

Considered: _____

WATER PERMIT NO. 1490-1

HAP No. Ph 374-3592

Name of Applicant USDA, Forest Service

Post Office Address P.O. Box 390 Lemmon SD 57638

Amount of Water Claimed 24.8 ac-ft Total Acres -

Source of Water Supply unnamed tributary to Deer Creek (Dam)

Water to be used for F&W^{habitat}, livestock watering County Perkins

About 4 1/2 miles N of Lodgepole

PROOF OF PUBLICATION: Received _____ Not Received _____

APPLICATION: Approved _____ Subject to _____

F.F. & C.L. Adopted _____ Not Approved _____ Deferred _____

PRIORITY _____ Date Received April 27, 1990 Fee 150.00 Remarks Dam being built in conjunction with Ducks Unlimited

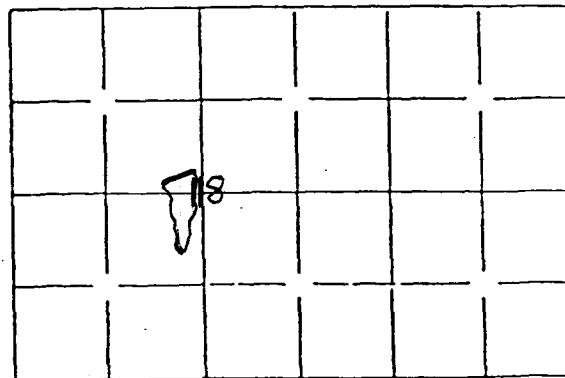
Corrected Application Received _____ Period of Annual Use continuously

WATER QUALITY APPROVAL RECEIVED NA APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES _____ NO _____ REMARKS _____

Diversion Point SE⁴NW⁴, NE⁴SW⁴ Section 18
T22N-R12E

Land to be Irrigated _____



Well Log: Driller NA Licensed YES _____ NO _____

Depth of Well NA REMARKS _____

Type of Map Plat PREPARED BY Curtis Glasge 4720 Reviewed and the Number assigned on 5/4/90 By Eric Thorslund

**SOUTH DAKOTA
WATER PERMIT No. 1490-1**

Date of first receipt of application April 27, 1990.

The Water Management Board approved Water Permit Application No. 1490-1 on July 25, 1990 for USDA Forest Service, P.O. Box 390, Lemmon, SD 57638 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 1490-1 authorizes impoundment of 24.8 acre-feet of water by constructing a dam on an unnamed tributary to Deer Creek. The damsite and the water impounded is to be located in the SE1/4 NW1/4, NE1/4 SW1/4 Section 18 T22N-R12E. Water is to be stored annually to an approximate elevation of 2,555 feet mean sea level.
2. The water appropriated shall be used for the purpose of waterfowl habitat and livestock watering and may not exceed the amount of water needed for beneficial use for recreational and domestic purposes.
3. The water is to be used during the following described annual period: January 1 - December 31.
4. The date from which applicant may claim right is April 27, 1990.
5. One-fifth of the construction is to be completed on or before January 25, 1993.
6. All construction is to be completed on or before July 25, 1995.
7. Water is to be put to beneficial use on or before July 25, 1999.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Approval of Permit No. 1490-1 authorizes storage of up to 24.8 acre-feet annually.

WATER MANAGEMENT BOARD

By: _____

John H. Hatcher
Chief Engineer, Water Rights Division
Department of Water and Natural Resources

SEP 13 1990

(date)

Pub Day Thurs

 Mail to: Water Rights Div.
 523 E. Capitol
 Pierre, SD 57501
 (605) 773-3352

64

 No. 1490-1 Hydrologic Unit 10130301
 Map No. _____ Basin Grand River
 Newspaper Lemmon Leader Box 180 57638

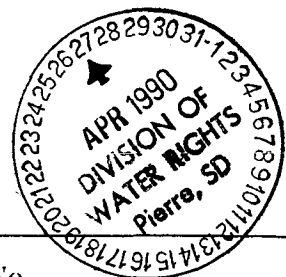
Application For Permit To Appropriate Water Within The State Of South Dakota

 Check use of water: Industrial ☐ Commercial ☐ Municipal ☐ Other Common Distribution System ☐
 Rural Water System ☐ Suburban Housing ☐ Geothermal Heat ☐ Institutional ☐ Recreational ☐
 Domestic ☐ (above 18gpm) Other ☒

Type of Application: Check one or more of the following

 New ☒ Vested Right ☐ Future Use ☐ Change Use ☐
☐ Amend Permit No. _____ with old priority date retained

 Change diversion point(s) ☐ Add diversion point(s) ☐ Other ☐
☐ Application to: Change diversion point(s) ☐ Add diversion point(s) ☐ on Permit No. _____

☐ Construction to use water reserved by Future Use Permit No. _____

 1. Name of Applicant USDA, Forest Service Phone No. (605) 374-3592
 Post Office Address P.O. Box 390 Lemmon State South Dakota Zip Code 57638
(Street, RR or Box) (City)

 2. Amount of water claimed (c.f.s) 24.8 ac. ft.

 3. Source of water supply Dry Draw

 4. Location of point of diversion See attached map. SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 18-T22N-R12E

 _____ County Perkins

 5. Counties where water will be used Perkins

 6. Annual period during which water is to be used -Yearlong- January 1 - December 31

7. Give a brief description of proposed 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)

The dam being proposed will be designed and constructed by Ducks Unlimited. Its purpose will be to provide habitat for waterfowl and to provide water for livestock.

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instruction)

 STATE OF SOUTH DAKOTA)
 County of Perkins)^{ss}

 I, USDA, Forest Service 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 Thomas W. Heintz

 Subscribed and sworn to before me this 24th day of April 1990
Mary Heintz

Notary Public

 my commission expires 9/10/93 presently Mary Heintz

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 Thickness _____ 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. Dugout Information Estimates

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

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should 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

Ducks Unlimited
6115 East Main Avenue
Bismarck, ND 58501

b) Freeboard 3.0 feet

c) Crest Width 12 feet

Crest Length 290 feet

d) Height 11 feet

e) Primary Outlet Capacity _____
 If Pipe, diameter 18 inches

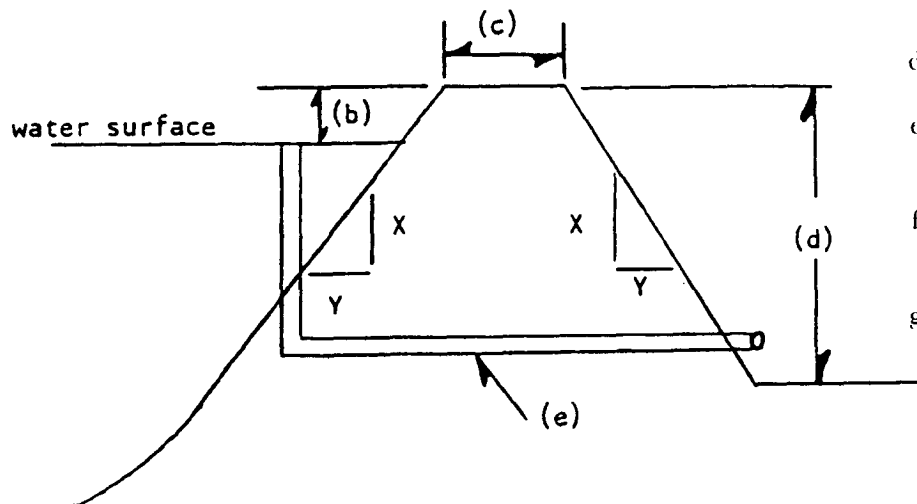
f) Secondary Spillway Capacity _____
 Spillway width Min. width 50 feet

g) X & Y Slope 3:1
 Upstream _____
 Downstream 3:1

Surface Area of Impoundment 8.8 acres

Storage 24.8 acre feet

Drainage area above dam 118



Thomas W. Heintz USDA Forest Service
 Signature of Applicant

RECEIPT

Division of Water Rights

412223

South Dakota Department of Water and Natural Resources

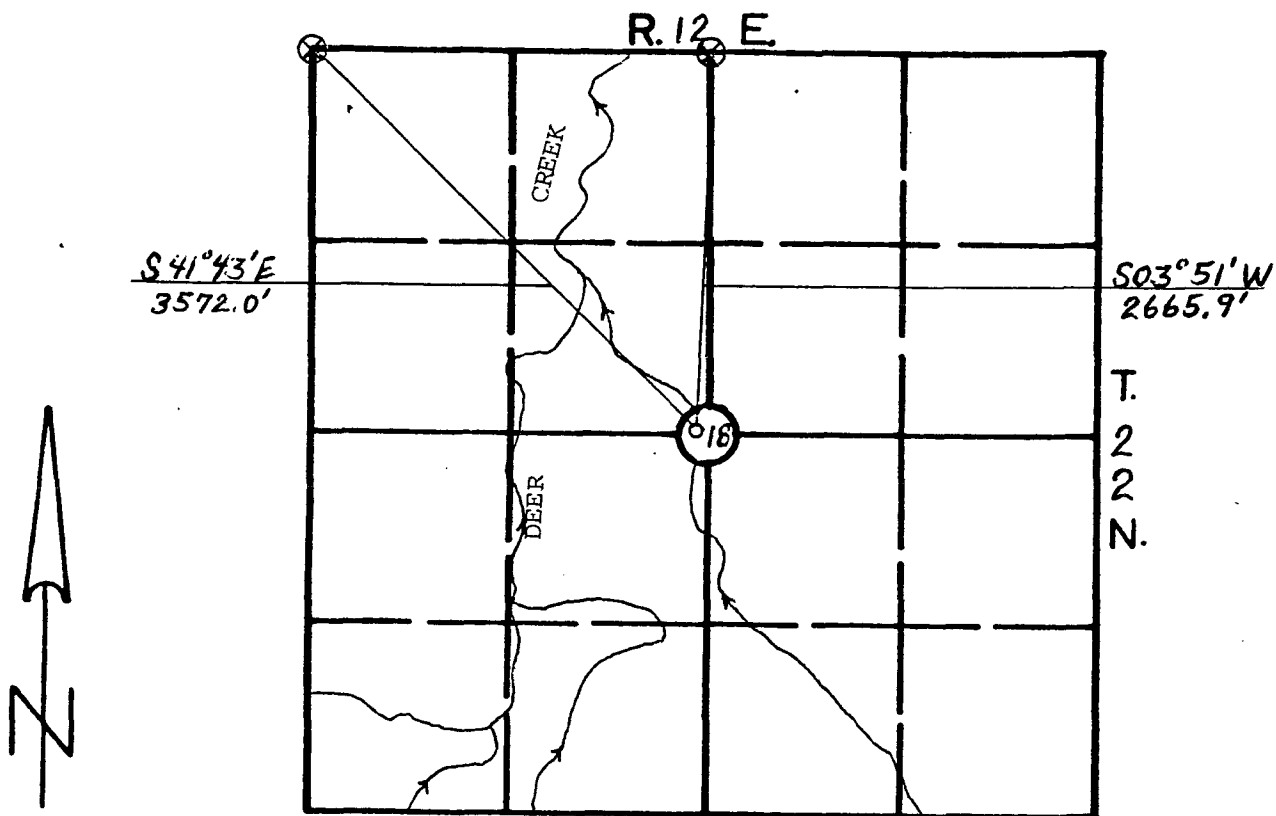
Pierre, May 3, 19 90

RECEIVED OF US Forest Service, Grand River Ranger District, Box 390, Lemmon, SD 57638-0390
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>1490-1</u> to Appropriate Water, to construct works 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 Certified Copy of _____		
Fee for Print Copy of Map _____		
Fee for Certifying _____		
Fee for _____		
(Any Other Work Provided by Law)	Total	150 00

By John Hatch / mra
Chief Engineer

DEER CREEK NORTH PROJECT
 GRAND RIVER RANGER DISTRICT
 CUSTER NATIONAL FOREST
 BILLINGS, MONTANA



- PROPOSED SITE
- ⊙ BRASS CAP
- ⊗ ALUMINUM CAP

STATE OF SOUTH DAKOTA)
) SS
 COUNTY OF PERKINS)

Scale: 1 inch=1320 feet

I, CURTIS W. GLASOE of DICKINSON, N. DAKOTA do hereby certify that this map was made from information taken from a field survey by me, (or, made under my direction by Mark Aughtman for whose work I stand personally responsible), the 16th day of April, 1990, and that it correctly represents the recreation/wildlife habitat works described in the accompanying application, together with a meander of streams and shows accurately the location and area of the lands proposed to be developed in each subdivision.

Curtis W. Glasoe RLS# 4120
 Surveyor

Map to accompany

Approved: _____
 State Engineer

Application No. 1490-1

Ducks Unlimited, Inc.

6115 EAST MAIN AVE.
BISMARCK, N.D. 58501



TO BETTER SERVE YOU...

Please accept this message in reply to your recent communication. We are using this note in lieu of a formal letter but are sure you will agree that a prompt reply is more important, and the time and money saved will best benefit the waterfowl.

DATE: 4-10-90

DEL BROSE
WATER RIGHTS DIV
DEPT. WATER & NATURAL RES.
JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE, S.D. 57501



DEL,

HERE ARE THE PRELIMINARY PLANS AND DESIGN
REPORT FOR 2 DAMS PROPOSED BY THE FOREST
SERVICE KNOWN AS THE DEER CREEK PROJECT.
SOILS INFORMATION WILL BE FORWARDED WHEN
AVAILABLE.

Logan Smith

United States
Department of
Agriculture

Forest
Service

Grand River
Ranger
District

P.O. Box 390
Lemmon, SD 57638

Reply To: 2610

Date: April 25, 1990

Water Rights Division
523 E. Capitol
Pierre, SD 57501



Dear Water Board,

Enclosed is an application for water rights for the North Deer Creek Ducks Unlimited project. This reservoir is estimated to store 24.8 acre feet and to cover a surface area of 8.8 acres. A survey plat is attached to the application, and your office should have received a copy of the design specifications from Ducks Unlimited in Bismarck. If not, let me know and I'll make sure some are sent to you. Also, our main office in Billings, Montana has started to process payment on the filing and inspection fees. This purchase order should also be arriving at your office soon.

If you have any further questions, please call.

Sincerely,

A handwritten signature in cursive script that reads "Tom Heintz".

THOMAS W. HEINTZ
District Ranger

Enclosure



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

June 14, 1990

Roger Smith, P.E.
Ducks Unlimited, Inc.
6115 East Main Ave.
Bismark, ND 58501

Dear Mr. Smith:

We have reviewed the plans and specifications for USDA Forest Service Deer Creek Project (Water Right No. 1490-1) in Perkins County. The plans and specifications as submitted are approved.

Our review was to determine compliance with the minimum spillway design flood requirements as specified by the Water Management Board Safety of Dams Rules, Chapter 74:02:08. Approval applies only to the portion of the plans and specifications that could result in the uncontrolled release of water from the Deer Creek Project dams. Approval of these plans and specifications does not release the USDA Forest Service as owner of the dams from the responsibility for operating and maintaining the dam in good repair to assure the safety of the dams.

If you have any questions, please let us know.

Sincerely,

A handwritten signature in cursive script that reads "Gale N. Selken".

Gale N. Selken, P.E.
Natural Resources Engineer IV
for John Hatch, Chief Engineer
Water Rights Division
605 773-3352

cc: Thomas W. Heintz, USDA Forest Service

REPORT ON APPLICATION NO. 1490-1
USDA FOREST SERVICE
JUNE 11, 1990

Water Permit Application No. 1490-1 proposes to impound 24.8 acre-feet of water in a dam located on an unnamed tributary to Deer Creek. The dam will be located in the SE 1/4 NW 1/4 of Section 18-T22N-R12E in Perkins County.

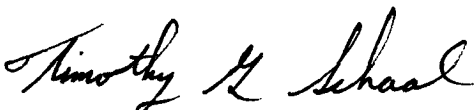
Discussion:

The Deer Creek Project is a Ducks Unlimited project in cooperation with the USDA Forest Service. The project consists of two small dams. Application No. 1490-1 was filed for the North Dam which will be 11 feet high with a normal storage capacity of 24.8 acre-feet and a maximum storage capacity of 54 acre-feet. Location Notice No. 72065 was filed for the South Dam which will be 15 feet high with a normal storage capacity of 20.6 acre-feet and a maximum storage capacity of 62 acre-feet.

Based on the preliminary risk assessment submitted by Ducks Unlimited, both of these dams will be classified as a Small Size, Low Hazard Dam. They will both qualify for the 25 year frequency event exception specified in section 74:02:08:07.01 of the Safety of Dams Rules. The dams will be constructed with a primary spillway which will pass flows produced by a 10 year 24 hour event, and a secondary spillway which will pass flows produced by a 100 year 24 hour event.

Conclusion:

Water Permit Application No. 1490-1 should be approved since there is unappropriated water available and approval of the application will not affect existing Water Rights or downstream domestic use.



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

Approved by,



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

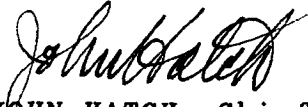
RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1490-1, USDA Forest Service

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Water and Natural Resources concerning Water Permit Application No. 1490-1, USDA Forest Service, PO Box 390, Lemmon SD.

The Chief Engineer is recommending APPROVAL of Application No. 1490-1 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) in the public interest with the following qualification:

Approval of Permit No. 1490-1 authorizes storage of up to 24.8 acre feet annually.

See the attached report for additional information.


JOHN HATCH, Chief Engineer
June 15, 1990



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

June 18, 1990

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

Thomas Heintz
USDA Forest Service
Box 390
Lemmon, SD 57638-0390

Dear Mr. Heintz:

Water Permit Application No. 1490-1 for waterfowl habitat and livestock watering use 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 Lemmon Leader printed at Lemmon SD. For your information, a copy of the notice is enclosed. Copies of the report and the Chief Engineer's recommendation are also 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 Intent to Appropriate Water 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. We must receive Proof of Publication before the application can be considered by the Water Management Board.

Sincerely,

A handwritten signature in cursive script that reads "Eric Gronlund".

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

June 18, 1990

Lemmon Leader
Box 180
Lemmon, SD 57638-0180

ATTN: Legal Publications:

Enclosed is a Notice of Hearing on Application No. 1490-1 to be published twice. Please publish the first notice on or before June 28, 1990 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 USDA Forest Service, Box 390, Lemmon, SD 57638-0390.

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. The permit application cannot be considered by the Water Management Board until proof of publication has been received.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----

FIRST TRANSMITTAL NOTICE

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

No. _____

Date _____

We are in receipt of your letter of _____ enclosing Notice of Hearing to
Appropriate Water by Application No. _____ 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 or before June 28, 1990 with 2nd publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 1490-1 to Appropriate Water

Notice is given that USDA, Forest Service, Box 390, Lemmon, SD 57638-0390 has filed an application for a water permit to impound 24.8 acre-feet of water by constructing a dam on an unnamed tributary to Deer Creek. The dam site and the water impounded is to be located in the SE1/4 NW1/4, NE1/4 SW1/4 Section 18-T22N-R12E. Water is to be stored annually to an approximate elevation of 2,555 feet mean sea level and is to be used to provide waterfowl habitat and for livestock watering.

