Form No. 10-306 (Rev. 10-74)

PH0686999

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY
RECEIVED OCT 23 1978
DATE ENTERED JUL 22 1979

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC
Gunnison Tunnel

AND/OR COMMON
Same

LOCATION

STREET & NUMBER
Approximately 6.5 miles east of Montrose (See attached page) NOT FOR PUBLICATION

CITY, TOWN
X VICINITY OF Montrose

CONGRESSIONAL DISTRICT
Third

STATE	CODE	COUNTY	CODE
Colorado	08	Montrose	085

CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	X PUBLIC	__OCCUPIED	X AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	X UNOCCUPIED	__COMMERCIAL	__PARK
X STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
__SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	X YES: RESTRICTED	X GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	__YES: UNRESTRICTED	__INDUSTRIAL	__TRANSPORTATION
		__NO	__MILITARY	__OTHER:

AGENCY

REGIONAL HEADQUARTERS: *(If applicable)*
Department of the Interior, Bureau of Reclamation

STREET & NUMBER
125 South State Street

CITY, TOWN
Salt Lake City —— VICINITY OF

STATE
Utah

LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Site is under Reclamation withdrawal from Public Domain (contact Bureau of Land Management or Montrose County Assessors Office)

STREET & NUMBER
BLM, 1600 Broadway, Denver, Colorado 81401

CITY, TOWN
Montrose County Assessor's Office, Montrose

STATE
Colorado

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
National Historic Civil Engineering Landmark / and / Colorado Inventory of Historic Site

DATE
1972 / and / ongoing

X FEDERAL X STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS
Colorado Historic Society, 1300 Broadway

CITY, TOWN
Denver, Colorado 80203

STATE

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
__EXCELLENT	__DETERIORATED	__UNALTERED	__ORIGINAL SITE
X GOOD	__RUINS	X ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The tunnel is 5.8 miles in length and has a capacity of 1,000 cfs. The upstream portion of the bore is constructed in crystalline rock and is unlined. This section is rectangular in shape with an arched roof and has cross section dimensions of 11 ft. (width) by 12 ft. (length). The downstream portion of the bore is constructed in Mancos Shale and is concrete lined for stability. Some short sections of this portion have been renovated and now form a modified horseshoe with a diameter of 12 ft.

The elevation of the tunnel's mouth on the floor of the Black Canyon of the Gunnison River is approximately 6,520 ft. asl. When the tunnel emerges at the South Canal in the Uncompahgre Valley, it has dropped approximately 40 ft. in elevation to 6480 ft. asl. At its deepest point, the tunnel channel is approximately 2,200 ft. beneath the dome of Vernal Mesa.

Form No. 10-300a
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The Gunnison Tunnel is reached by traveling approximately 6½ miles east of Montrose, Colorado, on U.S. Highway 50. From just below its intersection with this highway, the tunnel extends in a northeasterly direction for 5.8 miles to the diversion dam on the Gunnison River.

While there is access to the east portal and while the Bureau has withdrawn approximately 1,000 contiguous acres surrounding it for the Uncompahgre and Curecanti Projects, the area immediately surrounding the tunnel mouth is, because of its configuration, wholly unsuited for visitor facilities. Correspondingly, it is felt simply placing a plaque at the mouth of the tunnel is the only reasonable form of commenoration at this portal.

At the west portal, the Bureau has withdrawn approximately 40 acres which are herein described: Section 26: SE¼NW¼; T49N, R8W, MNPM. But any visitor development at this portal is, in the opinion of this office, ill advised, for the canal banks immediately below the tunnel are quite steep and the water as it leaves the tunnel is traveling at a fairly high velocity. These two conditions would pose a definite safety hazard to visitors.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
__PREHISTORIC	__ARCHEOLOGY-PREHISTORIC	__COMMUNITY PLANNING	__LANDSCAPE ARCHITECTURE	__RELIGION	
__1400-1499	__ARCHEOLOGY-HISTORIC	__CONSERVATION	__LAW	__SCIENCE	
__1500-1599	X AGRICULTURE	__ECONOMICS	__LITERATURE	__SCULPTURE	
__1600-1699	__ARCHITECTURE	__EDUCATION	__MILITARY	__SOCIAL/HUMANITARIAN	
__1700-1799	__ART	X ENGINEERING	__MUSIC	__THEATER	
__1800-1899	__COMMERCE	X EXPLORATION/SETTLEMENT	__PHILOSOPHY	__TRANSPORTATION	
X 1900-	__COMMUNICATIONS	__INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)	
		__INVENTION			

SPECIFIC DATES

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

In 1882 the Denver and Rio Grande Western Railroad completed a railhead through the Uncompahgre Valley in western Colorado. With improved access and the desire for peace and prosperity, homesteaders began to settle the valley in ever-increasing numbers. They soon discovered, however, that the annual rainfall and the irrigation supply from their one river, the Uncompahgre, were inadequate for continuously successful farming and ranching operations. To the north in the awesomely deep gorge of the Black Canyon, the Gunnison River held the potential to satisfy their water needs--if only a way could be found to tap it.

