

# LAKE OF THE WOODS COUNTY MINNESOTA DEPARTMENT OF NATURAL RESOURCES

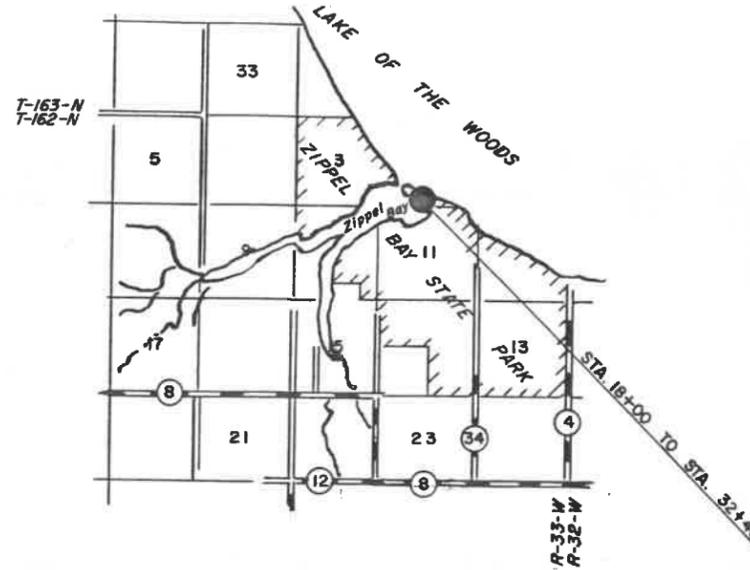
## CONSTRUCTION PLAN FOR CHANNEL EXCAVATION

LOCATED ON ZIPPEL BAY

TO \_\_\_\_\_

COUNTY PROJ. NO. 83-03  
 MINN. PROJ. NO. \_\_\_\_\_  
 GROSS LENGTH 1440 FEET .273 MILES  
 BRIDGES-LENGTH \_\_\_\_\_ FEET \_\_\_\_\_ MILES  
 EXCEPTIONS-LENGTH \_\_\_\_\_ FEET \_\_\_\_\_ MILES  
 NET LENGTH 1440 FEET .273 MILES  
 MILE POINT \_\_\_\_\_ TO MILE POINT \_\_\_\_\_

STATE PROJ. NO. \_\_\_\_\_  
 MINN. PROJ. NO. \_\_\_\_\_  
 GROSS LENGTH \_\_\_\_\_ FEET \_\_\_\_\_ MILES  
 BRIDGES-LENGTH \_\_\_\_\_ FEET \_\_\_\_\_ MILES  
 EXCEPTIONS-LENGTH \_\_\_\_\_ FEET \_\_\_\_\_ MILES  
 NET LENGTH \_\_\_\_\_ FEET \_\_\_\_\_ MILES  
 MILE POINT \_\_\_\_\_ TO MILE POINT \_\_\_\_\_



PROJECT NO. CP 83-03  
 ZIPPEL BAY CHANNEL

FED. PROJ. NO. \_\_\_\_\_

### SPECIFICATIONS

"STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION"  
 DATED JANUARY 1, 1978 SHALL GOVERN.

### ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	EST. QUANT.
2021.501	MOBILIZATION	LUMP SUM	1
2105.501	COMMON EXCAVATION	CU. YD.	5245
① 2123.509	DOZER	HOUR	76
0105.511	UNCLASSIFIED CHANNEL EXCAVATION	CU. YD.	4432

① ITEM 2123.509 INCLUDES 16 HOURS FOR CLEARING AND 60 HOURS FOR CONSTRUCTION OF SPOIL DETENTION POND.



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 6 June 83 REG. NO. 12086 LAKE OF THE WOODS CO  
  
 COUNTY ENGINEER

Right of Way Approval \_\_\_\_\_ 19 \_\_\_\_\_  
DIRECTOR, RIGHT OF WAY OPERATIONS

Recommended for Approval \_\_\_\_\_ 19 \_\_\_\_\_  
DISTRICT ENGINEER

Recommended for Approval \_\_\_\_\_ 19 \_\_\_\_\_  
PLANS ENGINEER

Recommended for Approval \_\_\_\_\_ 19 \_\_\_\_\_  
DESIGN ENGINEER

Recommended for Approval \_\_\_\_\_ 19 \_\_\_\_\_

Approved \_\_\_\_\_ 19 \_\_\_\_\_  
DIRECTOR, DESIGN SERVICES

FOR PLANS AND UTILITIES SYMBOLS SEE  
 TECHNICAL MANUAL NO. 5-292.620A (1, 1, 73)

STATE PROJ. NO.	AREA	JOB

PROJECT LOCATION  
 COUNTY 39  
 DISTRICT 2

**SCALES**

PLAN \_\_\_\_\_ 0 \_\_\_\_\_ 100'

