



WATER-RIGHT DOCKET

Mount Rushmore National Memorial

Docket No: 1

MOUNT RUSHMORE SPRING

Preliminary Docket Information

00-00-0000: water right/source docket information

WATER RIGHT RECORD

Park: MORU

Docket Number:
Federal #1

IDENTIFICATION NO: MORU S 0 7 0 2 0 6 A F 0 1

DITCH/WATER SYSTEM: Headquarters

SOURCE OF SUPPLY: Mount Rushmore Spring

LOCATION: 787 ft. N29°05'W of S½ Cor. of Sec. 7, T2S, R6E, BHM

WATER RIGHT:

Appropriator: United States of America, National Park Service

Application/Permit Number: 596-2

Certificate Record Number:

Date of Priority: June 11, 1949

Quantity of Water: 0.03 c.f.s.

Purpose: Domestic, recreational, fire protection

Irrigated Land Description:

SUMMARY OF STATUS: This is a Federal water right consisting of a spring, collecting reservoir, distribution reservoir and distribution system.

May 23, 1949 - Application made for Notice of Intention to use Waters of the State of South Dakota.

June 11, 1949 - Certificate of Withdrawal of Water for Appropriation.

July 19, 1949 - Certificate of Construction of Works and Appropriation.

Docket #4 contains materials pertaining to the supplemental well.

These springs are used occasionally.

Form 24B

CERTIFICATE OF CONSTRUCTION OF WORKS

and

APPROPRIATION

U. S. Water Right No. 596-2
Pennington County

Mount Rushmore Water System
Name of Project
Battle Creek Water District

TO ALL WHOM IT MAY CONCERN:

This is to Certify, that the United States of America, ~~Department of~~
National Park Service, has complied with the State Laws
 and has been issued a withdrawal No. 596-2 bearing date of June 11, 1949
 withdrawing from further appropriation a maximum of 0.03 cubic feet
 per second of water to be diverted through the Mount Rushmore Water System
~~ditch, canal or~~ pipe line at a point located ~~on the~~ bank 767 feet
N 29° 05' W. of ~~feet distant from the~~ S $\frac{1}{2}$ Corner of
Section 7 Township 2S Range 6E for the purpose of public recreation,
domestic use and fire protection during the months of Jan. to Dec., Incl.
 has fully complied with the provisions of the laws of the State of South
 Dakota relating to completion of the works as set out and described in
 Section 61.0137, that said works are completed in accordance with informa-
 tion filed in the office of the State Engineer, and a maximum amount of
0.03 cubic feet per second during the period of continuous is
 thereby appropriated for the above purposes bearing date of priority of
June 11, 1949.

Witness my hand this 19 day of July 1949.


DEAN W. LOUCKS
State Engineer



Form 23 A

WITHDRAWAL NO. U.S. 596-2Water Division No. 2Battle Creek Water District

CERTIFICATE OF EXAMINATION OF WORKS

Report of Examining Engineer

Date July 11, 1949Mount Rushmore Water System, No. U.S. 596-2By William E. Robertson, Regional Engr.

Project Name and Number

SpringSource of Appropriation
(Stream)

To the State Engineer, Pierre, South Dakota:

Dear Sir: I hereby certify that in accordance with your letter of authorization, dated June 13, 1949, I have made a thorough examination of the Mount Rushmore Water System, originally constructed by the Mount Rushmore National Memorial Commission but now under the jurisdiction of the United States of America, National Park Service, holder of withdrawal No. 596-2, issued upon Notice of Intention bearing date May 23, 1949, authorizing the withdrawal from further appropriation of acre feet, or 0.05 second feet of the waters of an unnamed spring area in Pennington County, South Dakota, tributary to the Cheyenne River, through Battle Creek and its unnamed tributaries for domestic, recreational, and fire protection purposes.

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

The impounded and diversion works comprise:

Dam: None.

Diversion: Water is collected at spring wells and conveyed to a concrete collecting reservoir of 33,500 gallons capacity by 185 feet of 4" cast iron pipe. The water is then pumped from the collecting reservoir by an Ingersoll-Rand pump of 50 gpm. capacity, driven by a 15 H.P. electric motor through 2,200 feet of 2" steel pipe and 460 feet of 3" steel pipe to a distribution reservoir. Distribution to activities in the area is by means of 2" steel pipe from the 3" steel pipe pump line.

Storage Reservoir: The storage reservoir is of concrete with a capacity of 36,500 gallons.

The system is in the following condition: Good.

The point of diversion from the spring areas is at a point from which the S $\frac{1}{2}$ corner of Section 7, T. 2S, R. 6E, B.H.M. bears S. 60° 55'E. 787 feet.

The works are capable of utilizing the claimed 0.05 second feet of water.

The utilization for public recreation, domestic use, and fire protection comprises at the present time:

1. Water service to three residences.

2. Water service to two small dormitories housing approximately 25 people.
3. Water service to a dining room and fountain serving the public.
(See note below for 1948 travel*).
4. Water service to two public comfort stations.
5. Fire protection and fluctuating water demands are provided by the 36,500 gallon storage reservoir.

The project was completed in October 1938.

*NOTE: Public travel to the area in 1948 was approximately 600,000 persons.
In each of the months of July and August of that year approximately 170,000 persons visited the area.

WITNESS my hand, this 11th day of July, A.D. 1949.


(Sgd.) William E. Robertson
Examining Engineer.

CERTIFICATE OF WITHDRAWAL OF

WATER FOR APPROPRIATION

No. U.S. 596-2

TO

UNITED STATES DEPARTMENT OF The Interior
BUREAU OF National Park Service

Pennington COUNTY

Mount Rushmore Spring
Name of Stream

The Associate Director A. E. Demaray, National Park Service

, having made application for the withdrawal of certain heretofore unappropriated public waters of the State of South Dakota, and having complied with the requirements of the statute of the State of South Dakota providing for such withdrawal, such statute and authority being contained in and described as Vol. 2, Chapter 2, Article 1, Paragraph 3243 of the Revised Code of 1919, now therefore:

This is to certify that there is hereby reserved, of the heretofore unappropriated waters of Mount Rushmore Spring the ~~annual amount of entire available flow~~ of water to be diverted at a maximum rate of cubic feet per second of water, the point of diversion to be on the bank a distance of 787 feet N60°55'W degrees from the N $\frac{1}{2}$ Cor. of Section 18, Twp. 2 South, Range 6 East , which water is to be used for the irrigation of certain lands in parts of the domestic, recreational and fire protection purposes, as the main water supply for Mount Rushmore National Memorial and the above said water is hereby withdrawn from future appropriation during the continuance of the right herein granted and contained.

This certificate and withdrawal shall in no manner prejudice, alter, amend or effect the rights of any prior appropriator or prior appropriation of water, nor of any application for appropriation pending upon the date of this certificate, but the rights and privileges of any and all such prior appropriators or applicants for appropriation of water shall remain inviolate and intact, the same as if the within withdrawal had not been made.

This certificate shall be and is subject to cancellation in accordance with the provisions of the statute hereinbefore referred to and under the authority of which this certificate is issued.

In accordance with the provisions of the statute hereinbefore referred to, this certificate is executed at the State Capitol at Pierre, South Dakota, this 11th day of June 1949 1900X

DML:RW

Dean W. Loucks
DEAN W. LOUCKS
State Engineer.

19A - Authorization to make Inspection (Federal Pro

Form 19A

LETTER OF AUTHORIZATION
for
Inspection

June 13, 1949 ~~XXXX~~

W. E. Robertson, Regional Engineer
Region Two Office
307 Federal Office Building
Omaha 2, Nebraska

Mount Rushmore Water System
Name of Project

Spring
Source of Appropriation
(Stream)

Dear Sir:

The United States of America, ~~Department of Agriculture, Forest Service,~~ The Dept. of Interior, National Park Service
~~Denver, Colorado,~~ having filed "Notice of Intention" to utilize certain specified waters of the State, and there having been issued a withdrawal from further appropriation as provided in Section 61.0137, 1939 Revised Code of South Dakota and identified as Withdrawal No. U.S. 596-2, on Spring (stream) County of Pennington ~~on the~~ Forest, has informed this office that the construction for the diversion, storage, appropriation and application of water to beneficial use has been fully completed and is ready for examination.

You are, therefore, hereby authorized to arrange with the holder of said withdrawal for an examination of the water supply and diversion works ~~reservoir,~~
~~ditch, or pipe line~~ constructed and owned by the United States of America, ~~Department of Agriculture, Forest Service, on the~~ Interior, National Park Service ~~Forest~~ and also an inspection to determine the amount of water stored and applied to beneficial use.

In this examination you will ascertain whether or not the constructed works comply fully with the plans submitted and are capable of using quantities of water as set forth in the "Notice of Intention", and give in complete form all the information which is suggested by the statements in the Certificate of Inspection which is herewith enclosed, in the attached instructions, and such other information as will enable the State Engineer to act intelligently and judicially in the matter of determining the status of completion of the projects.

You should also arrange with the holder of the withdrawal for the payment of your fee for this service and such proper expenses as you incur in making this examination and report and taking the testimony.

Very truly yours,

Dean W. Loucks
DEAN W. LOUCKS
State Engineer.

DWL:RW

cc: A.E. Demaray, Associate Director



C O P Y

Water
Administration

Office of State Engineer
STATE OF SOUTH DAKOTA
Dean W. Loucks, State Engineer
PIERRE

State Buildings
Design and Construction

June 2, 1949

The Director
National Park Service
U. S. Dept. of the Interior
Washington 25, D. C.

Re: U.S. Withdrawal No. 596-2
Mount Rushmore Water System

Attn: A. E. Demaray
Associate Director

Gentlemen:

We wish to acknowledge receipt of a Notice of Intention of the United States to use waters of South Dakota at Mount Rushmore National Memorial as applied for under Sec. 61.0137 of the South Dakota Code of 1939. We also acknowledge receipt of a tracing and print of a map of the water system bearing your drawing No. NMEM-MR-6950.

I note that you say that the water has been diverted and used for a number of years and you are now ready to make the necessary proofs to complete the Federal Withdrawal. We will give the matter prompt attention.

Sincerely yours,

(Sgd) Dean W. Loucks

DEAN W. LOUCKS
State Engineer

DWL:RW

May 23, 1949.

**Notice of Intention of the United States to Use
Waters of the State of South Dakota Under
Section 61.0137 South Dakota Code of 1939**

To the State Engineer of South Dakota:

Notice is hereby given in accordance with Section 61.0137 of the South Dakota Code of 1939 that the United States of America has been using, and intends to continue to use certain specified waters of the State of South Dakota for beneficial purposes, as follows, to-wit:

The project is designated as the Mount Rushmore Water System.

The water is diverted and used on the Federal lands in Mount Rushmore National Memorial which was established on lands of the Harney National Forest in Pennington County, South Dakota, under the act of February 25, 1929 (45 Stat. 1300).

The Mount Rushmore National Memorial was placed under the administrative jurisdiction of the National Park Service, Department of the Interior, Washington 25, D. C., under the Reorganization Plan No. II, which was prepared by the President pursuant to the Reorganization Act of 1939, approved April 3, 1939 (4 Fed. Reg. 2731; 53 Stat. 1431, 1435) and became effective on July 1, 1939.

All matters relating to this water right should be referred to the Director, National Park Service, Washington 25, D. C., where routine action will be handled by A. van V. Dunn, Chief, Water Resources Branch.

The source of water supply is a spring area tributary to the Cheyenne River through Battle Creek and its nameless tributaries, in Pennington County.

The spring area is located in the $SE\frac{1}{4}$ $SW\frac{1}{4}$ of Section 7, T. 2 S., R. 6 E., B.H.M., and the main diversion of water from said spring area is made at a point whence the $S\frac{1}{4}$ corner of Section 7, T. 2 S., R. 6 E., B.H.M., bears S. $60^{\circ}55'$ E. 787 feet.

The water is collected at spring wells and conveyed to a concrete collecting reservoir of 33,500 gallon capacity by 185 feet of 4" C.I. pipe. The carrying capacity of said 4-inch pipe is far in excess of the available spring flow, which is approximately 0.03 cubic feet of water per second of time during normal years.

Water diversions and use were started by the Mount Rushmore National Memorial Commission, which was created by act of Congress on February 25, 1929 (45 Stat. 1300), during the year 1929.

The United States intends to use the entire flow available from said spring area for domestic, recreational, and fire protection purposes, as the main water supply for Mount Rushmore National Memorial, consisting of portions of Sections 7, 8, 17, 18, 19, 20, and 29, T. 2 S., R. 6 E., and Sections 12 and 13, T. 2 S., R. 5 E., B.H.M., in Pennington County, South Dakota.

Standard tracing and black line print of drawing No. NMEM-MR-6950, showing Water System, Mount Rushmore National Memorial, accompany this Notice of Intention.

Nothing herein shall be deemed to constitute a waiver or relinquishment by the United States of any rights, title, priority of use or other interest it may have in and to the waters of this spring area irrespective of the filing of this Notice.

(Sgd) A. E. Demaray.
Associate Director, National Park Service.

BOOK 70 PAGE 148
76 148Society
Mt Rushmore

WATER LINE EASEMENT

For and in mutual consideration, the State of South Dakota does hereby grant, bargain and convey unto the United States Department of the Interior, having its present place of business in Washington, D. C., its successors and assigns, a right-of-way and right to construct, operate and maintain or remove a 4" water line, including all equipment, fixtures and appurtenances, across, over and under the following described real property, to-wit: The Southwest Quarter of the Southwest Quarter (SW $\frac{1}{4}$ SW $\frac{1}{4}$) of Section Eight (8), Township Two (2) South, Range Six (6) East of the Black Hills Meridian, subject to the Department of the Interior installing a "T" or water tap at the junction of Highway 16A and Horse Thief Road, allowing the State of South Dakota free use of water from said water line, together with the right of free ingress and egress over the said premises, for the purpose of erecting, laying, constructing, operating, maintaining or removing the same, and the right to cut and remove any trees and branches which may endanger any lines or equipment.

IT IS UNDERSTOOD that the Department of the Interior shall locate such lines, fixtures and equipment in such manner as not to unnecessarily interfere with the usual operation of said premises and so as not to endanger or injure any buildings thereon, and in case of abandonment of said easement the grantee agrees to leave the ground in as good condition as when first occupied.

The Department of the Interior shall be liable for and settle all damages to said lands caused by the construction, repair or removal of said lines.

IN WITNESS WHEREOF, The State of South Dakota has caused this instrument to be executed in the name of the State by the Chairman of the Game, Fish and Parks Commission and the Acting Director of the Department of Game, Fish and Parks this 2nd day of March, 1961.

