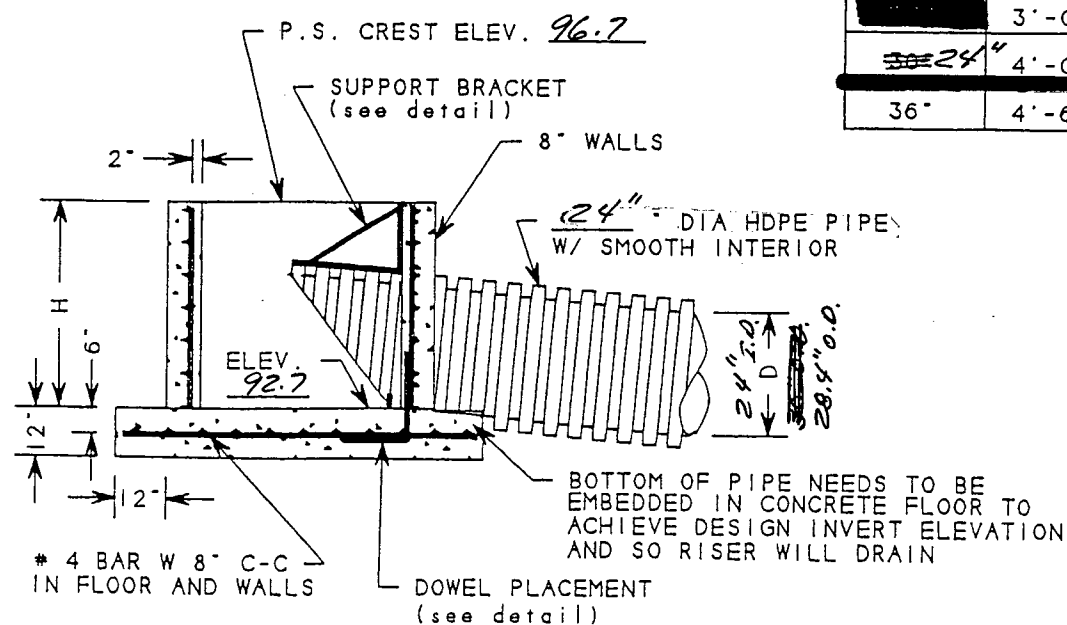


DOWEL DETAIL



SUPPORT BRACKET DETAIL

BARREL DIA. D	FT.-IN. X	FT.-IN. Y	FT.-IN. Z	FT.-IN. H	CONCRETE CU. YDS.	#4 REBAR LBS.	SUPPORT BRACKET			BOLTS W/ WASHERS & NUTS		
							2" X 2" 3/16" ANGLE IRON LENGTH FT.-IN. B1	3/16" X 2" FLAT IRON LENGTH FT.-IN. B2	3/16" X 2" FLAT IRON LENGTH FT.-IN. B3	1/2" DIA X 4"	5/8" DIA X 1 1/4"	5/8" DIA X 4"
10"	3'-0"	4'-4"	6'-4"	3'-0"	2.6	207	2'-9 3/4"	7 1/2"	1'-3"	2	2	2
12"	3'-0"	4'-4"	6'-4"	3'-0"	2.6	207	2'-9 1/2"	9"	1'-4"	2	2	2
15"	3'-0"	4'-4"	6'-4"	3'-0"	2.6	207	2'-10"	11 1/4"	1'-5"	2	2	2
18"	3'-0"	4'-4"	6'-4"	3'-0"	2.6	207	2'-10 1/4"	1'-1 1/2"	1'-6"	2	2	2
24"	3'-0"	4'-4"	6'-4"	4'-0"	2.9	230	3'-7 3/4"	1'-6"	1'-9"	3	2	2
30"	4'-0"	5'-4"	7'-4"	4'-0"	3.8	300	3'-7 3/4"	1'-6"	1'-9"	3	2	2
36"	4'-6"	5'-10"	7'-10"	4'-6"	4.6	373	4'-1 1/4"	2'-3"	2'-4"	3	2	2