Pursuant to SDCL 46-2A-2, the Chief Engineer of the Water Rights Division recommends APPROVAL of Application No. 1490-1 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. This application will be considered by the Water Management Board in Room 216, Joe Foss Bldg., 523 E Capitol, Pierre SD on July 25, 1990 at 10:00 am. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer or 4) deny this application based on the facts presented at the public hearing.

Any interested person that intends to participate in the hearing before the Board by presenting evidence or cross-examining witnesses according to SDCL 1-26, must file a written petition with BOTH the applicant and Chief Engineer by July 13, 1990. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)". 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 legal counsel if legal counsel is obtained. The applicant need not file a petition. Contact the Water Rights Division to request information on this application or to assure access to the hearing by the handicapped.

This hearing is an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. The time of the hearing will also be automatically delayed for at least twenty days upon written request to the Chief Engineer from the applicant or a petitioner. The request for a delay must be received by July 13, 1990.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.

Affidavit of Publication

STATE OF SOUTH DAKOTA
COUNTY OF PERKINS

SS:



I, Lee Starkey

being the first duly sworn under oath say: The Lemmon Leader is a legal weekly newspaper of general circulation as required by South Dakota Code of Nineteen Hundred Thirty-Nine, and any acts amendatory thereto, published by the Leader Publishing Co., Inc. in Lemmon, in said county and state, and has been such legal newspaper during the time hereinafter mentioned; that during all of said time as an employee or officer of said newspaper I have had personal knowledge of the facts stated in this affidavit; that the advertisement headed:

NOTICE OF HEARING

a printed copy of which is hereto attached, was printed and published in said newspaper for Two successive weeks upon the following dates, to-wit:

June 28, July 5, 1990

that the full amount of the fees charged for publishing the same to-wit: the sum of \$34.76 inures solely to the benefit of the publishers of said newspaper; that no agreement or understanding for any division of this sum has been made with any other person; and that no part of said sum has been agreed to be paid to any person whomsoever.

Lee Starkey

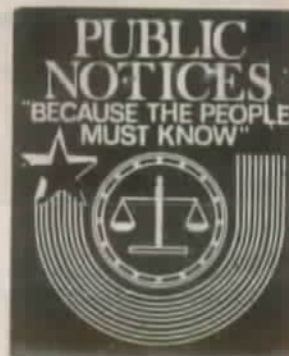
Subscribed and sworn to before me this 12 day of July, 1990

Alice A. Garsted

Notary Public, South Dakota

My Commission Expires
February 7, 1997

(Seal)



NOTICE OF HEARING

on Application No. 1490-1
to Appropriate Water

Notice is given that USDA, Forest Service, Box 390, Lemmon, SD 57638-0390 has filed an application for a water permit to impound 24.8 acre-feet of water by constructing a dam on an unnamed tributary to Deer Creek. The dam site and the water impounded is to be located in the SE 1/4, NW 1/4, NE 1/4 SW 1/4 Section 18-T22N-R12E. Water is to be stored annually to an approximate elevation of 2,555 feet mean sea level and is to be used to provide waterfowl habitat and for livestock watering.

Pursuant to SDCL 46-2A-2, the Chief Engineer of the Water Rights Division recommends APPROVAL of Application No. 1490-1 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. This application will be considered by the Water Management Board in Room 216, Joe Foss Bldg, 523 E Capitol, Pierre SD on July 25, 1990 at 10:00 a.m. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer or 4) deny this application based on the facts presented at the public hearing.

Any interested person that intends to participate in the hearing before the Board by presenting evidence or cross-examining witnesses according to SDCL 1-26, must file a written petition with BOTH the applicant and Chief Engineer by July 13, 1990. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)". 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 legal counsel if legal counsel is obtained. The applicant need not file a petition. Contact the Water Rights Division to request information on this application or to assure access to the hearing by the handicapped.

This hearing is an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. The time of the hearing will also be automatically delayed for at least twenty



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

SEP 13 1990

Thomas Heintz
US Forest Service
Box 390
Lemmon SD 57638-0390

Dear Mr. Heintz:

Enclosed is Water Permit No. 1490-1 as approved by the Water Management Board authorizing you to construct your water diversion system and put the water to beneficial use, not exceeding the limits as specified in the Water Permit.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the system and/or have put the water to beneficial use. An inspection can then be scheduled so that the Water License may be issued, thus completing your acquisition of a Water Right.

Very truly yours,

A handwritten signature in dark ink, appearing to read "John Hatch". The signature is written in a cursive, flowing style.

JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

enclosures

PLEASE NOTE: Certain changes can be made in your permit within the five year construction period, usually without affecting the priority date provided an application to amend your permit is made within the five year period - i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend a permit after the five year construction period will be assigned a new priority date. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.



United States
Department of
Agriculture

Forest
Service

Grand River
Ranger
District

P.O. Box 390
Lemmon, SD 57638

Reply to: 2650

Date: June 17, 1993



Water Rights Division, DWNR
ATTN: John Hatch
Joe Foss Building
Pierre, SD 57501-3181

Dear Mr. Hatch:

Enclosed is a Notice of Completion of Works and Application of Water to Beneficial Use form for your records.

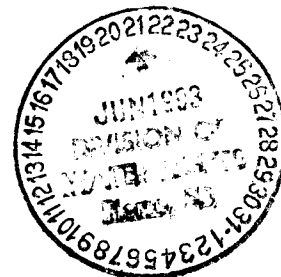
If you have any questions, please call me at (605) 374-3592.

Sincerely,

FOREST G. MORIN
District Ranger

Enclosure





NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE

Date June 16, 1993

TO: Water Rights Division, DWNR
Joe Foss Building
Pierre SD 57501-3181

FROM: USDA Forest Service, P.O. Box 390 Lemmon S.D.
name address city 57638

I have completed the construction of the water diversion system and I have put the water to beneficial use to the maximum extent it is going to be used. I have not exceeded the amounts specified in Water Permit No. 1490-1.

Water Permit No. 1490-1 states that the diversion system is to be constructed by July 25, 1995, and that the water it put to beneficial use by July 25, 1999.

The diversion system was completed on Oct. 4, 1990.
Applying the water to beneficial use was completed on Sept. 30, 1991.

You may schedule an inspection so that the Water License may be issued.

Forest A. Moen
signature

District Ranger
Sand River Ranger District
U.S. Forest Service



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

July 24, 1995

1490-1

Forest G. Morin, District Ranger
USDA Forest Service
P.O. Box 390
Lemmon, SD 57638

Dear Mr. Morin:

The inspection of your water use system and the inspection of the extent of application of water to beneficial use, as developed under Water Permit No. 1490-1, has been completed. Your final water right document, the Water License, can now be issued.

Statutes require that we charge a \$50.00 fee for the inspection and issuance of the Water License. Upon receipt of the \$50.00 fee from you, we will begin processing your Water License.

Please remit fee to:
Department of Environment & Natural Resources
Water Rights Program
523 E. Capitol
Pierre, SD 57501-3181

South Dakota Water Law 46-5-30.1 requires that a permit holder may not divert water until the \$50.00 license fee has been paid. Please contact us if you have any questions.

Sincerely,

Cheryl F. Frost
Secretary
Water Rights Program
(605) 773-3352

NOTE: On check or money order, please specify your permit number. This will insure proper handling of the fee.

RECEIPT

414567

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, _____, July 28, 19 95

RECEIVED OF Grand River Ranger Dist (Dept of Ag), PO Box 390, Lemmon, SD 57638

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. <u>1490-1</u>	50	00
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	50 00

By John Hatch
Chief Engineer

United States
Department of
Agriculture

Forest
Service

Grand River
Ranger
District

P.O. Box 390
Lemmon, SD 57638

Reply To: 2600

Date: July 26, 1995

Department of Environment and Natural Resources
Water Rights Program
ATTN: Cheryl F. Frost
523 E. Capitol
Pierre, SD 57501-3181



Dear Ms. Frost:

Enclosed is a check in the amount of \$50.00 for the fee for the inspection and issuance of a water license for permit number 1490-1.

Please send a receipt to: Grand River Ranger District
P.O. Box 390
Lemmon, SD 57638

Sincerely,

Forest G. Morin
FOREST G. MORIN
District Ranger

Enclosure

Permit No. 1490-1
Grand River - Water District

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, **6/19/1995**, made a thorough examination of the water use system owned by **USDA Forest Service of P.O. Box 390, Lemmon, SD 57638** holder of **Permit No. 1490-1**, bearing the priority of **April 27, 1990** authorizing the storage of **24.8 acre-feet** of the waters of **surface water** for **waterfowl habitat and domestic purposes**, in **Perkins County**.

I have to report on the conditions of the same as follows:

The system is in the following condition **Good**. The point of diversion is located **about 1700 feet east, 2700 feet north from the southwest corner of Section 18, T22N-R12E (SE1/4 NW1/4)**. The works are capable of storing **24.8 acre-feet** of water which is used for **waterfowl habitat and domestic uses**.

The license should be issued for **24.8 acre-feet** of storage.

Applicable permit qualifications have been complied with: **Yes X No**

Exceptions to compliance are: **None**

Date Report Completed: **7/13/1995**



M. Rassool Ahadi
Natural Resources Engineer
DENR, Water Rights Program

REPORT ON INSPECTION OF PERMIT NO. 1490-1

DATE OF INSPECTION: 6/19/1995

NAME & ADDRESS OF PERMIT HOLDER: USDA Forest Service, P.O. Box 390, Lemmon, SD 57638

DIVERSION POINT LEGAL LOCATION: SE1/4 NW1/4 Section 18, T22N-R12E

DAM INFORMATION: ***

- 1) Height to crest 11 feet
- 2) Height to primary spillway 8 feet
- 3) Height to secondary spillway 9 ft
- 4) Crest width 12 feet
- 5) Crest length 300 feet
- 6) Secondary spillway length 60 feet
- 7) Secondary spillway width 65 feet
- 8) Approx. storage 24 ac-ft
- 9) Approx. storage to crest 54 ac-ft
- 10) Date constructed: 1990

OUTLET TUBES:

- 1) Diameter 24 inches
- 2) Type Steel (CMP)
- 3) Valved N (Y/N)
- 4) Valve type
- 5) Location on structure
Bottom-middle
- 6) Category of dam III (I,II,III)
- 7) Inspection sheet completed N (Y/N)
- 8) Name of contractor Ducks Unlimited

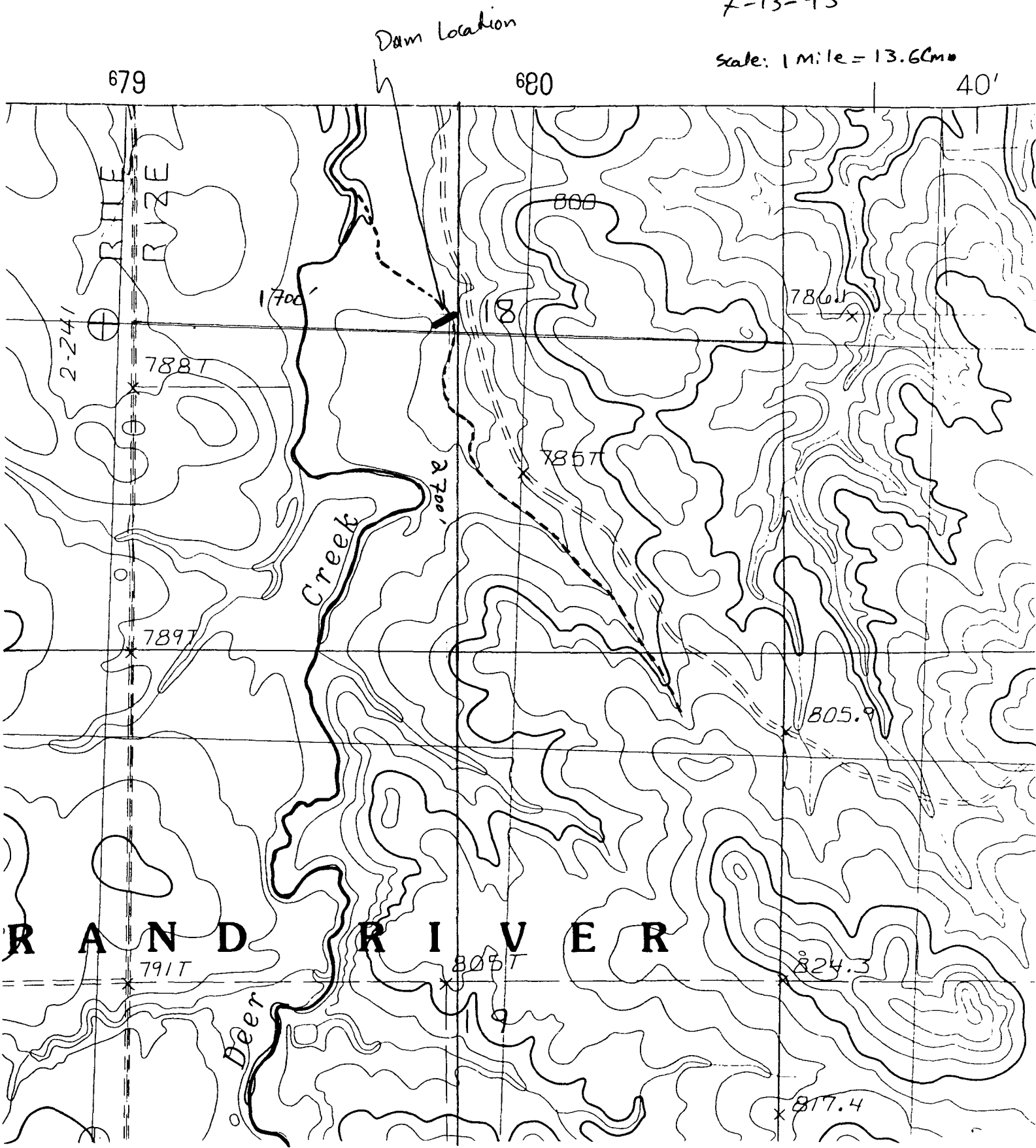
PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Soil and water permit lands agree with lands being irrigated and lands listed on permit NA
- 2) Special qualifications to permit being abided by Y
- 3) All structures, on map Y
- 4) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period NA

*** At the time of inspection, the dam was almost half full. The surface area was about 4.0 acres.
All field measurements are estimates.

MR. [Signature]
Nat. Res. Engineer III
7-13-95

Scale: 1 mile = 13.6 cm



STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1490-1

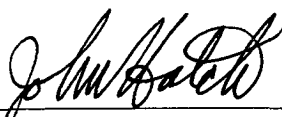
(1) The USDA Forest Service of PO Box 390, Lemmon, SD 57638-0390 made Application No. 1490-1, April 27, 1990 for a water permit to store 24.8 acre feet of water annually by impounding water through construction of a dam on an unnamed tributary to Deer Creek, Perkins County, South Dakota for recreational and domestic purposes. Permit No. 1490-1, with a priority date of April 27, 1990 was approved July 25, 1990 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before July 25, 1995 and for the application to beneficial use of said water on or before July 25, 1999.

The permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on June 22, 1993. The "*Notice*" stated the system was constructed on October 1, 1990 and water placed to beneficial use on September 30, 1991.

(2) It is certified that the applicant has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to store 24.8 acre feet of water annually for beneficial use. The location of the storage dam (spillway) is about 1700 feet east and 2700 feet north of the SW corner of Section 18, T22N, R12E (SE 1/4 NW 1/4).

(3) The applicant has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use for waterfowl habitat and domestic uses.

(4) Pursuant to South Dakota Water Law 46-5-30.1 the USDA Forest Service of PO Box 390, Lemmon, SD 57638-0390 the holder and/or owner of Water Permit No. 1490-1 is issued a license to appropriate water, the right to store 24.8 acre feet of water annually through impoundment of water in a dam on an unnamed tributary to Deer Creek with a priority date of April 27, 1990 from the location specified in (2) of this license. The water is utilized for recreational and domestic purposes. This license is subject to any limitations or qualifications listed in Water Permit No. 1490-1 and subject to South Dakota State Law.



JOHN HATCH, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

SEP 6 1995

date



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

SEP 6 1995

⁴
1890-1

Forest G. Morin, District Ranger
USDA Forest Service
P.O. Box 390
Lemmon, SD 57638-0390

Dear Mr. Morin:

Enclosed is Water License No. 1490-1 and Receipt No. 414567 for \$50.00 which was assessed for an inspection and issuance of the license. Water License No. 1490-1 is the final document which completes the process of obtaining a water right.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Program
(605) 773-3352

gm
enclosures

DESIGN REPORT

DEER CREEK

LOCATION OF PROPOSED DAM

North Dam - The proposed dam referred to as the North Dam of the Deer Creek project is located on Forest Service land in the SE $\frac{1}{4}$ Section 18 Township 22N Range 12E. The proposed dam is on an unnamed tributary to Deer Creek and has a watershed of 118 acres.

South Dam - The proposed dam referred to as the South Dam of the Deer Creek project is located on Forest Service land in the SW $\frac{1}{4}$ Section 18 Township 22N Range 12E. The proposed dam is on an unnamed tributary to Deer Creek and has a watershed of 670 acres.

Deer Creek is located in Perkins County, SD and is a tributary to the North Fork of the Grand River.

CLASSIFICATION OF PROPOSED DAMS

As described in Section 74:02:08:05 CLASSIFICATION OF DAMS -- HAZARD POTENTIAL, no loss of life and minimal or no economic loss is expected on surrounding lands as a result of constructing the proposed dam. It is recommended that the North Dam and South Dam be classified as a small category 3 dam. The product of the intermediate storage capacity and the effective height is 248 and 741 respectively.

DESIGN

Both the North Dam and South Dam are designed to meet or exceed South Dakota standards for a small category 3 dam. The primary spillway will pass flows produced by a 10 year 24 hour rainfall without utilizing the emergency spillway. The emergency spillways will pass flows produced by the 100 year 24 hour. The dams are of sufficient height to create a minimum freeboard of 1.0 feet over the water level produced by the 100 year 24 hour rain. The North Dam will utilize a natural emergency spillway. The South Dam will contain an excavated emergency spillway.

DISCHARGE CAPACITY

The SCS TR-20 Hydrology program was used to determine the discharge at various reservoir stages with respect to time. The program uses accepted procedures to develop inflow and outflow hydrographs. The data inputted into the TR-20 program was calculated from accepted formulas and procedures. The primary spillway capacity was calculated by comparing discharges developed by the weir flow formula, orifice flow formula, and

formulas for calculating head loss through corrugated metal pipe. The emergency spillway capacity was calculated using Technical Release No. 39 Hydraulics of Broad-Crested Spillways developed by the Soil Conservation Service.