RECORDED
INDEXED

18163
STATE OF SOUTH DAKOTA
COUNTY OF PENNINGTON
Filed for record this 29 day of
April, A. D. 1961, at 10 o'clock
and 49 minutes P. M., and recorded in
Book 70 Page 148 of 148
Records Pennington
Register of Deeds
By Walter J. Fillmore Deputy

THE STATE OF SOUTH DAKOTA

By:

Christ Christian
Christ Christian, Chairman
Game, Fish and Parks Commission

Walter J. Fillmore
Walter J. Fillmore
Acting Director,
Department of Game, Fish & Parks

STATE OF SOUTH DAKOTA)
) SS.
COUNTY OF HUGHES)

On this 2nd day of March, 1961, before me, a Notary Public within and for said county and state, personally appeared Christ Christian, Chairman of the Game, Fish and Parks Commission, and Walter J. Fillmore, Acting Director of the Department of Game, Fish and Parks, well known to me to be the persons who executed the foregoing instrument in the name of the State of South Dakota, and acknowledged to me that the State of South Dakota executed the said instrument.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my notarial seal on the day and year in this certificate first above written.

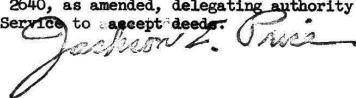


W. J. Fillmore
Notary Public, Hughes County, S. D.,
residing at Pierre, South Dakota

My commission expires July 25, 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

The within deed is accepted on behalf of the United States as of May 18, 1961, under the authority contained in the act of August 8, 1953 (67 Stat. 495, 16 U.S.C., sec. 1b(2)), and delegated by sections 1 and 7 of Departmental Order No. 2640, as amended, delegating authority to Assistant Directors of this Service to accept deeds.



Assistant Director
National Park Service

Other Supporting Information

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA GEN. REG. NO. 27

5010-107

Rec 8/22/66

UNITED STATES GOVERNMENT

Memorandum

TO : Supervisory Hydraulic Engineer, SSC

DATE: August 18, 1966

FROM : Hydraulic Engineer, SSC, Santa Fe

SUBJECT: Trip to Mount Rushmore National Memorial

I spent July 30 and part of July 31 at Mount Rushmore National Memorial investigating the area because of a recent critical water shortage. This shortage began earlier in the summer and except for the arrival of some unseasonable summer rains during the month of July the storage tanks might have been emptied and they would have been out of water.

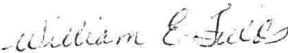
The existing water system originates in several springs located in a small tributary of Lafferty Gulch. This water is collected and either run by gravity or by pumps to storage tanks of over 2,000,000 gallons in capacity. Most of the time about 25 gpm is collected but as a result of low precipitation the combined flow was down to about 3-5 gpm (during June and early July). Two wells were drilled in 1962 to supplement the springs - one in the same drainage area as the springs down near the town of Keystone and the other in a canyon south of the Memorial. Completion reports and other records indicate that these wells were 61 and 75 feet deep, respectively, and were not pump tested. They were bail-tested for a short period of time and it was felt that sufficient water was available to construct a pipeline tying the well into the present system. When the pipeline was completed and a pump installed in the well near Keystone, it was found that it would only produce about 2-3 gpm and the water was full of colloidal material. The other well, as near as I could ascertain, was never tested or utilized after it was drilled but in all probability it is the same type of well as the first. It is my assumption that as the springs dry up so does the well because of the small recharge area and the shallow and narrow alluvial aquifer allows very little seasonal storage.

John Paul Gries, Consulting Geologist of Rapid City, South Dakota, made the original report on the possibilities of ground water in the area. He recommended against drilling deep wells into the bedrock at that time. A preliminary investigation reveals however that in that same area there were some mining companies who have drilled wells 500-700 feet in depth and they produce good water in sufficient amounts to alleviate all of the problems which we might have in the future.



Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

Since the pipeline is already installed to the well near Keystone and since the shallow wells have proved insufficient then I would suggest a deep well of 10-12" in diameter to be drilled about 20-30 feet away from the present shallow well. Chief Ranger Wallace Elms is attempting to obtain the logs and other pertinent data from the mining companies and will send them in as soon as possible. I think that the existance of producing wells in the immediate area justifies the drilling of a deep test hole without obtaining an additional geologic report. I also think that proper development of the well will remove the possibility of colloidal material.


William E. Fields

cc: Regional Director, Midwest Region
Superintendent, Mount Rushmore

Form 10-174
(Rev. 8-56)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION Midwest	AREA Mount Rushmore National Memorial	COUNTY Pennington	STATE South Dakota
PROJECT OR JOB TITLE 2,000,000 Gallon Steel Water Reservoir and Pumphouse Addition			PCP NO. U-25
LOCATION IN AREA Spring Area		MASTER PLAN NO. NMEM 2012C	BUILDING NO. 37
WORKING DRAWING NO. AND TITLE NMEM-MR-3115 - 2,000,000 Gallon Steel Water Reservoir and Pumphouse Addition			
APPROPRIATION TITLE AND SYMBOL 14X1035			WORK ORDER NO. B-10
CONTRACT NO. 14-10-0232-690		DATE WORK STARTED July 6, 1962	DATE WORK COMPLETED November 29, 1962 ✓
NAME OF CONTRACTOR Minneapolis Tank and Mfg. Co.		ADDRESS 1201 Winter St., Minneapolis, Minn.	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
100.8 UTILITIES: WATER SYSTEMS:			
Contract Payments			105,919.60
P S & S 1963 Program 16%			16,947.14
TOTAL			122,866.74

NOT A TRUE COPY
Ernest E. Elert
 SYSTEMS ENGINEER, ACCOUNTING OFF.
 RECEIVED NOV 15 1962
 DATE FEB 7 1963

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES
OTHER P S & S 16,947.14		
CHANGE ORDERS		
ORIGINAL CONTRACT AMOUNT 102,365.60	FIRST 2,990.00	SECOND 564.00
FINAL CONTRACT AMOUNT 105,919.60	FOURTH	SIXTH

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title) <i>Claudine V. Morgan</i>	Claudine V. Morgan Administrative Assistant	DATE December 14, 1962
APPROVED BY (Name and title) <i>W. Leon Evans</i>	W. Leon Evans Superintendent	DATE December 14, 1962

(ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS, AND "AS BUILT" DRAWINGS TO THIS FORM)

Completion Report of Construction Project - Contract No. 14-10-0232-690

Midwest Region, Mount Rushmore National Memorial, Pennington County, S. D.

2,000,000 Gallon Steel Water Reservoir and Pumphouse Addition - PCF U-25
Working Drawing No. NMEM-MR-3115

Contract No. 14-10-0232-690

Work Started - 7/6/62 Completed - 11/29/62

Contractor: Minneapolis Tank & Manufacturing Co., 1201 Winter Street,
Minneapolis, Minnesota

<u>COST ANALYSIS</u>			
Construction Items	Qty	Unit Cost In Place	Total Cost In Place
Pumphouse addition with Pump, Motor, Interior piping and valves	1	\$5400.00	\$5400.00
6-inch cast iron, Class 150 Cement Mortar, Lined Water Pipe	328LF	12.70	4165.60
2,000,000 Gallon Steel Reservoir including Reservoir Valve Chamber drain line and valves	Lump Sum	\$92,800.00	\$92,800.00
Change Order No. 1		2,990.00	2,990.00
Change Order No. 2		564.00	564.00
		<u>TOTAL -</u>	<u>\$105,919.60</u>

SUMMARY

Original Contract Amount	\$102,365.60
First Change Order	2,990.00
Second Change Order	564.00
	<u>\$105,919.60</u>

COMPLETION REPORT

2,000,000 Gallon Steel Water Reservoir and Pumphouse Addition
Mount Rushmore National Memorial, Keystone, South Dakota

Contract No. 14-10-0232-690

Contractor - Minneapolis Tank & Mfg. Co., 1201 Winter St.,
Minneapolis, Minnesota

Bids were opened 2:00 P.M. 5/19/62 at Omaha, Nebraska. Two bids were
received and Minneapolis Tank & Mfg. Co. of Minneapolis, Minnesota was
low bidder, with a bid of \$102,365.60, and were awarded the contract.

Notice to proceed was given June 27, 1962 and acknowledged by contractor
on July 5, 1962.

The starting date was July 6, 1962, with the initial completion date set for October 4, 1962. Change Order No. 1 extended the contract period 20 days to October 24, 1962, by reason of the additional work. The contractor was allowed a time extension of 10 days to November 3, 1962, by reason of delay due to the Chicago Northwestern rail strike during the month of September, 1962. A stop order was written suspending all work on October 31, 1962, due to adverse weather conditions. The stop order was followed up with an order to resume work November 27, 1962; with an extended final completion date of November 29, 1962.

Change Order No. 1 was written on August 17, 1962, to lower the 3" G.S. suction line under the pumphouse addition an additional 2 ft. to 6 ft. depth; to install a new tee in the 6" G.I. to Residential area in dry well for $\frac{1}{2}$ million gallon reservoir to receive new 3" G.S. suction line with check valve and gate valve bypass; to lower suction line to 32,000 gallon reservoir installing foot valve and gate valve, and to provide 2 ft. additional cover for new 6" C.I. supply line to 2 million gallon reservoir. The above was accomplished to provide for essential priming of pump. Change Order No. 1 increased contract price by \$2,990.00 to the amount of \$105,355.60

Change Order No. 2 was written on September 14, 1962 to prime, fill and seal the void between the base of the steel reservoir shell plate and the circumferential plate with a plant mix bituminous fill which was necessary to prevent infiltration of water into the sand fill under the reservoir bottom plate. Change Order No. 2 increased the contract price by \$564.00 to the final amount of \$105,919.60. The work under this contract consisted of furnishing all plant, labor, equipment, appliances and materials and performing all operations in connection with the construction of a steel water reservoir, laying a 6-inch cast iron water line, constructing a 6 feet by 11 feet pumphouse addition and installing centrifugal pump with supplemental piping.

The construction was completed within the extended contract period with a prefinal inspection made on November 2, 1962, and the final inspection made on November 29, 1962. The letter of acceptance dated December 14, 1962, was written accepting the work as complete on November 29, 1962.

The contractor removed approximately 10,000 cu. yds. of excavation which was hauled to the old borrow pit and dump, and to other areas designated by the Contracting Officer. The excavation was composed of decomposed granite, random boulders and shale.

The sand fill which supports the tank is constructed inside of a circumferential plate which is 1 foot larger in diameter than the tank shell. The sand fill was saturated with crank case drain oil for corrosion protection of the tank floor plate. The 12 foot access road around the reservoir was graded in a manner so as to

allow water to run away from the tank shell and so as to allow water to run from north to south around both the east and west faces of the reservoir. The existing drainage channel through the reservoir site was relocated to a ditch on the west toe of side slope of the reservoir excavation, and the ditch was carried across the fill for new 6" C.I. to meet the existing drainage channel again. The side slopes were cut back on a $\frac{3}{4}$:1 slope as required per contract plan. All the underground piping revised or installed under this contract was buried with 6 ft. minimum cover per Change Order No. 1. A six inch diameter cast iron, Class 150, cement lined supply line was installed from the new pumphouse addition to the new steel reservoir with a 2" gate valve and drain to daylight at its low point, instead of 2" G.S. drain line to 6" C.I. drain for $\frac{1}{2}$ million gallon reservoir as per plans. The new 2 million gallon reservoir is field welded steel plate, with interior pipe columns and structural steel roof members. The structural welding was of excellent quality and all the welding was vacuum checked prior to sand blasting and painting of tank. The interior of the tank received one prime coat and 2 finish coats of T&O Tank Solution. The tank exterior received one coat of red lead linseed base paint and 2 finish coats TT-P-102, Class B paint. All surfaces were sand blasted prior to priming and prime was applied the same day as sand blasting was accomplished. The contractor installed an aluminum gate. The reservoir was grounded with an air terminal at the high point and three $\frac{3}{8}$ "x10' copper ground rods evenly spaced around the perimeter of the tank. A plant mix bituminous fill was placed in the void between the shell plate and circumferential plate in accordance with Change Order No. 2 described above to prevent infiltration of rain water into the sand fill. The pumphouse addition was constructed to match the existing pumphouse structure. A new 3 HP, 170 gpm, 40 TDH pump with motor starter and brakes was installed to pump water from both the 32,000 gallon and $\frac{1}{2}$ million gallon reservoirs to the new 2 million gallon reservoir. The 3" G.S. suction line from reservoir was relocated and lowered for 6' minimum cover for frost protection. A foot valve with gate valve was installed in 3" G.S. suction line from the 32,000 gallon reservoir and a check valve with gate valve bypass was installed in the 3" G.S. suction line in the dry well for the $\frac{1}{2}$ million gallon reservoir both in accordance with Change Order No. 2 described above.

PROJECT INSPECTOR'S NOTES

The northwest embankment has a weathered shale strata with a dip of approximately 60°. On several occasions, due to heavy rains, rock was loosened from this strata and fell to the toe of the embankment. It can be expected that this breaking loose of rock will continue in the future unless corrective action is taken. A person could gunite the shale strata to prevent water from reaching its weathered joints, lubricating them and causing them to slip out of position. A ditch could also be built at the crown of the embankment which would prevent water from reaching the embankment and subsequently causing slides. Some settlement of the tank shell was noted as its erection progressed, but this settlement was not considered serious, and no corrective action was necessary. It is recommended that for future tanks of this type that a concrete foundation ring be installed under the shell plate, not for bearing, but for ease in erection of shell plates. The ring gives a level working surface which makes for ease of shell plate erection and makes for a job of superior quality.

A splash block should be constructed at the foot of down drain constructed in northwest face of reservoir embankment so as to prevent erosion of this area. The Spring Area fence should be relocated to include the new reservoir within its boundaries.

A study of automatic controls for the Mount Rushmore water system was made and PCP U-27 was prepared which recommended burying 3" G.S. supply line from Spring Area to 75,000 gallon reservoir at headquarters area; installation of a new pump to operate in alternation with present similar pump for pumping water to the reservoir at headquarters, installation of two automatic chlorinators and installation of solenoid valves for control of gravity flow. This PCP for automatic controls would simplify operational and maintenance procedures and is highly recommended for scheduling in the earliest construction program.



UNITED STATES DEPARTMENT OF JUSTICE

WASHINGTON, D. C.

May 18, 1961

Address Reply to the
Division Indicated

and Refer to Initials and Number

RJL:CFN
33-43-271

INTERIOR DEPT.