PROFILE \_\_\_\_\_ 0 \_\_\_\_\_ 100'

CROSS SECTION \_\_\_\_\_ 0 \_\_\_\_\_ 10'

GENERAL LAYOUT \_\_\_\_\_ 0 \_\_\_\_\_ 1 mile

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

ADT (Current Year)  
 ADT (Future Year)  
 DHV (Design Hr. Vol.)  
 D (Directional Distr.)  
 T (Heavy Commercial)

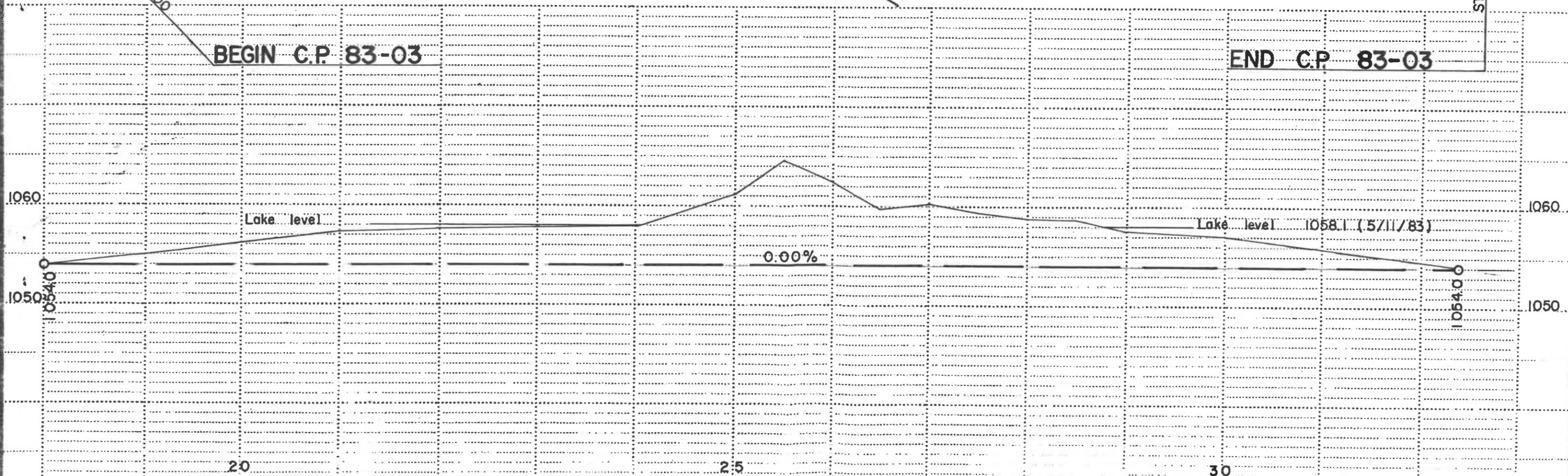
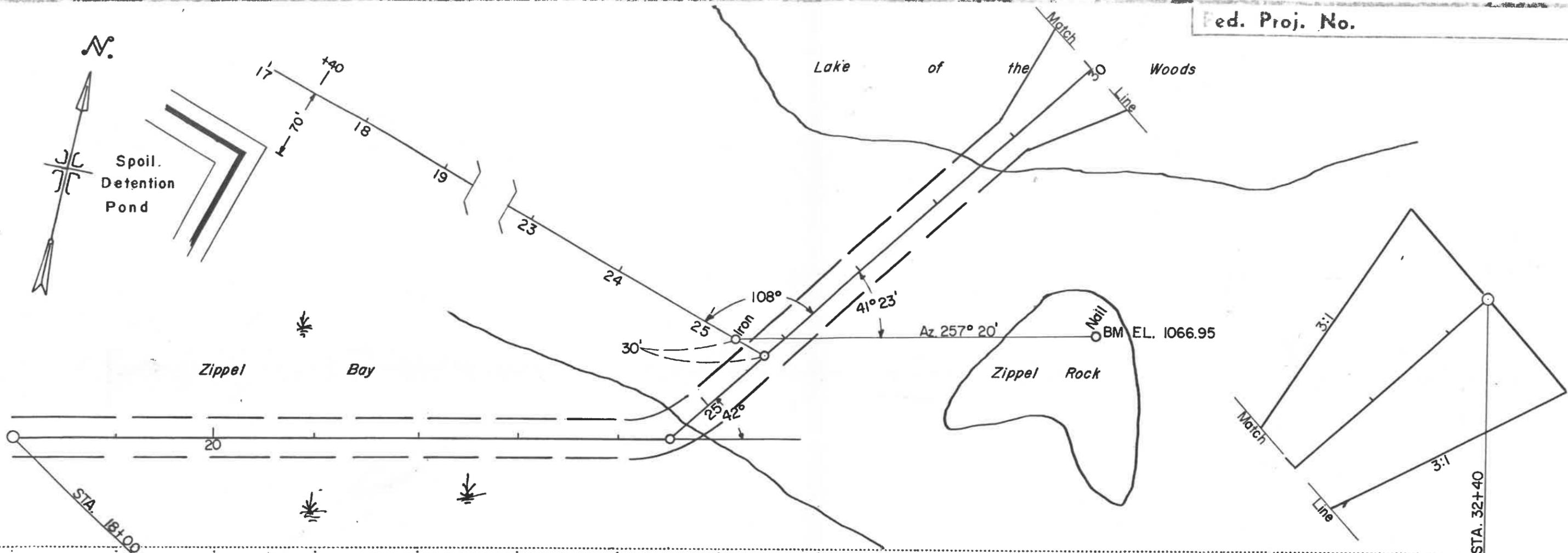
**DESIGN DESIGNATION**