The following is a relationship between peak inflows, corresponding outflows and reservoir elevations:

EVENT	INFLOWS (CFS)	MAX. WATER SURFACE	OUTFLOWS (CFS)
		ELEVATION (MSL)	
North Dam			
10 Yr.	58.4	2555.12	12.3
100 Yr.	128.7	2555.82	30.4
South Dam			
10 Yr.	167.4	2568.5	64.0
100 Yr.	387.8	2569.8	297.7

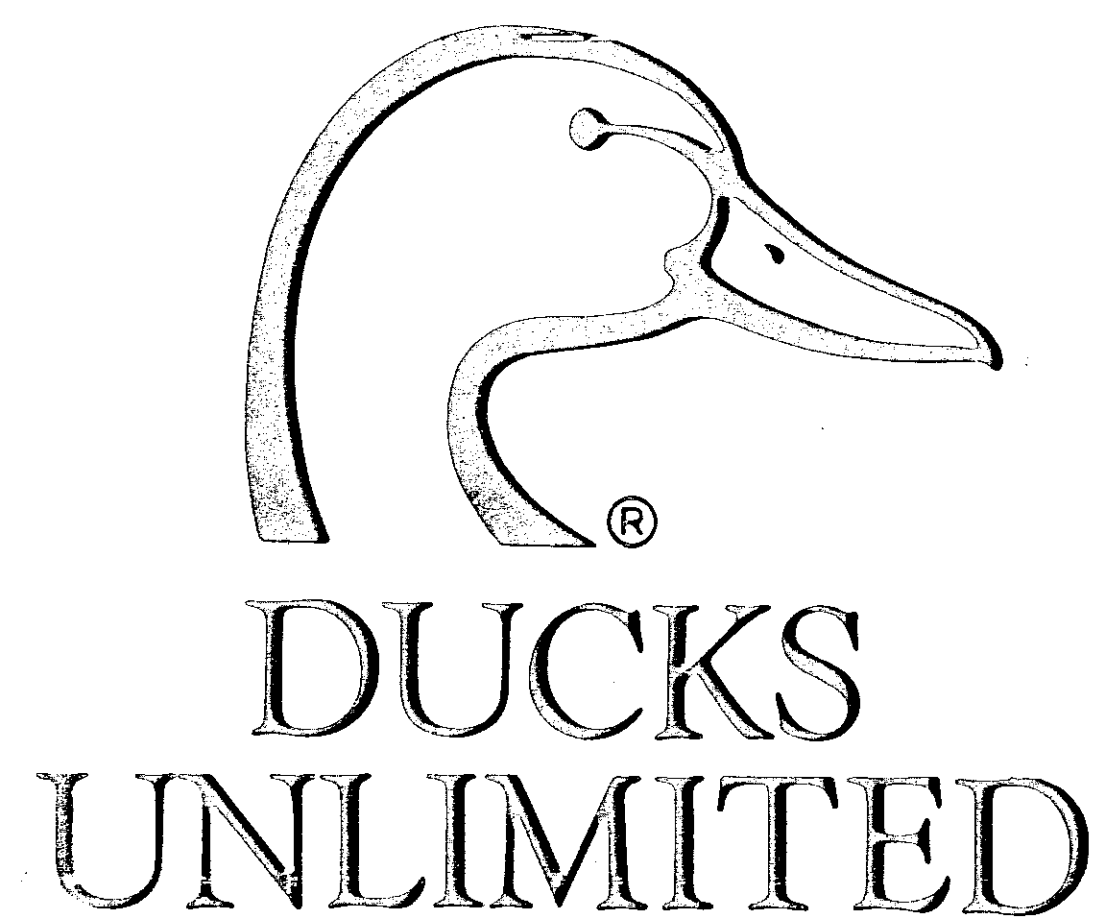
PLANS, SPECIFICATIONS, AND SOILS REPORT

The preliminary set of plans and soil report are submitted with the Design Report. A set of standard construction specifications has been submitted to the Division of Water Rights for the purpose of permit review. This information will satisfy section 74:02:08:09 of the "SD Dam Safety Requirements."

Submitted by:



Roger C. Smith, P.E.
PE-4325



DUCKS UNLIMITED

PROJECT

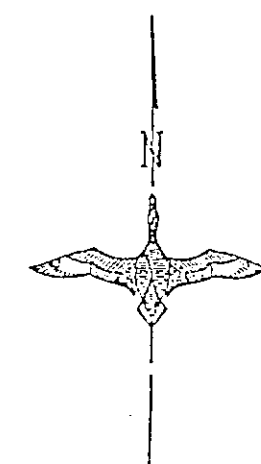
DEER CREEK

SEC. 18, TWP. 22N. R0E. 12E.

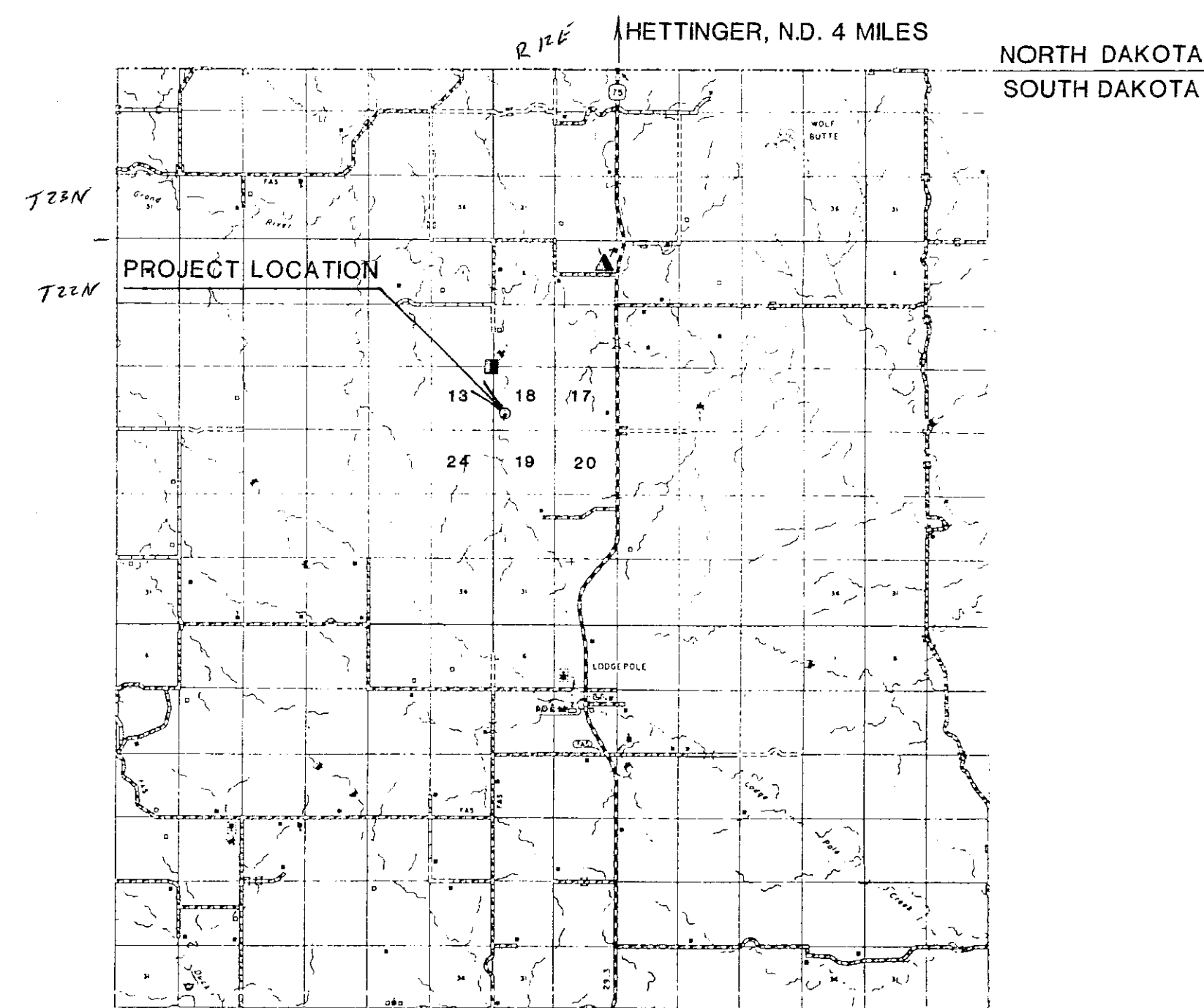
PERKINS COUNTY, SOUTH DAKOTA

IN COOPERATION WITH

US FOREST SERVICE

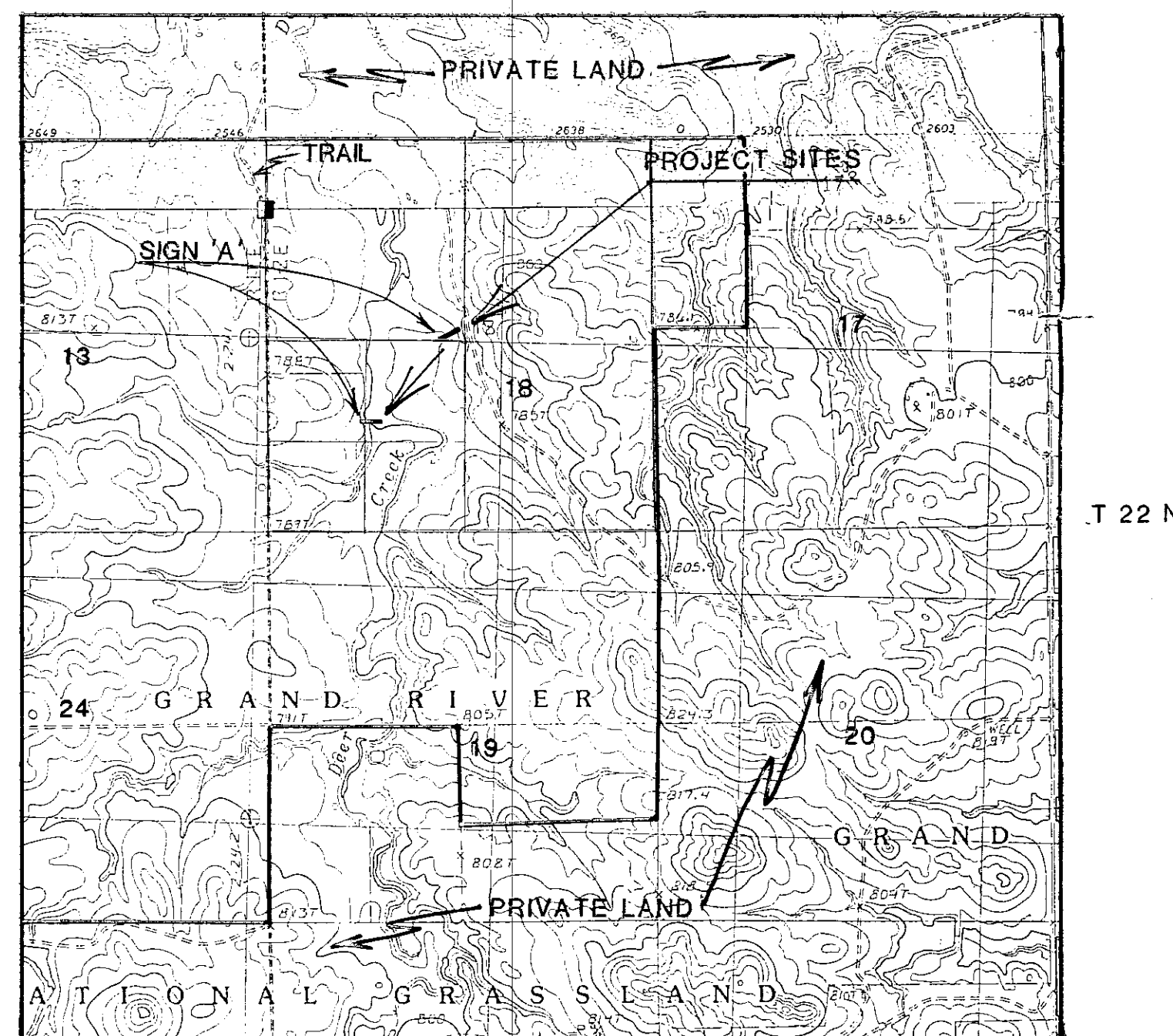


▲ APPROXIMATELY 6.7 MILES NORTH OF LODGEPOLE, S.D., OR 7 MILES SOUTH OF HETTINGER, N.D. TO PROJECT SITE FROM ▲ 1 MILE WEST, 1/2 MILE NORTH, 1 MILE WEST, 1 MILE SOUTH TO TRAIL, CONTINUE ON TRAIL SOUTH TO SECTION 18.



LOCATION MAP

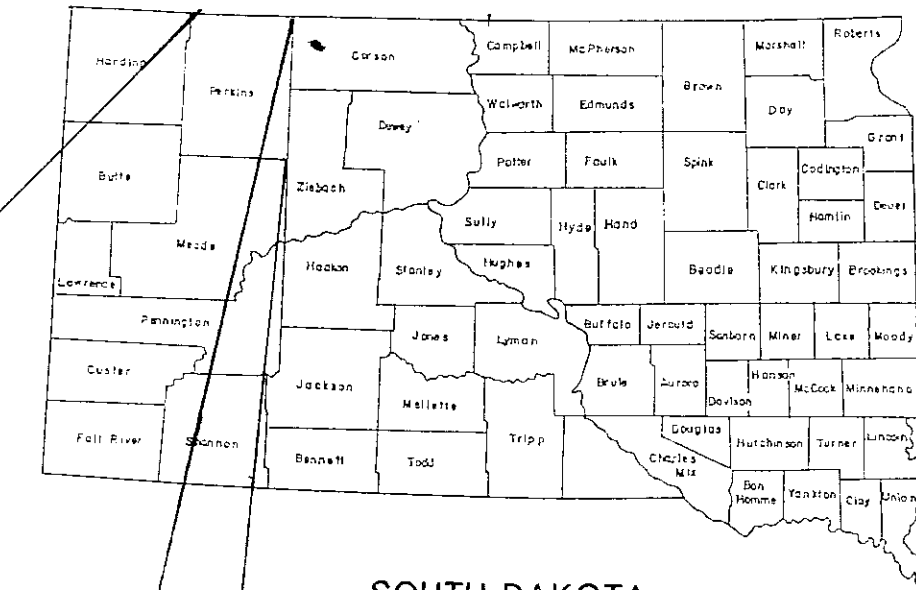
R 12 E



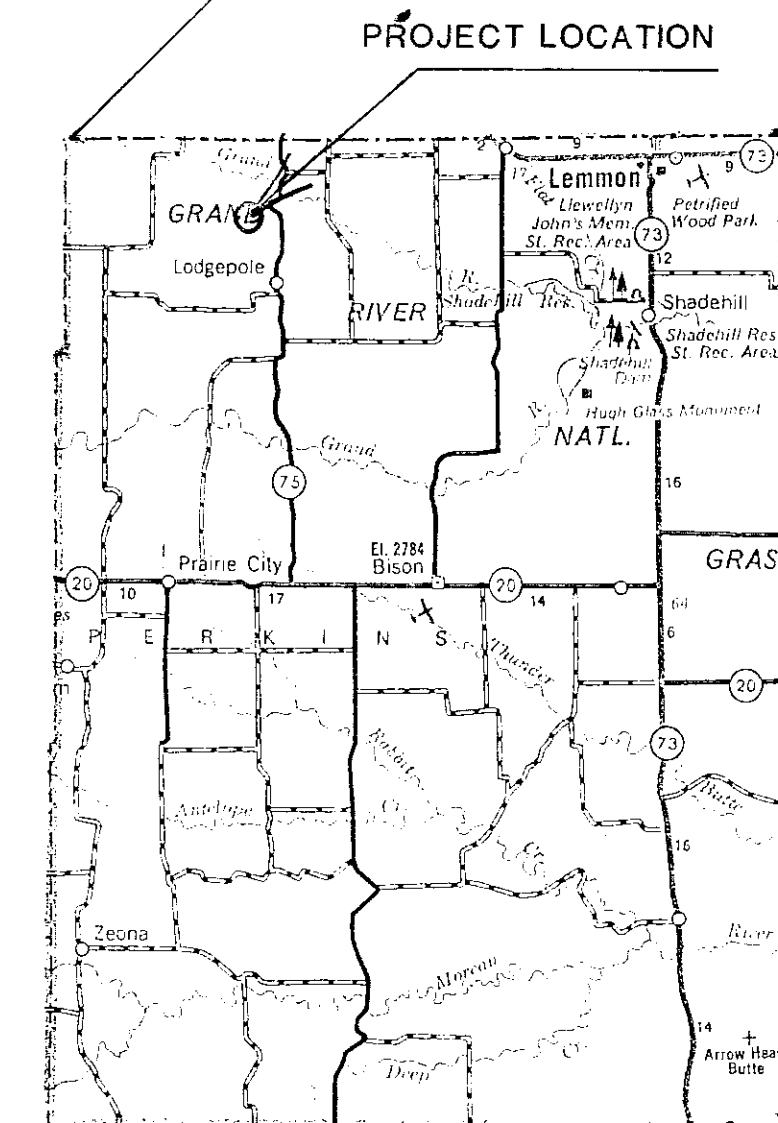
VICINITY MAP

SCALE: 1"=2000'

1490-1



SOUTH DAKOTA.



PERKINS COUNTY.