33-43-271
MAY 22 1961

SOLICITOR

Frank J. Barry, Esquire
Solicitor
Department of the Interior
Washington 25, D. C.

Dear Mr. Barry:

This refers to your letter of May 12, 1961, in connection with the acquisition from the State of South Dakota of an easement for a waterline to be used in connection with the Mount Rushmore National Memorial. You have requested a waiver of the requirement for the approval of the title to the easement by the Attorney General. Your reference is E-61-2058.18.

The recorded deed from the State of South Dakota provides that your Department shall be liable for and settle all damages to the lands caused by the construction, repair and removal of the line. The commissioners of the Department of Game, Fish and Parks of the State of South Dakota have certified to the ownership of the property over which the line is to be located and that the title is free from encumbrances. The easement is to be acquired without the payment of monetary consideration.

In view of the above, you are advised that it will not be necessary to obtain the approval of the title by this Department pursuant to the provisions of Rev. Stat. 355 (40 U.S.C. 255).

The deed to the United States and the certification from the commissioners of the Department of Game, Fish and Parks are returned:

Respectfully,
For the Attorney General

Ramsey Clark
Ramsey Clark

Assistant Attorney General
Lands Division

Enclosures



UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C.

2-6-572.18

MAY 12 1961

Hon. Ramsey Clark
Assistant Attorney General
Lands Division
Department of Justice
Washington 25, D. C.

Dear Mr. Clark:

In connection with the Mount Rushmore National Memorial, we are enclosing a recorded deed and a letter dated April 20, 1961, to the Superintendent, Mount Rushmore National Memorial, signed by the Chairman and by the Director of the South Dakota Department of Game, Fish and Parks.

Authority for the acquisition of this easement is found in Section 2 of the Act of August 8, 1953 (67 Stat. 495, 16 U.S.C., sec. 1b(2)).

It is the purpose of this letter to request a waiver by the Attorney General of the requirements for a title opinion in the case of this easement acquisition under authority of the provisions of 40 U.S.C., sec. 255.

Sincerely yours,

(SIGNED) GORDON R. BENNETT
MAY 12 1961

Gordon R. Bennett
Associate Solicitor
Territories, Wildlife & Parks

Enclosures

Swenson/jb/5-11-61
cc: Files
Mr. Swenson ✓
Asst. Sol. NPS chrono
Daily
Branch of Lands, NPS
Regional Director, NPS, Region 2



UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
Region Two Office
307 Federal Office Building
106 South 15th Street
Omaha 2, Nebraska

APR 28 1961

IN REPLY REFER TO

SOLICITOR

~~44-5~~
~~25039~~

L 3031 MAY 10 1961

INTERIOR DEPT. E-61-2058-18.
Memorandum

To: The Director
From: Acting Regional Director, Region Two
Subject: Water Line Easement, State Lands
Mount Rushmore National Memorial

Attached, with a copy of Mr. Spalding's memorandum of April 24, is the subject easement executed March 2, and recorded in Book 76, Page 148 of Miscellaneous Records, by the Register of Deeds, Pennington County, South Dakota, on April 20, 1961, along with a letter dated April 20 to Mr. Evans signed by the Chairman and by the Director of the South Dakota Department of Game, Fish and Parks, to the effect that these lands are free from encumbrances, mortgages, taxes or financial claims of any sort. Also attached is a copy of Field Solicitor Cook's memorandum dated April 26 stating that he is unaware of any authority which would allow the Service to acquire an easement without title approval by the Justice Department. This information is furnished in accordance with Mr. Price's request of April 11.

It will be noted that the terms of the conveyance read -

"For and in mutual consideration, the State of South Dakota does hereby grant, bargain and convey unto the United States Department of the Interior, having its present place of business in Washington, D.C., its successors and assigns, a right-of-way and right to construct, operate and maintain or remove a 4" water line, including all equipment, fixtures and appurtenances, across, over and under the following described real property, to-wit * * * *."

As this easement provides for no cost to the Government, we feel that it may be considered in the form of a donation.

We would appreciate a review of this matter and advice as to whether construction of the proposed water line may now be undertaken.

Attachments 1.

Acting Regional Director

Copy to: Superintendent, Mount Rushmore NMem

S. E. Lee
Price
De

George H. Bagley MORU



UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
415-17 Federal Office Building
Omaha 2, Nebraska

April 26, 1961

Memorandum

To: Regional Director, Region Two
From: Field Solicitor, Omaha
Subject: Water Line Easement, Mount Rushmore National Monument

Reference is made to Acting Regional Chief of Operation's memorandum dated April 14, 1961 to Superintendent, Acting Superintendent's memorandum dated April 24, 1961, to Regional Director, and Assistant Director Frise's memorandum of April 11, 1961 to Regional Director, Subject above.

In order that there may be no misunderstanding concerning this matter, I would like to make my position clear.

When the above April 14, 1961 memorandum was presented to this office I did not surmise, stating in a handwritten note that I was unaware of any authority which would allow the Service to acquire an easement without title approval by the Justice Department.

In some instances in the case of easements and rights of way, the Attorney General has waived this requirement when the cost thereof is relatively small or donated.

As I understand the procedure, a request is made by the Solicitor's Office to the Justice Department for a general waiver of title approval in regard to the foregoing. The specific instance I have in mind, is the waiver by the Attorney General to the Bureau of Land Management for title approval of easements acquired for a consideration not in excess of \$100.00. This waiver was in a letter dated April 8, 1958 from the Attorney General, signed by Perry W. Horton, Assistant Attorney General, Lands Division to former Solicitor Elmer F. Bennett.

I am unaware of any procedure where the Attorney General makes a waiver in a specific easement acquisition, although there may be instances where he does. In any event, in the absence of a waiver by the Attorney General, I am of the opinion that before this easement may be acquired the Attorney General must approve the title.

SIGNED

Morris D. Cook
Field Solicitor

✓ In duplicate

w.R. copy

L-54

MAR 21 1961

Memorandum

To: The Director

From: ~~Acting~~ Regional Director, Region Two

Subject: Water Rights, Proposed Notice of Intention to use
Certain Specified Waters, Mount Rushmore National Memorial

Attached is copy of a proposed Notice to the Water Resources Commission, State of South Dakota, pursuant to withdrawal of water for a supplemental supply to Mount Rushmore National Memorial, prepared in accordance with instructions contained in Assistant Director Price's memorandum of November 23, 1959, relative to Application 522-2, supply Well No. 1, Jewel Cave National Monument.

Also attached are the following:

1. Copy of Narrative Completion Report.
2. Print of Drawdown Curve.
3. Completion Report of Construction Project.

As our instructions continue to require review of such notices by your office, we will appreciate your comments on the subject proposal.

(Sglt) L. J. Castro

~~Acting~~ Regional Director

✓ In duplicate

Attachments

Copy to: Supt., Mount Rushmore NM

NOTICE OF INTENTION TO USE CERTAIN SPECIFIED WATERS

(Under Sec. 61.0123, Water Laws of South Dakota, Amended 1959)

TO THE STATE WATER RESOURCES COMMISSION OF THE STATE OF SOUTH DAKOTA:

Notice is hereby given by the Superintendent of Mount Rushmore National Memorial, Keystone, South Dakota, who is properly authorized officer of the United States and authorized by law to construct works for the utilization of water within this State, that the United States intends to utilize certain specified waters for the benefit of Mount Rushmore National Memorial, part of the National Park System, as follows,

TO WIT:

Source of Supply: A well lying within the boundaries of the Memorial area, approximately 150 feet from the east boundary line and adjacent to the Keystone roadway, at a point from which the E. 1/16 corner of SW $\frac{1}{4}$, Sec. 8, T. 2 S., R. 6 E., BHM, Pennington County, South Dakota bears S. 32° 10' 20" E., 680.46 feet.

System: The well is to be equipped with an electric pump and connected to the present distribution system with a 4-inch cast iron pipeline 4200 feet long. This water will be used as a supplement to the present spring supply and serve the Memorial area developments. The water supply will be used beneficially for domestic, fire protection and irrigation purposes. The irrigation will apply to residence area lawns and selected landscapings.

Well Data: The well was drilled to a depth of 61 feet, cased with a 6-inch steel well casing. The lower 40 feet of the casing is perforated. Test pumping of the well revealed an available yield of 30 gpm (.0666 cfs). The well drilling was completed July 27, 1960.

While the demand upon the water supply from this well will be variable throughout the year, it is estimated that in a relatively near future the entire yield of 30 gpm will be needed during the periods of maximum water requirements.

A drawing showing the location of the well and the distribution system is hereby submitted as a part of this Notice of Intent.

Nothing in this notice shall constitute a waiver of any rights which the United States may have to the same water.

DATE: _____ day of _____ 1960

W. Leon Evans. Supt., Mount Rushmore National Memorial

MOUNT RUSHMORE NATIONAL MEMORIAL

NARRATIVE COMPLETION REPORT

TEST WELL No. 1

East Boundary Line near Keystone Road

As an acute shortage of water supply had developed at Mount Rushmore National Memorial, a Contract, No. 14-10-02-32-438, dated July 18, 1960, was negotiated and issued to Mr. Richard Lawrence, driller and owner of Fall River Drilling Company, Hot Springs, South Dakota, to do some test well drilling to find a supplemental water supply.

Mr. Lawrence moved his cable drill rig and equipment July 19, 1960, into the Memorial area to a location near the east boundary line and adjacent to the Keystone road.

William A. Mott, Hydraulic Engineer, Region Two Office, supervised the drilling operations in locations recommended in a water supply study report, dated June 3, 1960, made by Dr. Paul Gries, Geologist at South Dakota School of Mines.

Mr. Lawrence did drilling at two different locations, each within the Memorial boundaries. First location was 100 feet, more or less, from the east boundary line and adjacent to the Keystone road. The second location is approximately 650 feet west of the junction of the Iron Mountain and Horse Thief Lake roads. The first well yielded a reasonable supply of water, about 30 gpm. The second well, drilled to a depth of 94 feet, did not possess a yield sufficient to be considered, less than 1 gpm. Therefore, the test well in the second location was capped and abandoned and not identified nor documented.

Test Well No. 1 was drilled to a depth of 61 feet. A piece of 12-inch casing, 10 feet long, was installed as a collar in the well. The well was cased, with an 8-inch steel well casing, from 0 to 61 feet depth. The 8-inch casing was perforated for 40 feet of length, between elevations of 18 feet and 58 feet below the ground surface.

Upon the completion of the well drilling operations the well was developed by surging, using the bailing bucket. The bailing bucket was lowered to the bottom then, repeatedly by quickly raising the bucket to above the water surface and dropping the bucket to the bottom of the well, the developing process was performed.

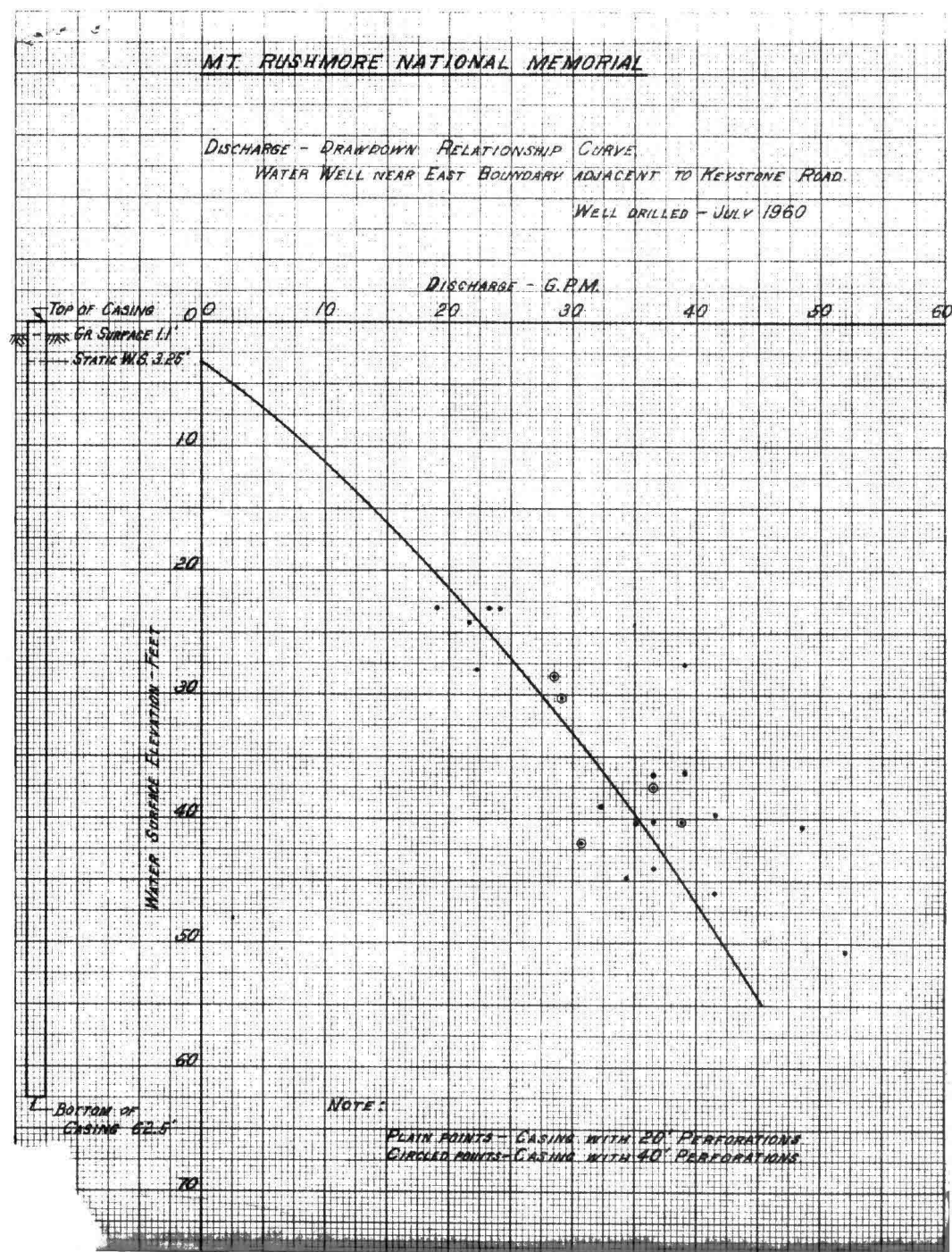
A 4-inch cylinder type pump, operated by the drill cable, was used to test pump the yield from the well. Test pumping data, also a discharge-drawdown relationship curve are attached and made a part of this report.

The location of the well is at the edge of a ravine which, according to local residents, remained so wet and soggy a couple of years ago that a person could not walk across the ravine. The present condition of the ravine is firm and covered with a heavy growth of water grasses, thus permitting the movement of the drill rig over the ravine floor. The water supply is seemingly derived from an alluvium formation in the ravine.

Mt. Rushmore NM, Narrative Completion Report, Test Well No. 1 - cont'd

Upon completion of test pumping the well, a steel plate was secured to the top of the casing to prevent molestation with, and contamination of the well. The work was completed July 26, 1960.

Attachments



WR copy
154-081

August 4, 1960

Memorandum

To: Regional Director, Region Two
From: Chief, Water Resources Section
Subject: Preliminary Report Ground Water Possibilities at Mount
Rushmore National Memorial by John Paul Gries

We assume that we are to keep the copy of the Gries Report of June 3, and that with the speco copy sent to WDCC, all offices now have copies. We have added section lines, basic pipelines and developed areas on the copy of the map in our copy of the report, and a slightly reduced photostat copy is attached to each copy of this memorandum, as indicated. For sources of data, see Dockets 1 and 2, and base maps of the area. The Memorial Boundary, and hence section subdivision, appears to be only approximate, but close enough for the purpose.

I assume that the wells which Mr. Gries shows at the most easterly corner of area 6-B, are at the infiltration gallery, tank and pump, which are shown partially in red, on the photostat from MM-RM-3008 at bottom of contents of Part II of Docket 1. We still seem to lack a copy of the related supplemental withdrawal or application as filed with the State but note that the claim is to be for 0.184 sec.ft. to supplement the withdrawal (No. 596-2) of 0.03 sec.ft. from the springs in the same area 6-B. The yield of 0.184 sec.ft. from the galleries or wells does not appear to be available when needed.

Before considering the various water sources suggested by Mr. Gries we should also consider the land status around the Memorial of which at least a part is federally owned Black Hills National Forest. A well at the southeast corner of Section 13 would be far superior to the one suggested half a mile further to the north if the Forest Service could and would withdraw or reserve Area 4-A so that all potential runoff would be assured for the future. There would apparently be little to gain by moving the well site at the Memorial Boundary in Area 1-B toward Grizzly Bear Creek unless it were moved to a point where it could intercept the subsurface flow of that Creek, and this might be objectionable if the Forest Service does not provide proper sewage treatment at the Campground to the south.

The question when Messrs. Aiton and Mott phoned me was whether one or more test wells could be drilled with water right construction funds,

because more water was needed by the Park Service. The Gries report has been supplied because I objected to what sounded like "wild-catting". My own opinion, after reviewing the report, is that the well to be used as a supplemental supply should be drilled with B&U construction funds, but that water right funds should be used for any wells which might first be drilled and abandoned because they proved to be inadequate. All pump tests might also be charged to the water right fund, in part as exploration, and in part to determine the quantity of water to claim in Federal water withdrawal. It is a matter of principle rather than law as to which fund is used for the water well. Drilling could be started with water right funds, while attempting to reschedule B&U construction funds, but the limited water right funds should not be used just because lack of foresight in programming B&U construction.

Before any well drilling, WODC should decide on the order of preference for the various sites, based partially on the comparative costs of the complete alternative water systems. It also appears to me that site selection will also depend on the degree of potential Federal control of the tributary drainage. I assume that Mr. Mott and WODC will agree with me that further wells in the subdrainage areas entirely within the Memorial, do not appear to lend themselves to an efficient, adequate water supply.

I note that Region Two has not yet submitted any work order for 1961 Fiscal Year water rights work. This is needed at once if you are to bill any July costs. You can include funds for two or three test wells at Mt. Rushmore under general ledger Account 102.5, subject to decisions reached on the points I have discussed.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Attachment

Copy to: Superintendent, Mt. Rushmore, w/c attachment
Chief, WODC, w/c attachment
Mr. P. Miller
✓ Mr. Dunn

AvVDunn:lct

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Mr. J. Leon Evans, Park Superintendent
Mt. Rushmore National Memorial
U. S. National Park Service
Keystone, South Dakota

This will confirm our discussion of July 25, 1960 relative to hauling water to supplement the Mt. Kushmore supply.

The water truck, operated by Pete Lien and Sons has been inspected and is in compliance with accepted health requirements. In addition, arrangements have been made so each load of water is manually chlorinated to obtain over one part per million chlorine residual while in transit.

The cooperation this office has received from the Mt. Rushmore personnel is very gratifying and I trust the water hauling operation is progressing satisfactorily.

Very truly yours,

E. W. Hansen
E. W. Hansen
Public Health Engineer

copies: (4) Mt. Rushmore National Memorial
(1) State Department of Health, Pierre

cc: Director ✓

Memorandum

Mr. Mott suggests two sources of possible water supply development following his preliminary investigation in your area in September 1959. Each source will require further study to determine the economic feasibility.

The other source is ground water from a deep well drilled to a possible depth of 350 to 450 feet. The probability of obtaining the desired supply from this source is based on the assertion of a local mining engineer, who said he had drilled a 350-foot well for a local mine that produces a good supply of water. Also, by nature of the topography and geology of the Black Hills, a large per cent of the annual precipitation is believed to be absorbed, thus allowing a relative small runoff; therefore, it is believed a substantial ground water potential exists in the area.

We suggest you solicit from Dr. Gries, Geologist, South Dakota School of Mines and Technology, an estimate of cost to make a geological study, a written report and recommendations on the potential water supply within the area of Mount Rushmore National Memorial. Dr. Gries made a study of water potentials in the Wind Cave National Park and rendered a very comprehensive report. An estimate of cost is needed for inclusion in our final program for

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fiscal year 1961. If Dr. Gries cannot make the investigative study with recommendations, this office will arrange with the U. S. Geological Survey to do the investigative work.

The test well drilling operations should be programmed for accomplishment in fiscal year 1962. The estimate of cost will be based on the report of the geological studies and recommendations.

(SGD.) GEORGE F. BAGGLEY

George F. Baggley
Regional Chief of Operations

Copy to: The Director (2)
✓ Chief, WODC (2)

154-CBL

W R Lofly
C
M

April 20, 1959

Memorandum

To: Regional Director, Region Two
From: Chief, Water Resources Section
Subject: Water System Enlargement, Docket 1, Mount Rushmore

The attached copies of completion reports on the subject water system enlargement under Contracts 14-10-232-170, 307 and 323, should be filed in Docket 1. I am particularly pleased to see the pump installation under Contract 14-10-232-307.

Also, the attached dividers; "Part I - Federal Withdrawal 596-2 - 0.03 sec.ft.; and Part II - Supplemental Federal Withdrawal---- 0.184 sec.ft." should be inserted in the docket. The divider for Part I should be placed above the "certificate of construction of works and appropriation 596-2", and Part II should be placed on top of the attached completion reports, and all added at top of the two drawings which are now above that certificate.

A notice of intention to make a supplemental Federal withdrawal should now be prepared and filed with the State Engineer, with copies as signed and dated and also added at Part II of this docket. Before preparing the notice I should like to know whether the quantity of water should be expressed in sec.ft., or in gallons or acre-feet per year. The point to determine is whether the claim should be made for continuous pumping at full pump capacity, as I have shown, both for the original withdrawal and for the proposed supplemental withdrawal.

The first point to consider is that pumping at full capacity throughout the year would produce 139,600 gpd, 4,327,600 gallons per 31 day month, or 51,931,200 gallons per year (or 156 acre-feet per year). If the pump can supply the needs of the peak month while operating only 8 hours per day, the August withdrawal would only be 1,442,500 gallons, instead of 4,327,600 gallons. I have also found that the annual use is only about 3 or 4 times the August use in most parks and monuments, making the realistic annual use between

4,327,600 gallons (13.28 AF) and 5,770,100 gallons (17.7 AF). The second point to determine by inquiry is whether the State Engineer's regulations (or state water laws) provide for ground water withdrawals at continuous maximum pump rate or the lesser suggested rate of beneficial use.

I shall appreciate having Mr. Mott supply the answers, and also submit the draft of the resultant notice for our consideration before it is filed. A review of dockets for ground water claims will show that many rights have already been established for continuous pumping, but I believe they are excessive.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Attachment

Copy to: Superintendent, Mount Rushmore, w/c attachment
Chief, WOEC, with Docket 1

✓ Mr. Dunn

AvVDunn:lct

Form 10-174
(Rev. 8-56)

**UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
COMPLETION REPORT OF CONSTRUCTION PROJECT**

REGION Two	AREA Mount Rushmore National Memorial	COUNTY Pennington	STATE South Dakota
PROJECT OR JOB TITLE Rehabilitation of Water Reservoir		MASTER PLAN NO. NMEM-MR-2012-C	POP NO. U-19
LOCATION IN AREA Spring Area		BUILDING NO.	
WORKING DRAWING NO. AND TITLE NMEM-MR-3042 Rehabilitation of Water Reservoir			
APPROPRIATION TITLE AND SYMBOL 14X1035 Construction of Buildings and Utilities - 1959		WORK ORDER NO. B-1	
CONTRACT NO. 14-10-232-323		DATE WORK STARTED 7-27-58	DATE WORK COMPLETED 9-11-58
NAME OF CONTRACTOR Jetcrete (Francis A.W.Estrup, Owner)		ADDRESS 613 - 11th Street Rapid City, South Dakota	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
Contract payments			5,448.23
TOTAL			5,448.23

COST AGREE WITH FFO RECORDS
C. D. VAN KIRK, SUPERVISORY ACCT.
REGION TWO OFFICE FFO
DATE **OCT 28 1958**

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES
OTHER		
CHANGE ORDERS		
ORIGINAL CONTRACT AMOUNT 5,260.25	FIRST 187.98	SECOND
FINAL CONTRACT AMOUNT 5,448.23	FOURTH	SIXTH

**THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES**

SUBMITTED BY (Name and title) Richard V. Herranen, Civil Engineer	DATE 11/12/58
APPROVED BY (Name and title) Donald M. Spalding, Acting Superintendent	DATE 11/12/58

(ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS, AND "AS BUILT" DRAWINGS TO THIS FORM)

**Completion Report - Contract No. 14-10-232-323, Rehabilitation of
Water Reservoir**

Narrative Statement

The contract consisted of removal of the old roof, placement of a 2" pneumatically applied mortar, and construction of a new roof. Except for a few spots the old concrete was in fairly good condition. An eighteen inch diameter hole was discovered in the floor when the reservoir was emptied. A change order was made to place a concrete fill and 6" topping sloped to the reservoir drain recently placed by the contractor for the residence water line. All visible leaks were patched with "Embeco" sealer and the walls were then cleaned by sand blasting. The 2x2 No. 12 galvanize steel reinforcing placed, and the pneumatic mortar then applied in two layers.

The first test indicated a leakage of approximately 1 gallon per minute. The contractor then applied an ironite concrete mixture around the base and the reservoir drain. The reservoir is now in good condition and ready to be put in service.

FD-101 (Rev. 1-1-56)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION TWO	AREA Mount Rushmore Nat'l Memorial	COUNTY Pennington	STATE South Dakota
PROJECT OR JOB TITLE Water Systems Addition		PCP NO. U-20-1 (part)	
LOCATION IN AREA Residential		MASTER PLAN NO.	BUILDING NO.
WORKING DRAWING NO. AND TITLE			
APPROPRIATION TITLE AND SYMBOL 14X1035 Construction NPS		WORK ORDER NO. 332.4A	
CONTRACT NO. 14-10-232-734 (Part)		DATE WORK COMPLETED 7/5/58	
NAME OF CONTRACTOR Taylor Brothers		DATE WORK STARTED August 1957	
		ADDRESS Rapid City, So. Dak.	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
UTILITIES: Water Systems Addition;			
Contract Payments			16,489.09
Facilitating Services			179.52
P S S			2,863.76
TOTAL			21,532.37

see next sheet

COST AGREE WITH FFD RECORDS
C. b. VAN KIRK, SUPERVISORY ACCT.
REGION TWO OFFICE FFD
DATE DEC 18 1959

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES
OTHER		
Facilitating Services 179.52	P S S 2,863.76	
CHANGE ORDERS		
ORIGINAL CONTRACT AMOUNT (Part) 17,202.01	FIRST -0-	SECOND 43.75
FINAL CONTRACT AMOUNT 17,189.09	FOURTH 1,012.10	THIRD -0-
	FIFTH	SIXTH

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

6. SUBMITTED BY (Name and title) Richard W. Waso Superintendent	DATE 1/12/60
APPROVED BY (Name and title)	DATE

(ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS, AND "AS BUILT" DRAWINGS TO THIS FORM)

Rec'd with Waso 4/13/60 Meme

GPO 914178

NPS-8-56)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION Two	AREA Mount Rushmore Nat'l Memorial	COUNTY Pennington	STATE South Dakota
PROJECT OR JOB TITLE Sewer System Addition		PCP NO. U-20-1 (por)	
LOCATION IN AREA Residential		MASTER PLAN NO.	BUILDING NO.
WORKING DRAWING NO. AND TITLE			

APPROPRIATION TITLE AND SYMBOL 14X1035 Construction OPS	WORK ORDER NO. 332.4B
CONTRACT NO. 14-10-234-234 (Part)	DATE WORK STARTED August 1957
NAME OF CONTRACTOR Taylor Brothers	DATE WORK COMPLETED 7/58
ADDRESS Rapid City, So. Dak.	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
UTILITIES: Sewer Systems Addition;			
Contract Payments			13,394.20
Facilitating Services			134.82
P S & S			2,075.35
TOTAL			15,604.37

COST AGREE WITH FFO RECORDS
C. D. VAN KIRK, SUPERVISORY ACCT
REGION TWO OFFICE FFO
DATE DEC 18 1959

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES	
OTHER			
Facilitating Services \$ 134.82	P S & S 2,075.35		
ORIGINAL CONTRACT AMOUNT (Part) 11,534.10	FIRST 1,946.90	SECOND	THIRD
FINAL CONTRACT AMOUNT 13,234.20	FOURTH	FIFTH	SIXTH

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title) Superintendent	DATE 1-18-60
APPROVED BY (Name and title) C. D. Van Kirk	DATE

(ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS AND "AS BUILT" DRAWINGS TO THIS FORM)

Completion Report - Contract No. 14-10-232-234 - Construction
of Water and Sewer System Residential Area.

Narrative Statement

The water and sewer system construction was a part of the Roads and Utilities contract. The newly constructed reservoir at the spring area was used as a reservoir for the Residential Area rather than construct a separate reservoir as planned in the original PCP. Only about 30 feet of rock excavation was encountered in the 2500 feet of water line construction. Because of the bends in the conduit under the newly constructed road, cement asbestos water pipe had to be used in lieu of the cast iron water pipe specified. As a precautionary measure a clay material was placed in the water line ditch in the area of the lower spring aquifer so as not to divert the water from the recently developed spring.

Percolation tests indicated a need for an additional 150 feet of disposal trench. Otherwise the sewer system was constructed as shown on the plan.

The storm sewers, inadvertently left out of the original bid schedule, were added to the contract. These were put in to protect buildings No. 44 and 43.

A change order was made to place a drain and overflow line in the old 32,000 gallon collection reservoir and also to connect this reservoir to the water line to the Residential Area. With this work accomplished it is now possible to clean either the large reservoir or the old 32,000 gallon reservoir with no interruption in water service either to the Residential or Headquarters Area.

All work was completed in an orderly manner and resulted in a complete and workable system.

Form 10-174
(Rev. 8-56)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION Two	AREA Mount Rushmore National Memorial	COUNTY Pennington	STATE South Dakota
PROJECT OR JOB TITLE Water Supply Development - Spring Area			PCP NO. U-18
LOCATION IN AREA Spring Area		MASTER PLAN NO. NMEM-MR-2012-C	BUILDING NO.
WORKING DRAWING NO. AND TITLE NMEM-MR-3008-A Water Storage Extension System (Hackett) NMEM-MR-3038 Pump Hypochlorinator Installation (Taylor)			
APPROPRIATION TITLE AND SYMBOL 14X1035 Construction of Buildings and Utilities 1957 - 1958			WORK ORDER NO. 332.2
CONTRACT NO. X-14-10-232-170 (Hackett) (1) 14-10-232-307 (Taylor) (2)		DATE WORK STARTED 8-31-56 6-26-58	DATE WORK COMPLETED 5-27-57 8-11-58
NAME OF CONTRACTOR Henry H. Hackett & Sons, Inc., Taylor Brothers		ADDRESS 216 Rapid City Natl Bank Bldg., Rapid City, South Dakota 308 E. Denver, Rapid City, South Dakota	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
Contract payments			66,554.57
Facilitating Services			500.00
TOTAL			67,054.57

COST AGREES WITH FFO RECORDS
C. D. VAN KIRK, SUPERVISORY ADGT.
REGION TWO OFFICE FFO
DATE **OCT 28 1958**

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES
OTHER	Facilitating Services - 500.00	

CHANGE ORDERS			
ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
(1) 64,310.00 (2) 3,996.57	(1) 1,054.50 (2) 81.50		
FINAL CONTRACT AMOUNT	FOURTH	FIFTH	SIXTH
(1) 62,476.50 (2) 4,078.07			

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title) Richard V. Herranen, Civil Engineer	DATE 11/12/58
APPROVED BY (Name and title) Donald M. Spalding, Acting Superintendent	DATE 11/12/58

(ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS, AND "AS BUILT" DRAWINGS TO THIS FORM)

Narrative StatementWater Storage Extension System

This work provided an additional 500,000 gallon water storage reservoir and an additional source of water supply. Before bids were received Addendum No. 1, dated July 9, 1956 was issued, moving the collection tank and pumping unit nearer to the 500,000 gallon reservoir and at the same time deleting the installation of a considerable amount of pipe. Work progressed in an orderly manner, with very little rock being encountered during excavation. The reservoir was formed with steel panels with a monolithic pour on the floor and deck. The weather was quite cold when the concrete work was completed, however, the contractor protected the work and a satisfactory job was secured. Tests following completion revealed some leakage through the walls. This was corrected in a workmanlike manner by the contractor by a thorough application of Waterplug and Thoroseal manufactured by the Standard Dry Wall Products, Inc., Centerville, Indiana. Final tests revealed no leakage whatsoever, during the period of a two weeks' test, with the reservoir filled. During construction a small spring was located at the upper side of the tank, this water is collected in the drain tile around the tank and piped to the collection tank that was installed, (see Change Order No. 1). Change Order No. 1, granted an extension of time and included installation of 6" cast iron pipe stubbed out to connect with the line to the residential area, called for installation of 4" cast iron pipe from tile drain at reservoir to collection tank and deleted approximately one-half of the 4" drain tile around reservoir. Quantities reduced by Addendum No. 1 decreased the final contract amount. Change Order No. 2 extended the contract period to allow for testing and installation of a different pumping unit to compensate for the change in head occasioned by moving the sump and pump to a higher elevation by Addendum No. 1.

Compressive tests on the concrete used in the reservoir construction were made at the Materials Testing Laboratory, South Dakota School of Mines and Technology, Rapid City, South Dakota. The tests indicated an average compressive strength of 4,500 pounds per square inch on 28-day old samples. The contract specifications required a compressive strength after 28 days of 3,200 lbs per square inch.

Three springs were discovered at the new site with the flow diverted into the collection tank through an infiltration gallery. Total flow is about 12.5 gallons per minute. Present water right does not appear to cover this source. This source of water has been used since June 22, 1954.

The original spring flows by gravity to the new reservoir and is covered by a water right (U. S. Water Right No. 596-2, dated 9-19-49). It flows about 11.75 gallons per minute during normal seasons. This plus the newly developed source provided a total of about 24.25 per minute, including the flow of about one-half gallons per minute from the upper side of the new reservoir.

COST ANALYSIS

<u>Construction Items</u>	<u>Qty</u>	<u>Unit Cost in Place</u>	<u>Total Cost in Place</u>
1. Underground Concrete Reservoir and Appurtenances in place	Ea	\$51,732.00	\$51,732.00
2. Auxiliary Supply Pump Station (Electrical Power Lines, Pump Sump and Shelter)	Ea	5,613.00	5,613.00
3. 4-inch Cast Iron Pipe in place	260 LF	5.00	1,300.00
4. 4-inch Galvanized Steel pipe in place	240 LF	6.00	1,440.00
5. 3-inch Galvanized Steel Pipe in place	515 LF	5.00	2,575.00
6. 8-inch Perforated Corrugated Metal Pipe in place	25 LF	66.00	1,650.00
Original Contract Amount -----			\$64,310.00

As Constructed

1. Underground Concrete Reservoir and Appurtenances in place. (Portion of Drain Tile deleted)	Ea	51,524.00	51,524.00
2. Auxiliary Supply Pump Station (Electrical power lines, Pump Sump and Shelter)	Ea	5,613.00	5,613.00
3. 4-Inch Cast Iron Pipe in place	343.5 LF	5.00	1,717.50
4. 4-Inch Galvanized Steel Pipe in place	80 LF	6.00	480.00
5. 3-Inch Galvanized Steel Pipe in place	274 LF	5.00	1,371.00
6. 8-Inch Perforated Corrugated Metal Pipe in place	25 LF	66.00	1,650.00
7. 6-Inch Cast Iron Pipe in place	24.2 LF	5.00	121.00
Total			\$62,476.50

Completion Report - Contract No. 14-10-232-307, Installation of
Water Pump and Hypochlorinator

Narrative Statement

Taylor Brothers was the low bidder of four bids received at the bid opening June 10, 1958. The first shop drawing submitted for approval of the pump showed a 1-1/2" discharge in lieu of the 2" specified. The pump manufacturer was notified of the error immediately but held up the fabrication of the pump until a second shop drawing submitted was approved. The first test run indicated a need for a primer line from the discharge to the suction side of the pump, and a foot vale in the draw line for more efficient starting. High surge pressures were also noted when the pump was shut down which would eventually damage the pump packing. This was corrected by the installation of a check valve on the discharge line. These corrections were accomplished by Change Order No. 1 at a cost of \$81.50.

The two stage centrifugal pump installed is an American Marsh Pumps Inc., type HHM size 1-1/2" B. The electric motor is a Diehl Manufacturing Company 3-phase 25 horse power. The coupling is a Falk Corporation Stillfex Type F. The pump performance test showed a rate of 96 gallons per minute. The specifications called for a rate of 75 gallons per minute.

The hypochlorinator installed was a Proportioneer Model 47.

All electrical and plumbing work was neat and orderly. The pump, automatic protective devices and hypochlorinator units perform well.

Office of Chief, Western Office Div. of Design and Const.
OCT 24 1955 A.M.
Supv. Architect
Supv. Engineer <i>W. H. V.</i>
Supv. Landscape Arch.
Safety Engineer <i>C. H. H.</i>

154

OCT 19 1955

Memorandum

To: Director

From: Acting Regional Chief of Operations, Region Two

Subject: Water Right Acquisition of Appropriation - Mount Rushmore

In connection with Mr. Garrison's memorandum of July 29 on the above subject for Areas in Region Two, the following information in regard to Mount Rushmore National Memorial will answer Mr. Dunn's request for information in regard to Docket 1 for that area.

Drawing No. NMEN-MR-5950, which is filed in Docket No. 1, covers the old system, not the new one. Drawing No. NMEN-MR-5312-A shows the new system as constructed. We believe you have prints of this drawing in your files. If not, the original is filed in the WODC. A short addition to the system was constructed within the past year to serve the new dormitory that is now being built in the area. It is shown on Drawing No. NMEN-MR-2052. Another short addition to the system to provide water in the new parking area is now being installed as shown on Drawing No. NMEN-MR-2030-D, prints of which have been sent to you. When the new system was built two pumps were installed at the pump house. These pumps can be operated singly or together. Specifications for the pumps called for a single acting triplex pump with a capacity of not less than 35 gallons per minute when operating against a total discharge head of 600 feet. The pumps are being operated by 10 HP motors at 1750 rpm. If you want more plate data we will have to ask the area to supply the information.

Further additions to the system will be needed. Due to below normal precipitation two and three years ago, the amount of water being secured from the spring supply was insufficient for the needs of the area. Part of this was due to the fact that the old collection tank at the pump house, which had been poorly constructed, leaked badly. An additional small supply of water was found in the draw several hundred feet below the pump house and a more or less temporary set up was installed to pump this supply back to the reservoir at the pump house.

Present plans now contemplate leak proofing the present collection reservoir at the pump house, construction of additional storage at the pump house to collect water, both from the present spring and the additional supply in the draw below the pump house. Surveys are to be made before these plans can be finalized and proper estimates made.

Drawing No. 6950 in Docket No. 1 shows a proposed reservoir at Station 6 + 92⁴ to supply a proposed residential area, also shown on that map. There have been numerous objections to the residential area as shown on that drawing and it now appears quite unlikely that this site will be used. Until a definite site is selected, we will be unable to determine whether water for such a site can be supplied by extensions to the present system, or if a new source of water will have to be found.

(Sgd) William E. Robertson

William E. Robertson
Acting Regional Chief of Operations

Copy to: ✓ Chief, WODC
Supt., Mount Rushmore NM

154

Mount Rushmore National Memorial
Keystone, South Dakota

October 10, 1955

Memorandum

To: Regional Director, Region Two
From: Superintendent, Mount Rushmore National Memorial
Subject: Water Right

Please refer to Acting Regional Director Baggley's memorandum of August 16, transmitting a copy of Mr. Garrison's memorandum of July 29, 1955.

We believe that the water right in Docket No. 1, covers the entire system. However, upon the completion of topographic survey of the area in connection with contemplated improvements to the water system we should be able to make a clear determination.

Park Engineer Thuring has this item on his work schedule and will submit a report later this fall.

Charles E. Humberger
Superintendent

cc- WODC ✓

Office of
Chief, Western Office
Div. of Design and Const.
OCT 13 1955A.M.
Supv. Architect
Supv. Engineer <i>K. 10/13</i>
Supv. Landscape Arch.
Safety Engineer

Form 10-174
(Rev. 1/56)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

REPORT 7 SPL

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION **Two** AREA **Mount Rushmore National Memorial** COUNTY **Pennington** STATE **South Dakota**

PROJECT OR JOB TITLE **Utilities Connections (Por.)** PCF NO. **U-14-2**

LOCATION IN AREA **Construction of Water and Sewer Line to Concessions Building** BUILDING NO.

Headquarters Area MASTER PLAN NO. **Mr-2012**

WORKING DRAWING NO. AND TITLE **Drawing No. NMEM-MR-2052**

APPROPRIATION TITLE AND SYMBOL **Water and Sewer Line - Headquarters Area, Mount Rushmore National Memorial** ACCOUNT NO. **332.1**

CONTRACT NO. **14X1035 Construction - Buildings and Utilities** DATE WORK STARTED **April 11, 1955** DATE WORK COMPLETED **May 9, 1955**

NAME OF CONTRACTOR **I-IP-14-10-232-75** ADDRESS **P. O. Box 108, Rapid City, South Dakota**

Black Hills Ditching Co.

COST ANALYSIS

CONSTRUCTION ITEM	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
1. 6" V. C. Sewer Pipe in place	414 LF	\$ 6.00	\$2,484.00
2. 6" C. I. Soil Pipe in place	79 LF	7.00	553.00
3. Concrete Manholes in Place	3 ea	250.00	750.00
4. 4" C. I. Water Pipe in place	228 LF	6.00	1,788.00
5. 1" G. S. Pipe in place	24 LF	2.00	42.00
6. Deleted by Change Order No. 1			
7. 4" C. I. Reducer	1 ea	30.00	30.00
Personal Services			115.06
Travel			24.75
COSTS HAVE BEEN CHANGED TO AGREE WITH FIELD FINANCE OFFICE RECORDS - 9/26/57			
C. D. Van Kirk, Supervisory Accountant			\$5,786.81
TOTAL			~~\$5,847.00~~

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES
115.06		
OTHER		
24.75		
CHANGE ORDERS		
ORIGINAL CONTRACT AMOUNT	FIRST	SECOND
\$5,385.00	\$180.00	
FINAL CONTRACT AMOUNT	FOURTH	FIFTH
\$5,647.00		

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title)

Charles E. Humberger, Superintendent

DATE

January 25, 1957

APPROVED BY (Name and title)

Charles E. Humberger, Superintendent

DATE

January 25, 1957

ATTACH NARRATIVE STATEMENT OF WORK AND COSTS

Completion Report of Construction Project
Contract 1-IP-14-10-232-75, Construction of
Water and Sewer Line to Concessions Building
Region: Two
Area: Mount Rushmore National Memorial

Narrative Statement

The Black Hills Ditching Company, Box 108, Rapid City, South Dakota, was awarded the contract to install water and sewerage extension lines to the site of the concessions dormitory and concessions building, in the amount of \$5,385.00. Two other bids were received in the amounts of \$6,995.60 and \$9,111.90.

Notice to Proceed was acknowledged on April 9, 1955 and work was commenced on April 11. One change order was written and no extension of time was granted. Work proceeded on schedule with Park Engineer Melvin Thuring providing the supervision and inspection. Satisfactory tests were made and final payment and acceptance approved by Regional Director Howard W. Baker on May 20, 1955.



ADDRESS:
THE DIRECTOR, NATIONAL PARK SERVICE

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON
25, D. C.

In reply refer to:
L54 MTRU

August 5, 1949

Memorandum

To: Regional Director, Region Two
From: Chief, Water Resources Branch
Subject: Mount Rushmore National Memorial Water System

Reference is made to Mr. Robertson's letter of July 11 to the State Engineer of South Dakota transmitting Certificate of Examination of Works in connection with Mount Rushmore National Memorial Water System, Withdrawal No. U. S. 596-2. By copies of Mr. Robertson's letter, copies of the Letter of Authorization of June 13, 1949, and of Certificate of Examination of Works, dated July 11, 1949, were forwarded to this Office and to Wind Cave. One copy of the Letter of Authorization and of the Certificate of Examination of Works should be inserted in each of the three assemblies of Mount Rushmore Deed 3 in your office, at Wind Cave, and at Mt. Rushmore, if this has not already been done.

In addition to the above-mentioned papers, we enclose three copies each of the State Engineer's Certificate of Withdrawal of Water for Appropriation, dated June 11, 1949, and of Certificate of Construction of Works and Appropriation, dated July 19, 1949, with priority of June 11, 1949. A copy of each of these papers should also be inserted in each water right assembly.

(SGD.) A. VAN V. DUNN.
A. van V. Dunn
Chief, Water Resources Branch

In triplicate

Attachments 6

AvanVDunn:sh

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

JUL 11 1949

Dean W. Loucks, State Engineer,
State of South Dakota,
Pierre, South Dakota.

Dear Mr. Loucks:

In accordance with your Letter of Authorization for Inspection, dated June 13, 1949, I have made an examination of the Mount Rushmore National Memorial Water System, Withdrawal No. U. S. 596-2. The report of my examination is shown on the enclosed Certificate of Examination of Works, Form 23A.

Very truly yours,

/s/ William E. Robertson
William E. Robertson,
Regional Engineer, Region Two,
National Park Service.

Enclosure: Certificate.

cc: Director, w/cy of Letter of Authorization & Certificate of Exam. of Works.
Supt., Wind Cave, w/2 cys Ltr. of "

P.S. Director, & Wind Cave.

Copies of Letter of Authorization of June 13, 1949, and of Certificate of Examination of Works for your Mount Rushmore National Memorial Deed No. 3 file.

/s/ W.E.R.

W. E. R.

C O P Y

STATE OF SOUTH DAKOTA
Office of
STATE ENGINEER
Pierre

June 14, 1949

A. E. Demaray, Associate Director

U. S. Dept. of the Interior
National Park Service
Washington 25, D. C.

Dear Sir:

Receipt is hereby acknowledged of your letter of May 25, 1949 enclosing notice of completion of works.

Mr. W.E. Robertson, Regional Engineer, 307 Federal Office Bldg., Omaha 2, Nebraska has been authorized to make the inspection of the diversion of works constructed under authority of permit No. U.S. 596-2, on _____ 190 . In case you so desire the inspection to determine the amount of water applied to beneficial use will be made at the same time as that of the constructed work, by the same examining officer.

If, for any sufficient reason, it would be inconvenient or impossible for either yourself or the examining officer to be present at the place and date above specified, a more convenient date may be mutually agreed upon, provided that this office be notified of such action at least two weeks before the date thus set, and, provided, that the dates designated are not later than the dates named in the application for the completion of the works and the application of the water to beneficial use.

Yours very truly,

/s/ Dean W. Loucks
DEAN W. LOUCKS, State Engineer.

DWL:RW

C O P Y

Water
Administration

Office of State Engineer
STATE OF SOUTH DAKOTA
Dean W. Loucks, State Engineer
PIERRE

State Buildings
Design and Construction

June 2, 1949

The Director
National Park Service
U. S. Dept. of the Interior
Washington 25, D. C.

Re: U.S. Withdrawal No. 596-2
Mount Rushmore Water System

Attn: A. E. Demaray
Associate Director

Gentlemen:

We wish to acknowledge receipt of a Notice of Intention of the United States to use waters of South Dakota at Mount Rushmore National Memorial as applied for under Sec. 61.0137 of the South Dakota Code of 1939. We also acknowledge receipt of a tracing and print of a map of the water system bearing your drawing No. NMEM-MR-6950.

I note that you say that the water has been diverted and used for a number of years and you are now ready to make the necessary proofs to complete the Federal Withdrawal. We will give the matter prompt attention.

Sincerely yours,

(Sgd) Dean W. Loucks

DEAN W. LOUCKS
State Engineer

DWL:RW



ADDRESS:
THE DIRECTOR, NATIONAL PARK SERVICE

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

27 MAY '949

MEMORANDUM for the Regional Director, Region Two.

The enclosed Mount Rushmore Deed 3, with Form L-1 as an index, in triplicate, now consists of a notice of intention of the United States to use water, and a map of the water system, both based on the memorandum of March 24 from Mr. Robertson. Copies of our forwarding letter of May 25 to the State Engineer were sent to you, from which you will note that we have recommended that the State Engineer appoint Mr. Robertson to make the engineering examination and report, as he did in connection with the perfection of rights for the Cedar Pass Water System at Badlands National Monument.

In addition to supplying you with three copies of the water right assembly, we will maintain one assembly as the original for permanent record, and one as a working copy in this Office. Please supply us with copies of all correspondence in connection with the engineering examination and report in duplicate for these records.

In preparing the notice and the map, we have tried to show a complete water system now operating and capable of using the full flow of the spring. At the same time, we have tried to imply that future use of the water may be made on any other portion of the Memorial which may be desirable in the future. So far as the form of the engineering report will permit, we suggest that this idea be stressed even though we shall make another water withdrawal to cover the additional source for which you are now making studies.

(SGD.) A. E. DEMARAY

AvVD:sh.

Associate Director.

Enclosure 194.
In triplicate.

cc: Mr. Overly, with copy of deed and L-1 form.
→ Mr. Dunn.



ADDRESS:
THE DIRECTOR, NATIONAL PARK SERVICE

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

MAY 25 1949

Mr. Dean W. Loucks,
State Engineer,
Pierre, South Dakota.

My dear Mr. Loucks:

We enclose a notice of intention of the United States to use waters of the State of South Dakota at Mount Rushmore National Memorial, under Section 61.0137 of the South Dakota Code of 1939, together with the tracing and a print of the map of the water system which bears our drawing number NPS-MR-6950.

As indicated in the notice, the water has been diverted and used for a number of years. Proofs, to complete the Federal withdrawal, can be made during this year. In this connection, it will simplify the matter of Federal payments if you can appoint W. E. Robertson, Regional Engineer at our Region Two Office, 307 Federal Office Building, Omaha 2, Nebraska, to make the engineering examination and report. Mr. Robertson has been in charge of the maintenance and plans for modification of the system.

For administrative reasons, we should like to have all other matters relating to this water right addressed to this Office.

Sincerely yours,

ASIGNED

AvVD:sh.

A. E. Denaray,
Associate Director.

Enclosure 192.

cc: Regional Director, Region Two (3).
→ Mr. Dunn.

May 23, 1949.

**Notice of Intention of the United States to Use
Waters of the State of South Dakota Under
Section 61.0137 South Dakota Code of 1939**

To the State Engineer of South Dakota:

Notice is hereby given in accordance with Section 61.0137 of the South Dakota Code of 1939 that the United States of America has been using, and intends to continue to use certain specified waters of the State of South Dakota for beneficial purposes, as follows, to-wit:

The project is designated as the Mount Rushmore Water System.

The water is diverted and used on the Federal lands in Mount Rushmore National Memorial which was established on lands of the Harney National Forest in Pennington County, South Dakota, under the act of February 25, 1929 (45 Stat. 1300).

The Mount Rushmore National Memorial was placed under the administrative jurisdiction of the National Park Service, Department of the Interior, Washington 25, D. C., under the Reorganization Plan No. II, which was prepared by the President pursuant to the Reorganization Act of 1939, approved April 3, 1939 (4 Fed. Reg. 2731; 53 Stat. 1431, 1435) and became effective on July 1, 1939.

All matters relating to this water right should be referred to the Director, National Park Service, Washington 25, D. C., where routine action will be handled by A. van V. Dunn, Chief, Water Resources Branch.

The source of water supply is a spring area tributary to the Cheyenne River through Battle Creek and its nameless tributaries, in Pennington County.

The spring area is located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 7, T. 2 S., R. 6 E., B.H.M., and the main diversion of water from said spring area is made at a point whence the S $\frac{1}{4}$ corner of Section 7, T. 2 S., R. 6 E., B.H.M., bears S. 66°55' E. 787 feet.

The water is collected at spring wells and conveyed to a concrete collecting reservoir of 33,500 gallon capacity by 185 feet of 4" C.I. pipe. The carrying capacity of said 4-inch pipe is far in excess of the available spring flow, which is approximately 0.03 cubic feet of water per second of time during normal years.

Water diversions and use were started by the Mount Rushmore National Memorial Commission, which was created by act of Congress on February 25, 1929 (45 Stat. 1300), during the year 1929.

The United States intends to use the entire flow available from said spring area for domestic, recreational, and fire protection purposes, as the main water supply for Mount Rushmore National Memorial, consisting of portions of Sections 7, 8, 17, 18, 19, 20, and 29, T. 2 S., R. 6 E., and Sections 12 and 13, T. 2 S., R. 5 E., B.H.M., in Pennington County, South Dakota.

Standard tracing and black line print of drawing No. NMEM-MR-6950, showing Water System, Mount Rushmore National Memorial, accompany this Notice of Intention.

Nothing herein shall be deemed to constitute a waiver or relinquishment by the United States of any rights, title, priority of use or other interest it may have in and to the waters of this spring area irrespective of the filing of this Notice.

(Sgd) A. E. Demaray.
Associate Director, National Park Service.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

MAR 24 1949

MEMORANDUM for the Director.

Reference is made to Mr. Dunn's memorandum of February 14 in regard to water rights for Mount Rushmore National Memorial.

We can add little information as to the flow of the spring other than what you already have. We have asked the Superintendent to measure the flow of the spring from time to time and send the results to this office, but so far we have not received any measurements. The only actual measurements which we have record of were made by our engineering party and are as follows:

May 15, 1948
October 25, 1948

10 gallons per minute.
11.5 gallons per minute.

The collecting work at the two springs consists of a masonry cut-off wall extending between and beyond the two springs and masonry collecting boxes with concrete tops at each spring. The top of the masonry wall is about six feet high at the southerly end and tapers off somewhat uniformly to ground level at the northeast end of the wall. The larger collecting box is about 8 feet wide at the front and extends into the hill about 12 feet. The smaller box is approximately 2' x 3' in size, and its top is about 2 feet above the ground. Probably more than 90 percent of the flow is from the southerly collection box. We are enclosing a small print of the topography at the spring area on a scale of 40' = 1", from which you will be able to get a better idea of the present spring development.

The flow line of the 4" cast iron pipe at the larger collecting box is approximately elevation 4,872.8. The 4" line is laid on a straight grade between the collecting box and the collecting reservoir, and it enters the collecting reservoir at an elevation of about 4,862.5. The elevation of the floor of the pump house is 4,865.5. *4" pipe would carry about 1/2 cfs*

Under separate cover we are mailing two prints of Drawing No. NHEM-MR-5208-A, which was prepared from a survey of the existing water system late last fall, and will give Mr. Dunn much more accurate data to prepare his map for filing on water rights than he now has. You will note that the lower 2,100 feet of the pump line is 2" pipe and that the upper 450 feet is 3" pipe.

4872.8
- 62.5

4810.3

185
185
diff = 55.7 / 1000

The N $\frac{1}{2}$ corner of Section 18 was found and its coordinates are shown on the drawing. Coordinates for survey station 34, L 32, and water line station 26 ~~4~~ 57 are also shown on the drawing. Ties from these stations to the pipe line shown on the drawing, should enable Mr. Dunn to make all necessary ties on his water filing map.

On Mr. Dunn's map of the water system, Drawing No. NMEN-MR-6950, he has shown sites for a proposed 100,000 gallon reservoir at an elevation of 5,365 and also a site for the proposed reservoir for the residential area.

We are returning one print of Drawing No. NMEN-MR-6950 on which we have shown sites that we have investigated as possible sites for these two reservoirs. The residential area reservoir is about 30 or 40 feet east of water line station 6/32.4 (Drawing 5308-A), with a ground elevation of approximately 4,990. The site shown for the upper reservoir is at approximate elevation 5,365 but is on top of a steep cliff where a reservoir would be hard to construct as materials could only be taken to the top by means of a high line from the parking area just east of the site. Solid rock would be encountered from the edge of the parking area to the reservoir site, and as this line would have to be buried to prevent freezing, we want to make further investigation before finally deciding on this site. We believe we may be able to find a more suitable site about 500 feet east and north of the "faces" and will investigate this matter as soon as weather conditions permit.

If there is need to show future construction on the filing map, it would be well to wait until we can furnish accurate data on what we will propose.

We have not attempted to close the survey of the existing water system shown on Drawing 5308-A. It was made by a two-man survey party, and therefore may not be too accurate, but it should furnish Mr. Dunn with more information than he now has.

Mr. Dunn may wish to amend his draft of the "Notice of Intention" with this new information.

WILLIAM E. ROBERTSON

William E. Robertson,
Regional Engineer.

Enclosures: Print of topography at spring area.
Print of Dwg. NMEN-MR-6950.

cc: Wind Cave w/copy of Dwg. MR-6950 and copy of Notice of Intention.

Duplicate copy w/prints under separate cover. 

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Wind Cave National Park
Hot Springs, South Dakota

April 18, 1949

MEMORANDUM for the Regional Director, Region Two.

Reference is made to Regional Engineer Robertson's Memorandum of March 24 addressed to the Director, a copy of which was received here concerning the volume flow of the spring now being used for the water supply at Mount Rushmore National Memorial. Under date of April 12, Superintendent Elliott has supplied the following information.

"I have, today, measured the flow of the spring, and, after taking six separate measurements, calculated that the flow at this time is approximately ten and one-half gallons per minute. I believe that my calculations are fairly correct. There may be some deviation from exact measurements, but not much.

It is my opinion that we could increase the flow of this spring by replacing the masonry retaining walls with concrete and developing one or two other small springs, just above and to one side of the springs now being utilized. The collecting boxes at the springs need considerable improvement to realize full utilization of the water available and to eliminate contamination."

Sgd. Neal G. Guse

Neal G. Guse
Acting Superintendent.

In duplicate.

Chief of Development, through Chief Engineer.

March 30, 1949.

Mr. Dunn.

Mt. Rushmore Water Supply.

The Regional Office is working on plans for enlarged water system, including the substitution of a 100,000 gallon reservoir on the existing system, and a diversion from another source of supply. For your information, however, the following analysis of data sent in for use in a water right filing shows that the present system may prove inadequate for summer demand in the next few years. To make full use of the spring supply much more storage is needed to carry surplus winter flow over to the time needed in the summer.

Spring flow of 10 gpm per memo of March 24 from Region Two, amounts to:

14,400 gpd
432,000 gal. per 30-day month
446,400 gal. per 31-day month
5,256,000 gal. per year of 365 days
892,800 gal. of flow in July and August=17% of annual total.

There were:

419,817 visitors at Mt. Rushmore in 1947
569,200 visitors at Mt. Rushmore in 1948
173,670 visitors at Mt. Rushmore in July 1948
169,337 visitors at Mt. Rushmore in August 1948
343,007 visitors in July and August 1948, or 60% of year's total.

It usually requires 7 or 8 gallons of water to flush a toilet. The spring flow during 1948 was equivalent to about 9.25 gallons for each visitor, disregarding any use by employees.

(SGD.) A. VAN V. DUNN.

A. van V. Dunn,
Chief, Water Resources Branch.

AvVD:sh.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

~~CHICAGO, ILLINOIS~~
Washington 25, D. C.

February 14, 1949.

MEMORANDUM for the Regional Director, Region Two.

The matter of water rights for Mount Rushmore National Memorial has been in abeyance since your letter of June 30, first because I became involved in the study of the Glacier View Project of the War Department, and then because of leave of absence for surgical treatment of my throat.

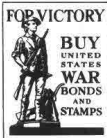
We can make a Federal Withdrawal of the waters of the springs now being used, but we need certain additional data to do so. A draft of the proposed Notice of Intention, and an advance print of 12/48 of drawing NMEM-MR-6950, are enclosed in triplicate for illustration and discussion.

First, we should claim all the waters of the springs, but we only know that the flow was about 10 gpm (0.0223 sec. ft.) a month before Mr. Baker wrote his memorandum of June 4. In the draft of the Notice I have tentatively suggested that the flow does not exceed double that amount, but it would be better to say that the normal maximum flow available when needed is _____ sec. ft. Any additional measurements which have been made in the past eight or nine months, with dates, would be helpful in estimating such a probable maximum, and an average flow.

Second, we should like to know exactly what type of collecting works are represented by the U-shaped symbols at the two springs.

Third, in order to give the greatest flexibility for future modifications, the diversion works are described as consisting of the headworks at the two springs, and approximately 172 feet of 4-inch cast iron pipe to a 33,500-gallon concrete collecting reservoir. Distribution is then shown to be made by pump to the existing area of use, and a proposed distribution by gravity is also indicated to serve the new residential area.

With this description of the system, the pump becomes a feature of distribution and diversion is made by the 4-inch cast iron pipe. Therefore, it is necessary to know the difference in elevation between the point of diversion (pipe junction) shown on the drawing, and the outlet of the 4-inch pipe at the collecting reservoir. The elevation



of 4,863 which you have previously suggested for the top of the reservoir will serve for diversion discharge elevation if we can obtain the relative elevation at the pipe junction.

Since drawing MR-5302 gives the $W\frac{1}{4}$ corner of Section 18 and part of the pipe line plotted to coordinates, while MR-5308 which shows the diversion area and $N\frac{1}{4}$ corner of the section does not give coordinates or bearings, we have had to scale much of the data for drawing MR-6950. We have also confined our ties to the $W\frac{1}{4}$ corner because it is the only corner "located" by coordinates. We have also drawn on the GLO township plat to complete the quarter section. We have had to make some adjustments to keep what appear to be the true pipe lengths and close approximately on the $N\frac{1}{4}$ corner. It will be helpful, therefore, to have coordinates of springs or collecting reservoir and $N\frac{1}{4}$ corner, or the tie between them, if you have them. We should also like to know whether the $W\frac{1}{4}$ corner has been actually seen and identified if it has not been tied into the maps of the area.

Please return one copy of the Notice and one copy of the drawing with such corrections or changes as you care to make. We shall then complete the Withdrawal as you have requested.

(SGD.) A. VAN V. DUNN.

A. van V. Dunn,
Chief, Water Resources Branch.

AvVD:sh.

Enclosure 1272769.
In triplicate.

D R A F T

February 14, 1949.

Notice of Intention of the United States to Use
Waters of the State of South Dakota Under
Section 61.0137 South Dakota Code of 1939

To the State Engineer of South Dakota:

Notice is hereby given in accordance with Section 61.0137 of the South Dakota Code of 1939 that the United States of America has been, and intends to continue to use certain specified waters of the State of South Dakota for beneficial purposes, as follows, to-wit.

The project is designated as the Mount Rushmore Water System.

The water is diverted and used on the Federal lands in Mount Rushmore National Memorial which was established on lands of the Harney National Forest in Pennington County, South Dakota, under the act of February 25, 1929 (45 Stat. 1300).

The Mount Rushmore National Memorial was placed under the administrative jurisdiction of the National Park Service, Department of the Interior, Washington 25, D. C., under the Reorganization Plan No. II, which was prepared by the President pursuant to the Reorganization Act of 1939, approved April 3, 1939 (4 Fed. Reg. 2731; 53 Stat. 1431, 1435) and became effective on July 1, 1939.

Harry J. Leik, Superintendent, Wind Cave National Park, Hot Springs, South Dakota, is the Coordinating Superintendent authorized to represent the United States in matters relating to the administration of Mount Rushmore National Memorial, but water right matters of the National Park

Service are supervised directly for the Director, National Park Service, Washington 25, D. C., by A. van V. Dunn, Chief, Water Resources Branch.

The source of water supply is a spring area tributary to the Cheyenne River through Battle Creek and its nameless tributaries, in Pennington County.

The spring area is located in the $SE\frac{1}{4}$ $SW\frac{1}{4}$ of Section 7, T. 2 S., R. 6 E., B.H.M., and the main diversion of water from said spring area is made at a point whence the $W\frac{1}{4}$ corner of Section 18, T. 2 S., R. 6 E., B.H.M., bears S. $31^{\circ}45'49''$ W. 3466.3 feet.

The water is collected at spring wells and conveyed to a concrete collecting reservoir of 33,500 gallon capacity by 172.4 feet of 4" C.I. pipe. The carrying capacity of said 4-inch pipe is far in excess of the available spring flow, which does not exceed 0.05 cubic feet of water per second of time at any time during a normal year.

Water diversions and use were started by the Mount Rushmore National Memorial Commission, which was created by act of Congress on February 25, 1929 (45 Stat. 1300), during the year 1929.

The United States intends to use the entire flow available from said spring area for domestic, recreational, and fire protection purposes, as the main water supply for Mount Rushmore National Memorial, consisting of portions of Sections 7, 8, 17, 18, 19, 20, and 29, T. 2 S., R. 6 E., and Sections 12 and 13, T. 2 S., R. 5 E., B.H.M., in Pennington County, South Dakota.

Standard tracing and black line print of drawing No. NMNM-MR-6950, showing Water System, Mount Rushmore National Memorial, accompany this Notice of Intention.

Nothing herein shall be deemed to constitute a waiver or relinquishment by the United States of any rights, title, priority of use or other interest it may have in and to the waters of this spring area irrespective of the filing of this Notice.

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

June 30, 1948.

MEMORANDUM for the Director.

Reference is made to Mr. Dunn's memorandum of June 17 in regard to filing on the spring now supplying water for Mount Rushmore National Memorial.

We can see no reason why you should delay filing on the present spring supply as in any planned development for the area, we will need all of the water that this spring will supply. For some time at least all of the present buildings in the area will probably have to obtain water from this source. Future developments will require additional reservoirs and extensions of the distribution system. There is probably a large loss of head due to pumping through the present small diameter pipe between the pump and the reservoir and a consequent heavy consumption of power on account of the size of the present pump and motor. The present pump is pretty well worn out and when replaced a study will be made to see if a more economical installation can be obtained. With a new reservoir at a higher elevation, we may need to enlarge the present pump line.

It appears that there will be funds made available for sewer and water systems in the Mount Rushmore area after July 1, and it is hoped that plans for these systems can be completed later in the summer. We cannot set a more definite date until we know what funds for personnel will be available after July 1.

(Sgd) Lawrence C. Merriam.

Lawrence C. Merriam,
Regional Director.

cc: Supt., Wind Cave, w/2 copies Dunn's memo.

C O P Y

Dean W. Loucks, State Engineer

STATE OF SOUTH DAKOTA
Office of State Engineer
PIERRE

June 23, 1948

mt Rushmore
X Wind Cave
X Badlands

A. van V. Dunn
Chief, Water Resources Branch
U. S. Dept. of the Interior
National Park Service
Washington 25, D. C.

Dear Mr. Dunn:

In the absence of Mr. Loucks, State Engineer, who is in the hospital at the present time, I am sending you what information I can relative to your letter of June 18.

Under separate cover I am mailing you three copies of our present water laws, a copy of the Supplement to Water Laws, Rules and Regulations for Use and Appropriation of Water in South Dakota (1937-1947), Procedure to Acquire State Water Rights on Definite Streams, Form 17A and Form 23A. If you have any questions about these forms or wish to have an additional supply, please let us know.

It is permissible with this office for you to file a preliminary layout of the plan or map of the water right and then file a final map after the job is completed.

If we can be of any further assistance to you please let us know.

Yours very truly,

(Sgd) Reva Winans

Miss Reva Winans, Secy.
State Engineer's Office

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

~~WASHINGTON, D. C.~~
~~CHICAGO, ILLINOIS~~

Washington 25, D. C.

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

June 18, 1948.

Mr. Dean W. Loucks,
State Engineer,
Pierre, South Dakota.

Dear Mr. Loucks:

We propose to file several Notices of Appropriation of Water by the United States in the State of South Dakota. In the past, we have prepared such notices in several different forms--see Withdrawals Nos. 33 and 512. We wonder if you have adopted any standard form for such notices, since we made our former withdrawals. If so, we should like to have about two dozen of the blank forms.

Our instructions for perfecting water rights are now covered by your Tentative Rules and Regulations, dated January 1944. We should like to know whether you have issued a final manual, and also whether you have a publication giving the compiled water code of the State of South Dakota. If so, we should like to have three copies of each publication.

One of the proposed withdrawals is for Mt. Rushmore National Memorial, where we have a water system which was built for the sculptor's studio, which now serves as the Memorial Administration Building. We are working on plans to expand the distribution system, but have not yet determined the locations for some of the reservoirs, or the final route for pipe laterals to serve them. We wish to file the notice of appropriation now, to establish priority, but the complete development plan may not be completed for another year. Will you please advise us whether the notice can be filed without an accompanying map; or if it can be filed with an advance print of the map, in which some of the tentative details are from penciled, temporary additions to the tracing. This would prevent redrawing a complete plan for final proof, when more accurate locations are determined.

Sincerely yours,

(SGD.) A. VAN V. DUNN

A. van V. Dunn,
Chief, Water Resources Branch.



AvVD:sh.

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
~~WASHINGTON, D. C.~~
CHICAGO, ILLINOIS

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

June 17, 1948.

MEMORANDUM for the Regional Director, Region Two.

From the memorandum of June 4 from Mr. Baker, it appears desirable to defer completion of drawing NMEN-MR-6950 until your plans for the water system at Mt. Rushmore National Memorial are complete. At the same time, it might be advantageous to file the notice of appropriation of waters of the spring with the State Engineer as soon as possible. If an additional water supply is to be obtained from Grizzly Creek, it should be covered by a separate notice, whether the same file map is used or not.

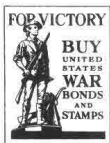
We have written to the State Engineer, to determine whether the notice can be filed without a map, or with only an advance print of drawing 6950. While waiting for the reply, we should also like to know about when you expect to be able to provide the supplemental data on the water line extensions and exact locations and elevations of new reservoirs, as suggested in Mr. Baker's memorandum. The water rights procedure may differ, according to whether you propose to complete such plans this summer or in the more remote future.

(SBB.) A. VAN V. DUSE

AvVD:sh.

Chief, Water Resources Branch.

In triplicate.



C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

June 4, 1948.

MEMORANDUM for the Director.

Reference is made to Mr. Vint's memorandum of May 27 with which there were enclosed four prints of Drawing No. NMEM-MR-6950, Water System, Mount Rushmore National Memorial.

Our engineering field party is now securing additional topography that will enable us to answer your questions in regard to additional reservoirs to serve the area. From what information we have we will probably be able to locate a new reservoir about 700 or 800 feet west and south of the present reservoir at an elevation of approximately 5,365 feet. We plan on a 100,000 gallon reservoir at this point. The parking areas' elevations, as shown on your drawing, vary from 5,225 to 5,260 rather than 5,325 to 5,360 as indicated in your letter.

The elevation of the proposed residential area is somewhere in the neighborhood of 4,850 to 4,875 feet, but this may be changed somewhat when the field party's survey is completed. However, we believe the above elevation will not be changed very much. There is some high ground west of the residential area, and it is believed that a second reservoir can be located in this high ground to adequately serve the proposed residential area. The second reservoir will probably require the construction of an additional line from the spring area, although there is a chance that we may be able to develop some water from a well in that general area.

Water supply is somewhat of a problem in the area. We do not have any series of measurements of the flow of water from the spring area. About a month ago we measured this flow, and it was 10 gallons per minute. Our engineer reported that we were obtaining all of the flow from the spring. It seems quite likely that this may fluctuate, and we hope to be able to secure a better record of the flow. But in any event we know it is only a small supply.

There is a small flow in Grizzly Creek about 1,000 feet south and west of the proposed upper reservoir, but we do not know whether the water has been filed on. It was flowing at 6 gallons per minute at the time we measured the flow at the spring.

This is about all the information we can give you at this time,
but hope to be able to supplement it at a later date.

We are returning one print of Drawing No. NMEM-MR-6950 on which we
have shown the approximate location of proposed reservoirs.

(Sgd) Howard W. Baker

Howard W. Baker,
Associate Regional Director.

Enclosure: Print of Drawing NMEM-MR-6950.

cc: Supt., Wind Cave, in duplicate, w/2 prints.



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

Name	Date
Burney	9/23
Dunn	9/25

September 21, 1945.

*Reply deferred for
report from Mr. Liek.
@ 9/25*

MEMORANDUM for the Director.

Reference is made to Mr. Dunn's memorandum of September 17 in regard to the water system at Mount Rushmore National Memorial.

There is a water supply system serving this area but unfortunately, we do not have a map of the system or sufficient field data to prepare a map for filing purposes.

Water for the area is secured from a spring north of the present developed area and pumped to a reservoir serving the present development. Water is pumped through approximately 2400 feet of pipe with a lift of about 350 feet. The collecting tank at the spring has a capacity of about 35,000 gallons and the storage reservoir has a capacity of about 43,000 gallons. Both are concrete. The sump tank is hand chlorinated.

The pump is an Ingersoll Rand, 3500 RPM, 50 GPM, 1½" MRV 15, powered by a 15 h.p. General Motors motor, 220/440 volt. This is a close coupled pump with opposed impellers.

When we are again in a position to make some surveys in the field we will secure the necessary data at Mount Rushmore to make a filing on this system.

There is a possibility that there are maps in the Mount Rushmore area of which we do not have copies, that show this entire system. With that possibility in view, a copy of this memorandum together with a copy of Mr. Dunn's memorandum of September 17, is being sent to Superintendent Liek, requesting that he advise us if there are any maps of the entire system at Mount Rushmore. We have photostat copies of plans for the storage reservoir and collecting tank, but that is all.

Howard W. Baker
Howard W. Baker,
Associate Regional Director.

cc-Supt., Wind Cave (w/copy
Mr. Dunn's memo 9/17).

Maps and Miscellaneous Information

**UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
BRANCH OF LANDS**

LAND TO BE ACQUIRED

State South Dakota Tract No. 2

County Pennings Deed No. _____

Civil Subdivision _____ Area 160 acres Mount Rushmore National Memorial
Name of Park or Area

Owner (New Dept. of Fish, Game, and Parks) Address Pierre, South Dakota

Section 8 Township 2 South Range 6 East Meridian Black Hills

Center Sec. 7 Center Sec. 8

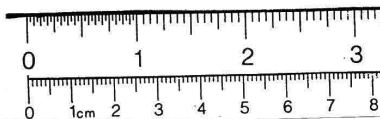
Center Sec. 16 Center Sec. 17

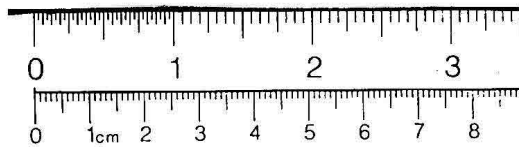
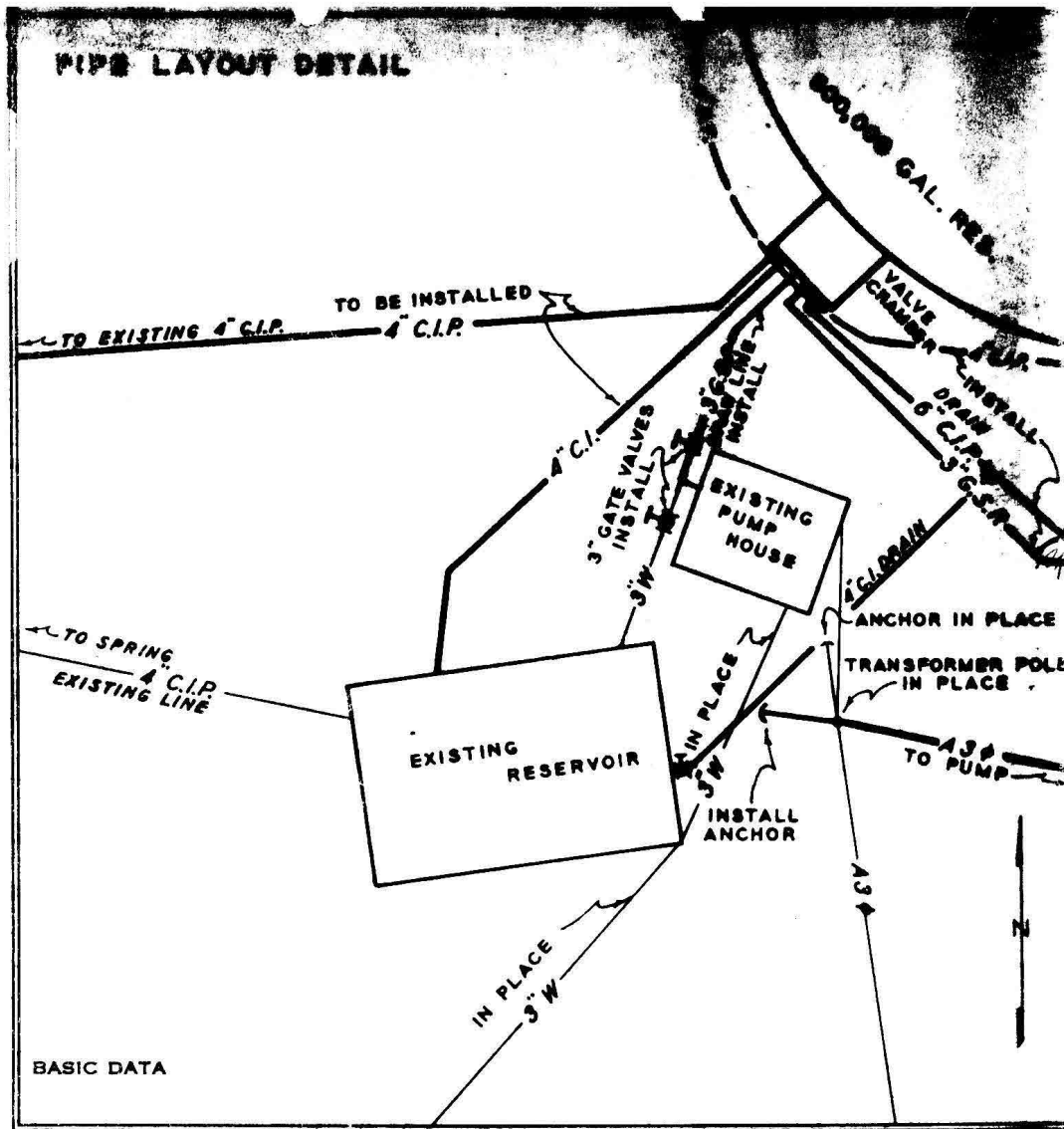
Map Description: The map shows a grid of sections. Section 8 is shaded and labeled 'LAND TO BE ACQUIRED'. A winding line represents the 'RUSHMORE ROAD'. A dashed line indicates the 'Memorial Boundary'. A handwritten note 'STATE LINE HERE' with an arrow points to a horizontal line. Another handwritten note 'WATER LINE ELEVATION DEED NO 6' points to a horizontal line. A handwritten note 'No rights-of-way for highway are known to have been acquired or recorded.' is present. A scale bar at the bottom right shows 0 to 8 inches, with a note 'Scale: One Inch Equals 800'. A legend at the bottom left identifies land types: Land to be acquired (shaded), Private Land (white), Federal Land (dark gray), State Land (light gray), and County Land (white).

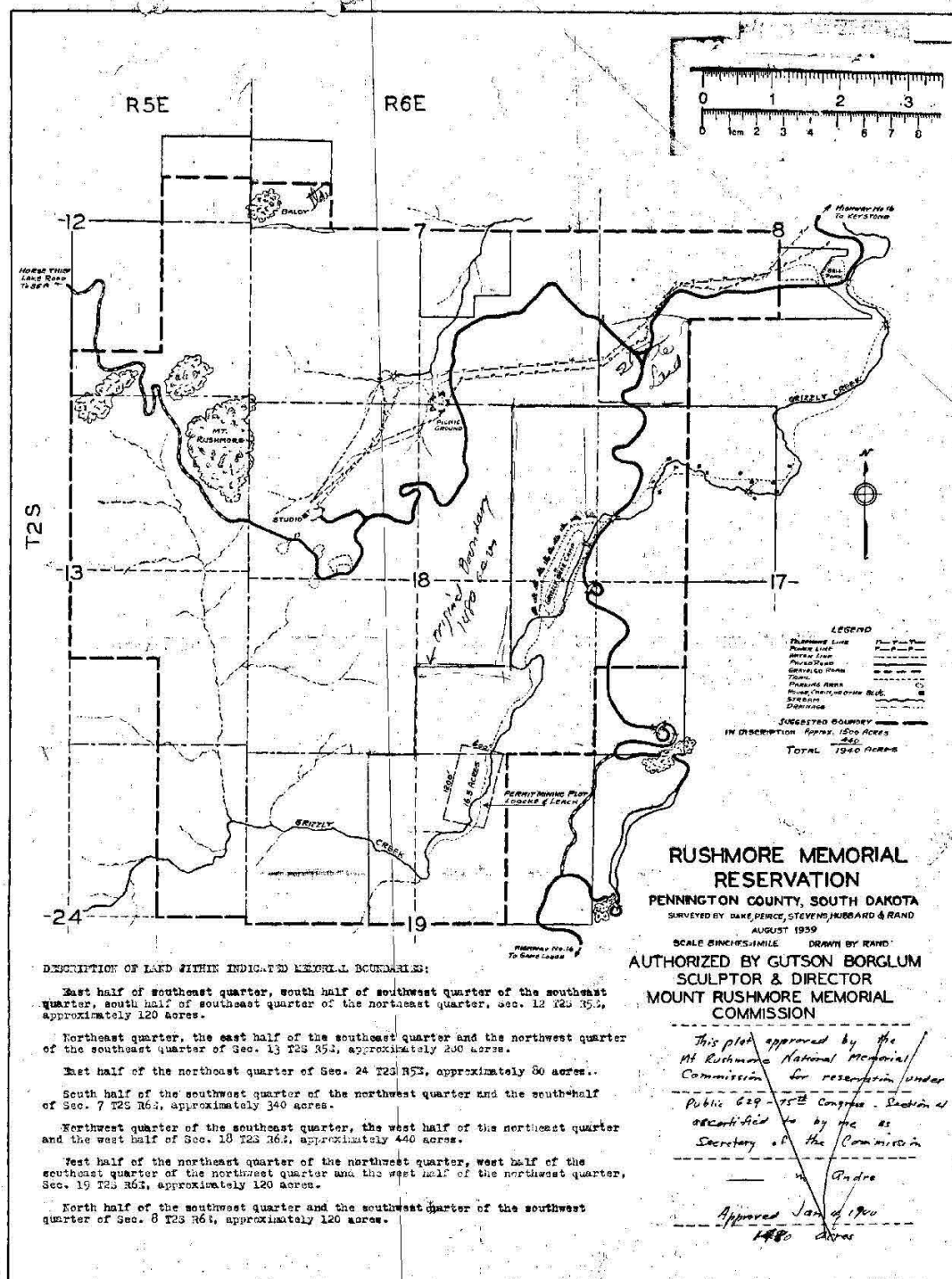
Scale: One Inch Equals 800 Remarks _____

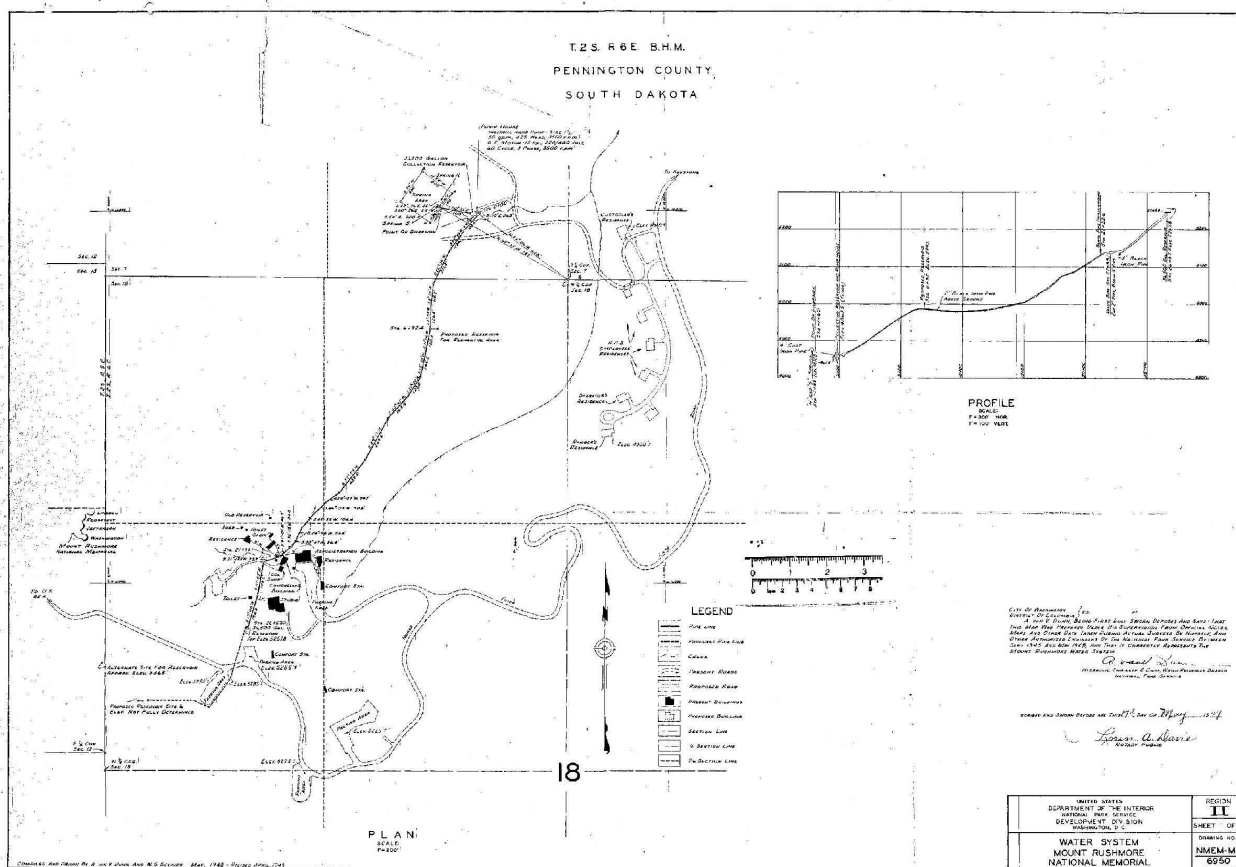
No rights-of-way for highway are known to have been
acquired or recorded.

108962









Docket Information

Number of Documents in Docket 83

Documents Dated from 8/15/1939 to 8/18/1966

Docket Compiled: 5/27/2011