Beginning in 1890 F. C. Lauzon, Montrose farmer, one-time miner, and full-time visionary, fired the imaginations of local residents with his dream of an irrigation tunnel through the Vernal Mesa, which separated the Gunnison River from the Uncompahgre Valley. By 1894 he had sparked enough interest so that funds could be secured and a survey taken. The first survey demonstrated that Lauzon's dream was something more than merely a dream. However, further surveys needed to be taken from the canyon floor before a tunnel site could be selected.

In 1901 E. B. Anderson, a Delta, Colorado, farmer, led four men in an ill-fated attempt to survey the canyon by floating the river in wood and canvas boats. After four weeks on what was expected to be a five-day journey and after traversing less than half of the 40-mile canyon, the party abandoned the project in understandable despair.

Finally in 1901 an engineer from the U.S. Geological Survey, A. Lincoln Fellows, and William W. Torrence of the Montrose Electric Light and Power Company, a member of the aborted expedition of 1901, made a survey using rubber air mattresses and waterproof bags to carry their equipment. In nine days they examined, photographed, and surveyed the best sites for a diversion dam and tunnel, and Fellows' account of this perilous exploration furnishes, according to one historian, "one of the most thrilling chapters in the engineering annals of America."

In 1901, 850 feet of tunnel was actually drilled, but work soon stopped when the $25,000 in funds allocated by the State of Colorado were exhausted. Funding for the project became a realizable possibility with the passage of the Reclamation Act in 1902, and on June 7, 1903, the Secretary of the Interior approved, as one of the five first projects to be built by the newly-created Reclamation Service, the allocation of funds for the Uncompahgre Project.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Beidleman, Richard G. "The Gunnison River Diversion Project." reprinted from The Colorado Magazine, XXXVI, (1959).
Brownell, Fran. "Gunnison Tunnel Opening." The Grand Junction Daily Sentinel, August 6, 1972, Colorado West Section, 4-9.
"The Gunnison Tunnel and the Uncompahgre Project." Bureau of Reclamation pamphlet. Washington, D.C.: GPO 843-656, ND.

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 373.33

UTM REFERENCES

	ZONE	EASTING	NORTHING
A	13	269090	4267200
B	13	269160	4267040
C	13	269760	4268000
D	13	269700	4269400

VERBAL BOUNDARY DESCRIPTION

The structure is a tunnel with its eastern portal on the Gunnison River between UTM references A and B described above and its western portal between UTM reference D and C described above.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE
Steve McCall

ORGANIZATION
Bureau of Reclamation, Upper Colorado Region

DATE
December 9, 1977

STREET & NUMBER
764 Horizon Drive

TELEPHONE

CITY OR TOWN
Grand Junction, Colorado 81501

STATE

12 CERTIFICATION OF NOMINATION

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES ✓ NO ___ NONE ___

William C. Ismond
STATE HISTORIC PRESERVATION OFFICER SIGNATURE

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Historic Preservation Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The evaluated level of significance is ___ National ✓ State ___ Local.

FEDERAL REPRESENTATIVE SIGNATURE Aldon D. Nielson

TITLE Acting Assistant Commissioner - Planning & Operations DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

Bill Lebovich
~~DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION~~

DATE July 22, 1979

ATTEST: William A. Brockman
~~KEEPER OF THE NATIONAL REGISTER~~

DATE 7.19.79

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Late in 1904, a private contractor began construction of the tunnel, but because of financial difficulties soon withdrew, and the Reclamation Service assumed the responsibility of completing the project.

The difficulties encountered were in some cases gargantuan. A wagon road had to be built across Vernal Mesa and onto the floor of the canyon. In some places the grade was nearly 30 percent, and much of the massive drilling equipment had to be eased down on skids and held with block and tackle. Four separate drill headings were begun--one in from each portal and east and west from a shaft sunk in at the mesa.