\_\_\_\_\_ = \_\_\_\_\_ Design Speed \_\_\_\_\_ MPH  
 \_\_\_\_\_ = \_\_\_\_\_ Based on \_\_\_\_\_ Sight Distance  
 \_\_\_\_\_ = \_\_\_\_\_ Height of eye \_\_\_\_\_ Height of object \_\_\_\_\_  
 \_\_\_\_\_ = \_\_\_\_\_ % Design Speed not achieved at: \_\_\_\_\_  
 \_\_\_\_\_ = \_\_\_\_\_ % STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH  
 \_\_\_\_\_ = \_\_\_\_\_ % STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH

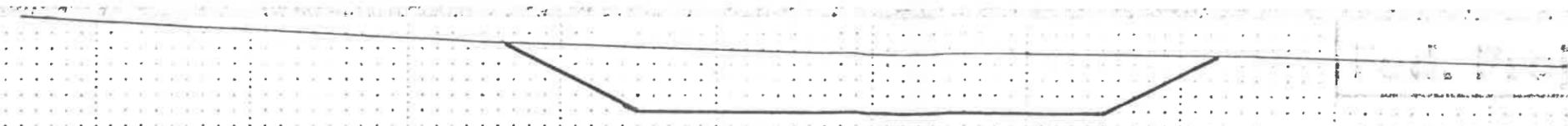
STATE PROJ. NO. CP 83-03

SHEET NO. 1 OF 6 SHEETS

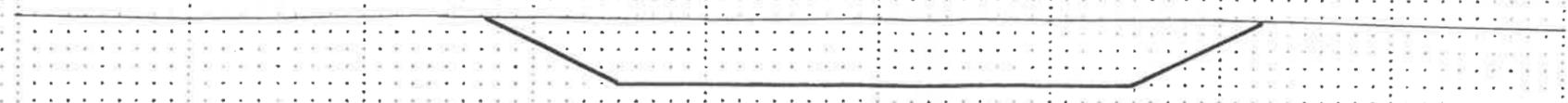
DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 APPROVED  
 \_\_\_\_\_  
 DIVISION ADMINISTRATOR      DATE



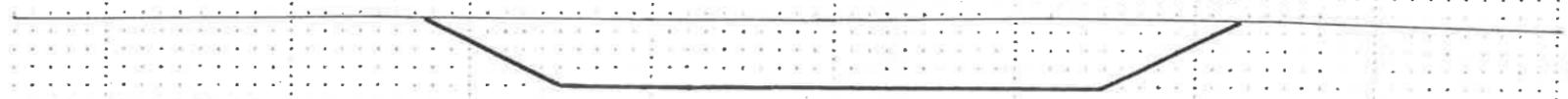
FORM 22 (NOV 68) 417



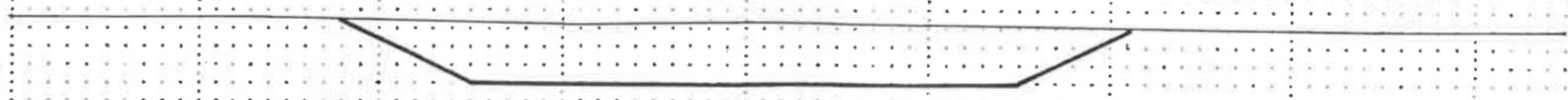
24 1057.9



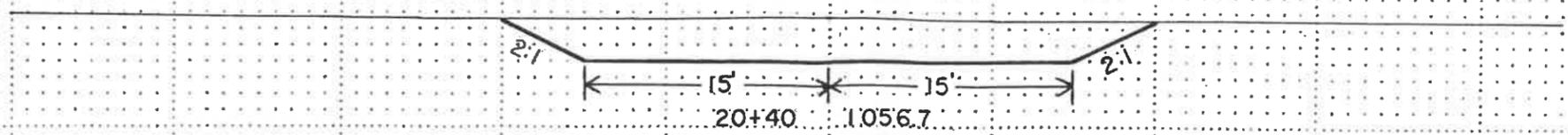
23 1057.9



22 1057.7



21 1057.3



Top Proj. L.S.