INDEX

1. VICINITY MAP
2. N. DAM SITE PLAN
3. N. DAM PROFILES
4. S. DAM SITE PLAN
5. S. DAM PROFILES
6. DETAILS

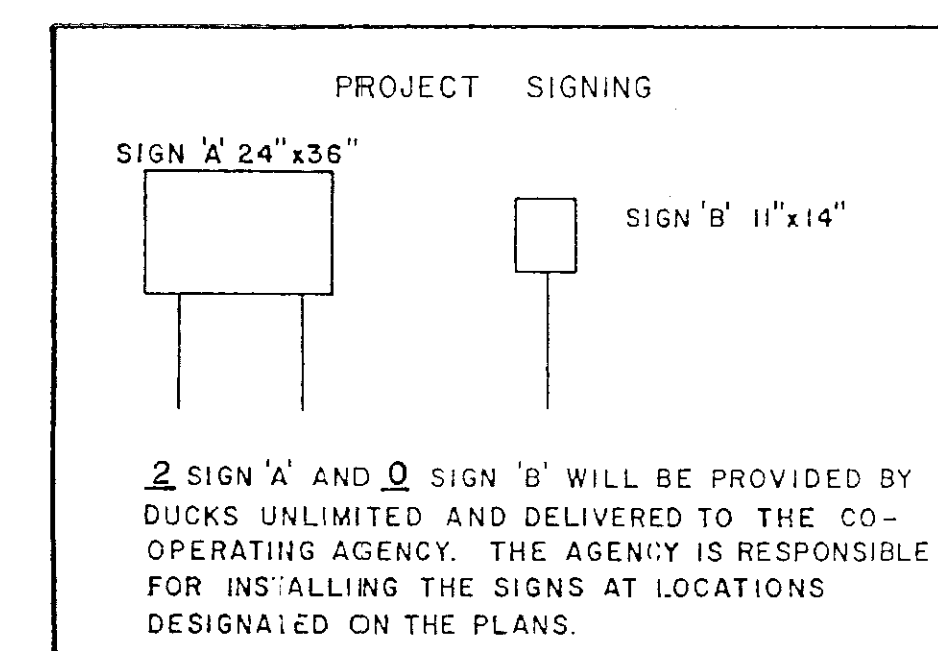
SPECIFICATIONS

- | | |
|-----|--------------------------------------|
| 201 | MOBILIZATION |
| 202 | SITE PREPARATION |
| 204 | EMBANKMENT CONSTRUCTION |
| 205 | WATER |
| 206 | WATER CONTROL STRUCTURE INSTALLATION |
| 207 | CULVERT INSTALLATION |
| 208 | CAST-IN-PLACE CONCRETE |

ESTIMATED QUANTITIES

- | | |
|---------------------------|-----------------|
| SITE PREPARATION | 1003 C.Y. |
| * EMBANKMENT CONSTRUCTION | 9,545 C.Y. - S. |
| WATER CONTROL STRUCTURE | 2 |
| CULVERT INSTALLATION | |
| 18" CMP, 16 GA, 52 L.F. | |
| 30" CMP, 16 GA, 76 L.F. | |

* EMBANKMENT CONSTRUCTION WILL BE PAID FOR ON A C.Y.-STAKED QUANTITY BASIS. A SHRINK FACTOR OF % WAS DETERMINED FROM ACTUAL SOILS TESTS.



Robert C. Smith

	PROJECT NO. SD-108-01-011	DESIGNED BY: RCS
	DATE: 3-2-90	DRAWN BY: WCK
GREAT PLAINS REGIONAL OFFICE	SHEET NO. 1 OF 6	CHECKED BY: GLJ
APPROVED BY: <i>Robert C. Smith</i>		CHECKED BY: <i>WCK</i>



DUCKS UNLIMITED

PROJECT

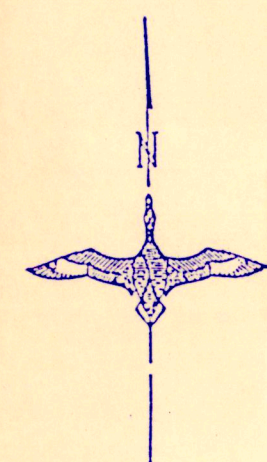
DEER CREEK

SEC. 18, TWP. 22N., RGE. 12E.

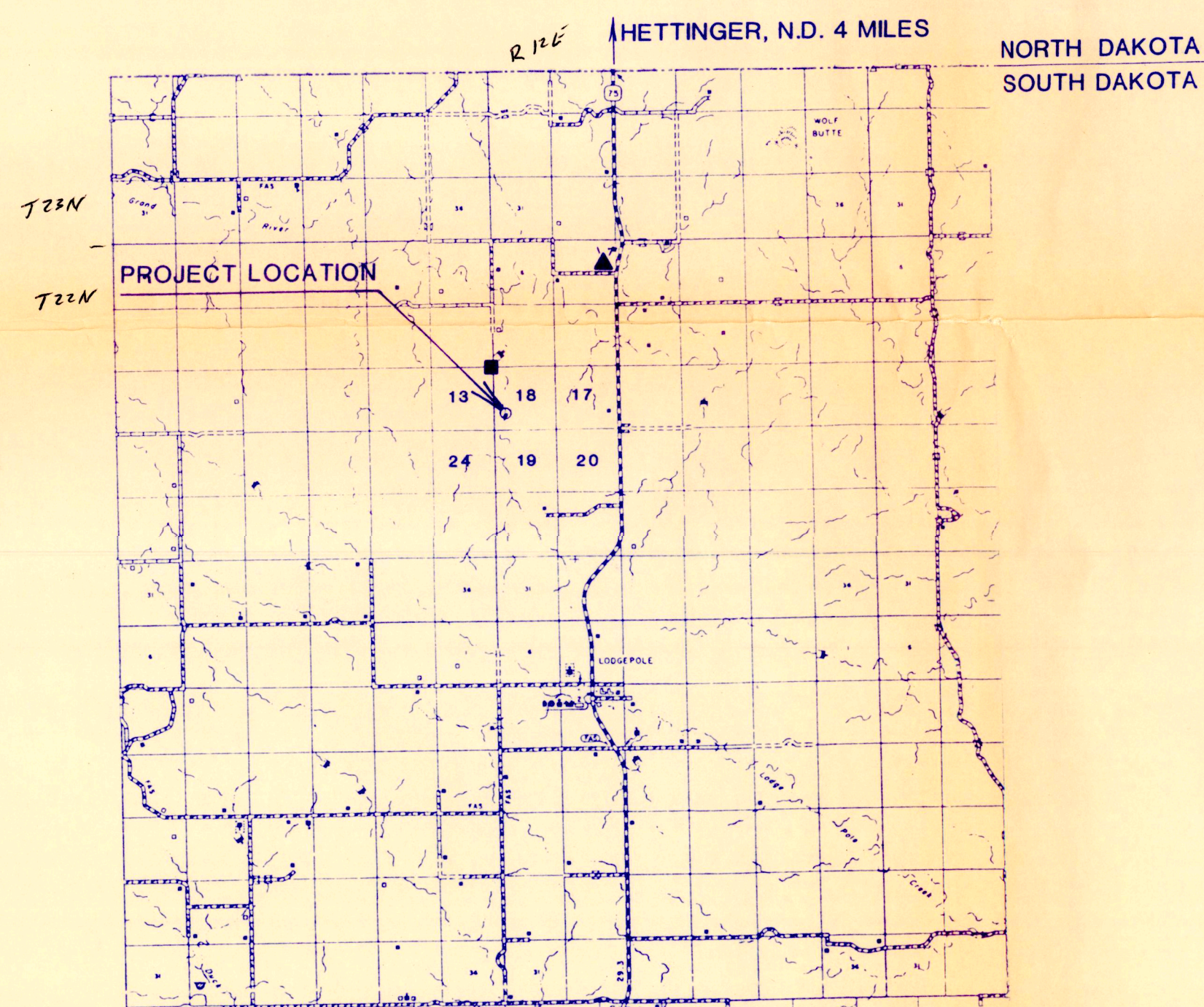
PERKINS COUNTY, SOUTH DAKOTA

IN COOPERATION WITH

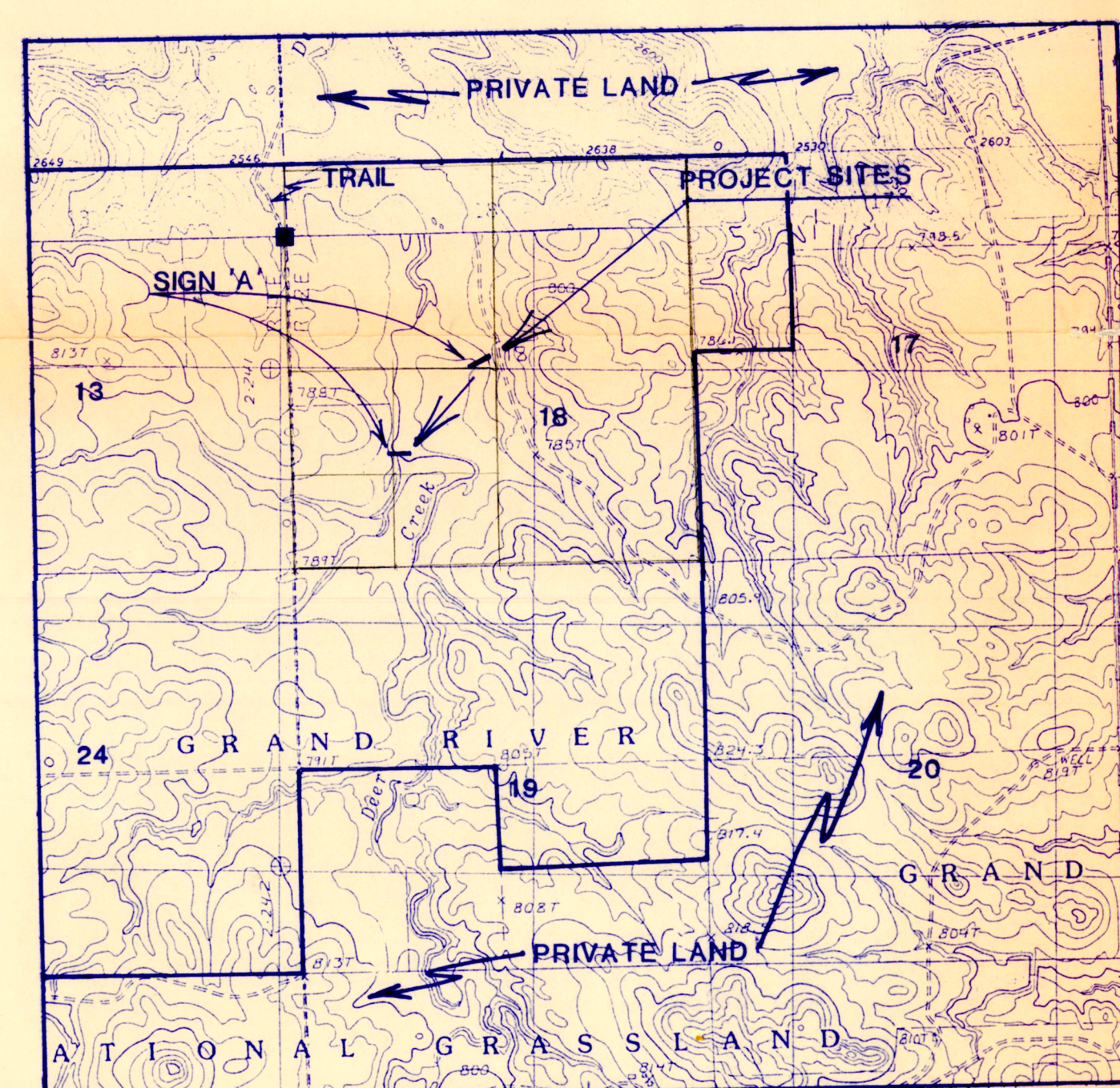
US FOREST SERVICE



▲ APPROXIMATELY 6.7 MILES NORTH OF LODGEPOLE, S.D., OR 7 MILES SOUTH OF HETTINGER, N.D. TO PROJECT SITE FROM ▲ 1 MILE WEST, 1/2 MILE NORTH, 1 MILE WEST, 1 MILE SOUTH TO TRAIL, CONTINUE ON TRAIL SOUTH TO SECTION 18.



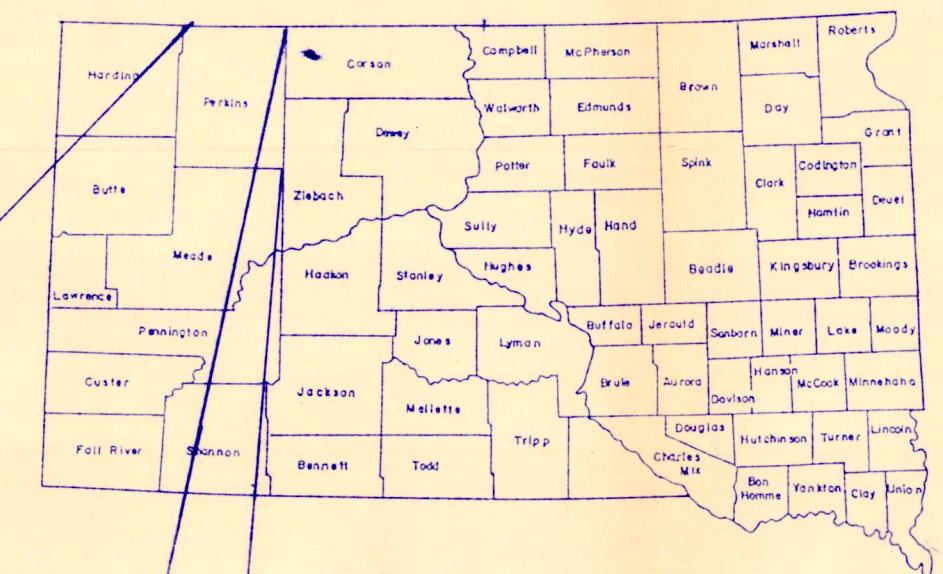
LOCATION MAP



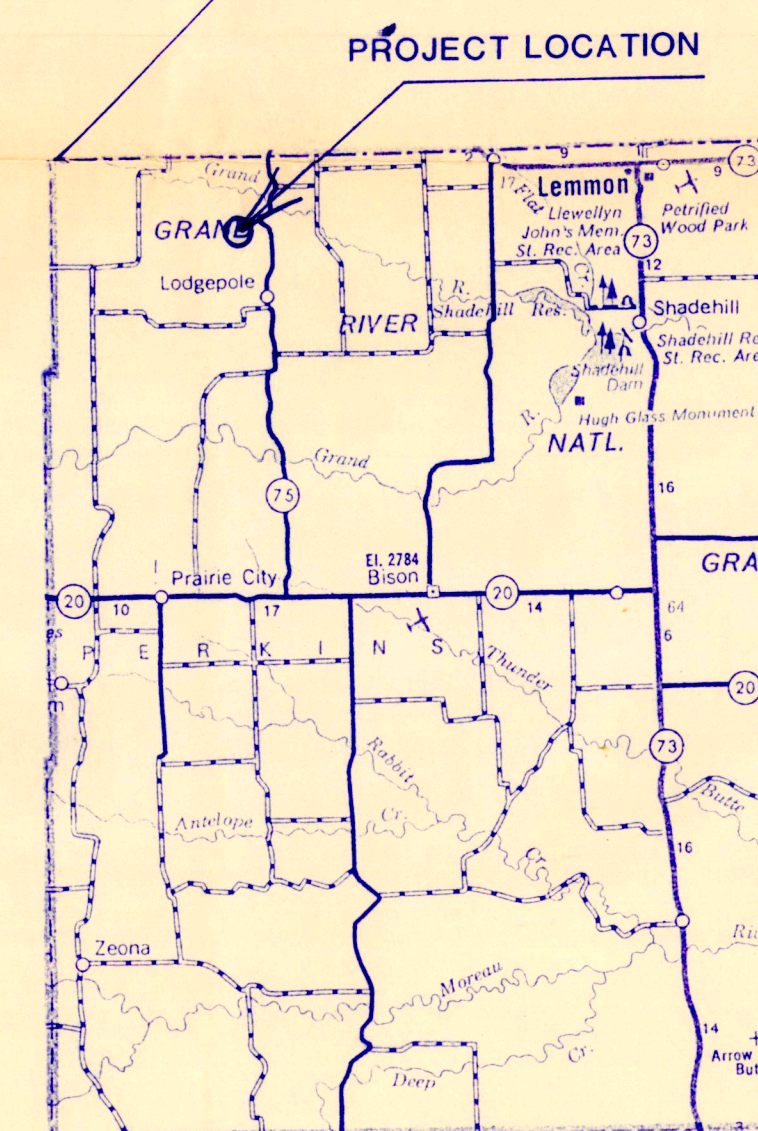
VICINITY MAP

SCALE. 1"=2000'

1490-1



SOUTH DAKOTA.



PERKINS COUNTY.

INDEX

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6. DETAILS

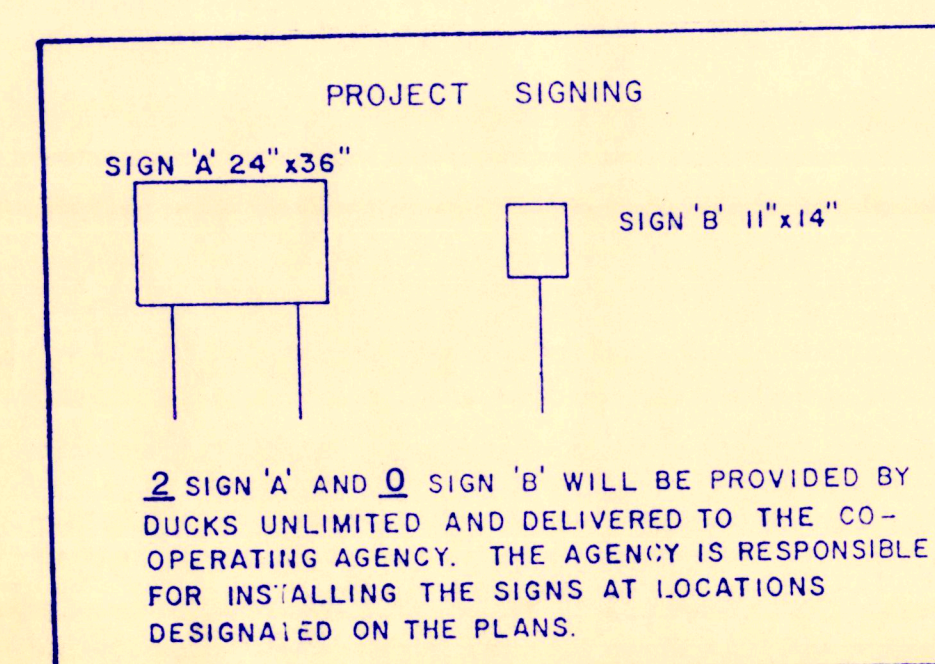
SPECIFICATIONS

- | | |
|-----|--------------------------------------|
| 201 | MOBILIZATION |
| 202 | SITE PREPARATION |
| 204 | EMBANKMENT CONSTRUCTION |
| 205 | WATER |
| 206 | WATER CONTROL STRUCTURE INSTALLATION |
| 207 | CULVERT INSTALLATION |
| 208 | CAST-IN-PLACE CONCRETE |

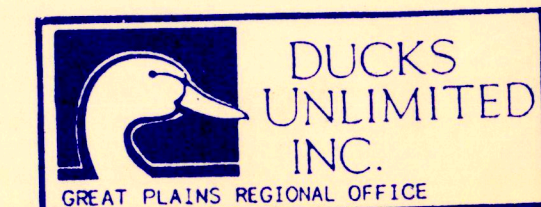
ESTIMATED QUANTITIES

- | | |
|---------------------------|-------------------------|
| SITE PREPARATION | 1003 C.Y. |
| * EMBANKMENT CONSTRUCTION | 9,545 C.Y. - S. |
| WATER CONTROL STRUCTURE | 2 |
| CULVERT INSTALLATION | 18" CMP, 16 GA, 52 L.F. |
| | 30" CMP, 16 GA, 76 L.F. |

* EMBANKMENT CONSTRUCTION WILL BE PAID FOR ON A C.Y.-STAKED QUANTITY BASIS. A SHRINK FACTOR OF ____% WAS DETERMINED FROM ACTUAL SOILS TESTS.