SECTIONAL ELEV. A-A

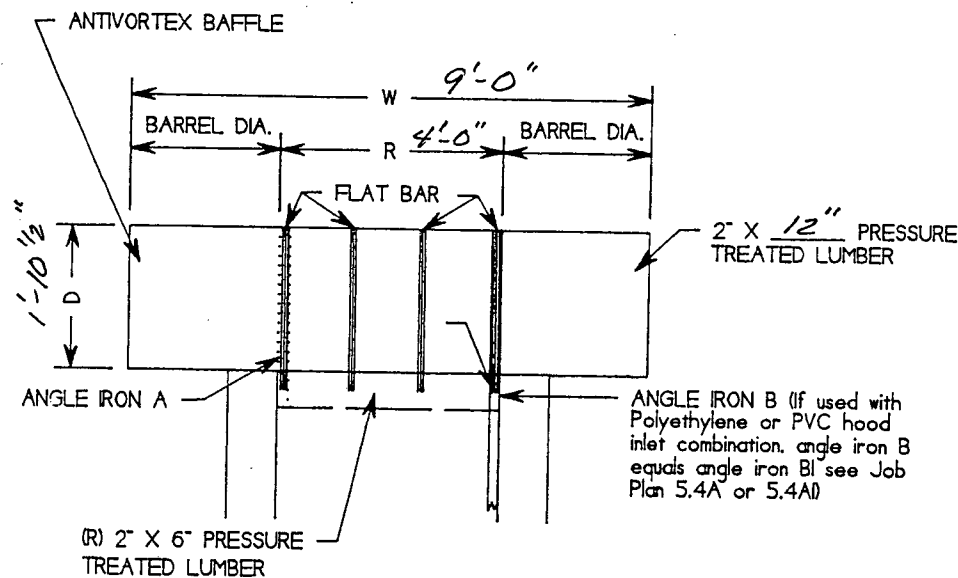
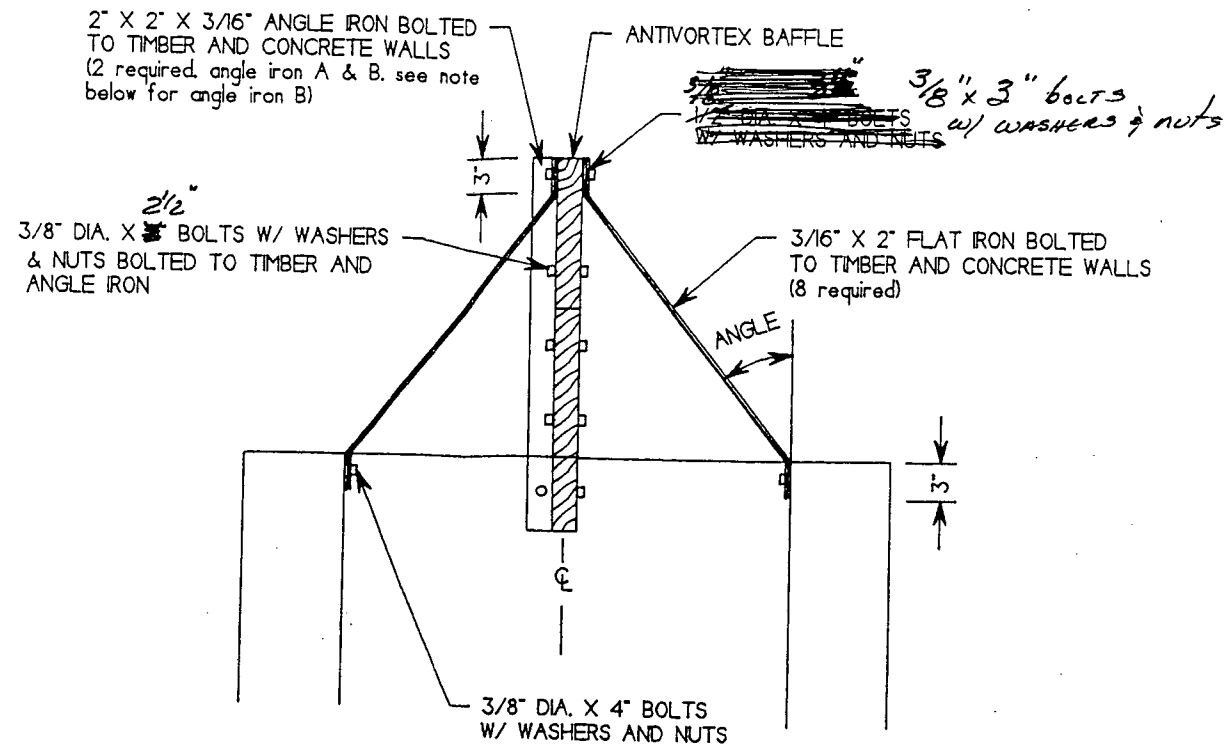
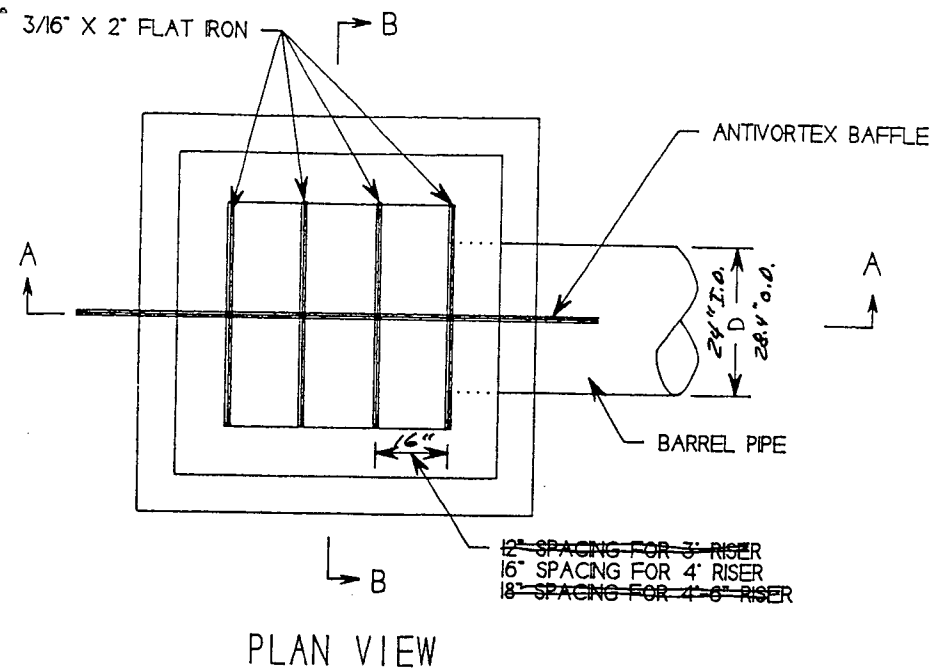
- NOTE: 1. CONCRETE AROUND PIPE NEEDS TO BE VIBRATED TO INSURE A GOOD SEAL AROUND PIPE.
2. CONSTRUCTION JOINT BETWEEN WALLS AND FLOOR OF CONCRETE RISER WILL HAVE #4 DOWELS • MAX. 8" SPACING.
3. PE DOUBLE WALL CORRUGATED PIPE W/ SMOOTH INTERIOR (AASHTO M294 TYPE S) WITH BELL & SPIGOT JOINT AND WATERTIGHT GASKET.