26+50 1059.8

26 1062.4

25+50 1064.5

25 1061.1

29 1057.5

28+50 1058.7

28 1058.7

27+50 1059.3

27 1060.2

Prod. Proj. No.

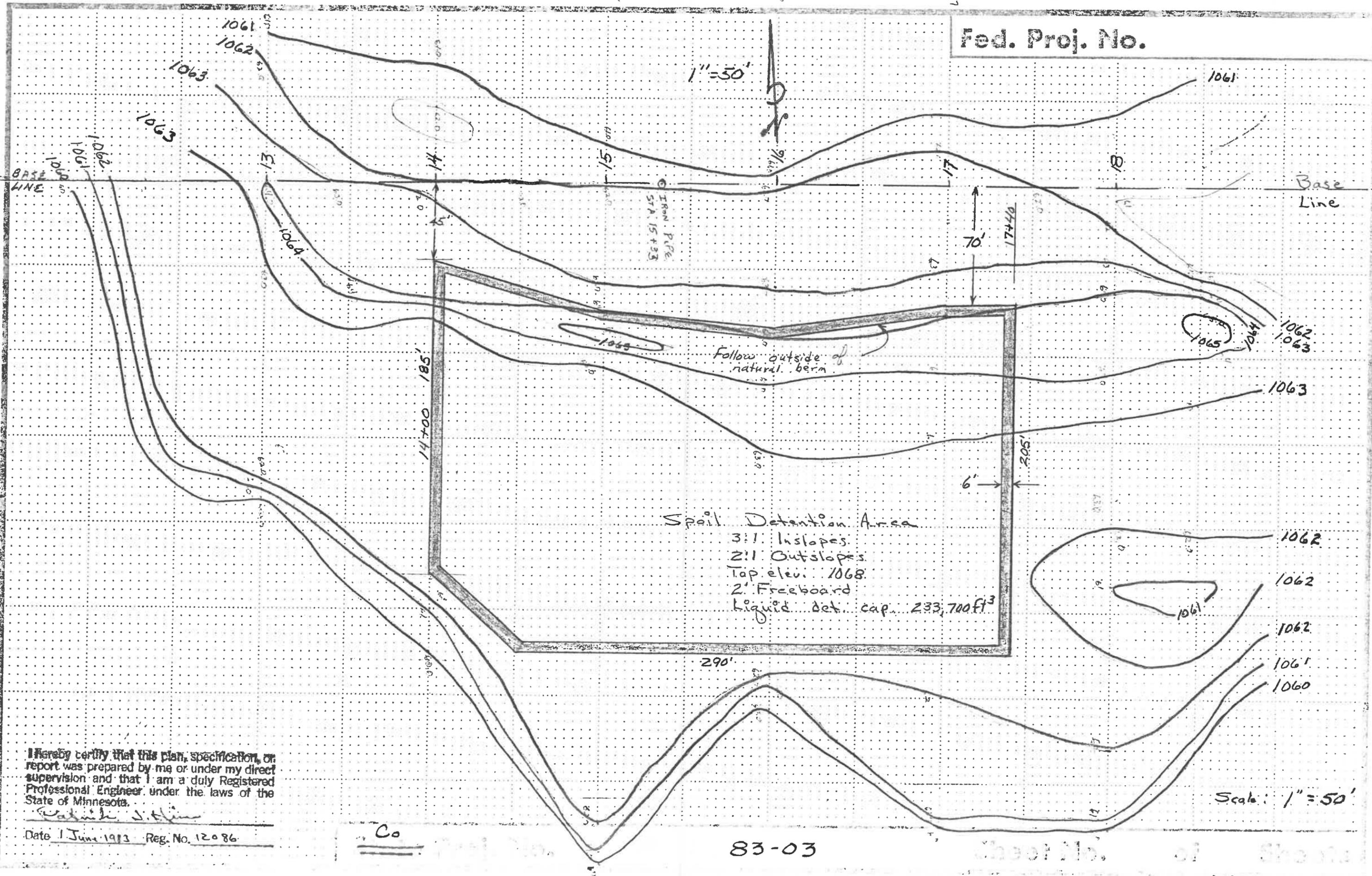
30+50 10564

30 10571

29+50 10572

Fed. Proj. No.

1"=50'



Spoil Detention Area  
 3:1 Inslopes  
 2:1 Outslopes  
 Top elev. 1068  
 2' Freeboard  
 Liquid det. cap. 233,700 ft<sup>3</sup>

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

*Walter J. Hill*

Date June 1913 Reg. No. 12086

Co

83-03

Scale: 1"=50'

Sheet No. of Sheets