2 SIGN 'A' AND 2 SIGN 'B' WILL BE PROVIDED BY DUCKS UNLIMITED AND DELIVERED TO THE CO-OPERATING AGENCY. THE AGENCY IS RESPONSIBLE FOR INSTALLING THE SIGNS AT LOCATIONS DESIGNATED ON THE PLANS.



PROJECT NO. SD-108-01-011
DEER CREEK VICINITY MAP

DESIGNED BY: RCS
DRAWN BY: WCK
SURVEYED BY: GLJ
CHECKED BY: [Signature]

DATE: 3-2-90
SHEET NO: 1 OF 6

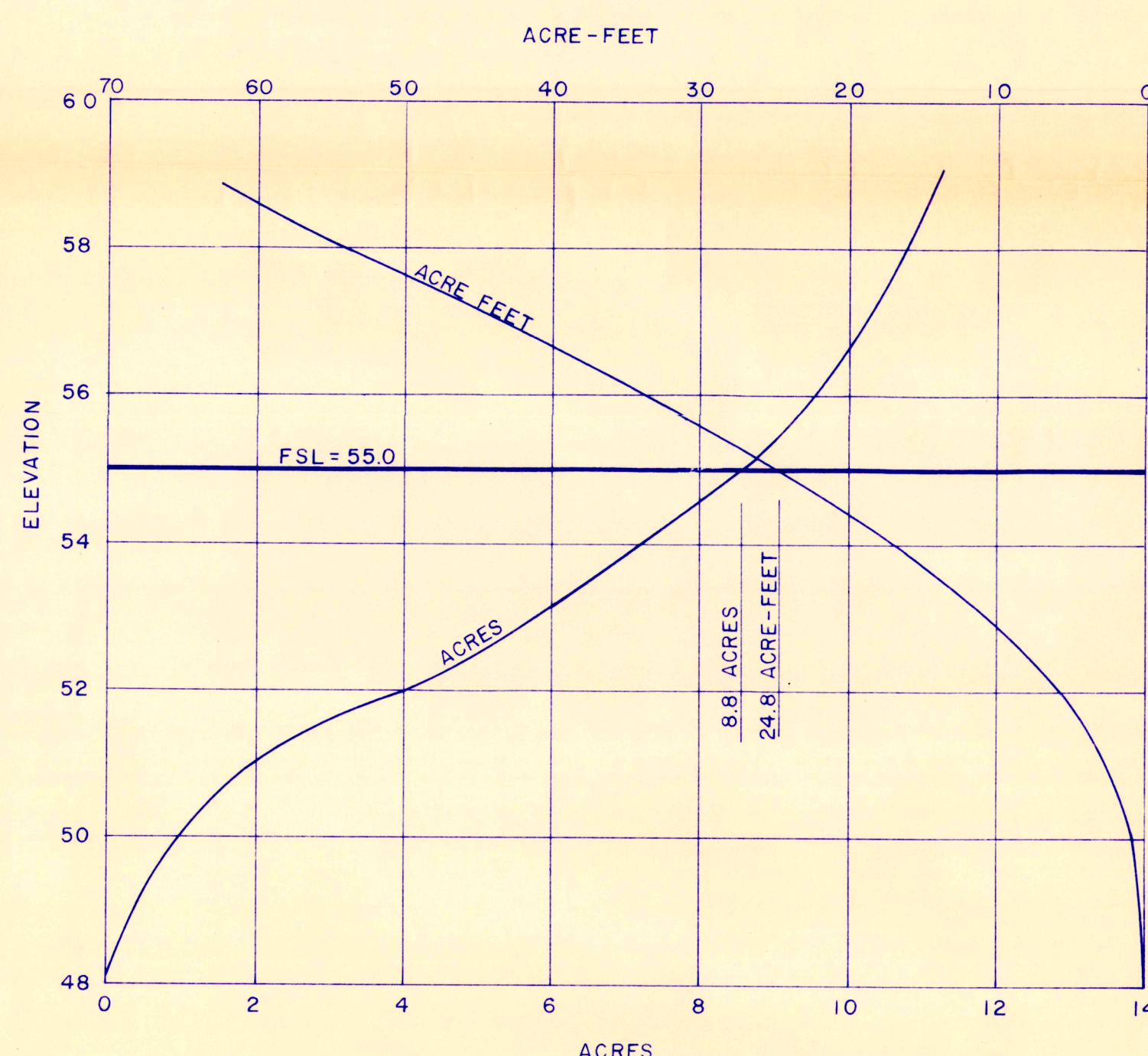
APPROVED BY: [Signature]

MARSH DATA

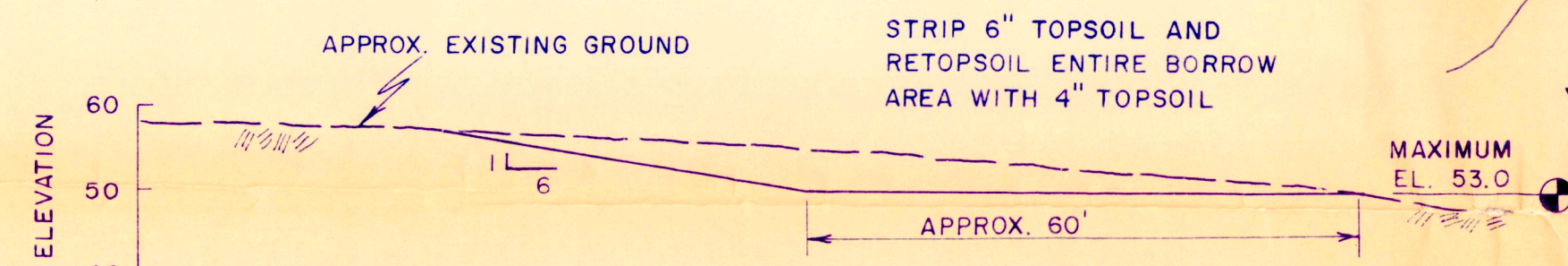
FULL SERVICE LEVEL (FSL) = 55.0
ACRES AT FSL = 8.8
ACRE-FEET AT FSL = 24.8
SHORELINE MILES AT FSL = .59

EST. QUANTITIES - NORTH DAM

SITE PREPARATION 291 C.Y.
EMBANKMENT CONSTRUCTION 2551 C.Y. -S
WATER CONTROL STRUCTURE 1 EA.
CULVERT INSTALLATION
18" CMP, 16 GA. 52, L.F.

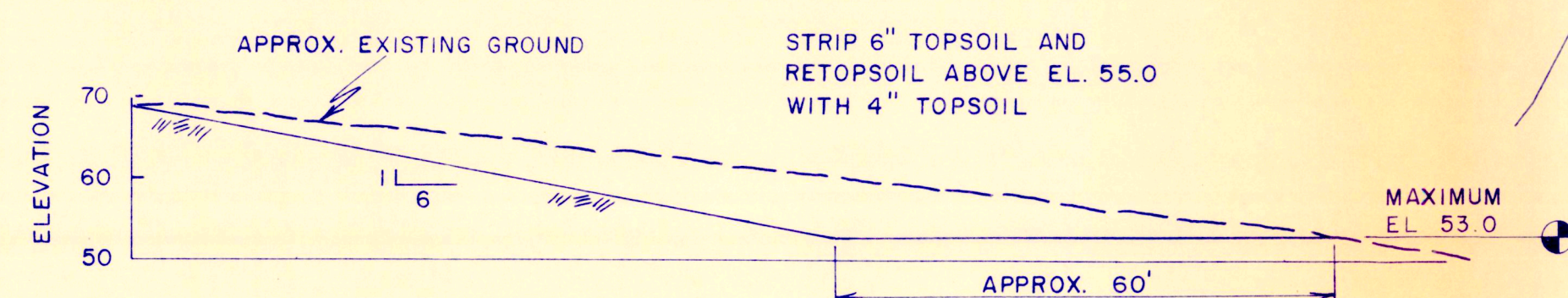


AREA CAPACITY CURVE



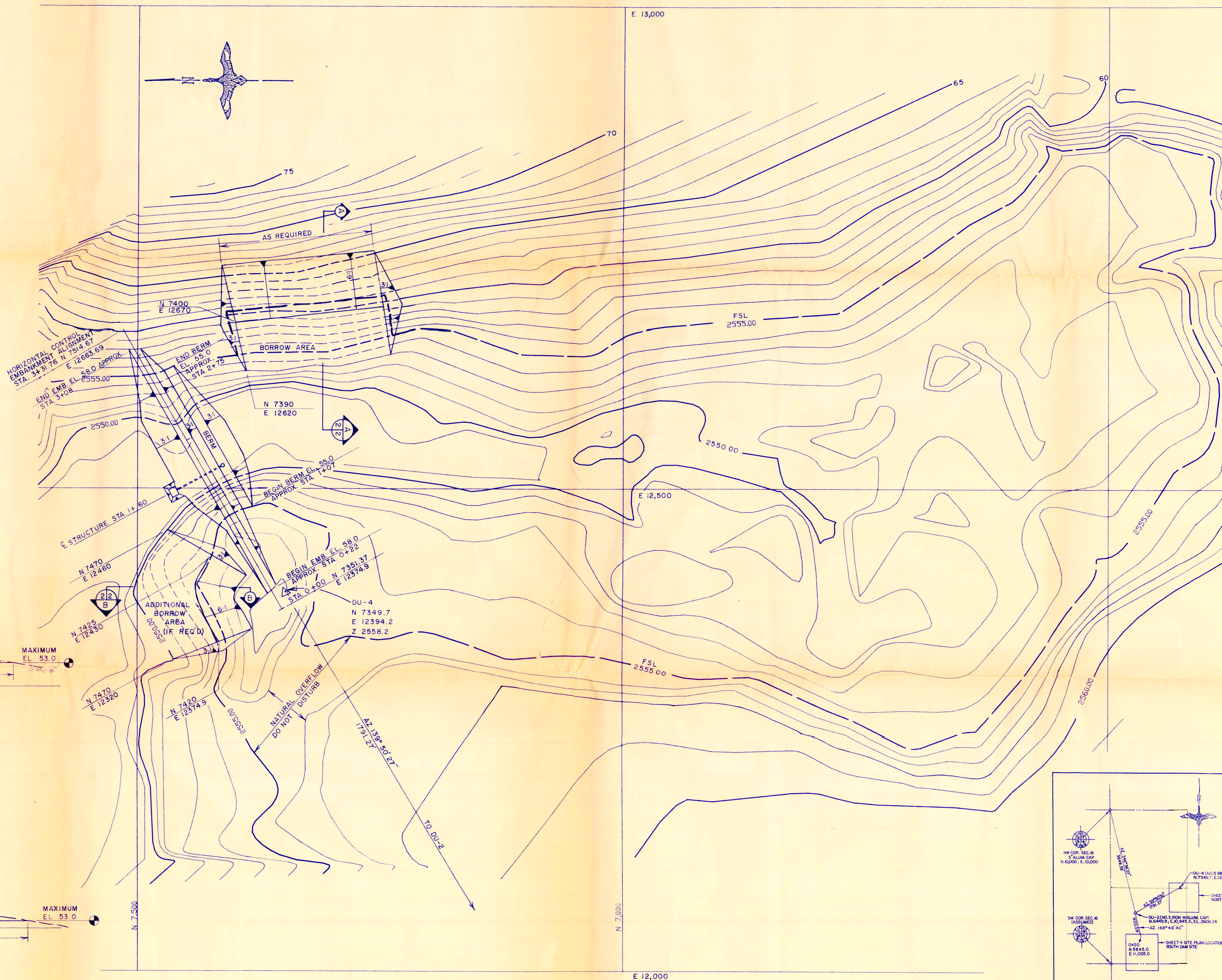
ADDITIONAL BORROW AREA

SCALE: 1" = 20' HOR. & VERT.

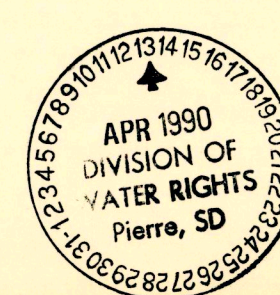
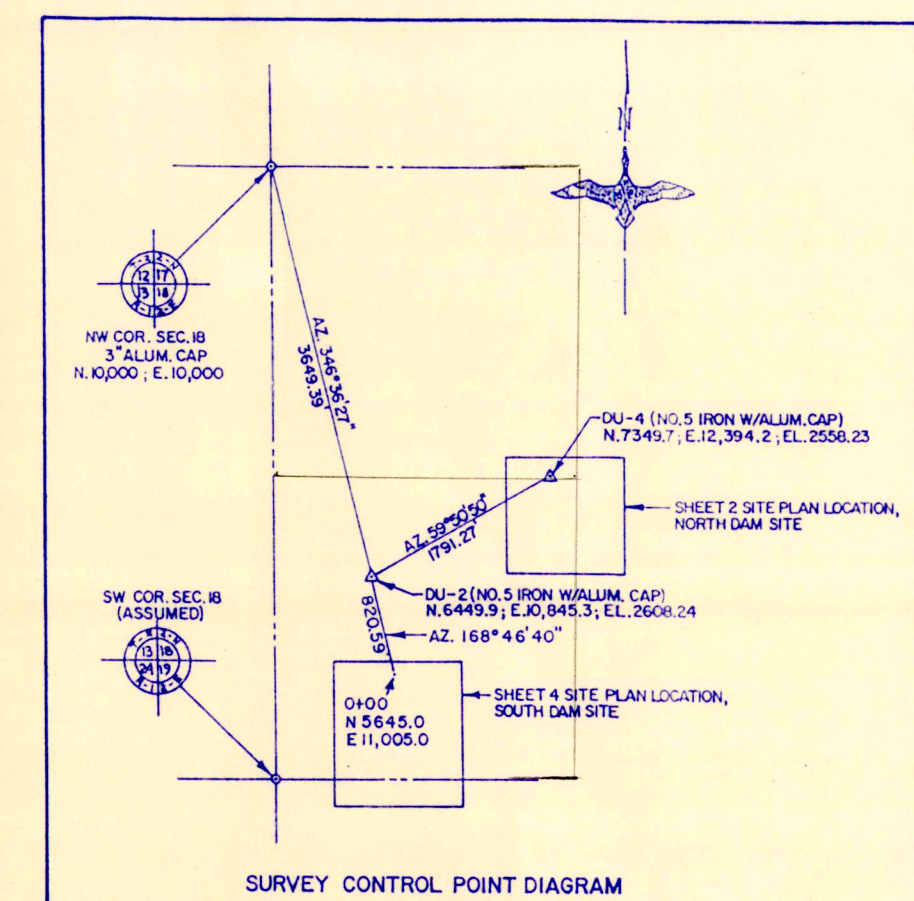
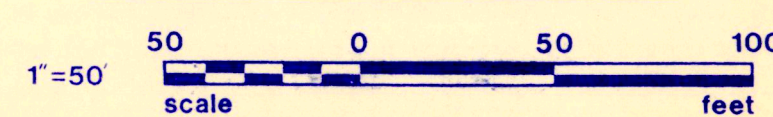


BORROW AREA

SCALE: 1" = 20' HOR. & VERT.



SITE PLAN



PROJECT NO. SD-108-01	DESIGNED BY: RCS
DEER CREEK-NORTH DAM SITE PLAN	DRAWN BY: TD
CHECKED BY:	SURVEYED BY:
DATE: 3-1-90	SHEET NO. 2 OF 6
APPROVED BY:	APPROVED BY:

NOTE TO SURVEYORS:
IF THE ELEVATION OF THE NATURAL GROUND AT THE END OF THE OUTLET WORKS IS > 48.5 , STAKE AN OUTLET CHANNEL AT 48.5, 8' WIDE, 3:1 SIDE SLOPES, AT 0% GRADE TO DAYLIGHT.

MAX. EL. 48.5

EL. 48.0

15'

36'

16'

20'

12'

10'