CONCRETE RISER
AND POLYETHYLENE
HOOD INLET COMBINATION

Ben Krogman
Farm Pond
NELLETTE Co.

USDA U.S. Department of Agriculture
Natural Resources Conservation Service

DESIGNED BY Quinnell 3/2008 APPROVED BY _____
DRAFTED _____ TITLE _____
DATE _____ SHEET 3 OF 6 DWS NO. PEH4&Rgod



SECTIONAL ELEVATION B-B

BARREL DIA.	D	R LENGTH FT.-IN.	W LENGTH FT.-IN.	NO. REQ'D	(R) 2" X 6" LENGTH FT.-IN.	NO. REQ'D	ANGLE IRON A & B LENGTH FT.-IN.	FLAT IRON LENGTH FT.-IN.	3/8" DIA. X 3" BOLTS, NUTS & WASHERS	3/8" DIA. X 4" BOLTS, NUTS & WASHERS	ANGLE
10"	0'-9 1/4"	3'-0"	(2" X 10") X 4'-8"	1	3'-0"	1	1'-2 3/4"	2'-1 1/2"	4	8	62°
12"	0'-11 1/4"	3'-0"	(2" X 12") X 5'-0"	1	3'-0"	1	1'-4 3/4"	2'-2 1/2"	4	8	57°
15"	1'-2 3/4"	3'-0"	(2" X 10") X 5'-6" (2" X 6") X 5'-6"	1	3'-0"	1	1'-8 1/4"	2'-4 3/4"	8	8	49°
18"	1'-6 1/2"	3'-0"	(2" X 10") X 6'-0"	2	3'-0"	1	2'-0"	2'-7"	8	8	43°
24"	1'-10 1/2"	3'-0"	(2" X 12") X 7'-0"	2	3'-0"	1	2'-4"	2'-10 1/4"	8	8	38°
30"	2'-4"	4'-0"	(2" X 12") X 9'-0" (2" X 6") X 9'-0"	2 1	4'-0"	1	2'-9 1/2"	3'-6 1/2"	12	8	40°
36"	2'-9 3/4"	4'-6"	(2" X 12") X 10'-6"	3	4'-6"	1	3'-3"	4'-3/4"	12	8	38°
24"	1'-10 1/2"	4'-0"	(2" X 12") X 9'-0"	2	4'-0"	1	A = 2'-4" B = 3'-7 3/4"	3'-4"	2	10	40°