Tunnel drillers prefer hard, solid rock; but in this tunnel they also ran into clay, sand, shale, and a badly fractured fault zone. In December of 1906 a seam was tapped carrying warm water surcharged with carbonic acid. The drillers were forced to abandon the heading for six months while a 400-foot shaft was driver into the mountain side for ventilation.

After the ventilation shaft was installed, and according to official Bureau records, "the tunnel was driven for two thousand feet through a geological fault which furnishes a weird and unholy assortment of grief." Not only were the drillers working in a saturated atmosphere at a temperature above 90° F, but they had to observe the utmost caution as well; for at frequent intervals "great rushes of water would break from the sides and face, carrying hundreds of yards of sand, which buried tracks, tools, and everything else 500 or 600 feet from the breast." From December 1906 to March 1909 much water was encountered. A volume estimated as 8 cubic feet per second ran steadily through the bore. Perhaps it can be understood why, while the pay and benefits were considered good for the time, the men, up to 500 at a given time, rarely lasted longer than two weeks on the job.

On July 6, 1909, the bore was "holed through" and at the time was one of the longest tunnels in the world, and was the longest irrigation tunnel in the world.

President William Howard Taft, accompanied by an entourage of local, state, and federal dignitaries, arrived by train on September 23, 1909, to officially dedicate the diversion of water through the tunnel onto what he called the "incomparable valley with the unpronounceable name."

Before the Gunnison Tunnel and the attendant canals, laterals, and diversion dams which constitute the Uncompahgre Reclamation Project were completed, farming in the valley was at desperate ebb. At the turn of the century about 100,000 acres in the valley had been taken up and patented; but less than 30,000 acres were under cultivation and often there was not even water for this land. In addition, many settlers were being forced to abandon their homesteads for lack of water; and, moreover, foreclosures had been made on approximately 20,000 acres by loan companies. The irrigation water flowing through the Gunnison Tunnel helped reverse this onerous process, and today 85,990 acres of farmland flourish within the boundaries of the Uncompahgre Project.

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In 1972, 63 years after its completion, the Gunnison Tunnel was acclaimed by the American Society of Civil Engineers as a National Historic Civil Engineering Landmark. The tunnel became only the 26th structure of man's ingenuity to be accorded this honor.

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Rockwell, Wilson. Sunset Slope. Denver: Big Mountain Press, 1956.
Rockwell, Wilson. Uncompahgre Country. Denver: Sage Books, 1965.
Steinel, Alvin T. History of Agriculture in Colorado. Fort Collins, Colorado: The State Agriculture College, 1926.

Gunnison Tunnel
Montrose County

MAY 30 1979

DOE
JUL 22 1979

P31-427-4NA
Uncompahgre Project--Colorado
View of the inlet portal and gate structure of the Gunnison Tunnel.
1-25-66--Bureau of Reclamation Photo by V. Jetley

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Gunnison Tunnel
Montrose County

MAY 30 1979

P31-427-5NA
Uncompahgre Project--Colorado
View showing condition of the rock in a typical unlined portion of the Gunnison Tunnel.
1-25-66--Bureau of Reclamation Photo by V. Jetley

DOE
JUL 22 1979

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Gunnison Tunnel
Montrose County

MAY 30 1979

DOE
JUL 22 1979

P31-427-57NA
Uncompahgre Project--Colorado
Copy of old photograph taken from Uncompahgre water users albums showing construction of the Gunnison Tunnel.
Bureau of Reclamation Photo

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Gunnison Tunnel
Montrose County

MAY 30 1979

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JUL 22 1979

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P31-427-62NA
Uncompahgre Project--Colorado
Copy of old photograph taken from Uncompahgre water users albums showing construction of the Gunnison Tunnel.
Bureau of Reclamation Photo

Gunnison Tunnel
Montrose County

MAY 30 1979

DOE
JUL 22 1979

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P31-427-62NA
Uncompahgre Project--Colorado
Copy of old photograph taken from Uncompahgre water users albums showing construction of the Gunnison Tunnel.
Bureau of Reclamation Photo

Gunnison Tunnel
Montrose County

MAY 30 1979

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P31-427-279 NA - Uncompahgre Project - Colorado
View from the right abutment showing the Gunnison Diversion Dam. Note the portal of the tunnel at upper left.
5-4-71 - Bureau of Reclamation Photo by V. Jetley.

DOE
JUL 22 1979

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P31-427-339 NA Uncompahgre Project - Colorado
Gunnison Tunnel: Copy of old photograph showing the construction camp at East Portal.

Gunnison Tunnel
Montrose County

MAY 30 1979

DOE
JUL 22