TOP OF COMPACTED FILL EL. 58.0

3

1

48" CMP RISER

52" L.F. 18" CMP, 16 GA. 0% SLOPE

TRASHRACK NOT SHOWN-SEE SHEET 6 FOR DETAILS

TOP OF BERM & RISER EL. 55.0

APPROX. EXISTING GROUND

BOTTOM OF CONC. BASE EL. 46.5

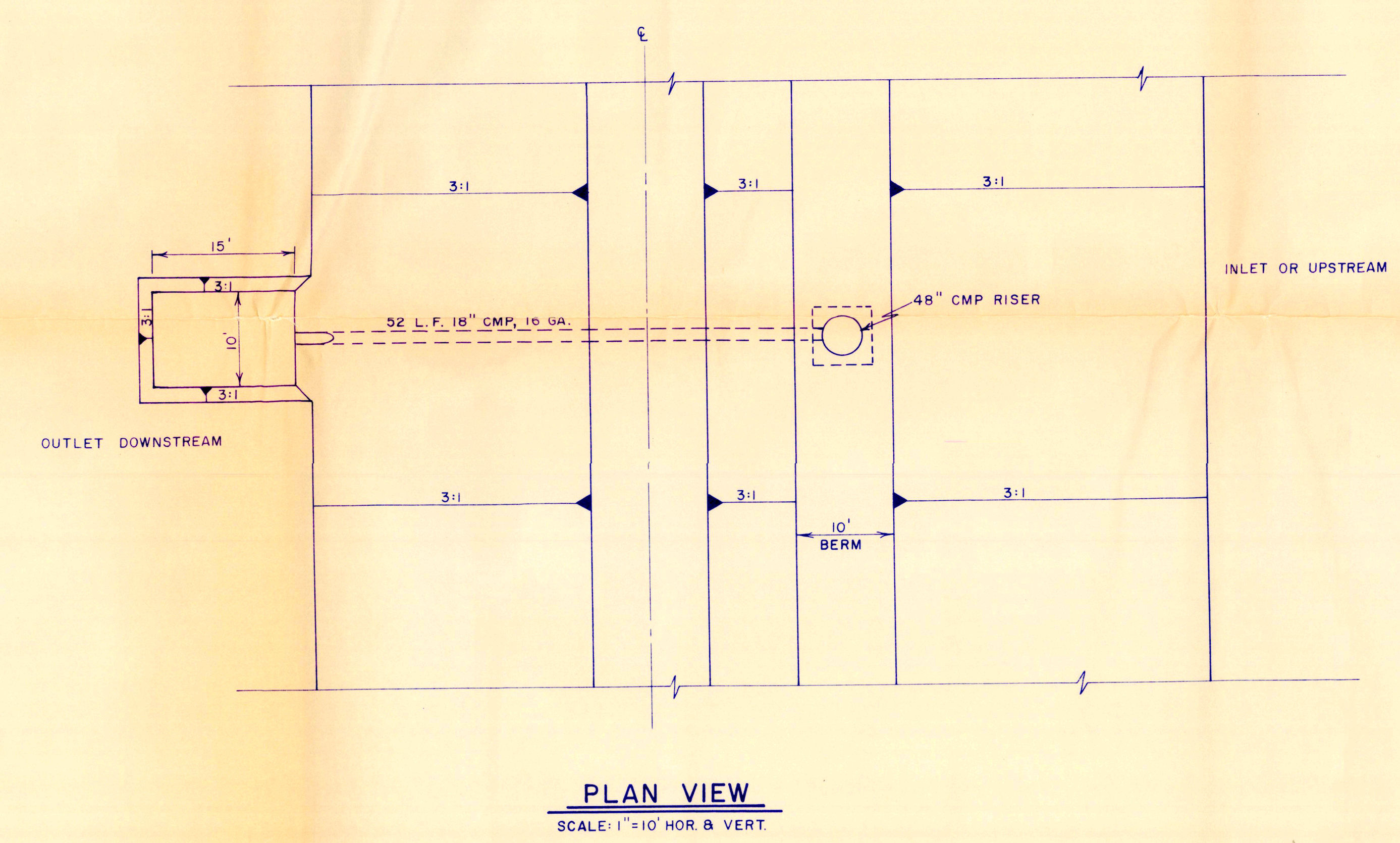
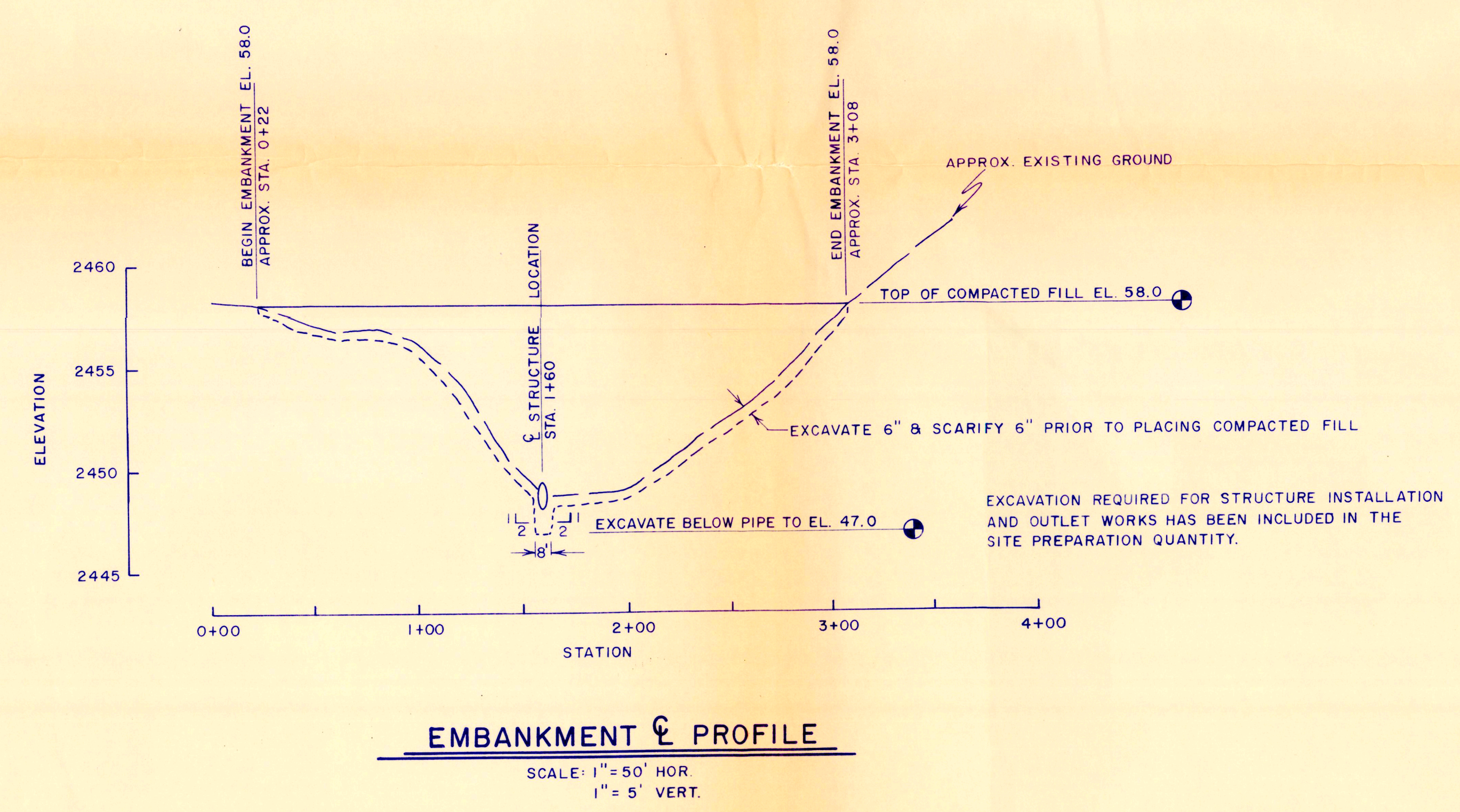
SEE DETAILS PAGE 6

EXCAVATE BELOW CMP 12", SCARIFY 12" AND COMPACT MATERIAL PRIOR TO PLACING PIPE.

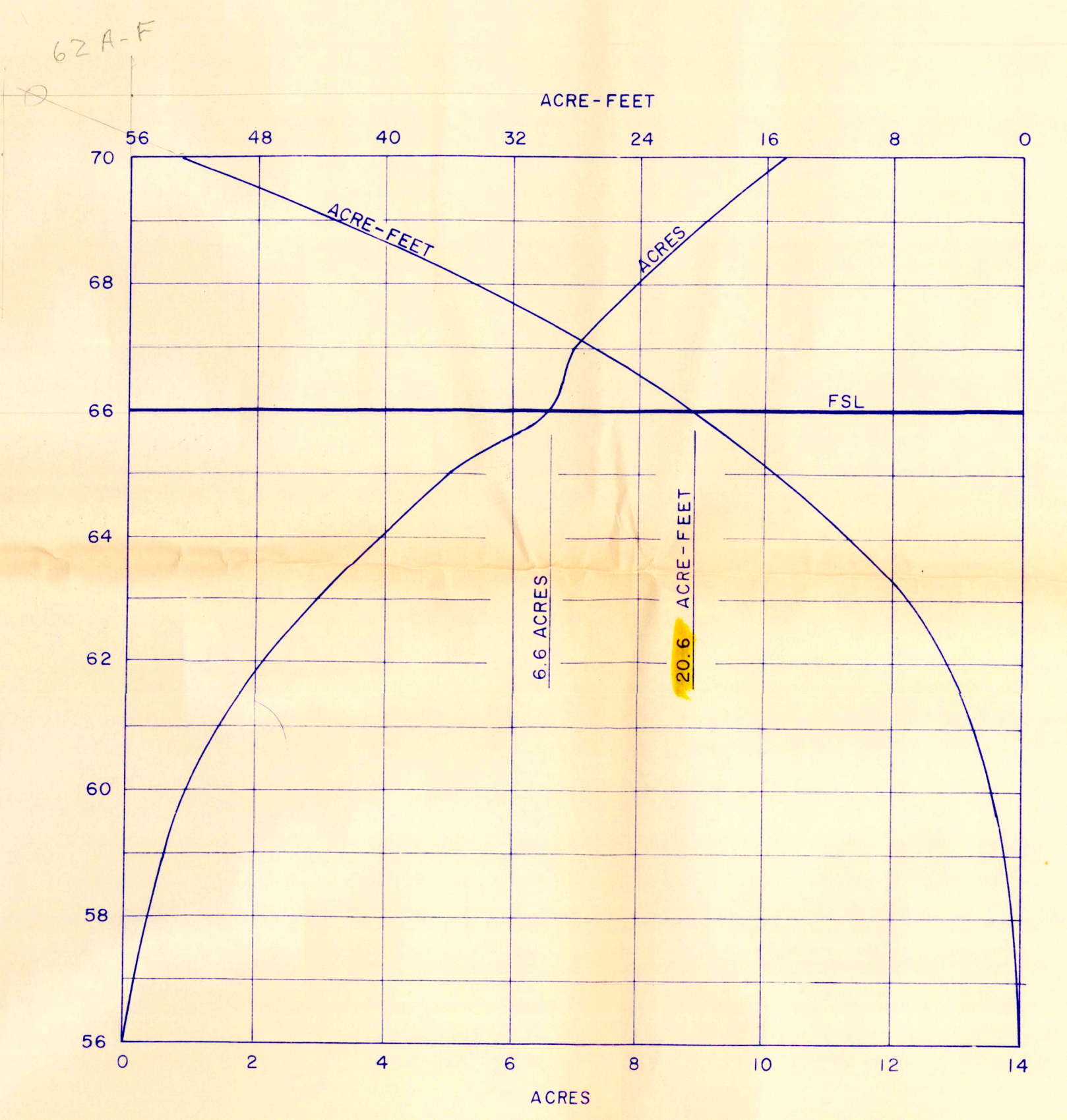
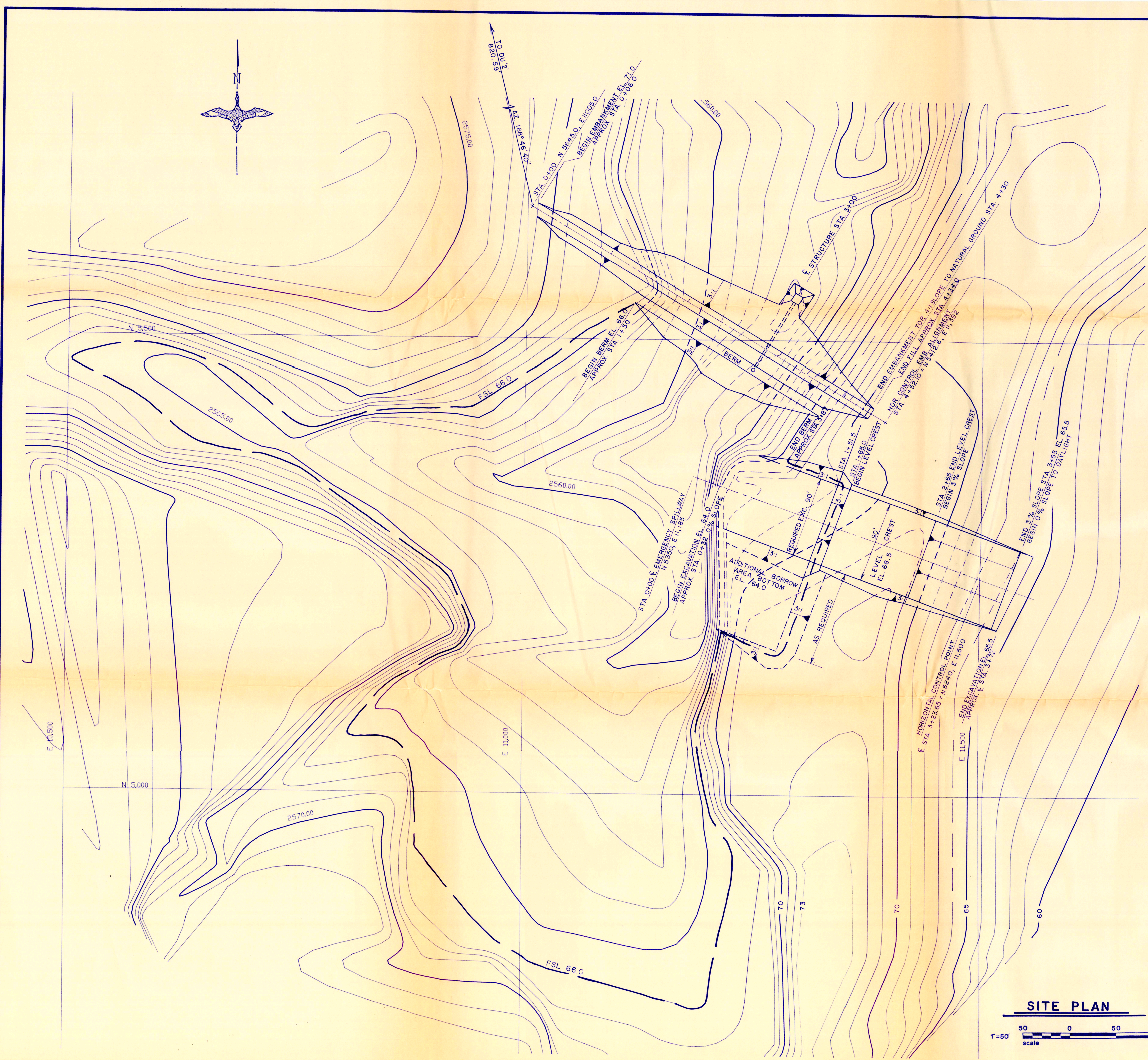
STATION 1+60

STRUCTURE C& PROFILE

SCALE: 1" = 10' HOR. & VERT.



 DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO: SD - 108-01 DEER CREEK - NORTH DAM PROFILES	DESIGNED BY: RCS DRAWN BY: TD SURVEYED BY: CHECKED BY:
	DATE: 2 - 20 - 90 SHEET NO: 3 OF 6 APPROVED BY:	APPROVED BY:



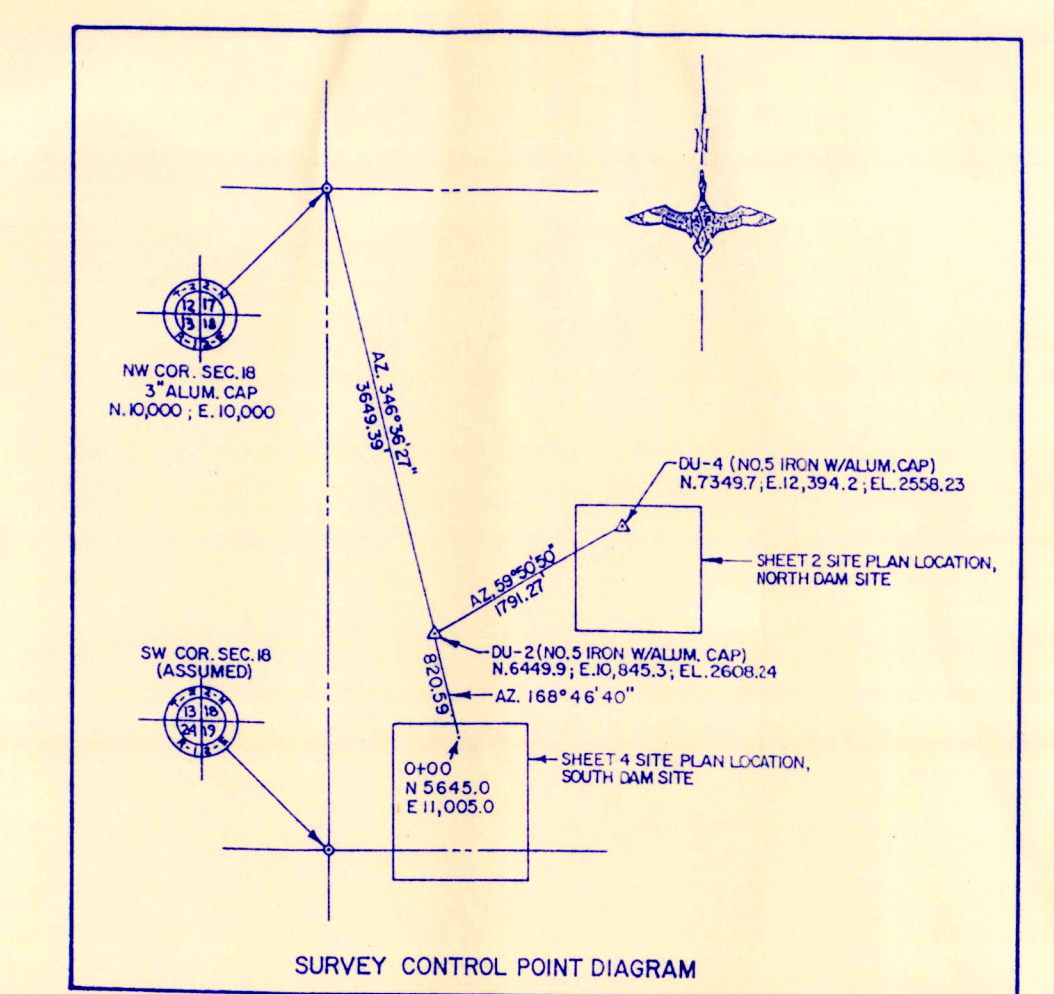
AREA-CAPACITY CURVE

MARSH DATA

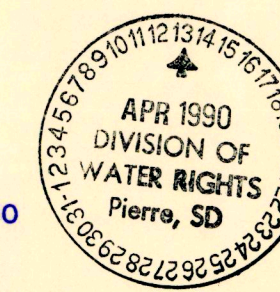
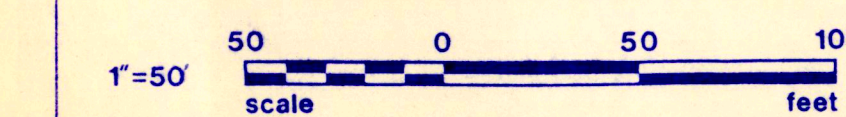
FULL SERVICE LEVEL (FSL) = 66.0
 ACRES AT FSL = 6.6
 ACRES FEET AT FSL = 22.3
 SHORELINE MILES AT FSL = .53

EST. QUANTITIES - SOUTH DAM

SITE PREPARATION 712 C.Y.
 EMBANKMENT CONSTRUCTION 6,994 C.Y. - S.
 WATER CONTROL STRUCTURE 1 EA.
 CULVERT INSTALLATION:
 30" CMP 16 GA. 76 L.F.