SECTIONAL ELEVATION A-A

ANTIVORTEX BAFFLE FOR
CONCRETE RISER

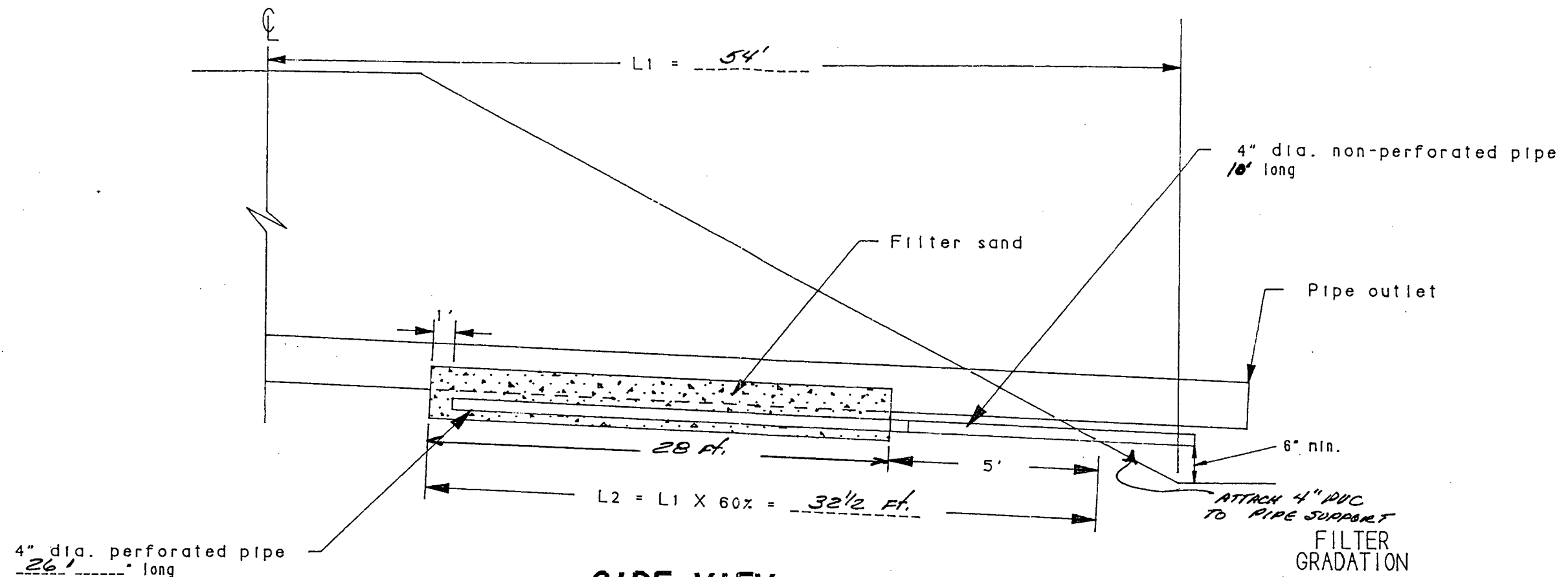
Ben Krognan
Farm Pond
Mellette Co.

USDA U.S. Department of Agriculture
Natural Resources Conservation Service

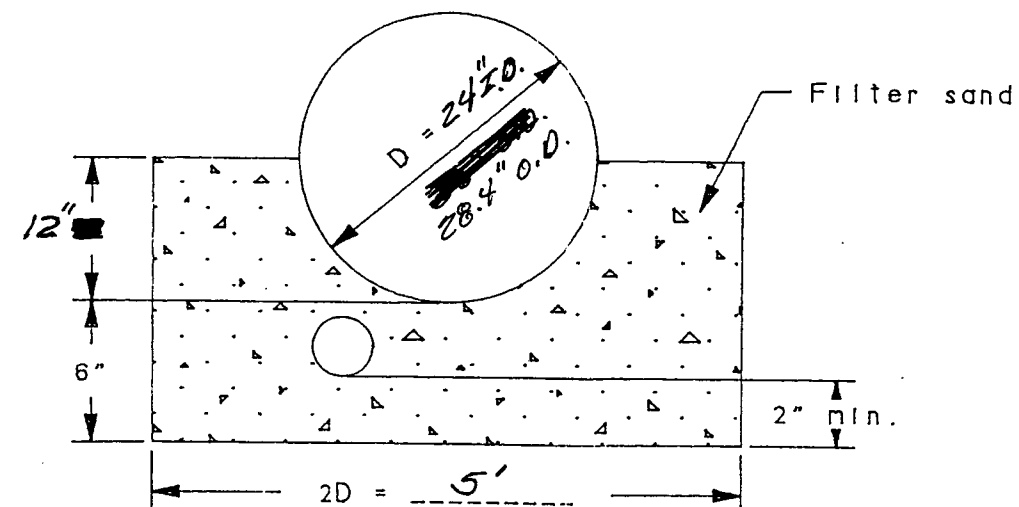
DESIGNED: S. Quinell
DRAFTED: _____
DATE: _____

APPROVED BY: _____
TITLE: _____

SHEET 4 of 6
DWG NO. AVBAF-CR.gcd



SIDE VIEW



UPSTREAM VIEW

**FILTER
GRADATION**

SIEVE SIZE	PERCENT PASSING
3/8"	100
4	95-100
8	80-100
16	50-85
30	25-60
50	10-30
100	2-10

SAND
FILTER
QUANTITY
= 7.5
cu. yd.

NOTE: USE FINE AGGREGATE
SUITABLE FOR CONCRETE READY-MIX
FOR FILTER MATERIAL

SAND ANTISEEP DRAIN

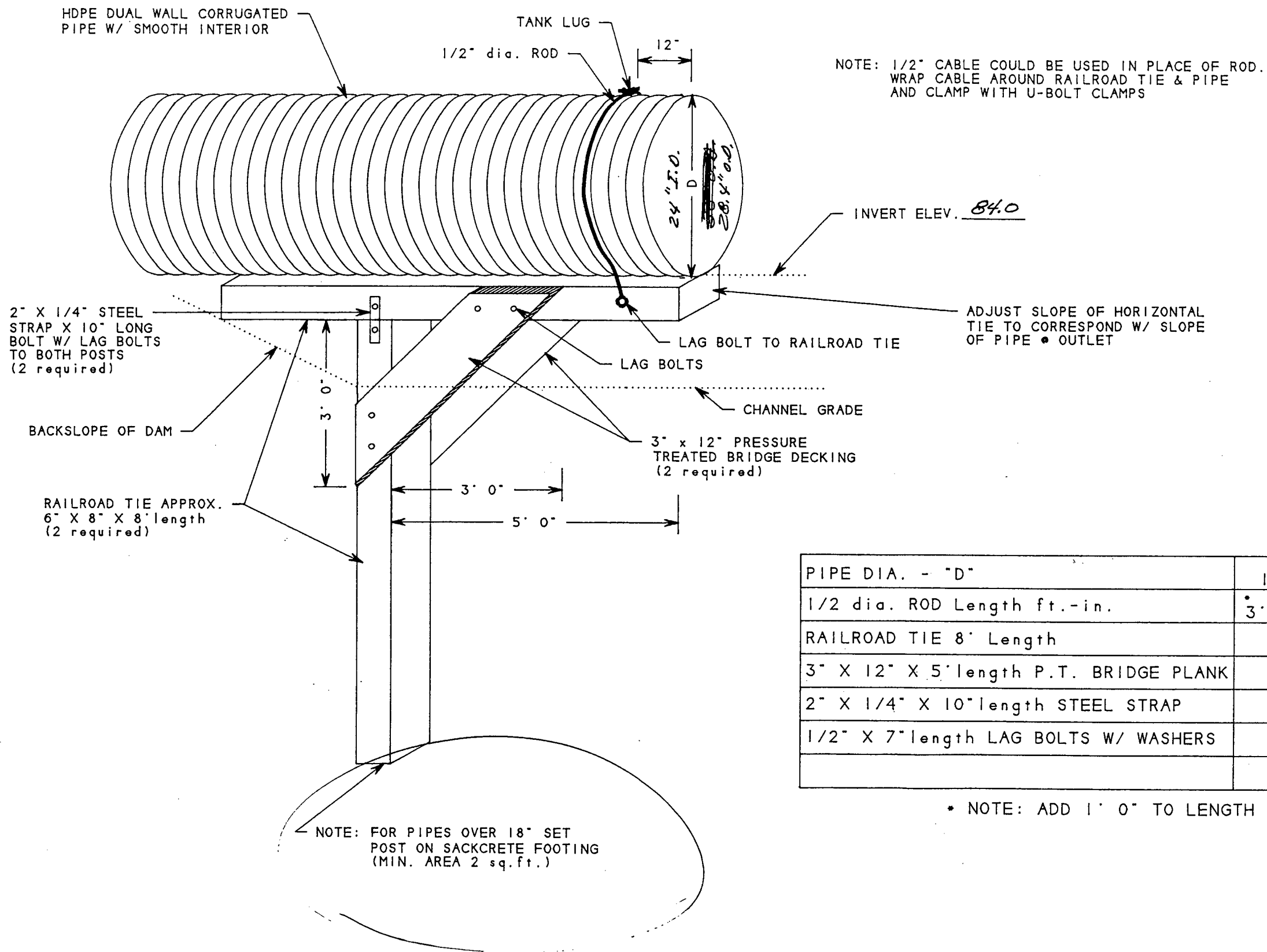
- NOTE:
1. THE 4" DIA. PIPE SHALL BE SDR 35 PVC, OR STRONGER
 2. PROVIDE AN ANIMAL GUARD ON DRAIN OUTLET PIPE. DRILL
2, 1/2" DIA. HOLES, ON 6" FROM END OF PIPE AND PLACE
A 3/8" DIA., 5 1/2" LONG GALVANIZED STEEL BOLT THRU THEM
AND SECURE WITH A NUT (PLACE BOLT HORIZONTAL).
 3. FILTER SAND WILL BE CLEAN PEA AGGREGATE OR CONCRETE SAND.

Rev. 3/96

JOB PLAN NO. 3.8-P

OPERATOR <u>BEN KROGMAN</u>	
CONSERVATION DISTRICT <u>MELETTE CO</u>	
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	
Designed <u>S. G. G. 3/2000</u>	Date <u>3/2000</u>
Drawn <u>S. G. G.</u>	Approved by <u>S. G. G.</u>
Traced <u>S. G. G.</u>	Title <u></u>
Checked <u>S. G. G.</u>	Title <u></u>
	Sheet No. <u>5</u>
	Dwg. No. <u>6</u>

L1 = 54'
L2 = 33'
Drain length = 27'



PIPE DIA. - "D"	10"	12"	15"	18"	24"	30"	36"
1/2 dia. ROD Length ft.-in.	3' 2"	3' 8"	4' 6"	5' 4"	7' 0"	8' 6"	10' 1"
RAILROAD TIE 8' Length	2 ea.						
3" X 12" X 5' length P.T. BRIDGE PLANK	2 ea.						
2" X 1/4" X 10" length STEEL STRAP	2 ea.						
1/2" X 7" length LAG BOLTS W/ WASHERS	14 ea.						

• NOTE: ADD 1' 0" TO LENGTH IF CABLE IS USED

PIPE SUPPORT FOR HDPE PIPE

Ben Krogman
Farm Pond
Mellette Co.

USDA U.S. Department of Agriculture
Natural Resources Conservation Service

DESIGNED: *S. D. Smith* 3/2000 APPROVED BY: _____
DRAFTED: _____ TITLE: _____
DATE: _____ SHEET 6 OF 6 DWG. NO. PIPE-SUP.gcd



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

April 19, 2000

David George
NRCS
PO Box 1
White River, SD 57579-0709

Dear Mr. George:

Enclosed are application forms and instructions for both a non-irrigation Water Permit and a Water Permit for irrigation. The instructions are about the same, we need two signed copies of the application and form 2A, a signed map, and the filing fee. We are now collecting the \$50.00 licensing fee with the application.

As we discussed yesterday, we received the plans for Ben Krogman's proposed dam in the SW 1/4 of Section 23-T40N-R30W, and this dam will also need a Water Permit since it will store 32 acre-feet of water.

If you have any questions, please feel free to contact me.

Sincerely,

Timothy G. Schaal, P.E.
Natural Resources Engineer
Water Rights Program
(605) 773-3352

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

June 20, 2000

Ben Krogman
HCR 78 Box 220A
White River SD 57579

Dear Mr. Krogman:

Thank you for submitting the *Application for a Permit to Appropriate Water* for the dam located in Mellette County.

We have received the \$150 application filing fee. In addition to the application filing fee, the Water Rights Program now collects the \$50 licensing fee at the time of filing. Please submit \$50 for the licensing of the water permit.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in cursive script that reads "Karen Schlaak".

Karen Schlaak
Water Rights Program
605 773-3352



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

July 17, 2000

Ben Krogman
HCR 78, Box 220A
White River, SD 57579

Dear Mr. Krogman:

We have reviewed the plans and specifications for your dam project located in the SW 1/4 of Section 27-T40N-R30W, in Mellette County. The plans and specifications as submitted are approved. Approval of the plans and specifications does not authorize construction of the dam. The construction may not begin until Water Permit Application No. 2441-2 is approved.

Our review was to determine compliance with the requirements of the Water Management Board Safety of Dams Rules, Chapter 74:02:08. Approval of these plans and specifications does not release you, as owner of the dam, from the responsibility for operating and maintaining the dam in good repair to ensure the safety of the dam.

The Krogman Dam will be classified as a small size Category 3, Low Hazard dam with a dam height of 22 feet and a normal storage capacity of 32 acre-feet and a maximum storage capacity of 66 acre-feet.

If you have any questions, please feel free to contact us.

Sincerely,

Gale N. Selken, P.E.
Natural Resources Engineer IV
for Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

c: Steve Quissell, NRCS Rapid City
David George, NRCS White River



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PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2441-2, Ben Krogman**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 2441-2, Ben Krogman, HCR 78, Box 220A, White River, SD 57579.

The Chief Engineer is recommending APPROVAL of Application No. 2441-2 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. Water Permit No. 2441-2 authorizes a dam with a storage capacity of 32 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

See report on application for additional information.

Garland Erbele, Chief Engineer
July 14, 2000

REPORT ON
WATER PERMIT APPLICATION NO. 2441-2
Ben Krogman
July 12, 2000

Water Permit Application No. 2441-2 has been filed by Ben Krogman to impound 32 acre-feet of water from runoff by constructing a dam located in the E 1/2 SW 1/4 of Section 27-T40N-R30W, in Mellette County. The application also requests impoundment of sufficient water to maintain water at the outlet elevation. The water will be used for livestock watering.

Discussion:

The dam will be classified as a small size, Category 3, Low Hazard dam. The Natural Resources Conservation Service (NRCS) has designed the project. The plans and specifications have been reviewed and will be approved; however, construction of the dam can not begin until Water Permit Application No. 2411-2 is approved.

The Krogman Dam will be 22 feet high with a normal storage capacity of 32 acre-feet with a reservoir level at the primary spillway elevation, and a maximum storage capacity of 66 acre-feet with a reservoir level at the top of dam elevation. A dam of this size and hazard classification is required to have a minimum spillway design capable of passing a 25-year frequency event.

The dam has a drainage area of 1.23 square miles. A 25-year frequency event for this drainage area produces a peak runoff of approximately 480 cfs. A 100-year frequency event produces a peak of approximately 890 cfs. The dam is designed to have two 80 foot wide earth spillways with 3 feet of available freeboard. The two secondary spillways will have a capacity of approximately 2162 cfs.

The annual yield for this drainage area with an 80 percent chance of occurrence, or 8 out of 10 years, is expected to be 20 acre-feet. The annual yield with a 50 percent chance of occurrence, or 1 out of 2 years, is expected to be 46 acre-feet and the annual yield with a 10 percent chance, or 1 out of 10 years, is expected to be 177 acre-feet.

The Krogman Dam will be located in the SW 1/4 of Section 27-T40N-R30W on an unnamed tributary of Cut Meat Creek about one mile upstream of its confluence with Cut Meat Creek and three miles above the confluence of Cut Meat Creek and the Little White River. There are no existing Water Permits/Rights located on the unnamed tributary or Cut Meat Creek between the proposed dam and the Little White River.

Conclusions:

1. Water Permit Application No. 2441-2 should be approved since unappropriated water is available and approval should not have any adverse effect on existing Water Permits/Rights.
2. If approved, the low flow bypass requirement for downstream domestic use should be a qualification on Water Permit Application No. 2441-2.


Timothy G. Schaal, P.E.
Natural Resources Engineer III

Approved by:


Gale N. Selken, P.E.
Natural Resources Engineer IV



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.

July 17, 2000

Ben Krogman
HCR 78, Box 220A
White River, SD 57579

Dear Mr. Krogman:

Water Permit Application No. 2441-2 for livestock watering has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Mellette Co. News printed at Mission, SD (Ph # (605) 856-4469). For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. The newspaper has been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

July 17, 2000

Mellette Co. News
Box 229
Mission, SD 57555-0229

ATTENTION: Legal Public Notice

Enclosed is a Notice of Hearing on Application No. 2441-2 to Appropriate Water to be published twice. Please publish the first notice on July 26, 2000, with the second publication 7 days later.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Ben Krogman, HCR 78, Box 220A, White River, SD 57579 (Ph # (605) 259-3672).

Please send the Water Rights Program the first publication immediately. The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,


Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CU T HERE-----

No. 2441-2

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
Pierre SD 57501-3181

Date _____

We are in receipt of your letter of July 17, 2000, enclosing Notice of Hearing to Appropriate Water by Application No. 2441-2 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper

Instruction to Newspaper - Publish first Notice on July 26, 2000, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 2441-2 to Appropriate Water

Notice is given that Ben Krogman, HCR 78, Box 220A, White River SD 57579 has filed an application for a water permit to impound 32 acre-feet of water from runoff by constructing a dam located in the E ½ SW ¼ Section 27 with water impounded in the E ½ SW ¼ Section 27; all in T40N-R30W. This application requests impoundment of sufficient water to maintain water at the outlet elevation and is to be used to provide water for livestock.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2441-2 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by August 14, 2000.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
 County of MELLETTIE)

I, Kathy R Klein

certify that the attached printed Notice was taken

from the Mellette County

News

printed and published in Mission

County of Mellette and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

July 26, 2000

August 2, 2000

Cost of Printing 33 lines @ .66 =

21.78; minus 20% 2nd lns. 17.42 = 39.20

Kathy R Klein
 (Signature)

Bookkeeper
 (Title)

August 2, 2000
 (Date Signed)

**NOTICE OF APPLICATION NO. 2441-2
TO APPROPRIATE WATER**

Notice is given that Ben Krogman, HCR 78, Box 220A, White River, SD 57579 has filed an application for a water permit to impound 32 acre-feet of water from runoff by constructing a dam located in the E1/2SW1/4 Section 27 with water impounded in the E1/2SW1/4 Section 27; all in T40N-R30W. This application requests impoundment of sufficient water to maintain water at the outlet elevation and is to be used to provide water for livestock.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2441-2 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on the application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider the application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by August 14, 2000.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.
 Publ.: July 26 and August 2, 2000.





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

AUG 25 2000

Ben Krogman
HCR 78 Box 220A
White River SD 57579

Dear Mr. Krogman:

Enclosed is Water Permit No. 2441-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Report of Examination of Works and/or Application of Water to Beneficial Use

To: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, July 29, 2015 made a thorough examination of the water system used by Ben Krogman, 27402 Ring Thunder Rd., White River, SD 57579, holder of Water Permit No. 2441-2, bearing the priority date of June 19, 2000. Water Permit No. 2441-2 authorizes the storage of 32 ac-ft of water through the construction of a dam in a draw in the E ½ SW ¼ of Section 27, T40N-R30W. The water impounded by this dam is in the same quarter section as the dam and is used to water livestock.

I have the following conditions to report for the system in question:

- 1) Works used to divert water:

Dam.

- 2) Works used to transport water to a place of use:

N/A

- 3) Works used to apply water to beneficial use:

N/A

The system is in the following condition: functional. The dam is in the following location:

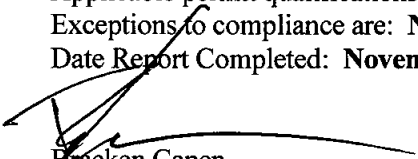
900 feet north and 1,800 feet east of the southwest corner of Section 27, T40N-R30W. Lat 43.40652N Lon 100.86151W.

License should be issued for the retention of: **32 ac-ft/yr**

Applicable permit qualifications have been complied with: **Yes**

Exceptions to compliance are: **None**

Date Report Completed: **November 16, 2015**



Bracken Capen

Natural Resources Engineer

DENR, Water Rights Program

FIELD INVESTIGATION REPORT FOR WATER PERMIT NO. 2441-2

DATE OF INVESTIGATION:	July 29, 2015
NAME & ADDRESS OF PERMIT HOLDER	Ben Krogman 27402 Ring Thunder Rd. White River, SD 57579
NAME & ADDRESS OF INVESTIGATION CONTACT/ RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE	Ben Krogman, owner.
DIVERSION POINT LEGAL LOCATIONS	900 feet north and 1,800 feet east of the southwest corner of Section 27, T40N-R30W. Lat 43.40652N Lon 100.86151W.

DAM INFORMATION:

Design Done By: NRCS, 1530 Samco Rd., Suite #4, Rapid City, SD 57702

Freeboard: 3 feet
Crest Width: 12 feet
Crest Length: 250 feet
Height: 20 feet
Storage: 32 ac-ft
Outlet Pipe Diameter: 24 inches
Secondary Spillway Width: 70 feet

PERMIT QUALIFICATIONS:

- 1) Special qualifications to permit being abided by: N/A
- 2) All structures, wells, and lands on map: Yes

Comments: Original Permit uses Sections 22 and 27 interchangeably on the description of the location.
The E ½ SW ¼ of Section 27, T40N-R30W is the correct description of the legal location.



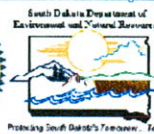
Legend

- Secondary_Spillway
- Dam
- Impounded Water
- Section Boundaries - PLSS



0 0.02750.055 0.11 Miles

Prepared by Bracken Capen
Natural Resources Engineer
DENR, Water Rights Program





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

DEC 22 2015

2441-2

Ben Krogman
27402 Ring Thunder Rd
White River SD 57579

Dear Mr. Krogman:

Enclosed is Water License No. 2441-2. This is the final water right document completing your process of obtaining a Water Right. Also, included with your license is a map prepared by the staff engineer who conducted the investigation.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2441-2

(1) Ben Krogman, 27402 Ring Thunder Rd, White River SD 57579 made Application No. 2441-2, June 19, 2000 for a water permit to impound 32 acre feet of water from runoff, Mellette County, South Dakota for livestock watering purposes. Permit No. 2441-2, with a priority date of June 19, 2000 was approved August 14, 2000 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before August 14, 2005 and for the application to beneficial use of water on or before August 14, 2009.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Water Right No. 2441-2 is issued a license, bearing a priority date of June 19, 2000, to impound 32 acre feet of water from runoff for livestock watering purposes.

The location of the storage dam (spillway) is approximately 900 feet north and 1,800 feet east of the SW corner of Section 27-T40N-R30W (E 1/2 SW 1/4)

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 2441-2, including the following qualifications:

- Water Permit No. 2441-2 authorizes a dam with a storage capacity of 32 acre-feet of water and sufficient water annually to maintain the water level to the outlet elevation.
- Low flows as needed for downstream domestic use, including livestock water and prior water rights must be bypassed.


Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

DEC 22 2015

date