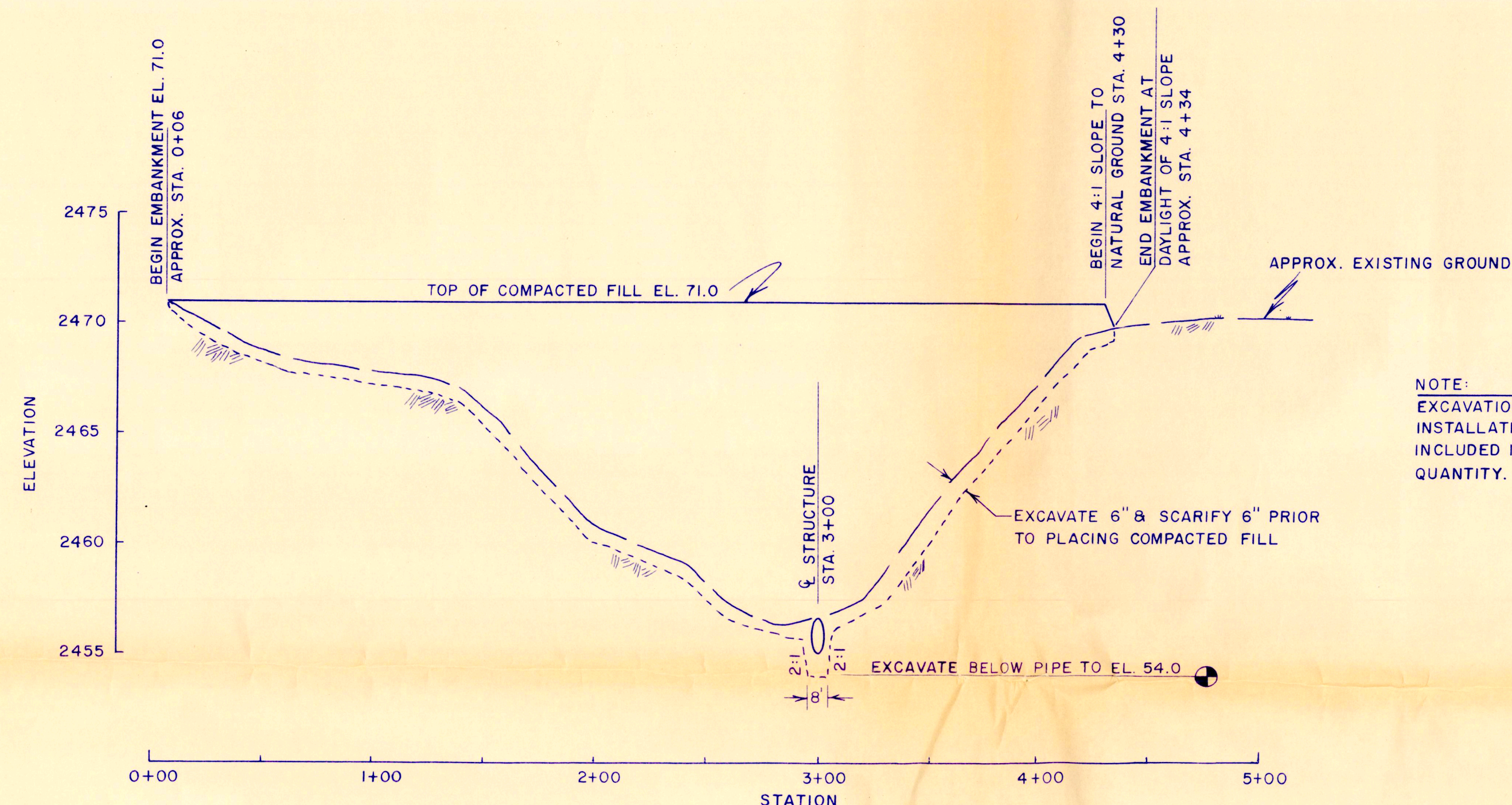


SITE PLAN



DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO. SD-108-01 DEER CREEK - SOUTH DAM SITE PLAN	DESIGNED BY: RCS DRAWN BY: TD SURVEYED BY: CHECKED BY:
DATE: 2-27-90	SHEET NO.: 4 OF 6	APPROVED BY:

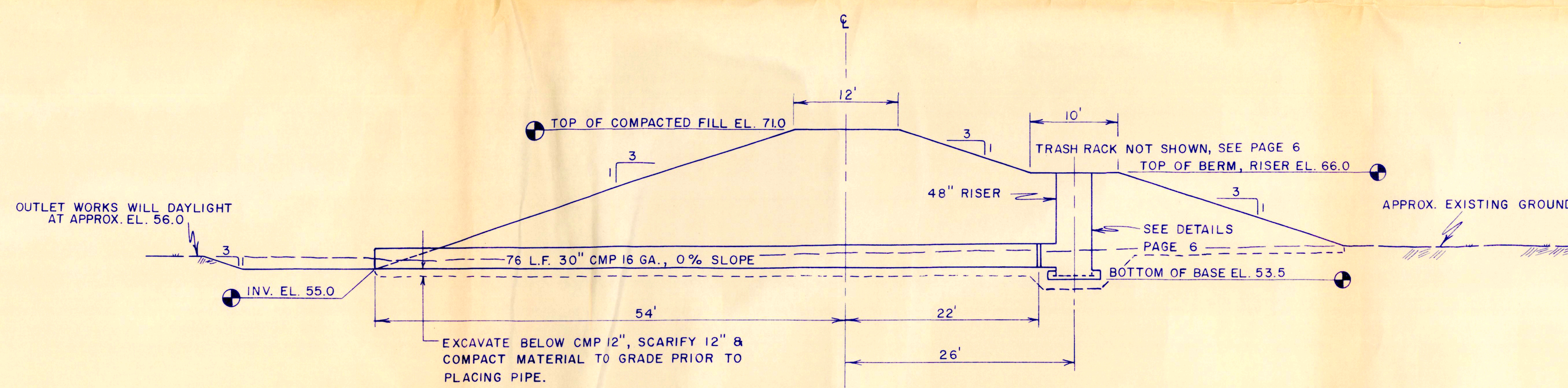
1490-1



EMBANKMENT & PROFILE

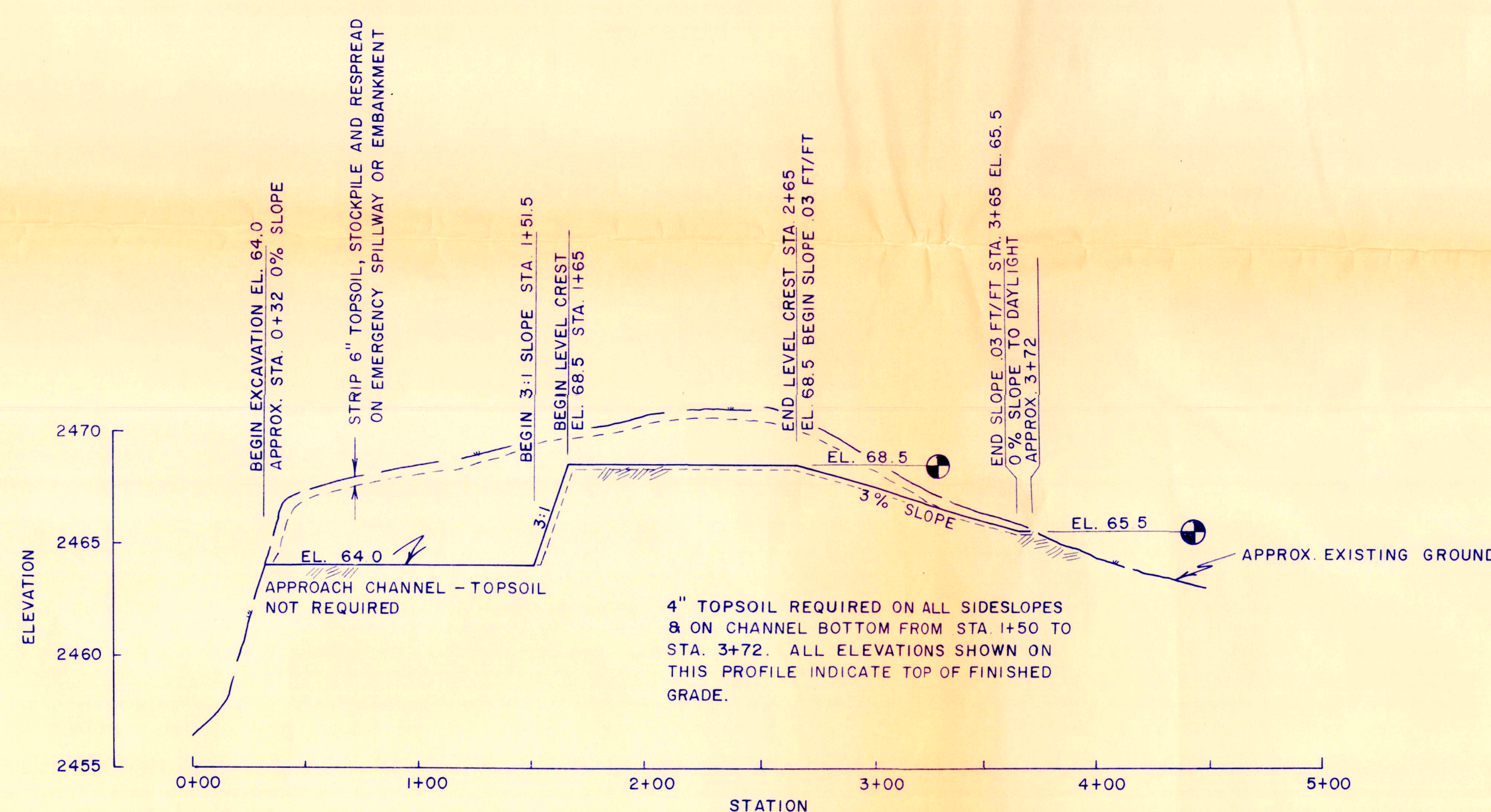
SCALE: 1" = 5' VERT.
1" = 50' HOR.

NOTE:
EXCAVATION REQUIRED FOR STRUCTURE
INSTALLATION & OUTLET WORKS IS
INCLUDED IN THE SITE PREPARATION
QUANTITY.



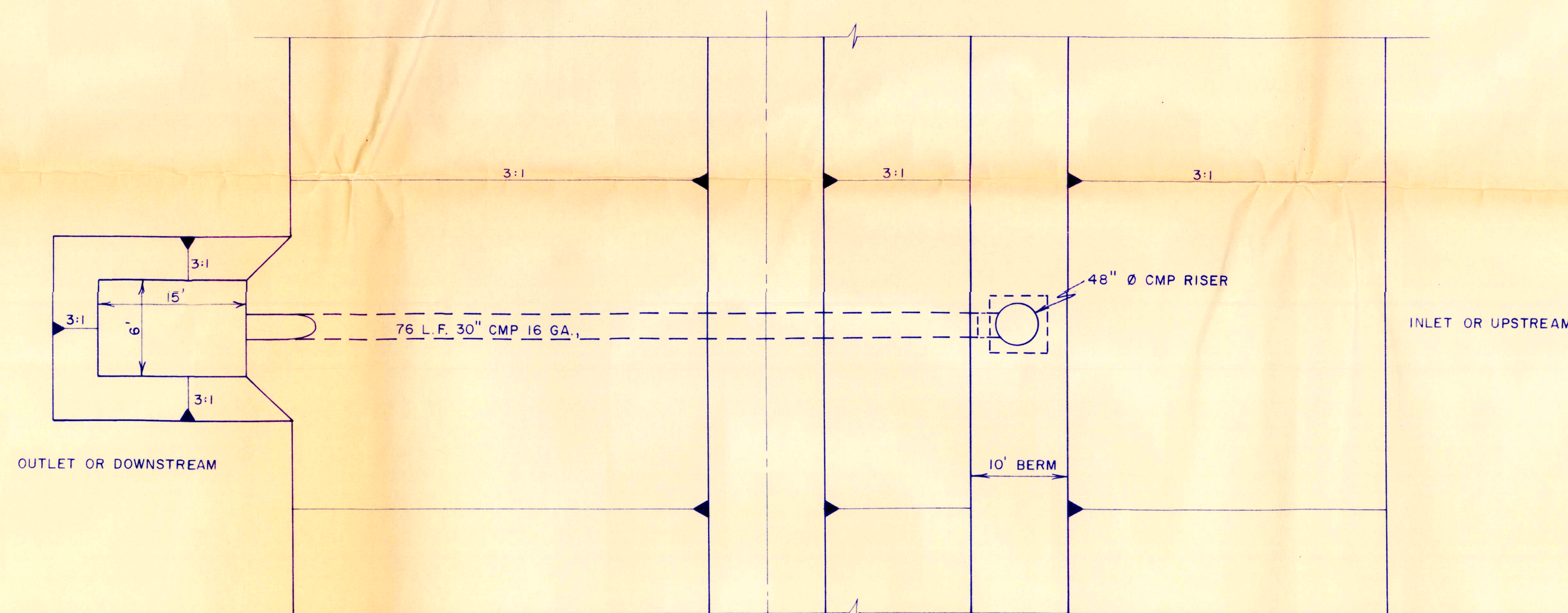
STATION 3+00 STRUCTURE & PROFILE

SCALE: 1" = 10' HORZ. & VERT.



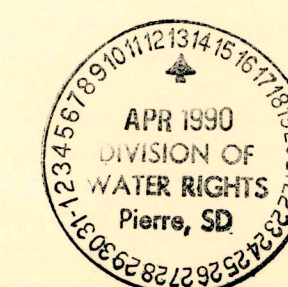
EMERGENCY SPILLWAY & PROFILE

SCALE: 1" = 5' VERT.
1" = 50' HOR.

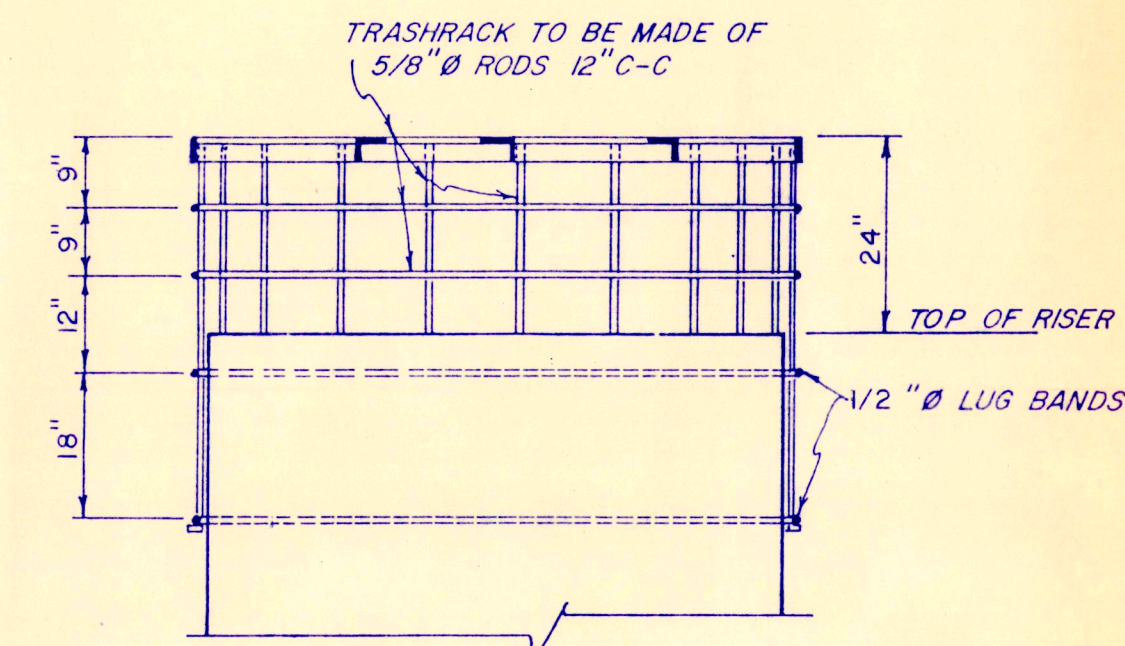


PLAN VIEW

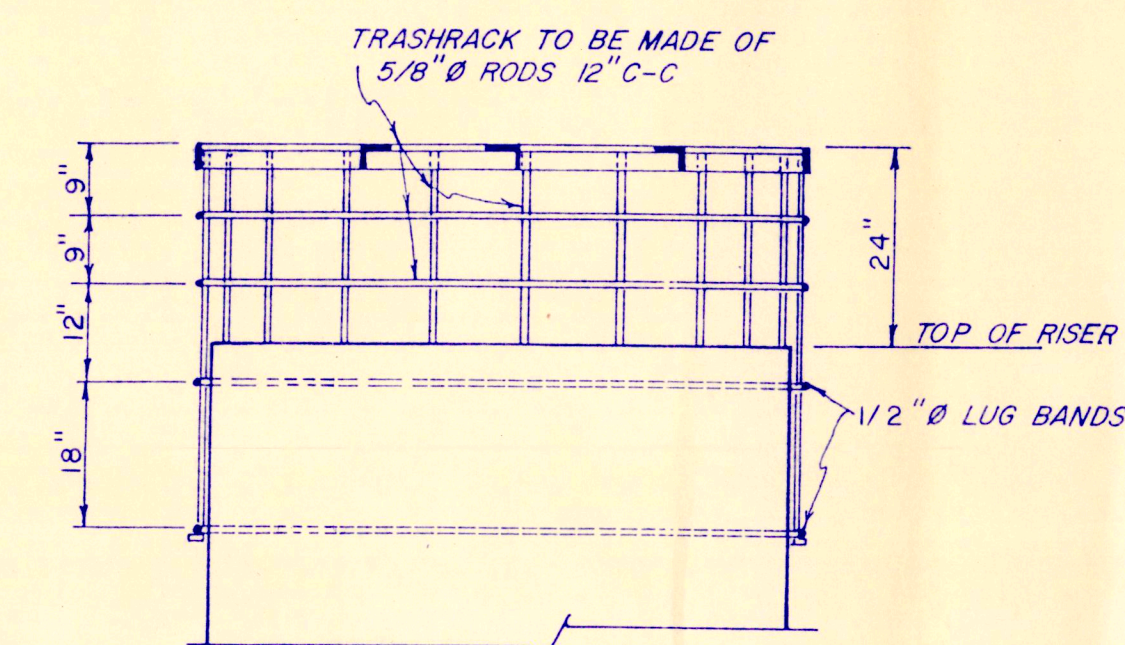
SCALE: 1" = 10' HORZ. & VERT.



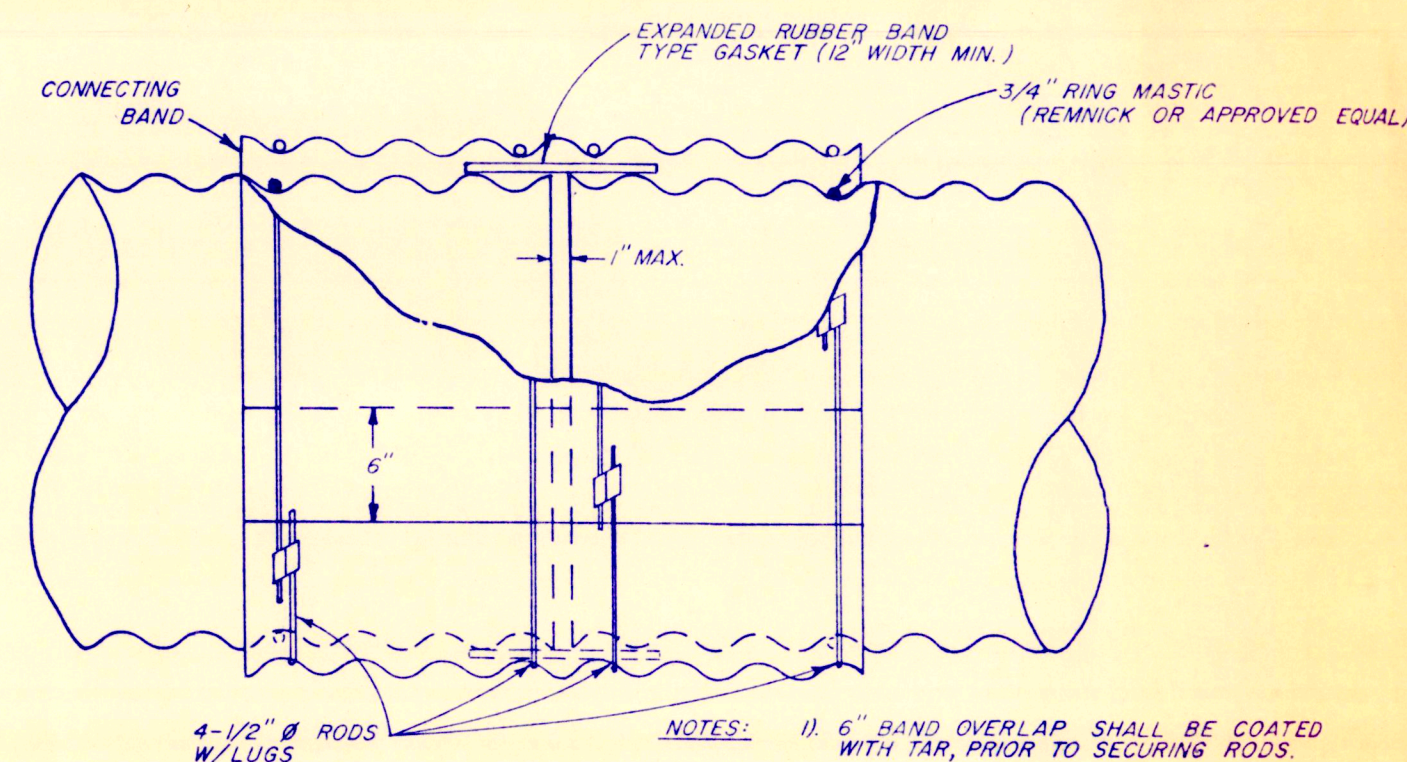
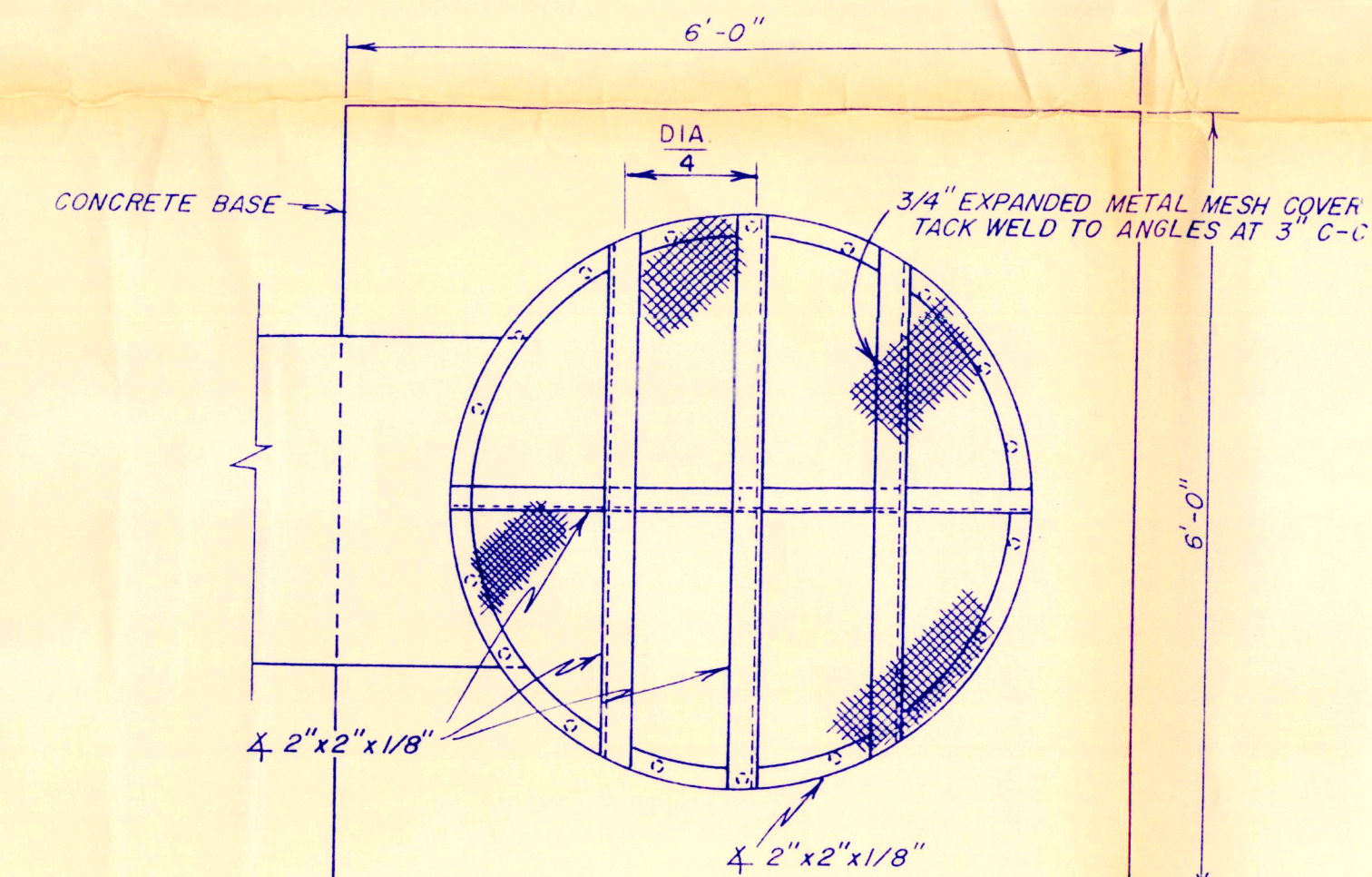
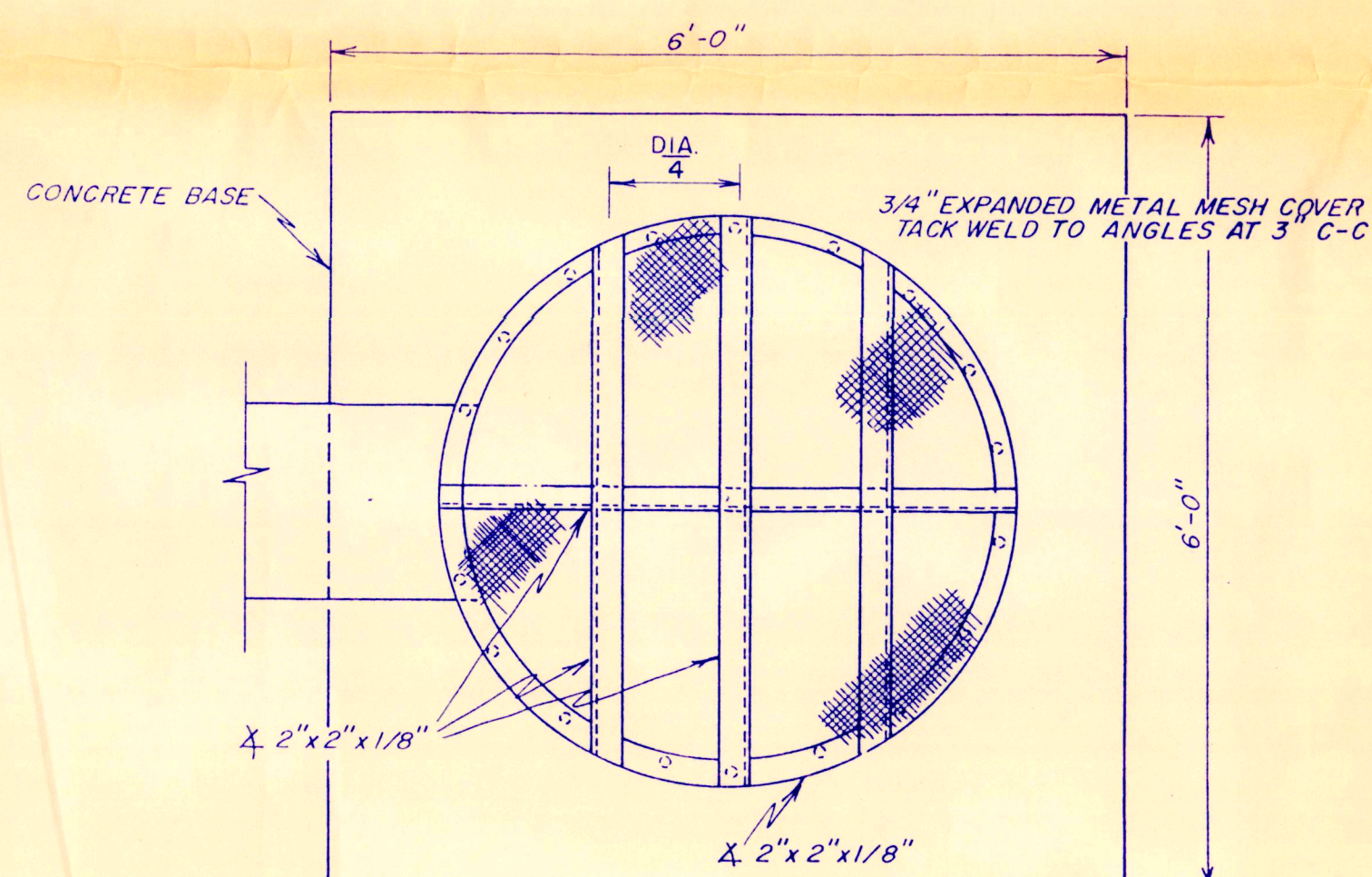
PROJECT NO. SD-108-01	DESIGNED BY: RCS
DEER CREEK - SOUTH DAM PROFILES	DRAWN BY: TD
	SURVEYED BY:
	CHECKED BY:
DATE: 2-16-90	APPROVED BY:
SHEET NO. 5 OF 6	



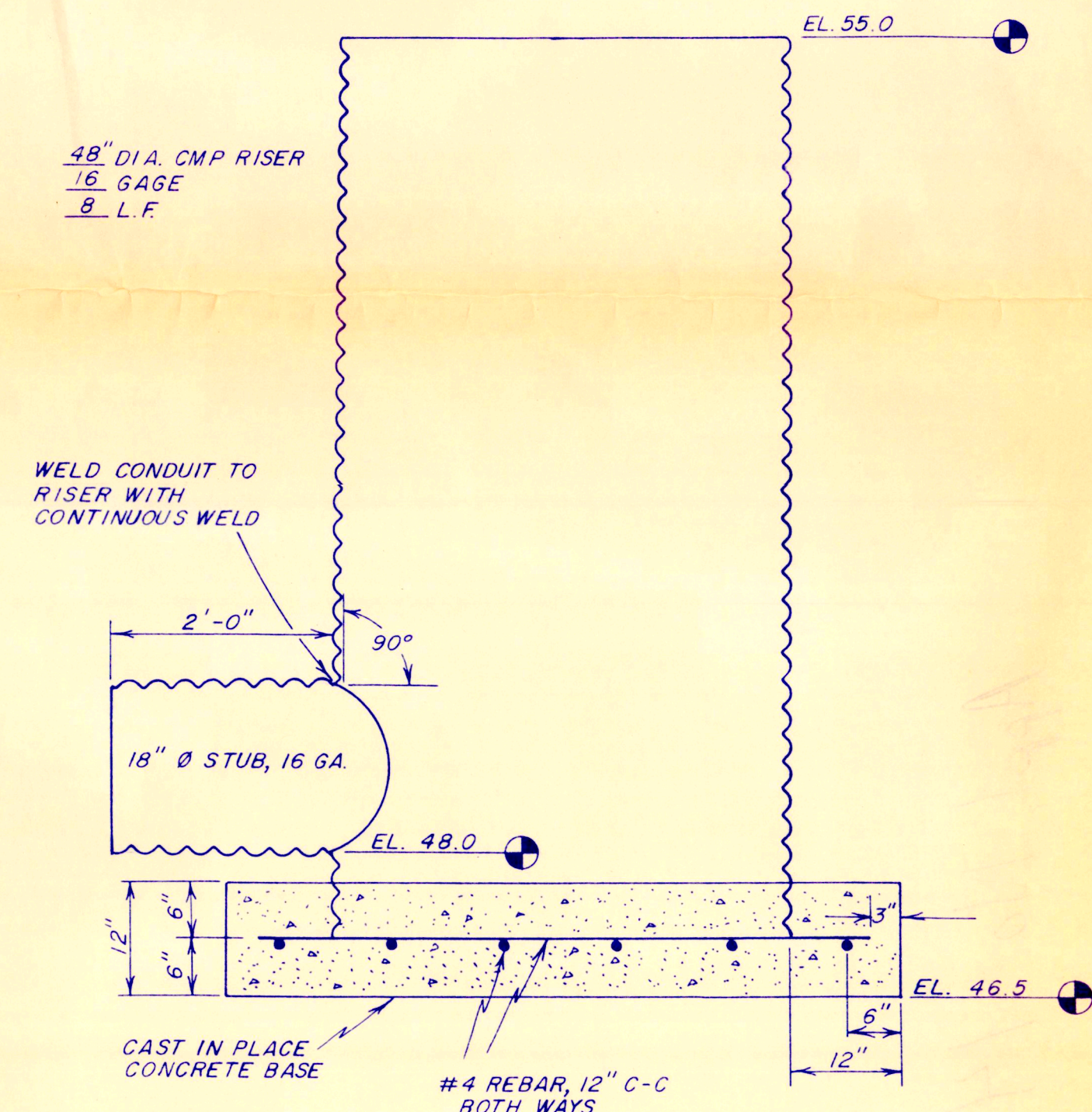
TRASHRACK DETAIL
NTS



TRASHRACK DETAIL
NTS

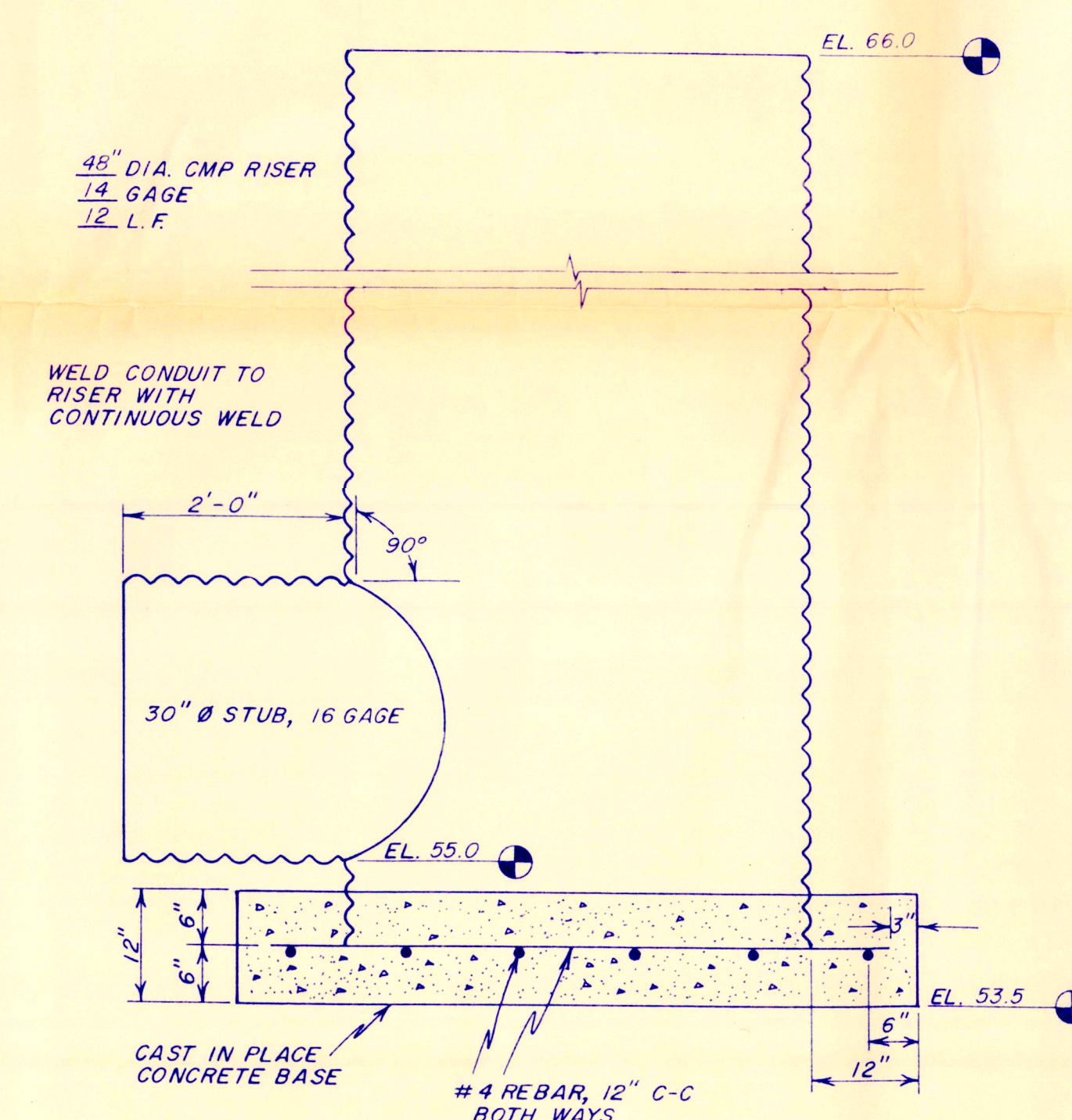


CONNECTING BAND DETAIL
NTS



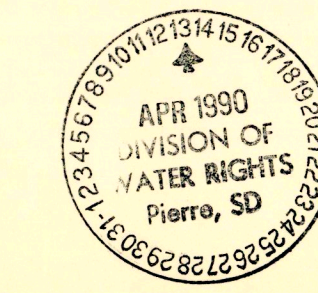
CONTROL STRUCTURE DETAIL
SCALE: 3/4" = 1'-0"

NORTH DIKE



CONTROL STRUCTURE DETAIL
SCALE: 3/4" = 1'-0"

SOUTH DIKE



 GREAT PLAINS REGIONAL OFFICE DATE: 2-28-90 SHEET NO: 6 OF 6	PROJECT NO: SD-108-01 DEER CREEK DETAILS	DESIGNED BY: RCS DRAWN BY: TD SURVEYED BY: CHECKED BY:
	APPROVED BY:	APPROVED BY: