NPS Form 10-900
(Rev. 10-90)

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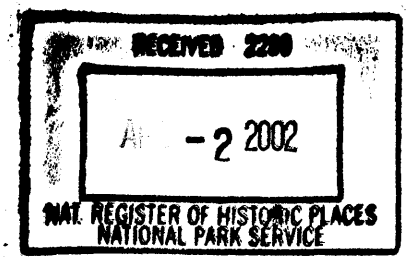
OMB No. 1024-0018

United States Department of the Interior
National Park Service



NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

1. Name of Property

historic name: North Entrance Road Historic District

other name/site number: 24PA497; 24YE031; 48YE822

2. Location

street & number: N/A

not for publication: n/a
vicinity: X

city/town: Yellowstone National Park
state: Montana **code:** MT **county:** Park **code:** 067 **zip code:** 82190
state: Wyoming **code:** WY **county:** Park **code:** 029 **zip code:** 82190

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this X nomination __ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property X meets __does not meet the National Register Criteria. I recommend that this property be considered significant _x_nationally _x_statewide __locally. (See continuation sheet for additional comments.)

Signature of certifying official/Title — Date: 4-8-02

Department of Interior, National Park Service
State or Federal agency or bureau

In my opinion, the property ____ meets _____ does not meet the National Register criteria.

Signature of commenting or other official — Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

Signature of the Keeper — Date of Action: 5/22/02

✓ entered in the National Register
_____ see continuation sheet
_____ determined eligible for the National Register
_____ see continuation sheet
_____ determined not eligible for the National Register
_____ see continuation sheet
_____ removed from the National Register
_____ see continuation sheet
_____ other (explain)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

3. State/Federal Agency Certification

In my opinion, the property X meets ___ does not meet the National Register criteria.

Mark F. Baumler — 6/8/2001

Signature of commenting or other official — Date

Montana State Historic Preservation Office

State or Federal agency and bureau

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

3. State/Federal Agency Certification

In my opinion, the property ✓ meets ____ does not meet the National Register criteria.

Signature of commenting or other official — Date: 6/28/01

SHPO

State or Federal agency and bureau

5. Classification

Ownership of Property: Public-Federal
Category of Property: District
Number of contributing resources previously listed in the National Register: 0
Name of related multiple property listing: Historic Resources of Yellowstone National Park: Construction of the Road System

Number of Resources within Property		
Contributing	**Noncontributing**	
___	1	**building(s)**
___	___	**sites**
2	2	**structures**
___	___	**objects**
2	3	**Total**

6. Function or Use

Historic Functions: Transportation - Road Related (vehicular)
Current Function: Transportation – Road Related (vehicular)

7. Description

Architectural Classification:
Other: "Park Road" Landscape Architecture
Other: Rustic Style

Materials:
foundation: earth; stone
walls: stone
roof:
other: asphalt; concrete; clay tile; corrugated metal

Narrative Description

The North Entrance Road Historic District is a 5.23 mile road within Yellowstone National Park. The road extends from the park boundary at Gardiner, Montana to the park headquarters at Mammoth Hot Springs. The historic district includes the road and the Roosevelt Arch near the north boundary. Within the historic district are two non-contributing modern bridges and a non-contributing modern checking station. The road traverses through a fairly narrow canyon for most of the route. It is a typical park road; however, due to the narrowness of the canyon in some areas, the shoulders tend to be unimproved, thus giving an even narrower than typical width.

The north access into Yellowstone National Park changed several times prior to construction of the current road. The first route into the park probably followed the Rescue Creek Trail starting east of Gardiner, passing by Turkey Pen Pass, and meeting the old road to the Cooke City mines. The next route, known as the Gardiner High Road crossed over a hill above the Gardner River Canyon and dropped into the Mammoth Hot Springs area behind the present day hotel.

In the 1880s, the North Entrance Road through the canyon was built. By 1903, the Roosevelt Arch had been completed and the area around the arch and the Northern Pacific depot had been landscaped. (The designed landscape and the depot are no longer extant.) At that time, the road was widened to 25 feet and the grades reduced to 8 percent. All of the older wooden culverts were replaced with vitrified clay-pipe or cast-iron. The river crossings were bridged with steel structures.

8. Statement of Significance

Applicable National Register Criteria: A, C

Criteria Considerations (Exceptions): N/A

Significant Person(s): N/A

Cultural Affiliation: N/A

Areas of Significance: Transportation; Landscape Architecture; Architecture

Period(s) of Significance: 1883-1951

Significant Dates: 1883; 1903, 1938

Architect/Builder: U.S. Army Corps of Engineers, Bureau of Public Roads

Narrative Statement of Significance

The North Entrance Road Historic District is eligible for listing in the National Register of Historic Places at the national and statewide level under Criterion A and Criterion C. The context establishing the District's significance is found in Yellowstone National Park Multiple Property Submission, "Historic Resources of Yellowstone National Park, associated context, "The History of the Construction of the Road System in Yellowstone National Park, 1872-1966." The North Entrance Road Historic District has two of the identified Property Types: 1) Roads and 2) Buildings and Structures associated with the construction of the road system.

Under Criterion A at the national level, the North Entrance Road Historic District is significant as an integral part of the planned road system in Yellowstone National Park. It is also associated with the Army Corps of Engineers role in the development of the Park.

Under Criterion C at the state level, the North Entrance Road Historic District is a significant example of the "blending with nature" design philosophy first espoused by the Army Corps of Engineers and later expounded upon by the landscape architects of the National Park Service. The road alignment, its historic culverts, headwalls, and other design features continue to impart this important "park road" feeling to the visitor.

The Roosevelt Arch is significant at a national level under Criteria A and C. Under Criterion A, the Historic Resource Study found the arch significant as an integral part of the road system; for its association with the Army Corps of Engineers' important contribution toward the development of the road system and its standards; as the earliest attempt to recognize the importance of an entrance at a park and the transition identifying it as a "special place"; and as a symbol of Yellowstone National Park. Under Criterion C, the Resource Study found the arch significant for its use of columnar basalt to achieve a rustic design appearance. The construction of the arch, the Northern Pacific Depot, and Old Faithful Inn in 1903 established the Rustic Style as Yellowstone's own architectural style. These designs set a precedent soon to be followed in other parks.

History of North Entrance Road

A route from the Upper Yellowstone Valley to Mammoth Hot Springs existed prior to the creation of Yellowstone National Park in 1872, but it would be many years before the route could be called a road. In 1879, park superintendent Philetus Norris termed "a portion of the canon of the main Gardiner [sic], and all of those of the west and middle branches, are utterly impassable for even a bridle path."[1] Two different routes left the mouth of the Gardner River for the springs, but neither was passable, and Norris did not want to expend much money on their improvement. He did spend considerable

[1] Philetus Norris, "Report Upon the Yellowstone National Park for the Year 1879" in *Annual Report of the Secretary of the Interior for 1879* (Washington D.C.: Government Printing Office, 1880), 3-4.

9. Major Bibliographic References

See continuation page.

Previous documentation on file (NPS):
- ___ preliminary determination of individual listing (36 CFR 67) has been requested.
- ___ previously listed in the National Register
- ___ previously determined eligible by the National Register
- ___ designated a National Historic Landmark
- _x_ recorded by Historic American Buildings Survey MT- 49
- ___ recorded by Historic American Engineering Record # ____

Primary Location of Additional Data:
- ___State Historic Preservation Office
- ___ Other State agency
- ___ Federal agency
- ___ Local government
- ___ University
- ___ Other -- Specify Repository:

10. Geographical Data

Acreage of Property: 41 acres

UTM References:	Point	Zone	Easting	Northing
	A	12	522840	4986100
	B	12	523640	4985600
	C	12	524150	4984000
	D	12	524320	4981910
	E	12	523910	4980370

Verbal Boundary Description

See continuation sheet

Boundary Justification

The boundary of the North Entrance Road Historic District is drawn to include the road corridor from the north Yellowstone Park boundary to a point where a designed promenade defines the beginning of the developed Mammoth Hot Springs/Fort Yellowstone area. The 66-foot width (33 feet on either side of the road centerline) is drawn to include the historic features associated with the road. The northern end of the district expands to include the Roosevelt Arch and its associated stone walls; the southern end of the district expands to include a historic stone guardwall.

11. Form Prepared By

name/title: Marcy Shivers Culpin – Historian; amended by Christine Whitacre, Historian, National Park Service, Denver and Catherine Lentz and Lon Johnson, Cultural Resource Specialists, Yellowstone National Park
organization: National Park Service **date:** 2001 **street & number:**
telephone: (307) 344-2157 **city or town:** Yellowstone National Park **state:** WY **zip code:** 82190

Property Owner

name/title: Yellowstone National Park **street & number:** P.O. Box 168 **telephone:** (307)344-2157
city or town: Yellowstone National Park **state:** WY **zip code:** 82190

CONTRIBUTING RESOURCES

ROAD: The North Entrance Road begins at the southwest corner of the unincorporated town of Gardiner, Montana at an elevation of approximately 5280 feet. The Gardner River enters the Yellowstone River approximately one-half mile to the east. The road runs in a southeasterly direction across an open meadow, past a modern checking station until it reaches the west side of the north-south Gardner River. At about 5360 feet, the road enters the mouth of the Gardner River Canyon. Within about one-half mile, it crosses to the east side of the river. The cliffs to the east rise about 400 feet from the road's edge; the west side of the canyon is less steep---about 200 feet above the road. The road through much of the canyon is tight between the cliffs and the river without shoulders. The road continues in the canyon for about 1.5 miles where it crosses back to the west side of the river and the Montana/Wyoming boundary at an elevation of 5632 feet. From here the road begins a steady, steep ascent out of the canyon, climbing just under 400 feet in a little over one mile. The Mammoth Campground and Lower Mammoth housing area are located here, on a terrace about 300 feet above the river. The road then takes a hairpin turn making a final climb to about 6200 feet in one-half mile. The North Entrance Road Historic District terminates at the northeastern end of the Mammoth Hot Springs esplanade.

The North Entrance Road encompasses several historic features which help characterize it through engineering, construction, and design as a park road.

The most numerous of these features are culverts. They are functional in design, meant to allow drainage under the roadway, and are of minimal construction. A park wide survey identified nine basic types of culverts constructed during the historic period. Four of these types are found in the North Entrance Road Historic District:

Type A culverts are found in eight locations along the road (From the Roosevelt Arch at miles 4.35, 4.62, 4.77, 4.83, 4.88, 4.91, 4.99, and 5.01). These culverts are comprised of a stone headwall with a single culvert pipe. The pipe is usually clay. The Type A culvert headwalls are constructed of coursed, rectangular stone blocks, which are predominantly gray and tan in color and are set in a light gray concrete mortar.

Type B culverts are on both sides of the base of the Roosevelt Arch. (From the Roosevelt Arch at miles –0.02 and two at 0.00). Type B culverts flank the Arch on its south side. The drop inlets are covered by a 24 by 30 inch iron grating. The inlet to the west is set in earth and the one to the east is set in concrete. Each inlet is formed by rubblestones in a single course. The stones are mortared, and range from dark gray to light gray to brown. The Type B culvert north of the arch has a double concrete headwall 90 inches long, 42 inches high, and 12 inches thick. The west culvert pipe is corrugated metal and the east culvert pipe is clay.

One type C culvert is found along the road (from the Roosevelt Arch at mile 3.62). This culvert occurs in an area of natural vegetation, at the termination of a small stone swale which parallels the road. The culvert is located on the inlet side, slightly below the road elevation. It is constructed of roughcut, rectangular stones, dark gray and brown in color and set in light gray mortar. The headwall is L-shaped in plan. The primary headwall is 48 inches long, 24 inches high, and 12 inches thick. It has a perpendicular sidewall 42 inches in length and 19 inches high. The culvert itself is corrugated metal pipe.

Two Type K culverts are found along the road (from the Roosevelt Arch at miles 0.79 and 1.10). Type K culverts consist of loosely constructed rubble headwalls of small, rounded, irregularly-shaped stones which are drylaid around a clay pipe. The headwalls are informally curved in plan, set directly into the adjacent grade, and battered in section to follow the grade.

Besides the culverts, other historic features are located along the road:

Concrete headwalls are found in three locations on the North Entrance Road (from the Roosevelt Arch at miles 0.79, 1.10, and 3.29). These consist of a concrete headwall and a single culvert pipe at small stream crossings or drainage low points. They are found only on the inlet side. The culvert itself is clay pipe in two of the examples and corrugated metal in the other. The headwalls are from 4 to 6 feet in height and about 5 feet in height.

Stone flumes are found in two locations along the road (from the Roosevelt Arch at miles 3.62 and 3.64). The first flume follows the grade which slopes up steeply on the west side of the road. It is 8 feet long and terminates at a Type C culvert headwall. The flume is constructed of irregularly shaped, flat, mortared stones. The other flume, on the east side of the road, occurs at a break in the road shoulder . It is the outflow for the other flume. The flume is approximately 16 feet long and tapers from a width of 72 inches at the top to 30 inches at the bottom. It is constructed of loose, dark and light gray rubblestone of various sizes.

A stone guardwall is on the east side of the North Entrance Road (from the Roosevelt Arch at mile 5.03) at its termination in Mammoth Hot Springs. The guardwall is located where the road turns west and begins the Mammoth promenade. The grade drops steeply from the road towards the Gardner River Canyon. The guardwall is designed with alternating, crenellated stone bays. The taller bays are 6 feet in length and about 12 inches above the road surface. The shorter bays are 10 feet in length and about 4 inches above the road surface. The rectangular, stone slabs are a light gray to tan in color, and set in a gray mortar.

ROOSEVELT ARCH: The "Technical Report Upon the Improvement of Yellowstone National Park, 1904," presumably written by Capt. Hiram Chittenden, provides a good description of the North Entrance Arch:

> The arch consists of two square stone towers with a batter of one in thirty, the bottom dimension being 13 feet 3 inches square. The clear space between the towers at the ground is 19 feet 8 inches. It is closed over by an arch, the crown of which is 30 feet above the ground. This arch curtain is 5 feet thick and is built up to the same height as the towers. The entire structure is 50 feet high and is capped with a concrete roof, roughly shingled with the chippings from the cut stone used in the arch. The character of the masonry is entirely original. It consists of columnar basalt taken from a quarry nearby in approximately hexagonal prisms. Stones have been used just as found with the least possible dressing, retaining their natural weather worn condition. The points of the prisms project beyond the plan of the face, presenting to the whole structure a novel appearance in a masonry work. The two base courses are roughly cut, as, of course, are the stones in both the small and the large arch openings. The cutting of this stone was a very difficult matter, owing to the extremely hard quality of the rock. The side of the structure which faces the station [now removed] is ornamented with three tablets. The largest is 3 feet 10 inches by 10 feet 8 inches, and bears the inscription: "FOR THE BENEFIT AND ENJOYMENT OF THE PEOPLE," an extract from the Act creating the Park. The smaller tablet on the left tower is inscribed, "YELLOWSTONE NATIONAL PARK," that on the right, "CREATED BY ACT OF CONGRESS MARCH 1, 1872." These tablets were molded entirely of concrete. The forms for the letters were manufactured by the Stillwater Manufacturing Company of Stillwater, Minnesota . . .

The two small, pedestrian portals, flanking the main arch are now closed off.

Wing walls are located on either side of the arch. The walls, which are constructed of the same basalt stone as the arch, are each approximately 25 feet long. At the far end of each wall is a basalt stone tower with a concrete pyramidal-shaped roof. Each tower is approximately 7 feet wide at its center. Extending northward from the end of the west wing wall tower is a retaining wall, approximately 570 feet long. The wall is constructed of river cobble. At the northern end of the retaining wall is a basalt stone tower, identical in material and design to the towers at the end of the wing walls.

NON-CONTRIBUTING RESOURCES

UPPER GARDNER RIVER BRIDGE: Located 3 miles south of the North Entrance, Gardner River Bridge No. 1 is a steel girder-type bridge with reinforced concrete deck. It is 64 feet in length and has a deck width of 28 feet. The sidewalks are 3.6 feet on the right and 2.7 feet on the left. The rails are made of concrete. The W.R. Cahoon Construction Company of Pocatello, Idaho built the bridge in 1958.

LOWER GARDNER RIVER BRIDGE: Located 1.5 miles south of North Entrance, Gardner River Bridge No. 2 is a steel girder-type bridge with reinforced concrete deck; it is 95 feet long. The deck width is 29 feet and has 2.8 feet concrete sidewalks.[2] The W.R. Cahoon Construction Company of Pocatello, Idaho built the bridge in 1958.

NORTH ENTRANCE CHECKING STATION: Located about one-half mile from the Roosevelt arch is a modern checking station, which was built in 1991. The small gable-roofed building is constructed of log and stone.

INTEGRITY

The North Entrance Road meets the Registration Requirements for "Roads" established in the Historic Resources Study. It maintains those aspects of integrity important in conveying its historic appearance. Under Criterion A, the road's association with Yellowstone National Park's designed and planned road system is well documented. Although some changes in location have taken place over the years, the road still adheres to its original purpose and function. The changes cannot be differentiated from the original and most took place during the period of significance. The road retains a strong sense of feeling. It is clearly "different" from the roads commonly found outside the park. Adding to the retention of integrity important under Criterion C, the road retains integrity of design and workmanship. There are many examples of manmade features such as culverts and walls constructed of natural materials. Along much of its route, the vegetation comes near the road, offering a natural setting.

The Roosevelt Arch retains complete integrity of design. It appears today as it did when built. The only modifications to the arch are the easily reversible boards covering the pedestrian portals.

time trying to site a new route. "In this I finally succeeded, and without sharp curvatures, carried a line of easy grades for some 3 miles, and with only a moderate amount of bridging, constructed a road much shorter and in all respects superior to what could have ever been made upon either of the other routes at manifold its cost."[2] Norris' road avoided the Gardner River Canyon and followed the approximate route of an older tourist road.

The North Entrance remained the most popular entrance into the Park, and usage increased after the Northern Pacific Railroad completed its line to near Gardiner, Montana in 1883. That same year, the U.S. Army Corps of Engineers took over construction of the park's roads. The corps first improvement was to the road between Gardiner and Mammoth Hot Springs, costing about $50. After filling the ruts and removing the stumps on the old road, Lt. Dan Kingman recommended abandoning the route for a new one, following the Gardner River through the canyon. The steep inclines on the old road presented many problems particularly to the freighters and especially in wet weather.[3]

Kingman knew that the canyon route, with its exceptional obstacles, would be expensive to construct and estimated that it would cost approximately $2,000 per mile, which was more than double what it would cost in other areas of the Park. During 1883, he spent $5,740 and estimated an additional $3,000 would be needed to complete the job. Before the crews stopped for the winter, they had made excellent progress up to the canyon. Kingman hoped to complete the entire project before the first visitors arrived the following spring.[4]

In the Annual Report for 1889,[5] several bridges, without specific locations, spanning the Gardner River were listed:

Three spans of 33 feet – no trusses
Three spans of 32 feet – King post trusses
One span of 28 feet, a coulee – no truss
Two spans of 40 feet and 20 feet – King and Queen post trusses

During 1901 and 1902, Captain Hiram Chittenden supervised work on the road and in 1903, one of his major achievements, the construction of the Roosevelt Arch, was completed. Chittenden felt that the heavily traveled, highly visible northern park entrance at Gardiner deserved an impressive entrance gate. The Northern Pacific Railway's depot, designed by Robert Reamer, had just been completed on the park's boundary in Gardiner. The railroad and the wagon roads ended in two loops, with the Rustic style depot placed between them. One side of the building was used to unload the passengers; the other side was used for carriages. On the carriage side, between the depot and the future arch, two artificial ponds in the shape of the railroad's logo, the Chinese yin and yang symbols, was constructed.

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[2] Ibid.

[3] Dan Kingman, Report for 1883, 11-12. Kingman did not file any reports with the Chief of Engineers, but a later Army Corps of Engineer officer, Captain Clinton B. Sears did include Kingman's notes on road improvements and construction in his report to the Chief of Engineers; "Annual Report of Captain Clinton B. Sears, Corps of Engineers, for the Fiscal year Ending June 30, 1887," in *Report of the Secretary of War Being Part of the Messages and Documents Communicated to the Two Houses of Congress in Four Volumes* (Washington D.C.: Government Printing Office, 1887). Report for 1883, 11-12.

[4] Ibid.

[5] Major Charles Allen, *Report of the Secretary of War Being Part of the Messages and Documents Communicated to The Houses of Congress and The Beginning of the First Session of The Fiftieth Congress in 4 Volumes, Volume II -(in four parts),* Part IV (Washington D.C.: Government Printing Office, 1889); and "Annual Report of Major Charles J. Allen, Corps of Engineers, Officer in Charge for the Fiscal year Ending June 30, 1889, " 2863.

The corner stone for the entrance arch was laid in a ceremony attended by President Theodore Roosevelt on April 24, 1903, and the first visitors passed through the arch on September 1, 1903.[6] Although the architect of the Roosevelt Arch is still in question, it is evident that the arch represents a significant and sophisticated early design for a national park. Aubrey Haines, Yellowstone National Park historian, attributes Robert Reamer with being the architect using Hiram Chittenden's notes. However, Montana newspapers published during the time of the dedication ceremonies attributed it to N.J. Ness of St. Paul. Ness advertised himself as a stone contractor and builder.[7]

By 1903, the North Entrance Road was widened to 25 feet, the grades had been reduced to eight percent, and the road had been surfaced with gravel or macadam. All of the old wooden culverts had been replaced with vitrified clay-pipe or cast-iron culverts. The four crossings of the Gardner River were bridged with steel structures set on monolithic concrete abutments.[8]

During the autumn of 1906, a dry slide occurred near the first bridge from Gardiner, followed by more sliding during the winter and finally, more than 2,000 yards of material in the spring. Another slide developed 1 1/2 miles further down the road which was removed by sluicing. Other 1907 spring damage was described:

> Next to the slides the most expensive work has been in keeping the road from being washed out. Large boulders aggregating more than 200 tons, fell in a section of the Gardiner [sic] River less than 150 feet in length, one boulder alone weighing approximately 75 tons. This rock had to be removed in order to keep the road from being washed out. Upward of 20 breaks in the wall occurred in the vicinity of 1 1/2 miles from Gardiner. The wall along the river is a dry wall and the water rushing down washes out the material behind the rocks and below the water. The result is that the road is all undermining along the wall, which always gives away during high water, when it is most difficult to repair . . .. On one occasion it was necessary to take a few men available and work two days and a night save, for a few hours in the early morning. Too much stress cannot be laid upon the fact of these dry walls must be replaced by those laid in mortar....I am firmly of the opinion that if the water in the Gardiner [sic] River is as high next summer as it has been this season, that someday the road will be so washed out as to require using the old road from Gardiner to Mammoth Hot Springs which runs over the hills and which has not been used for 12 years or more.[9]

Severe damage and deterioration affected this section of road for many years. The following excerpts from annual reports reveal the extent of the problem.

> 1908 -- . . . considerable work was again required at the slide in the bend about 1 1/2 miles from Gardiner, which has been troublesome for more than a year. An additional 2,000 yards or more of earth were removed and it was thought that with the quantity removed a year ago, it was secure but proved

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[6] Hiram Chittenden, "Improvement of Yellowstone National Park, Including the Construction, Repair, and Maintenance of Roads and Bridges" in *Annual Report of the Chief of Engineers for 1904*, Appendix FFF (Washington D.C.: Government Printing Office, 1904), 2889.

[7] North Entrance Arch Historic District, Determination of Eligibility Form, 1986. On file Branch of Cultural Resources, Yellowstone National Park, Wyoming.

[8] Hiram Chittenden, "Improvement of Yellowstone National Park, Including the Construction, Repair, and Maintenance of Roads and Bridges" in *Annual Report of the Chief of Engineers for 1903,* Appendixes GGG and KKK (Washington D.C.: Government Printing Office, 1903), 2890.

[9] Ernest Peek, *Annual Report of the Chief of Engineers for 1907* (Washington D.C.: Government Printing Office, 1907), 2468.

again troublesome on account of the numerous openings which are in the sidehill. A few yards below this slide difficulty was again experienced during high water in keeping the road from being washed out. The wall at this point was faced with planks, which were held in place by large steel bars. This section probably a stretch of 100 yards of dry rubble, should be laid in mortar this season.[10]

1909 -- Trouble was again encountered at the slide on the Mammoth Hot Springs to Gardiner road about 1 1/2 miles from Gardiner. It was necessary to remove about 500 yards of earth which slipped into the road from the steep hillside. Efforts have been made to eradicate the troublesome spring here by diverting the small stream on the hill above but so far no marked results have been secured. The retaining wall in the bend of the Gardner River at this point was rebuilt in March, 1909, but a portion of it, as well as parts of the old wall, both below and above the bend were washed out by the very high water in the Gardner River in the early part of June. The water at this bend has quite a fall and strikes the wall at right angles. The road was saved by the construction of a revetment of logs and sandbags held by heavy iron bars at those points where the retaining wall gave way. It will be necessary to either relocate the road at this point or construct a substantial wall of masonry or concrete.[11]

1911 -- A concrete retaining wall, 487 feet long was constructed about 3 1/2 miles from Mammoth Hot Springs. This is the first concrete revetment wall constructed in the park. . . . the dry rubble wall along the Gardner River is in bad condition.[12]

1912 -- I think it well to call your attention to the condition of the road between here and Gardiner. The heavy teams hauling in your winter supply of coal so shook the road at the dangerous and narrow part that a section of it fell into the river, leaving a roadway of only about 3 feet in width for a distance of about 12 feet.[13]

The bridge, about 1 1/2 miles from Mammoth Hot Springs, 48 feet long and 16 feet wide, consists of four stringers carrying a pole floor. The two outside stringers are in fairly good condition, but the middle ones are in an advanced state of decay. Two braces, each 22 feet long and 10 inches in diameter are necessary to keep the abutments from sliding down hill towards each other. About 100 feet of side-hill grading opposite the lake is needed. Near Gardiner a 10 feet culvert is to be built as there is no timber within two miles of this point, the culvert can be built of rock, leaving spaces wide enough to carry the stream of water.[14]

. . . there is a sliding bank above the road caused by seepage water from a lake some distance back from the road. Steps were taken last fall to divert the drainage of the country behind the lake and to drain the lake. The sliding bank, for a distance of about 1,000 feet had, last summer and fall, covered about half of the road and will have to be cleared out next summer. Along this sliding bank and in the near vicinity the

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[10] Ernest Peek, *Annual Report of the Chief of Engineers for 1908* (Washington D.C.: Government Printing Office, 1908), 2547.

[11] "Report of Inspection of Bridges in the Yellowstone National Park, made September 24, 25, 26, 1909," with recommendations by request of Capt. Wilbur Willing, Corps of Engineers, U.S.A.

[12] C.H. Knight, C.W. Kutz, and Jay J. Morrow, *Report Upon the Construction, Repair, and Maintenance of Roads and Bridges in the Yellowstone National Park and Report Upon the Road Into Mount Rainier National Park and Report Upon the Crater Lake National Park* (Washington, D.C.: Government Printing Office, 1911), 3030-3031.

[13] H.W. Child, President, Yellowstone Park Transportation Company, to Acting Superintendent, Yellowstone National Park, 2 May 1912.

[14] William Nespital, "Notes on the Condition of the Old Road from Mammoth Hot Springs to Gardiner, " April 10, 1912.

retaining wall along the river is in bad condition and about 1,000 feet of concrete wall, 9 feet high is needed. Last fall, this road was nearly closed by the sliding bank.[15]

. . . the past week of warm weather and rains has caused the Gardner River to rise rapidly and it is now washing away the earth and the stone retaining wall. I expect the road to go any day. Authority granted to expend 500 dollars park revenue for repairs to old trail, commencing Mammoth Hotel running due north and entering Park road about alfalfa field, . . .[16]

This wagon trail was practically impassable for any class of vehicles on account of earth slides, boulders, broken culverts and an unserviceable bridge. The work done consisted of dismantling the old wooden bridge and the construction of a timber bridge with a span of 25 feet and 12 feet approach at each end. This bridge spans a ravine about 25 feet deep. All other culverts and bridges were built of rough timber, these varied in length from 4 to 16 feet. Many boulders were removed from the road by blasting and excavating, plowing was done where necessary and the entire length of trail was graded. Widening was also done in many places, leaving this trail in good condition for light vehicle traffic.[17]

1913 . . . a 24 inch metal culvert 140 feet long was placed at the entrance arch to carry the spring flood water. Six hundred and fifty feet of retaining wall, built of rubble laid in cement mortar was constructed along the Gardner River and the old dry rubble wall was patched in numerous places. High water in the spring of 1913 developed several new bad places in the wall and several hundred feet of wall along this road will be replaced during the coming year . . . . The road was widened at several places, the gravel bank near Gardiner was sloped back, a retaining wall was built along the slide at the two mile post, and a large part of the slide removed, and practically the entire road regraveled.[18]

1915 . . . slide is located just above the 2 mile post from Gardiner and a length along the road of nearly 800 feet. Sluicing was begun with the pump installed last fall and a few days later with water from a lake nearly 200 feet above the road at the slide . . . .During the month, one-half mile, between the Entrance Arch and the freight road, was completed and oiled with a light layer of sand and gravel on top.[19]

Throughout the summer of 1917, crews worked diligently to keep the canyon road open, but the 1918 spring thaw caused extensive damage to a mile of the road. One of the last projects that the Army Corps of Engineers supervised before turning over road construction to the newly created National Park Service, was making improvements to the old Gardiner High Road so it could be used while the North Entrance Road was being reconstructed.[20]

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[15] C.H. Knight, Army Corps Engineering Officer to Chief of Engineers, Army Corps of Engineers, 19 February 1912.

[16] Lt. Col. Brett, Superintendent, Yellowstone National Park, to Secretary of the Interior, 14 May 1912.

[17] Lt. Col. Brett, Superintendent, Yellowstone National Park, to Secretary of the Interior, 20 May 1912; "Report of Work Repairing Old Wagon Trail between Mammoth Hot Springs to Gardiner," May 27 to June 21, 1912.

[18] C.H. Knight, J.B. Cavanaugh, and J.J. Morrow, *Report Upon the Construction, Repair, and Maintenance of Roads and Bridges in Yellowstone National park; Report Upon the Road Into Mount Rainier National Park;* and *Report Upon Crater Lake National Park*, Appendixes EEE and FFF, (Washington D.C.: Government Printing Office, 1913), 3269-3270.

[19] "Report for November 1915."

[20] G.E. Verrill and George Zuin, *Report Upon the Construction, Repair, and Maintenance of Roads and Bridges in the Yellowstone National Park,* Appendixes EEE and FFF (Washington D.C.: Government Printing Office, 1918), 1977-80; *Annual Report of the Director of the National Park Service to the Secretary of the Interior for the Fiscal year Ended June 30, 1919*, (Washington D.C.:

Despite recommendations by the Army Corps of Engineers that the entrance road be relocated to the Gardiner High Road, National Park Service Director Stephen Mather favored the canyon route. In fact, he called the construction of a new road through the Gardner River Canyon the first important engineering project undertaken by the newly formed engineering division.[13] However, the annual reports for the next few years indicate that mostly improvements and not reconstruction were undertaken. In 1920, considerable gravel was placed on the road and log cribbing installed to prevent wash outs. In 1921, 1,300 cubic yards of material were moved from the slide area. In 1923, about 400 feet of road near the two mile post was widened and 1700 cubic yards of rock was blasted from the sandstone cliffs above the roadway.[21]

In August and September of 1921, a new stone ranger station to house rangers checking traffic at the North Entrance was built just inside the arch. The new building replaced an "unsightly tent arrangement." The building, which was compatible in design and material, to the basaltic rock arch, was 15 feet by 16 feet, with walls 24 inches thick. The masonry walls were 8 feet 6 inches in height with two logs 7 inches in diameter resting upon them. The dovetailed log constructed gables were covered with a cedar shake roof. The porch was constructed of flagstones embedded in cement mortar.[22] In March, 1937, a fire destroyed the ranger station. A temporary station was built several hundred feet east of the burned station.[18] A new log and stone station was built in 1961 about one-half mile southeast of the arch.

In the mid-1930s, the National Park Service began implementation of the "Mammoth Plan," which called for replacement of many of the existing buildings. As part of the plan, the park proposed relocating the point where the North Entrance Road entered the development from the south end to the northeast corner. The Bureau of Public Roads surveyed the new location and prepared plans and specifications. Peter Kiewit Sons Company of Omaha received the contract.[23]

On August 18, 1941, a severe storm hit the northern part of the Park. The North Entrance Road was closed for several hours because of slides and washouts. Many of the culverts were blocked with debris. Maintenance crews used gas shovels and patrol graders over the following ten days to put the road in good order.[24]

The Bureau of Public Roads opened bids for the Upper and Lower Gardner River replacement bridges on January 14, 1958. The National Park Service accepted the $174,963 bid of the W.R. Cahoon Construction Company of Pocatello, Idaho two weeks later and construction began almost immediately. As a result of the 1959 earthquake, some repair work was done to the road in July of 1962. During the National Park Service's Mission 66 program, the road received new surfacing and guardrails.[25]

Government Printing Office, 1919), 46-47.

[21] *Report of the Director of the National park Service to the Secretary of the Interior for the Fiscal year Ended June 30, 1921 and the Travel Season 1921* (Washington D.C.: Government Printing Office, 1921), 165, 209; *Report of the Director of the National Park Service to the Secretary of the Interior for the Fiscal Year ended June 30, 1923 and the Travel Season 1923* (Washington D.C.: Government Printing Office, 1923), 116.

[22] *Annual Report of the Director of the National Park Service to the Secretary of the Interior for the Fiscal year Ended June 30, 1921 and the Travel Season 1921.*

[23] Bureau of Public Roads, "Final Construction Report (1937-38) on North Entrance 2-A1, Mammoth Development Area, National Park Project, Yellowstone National Park, Wyoming."

[24] Philip Wohlbrandt, Park Engineer, "Final Report, Project No. 508, Flood Damage, Reconstruction of Mammoth-Gardiner Road, April 21, 1943."

[25] Fixed Property Records for Yellowstone National Park, National Park Service, Rocky Mountain Regional Office files, Denver, Colorado.

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10. Geographical Data

Verbal Boundary Description

Northern Terminus

From the centerline of the southeast face of the Roosevelt Arch run 20 feet in a southeast direction; then 33 feet in a northeast direction parallel to the face of the arch to the point of beginning (POB). From the POB, continue in a northeast direction until the line intersects the north boundary of Yellowstone National Park. Proceed west along the boundary to a point 5 feet west of where the stone wall (or its natural extension) intersects the boundary. At his point, turn south and follow 5 feet behind the wall as it curves back toward the arch; pass parallel to the side of the arch and 20 feet past is southeast face; Then turn northeast and proceed to within 66 feet of the POB (leaving a 66 foot wide gap).

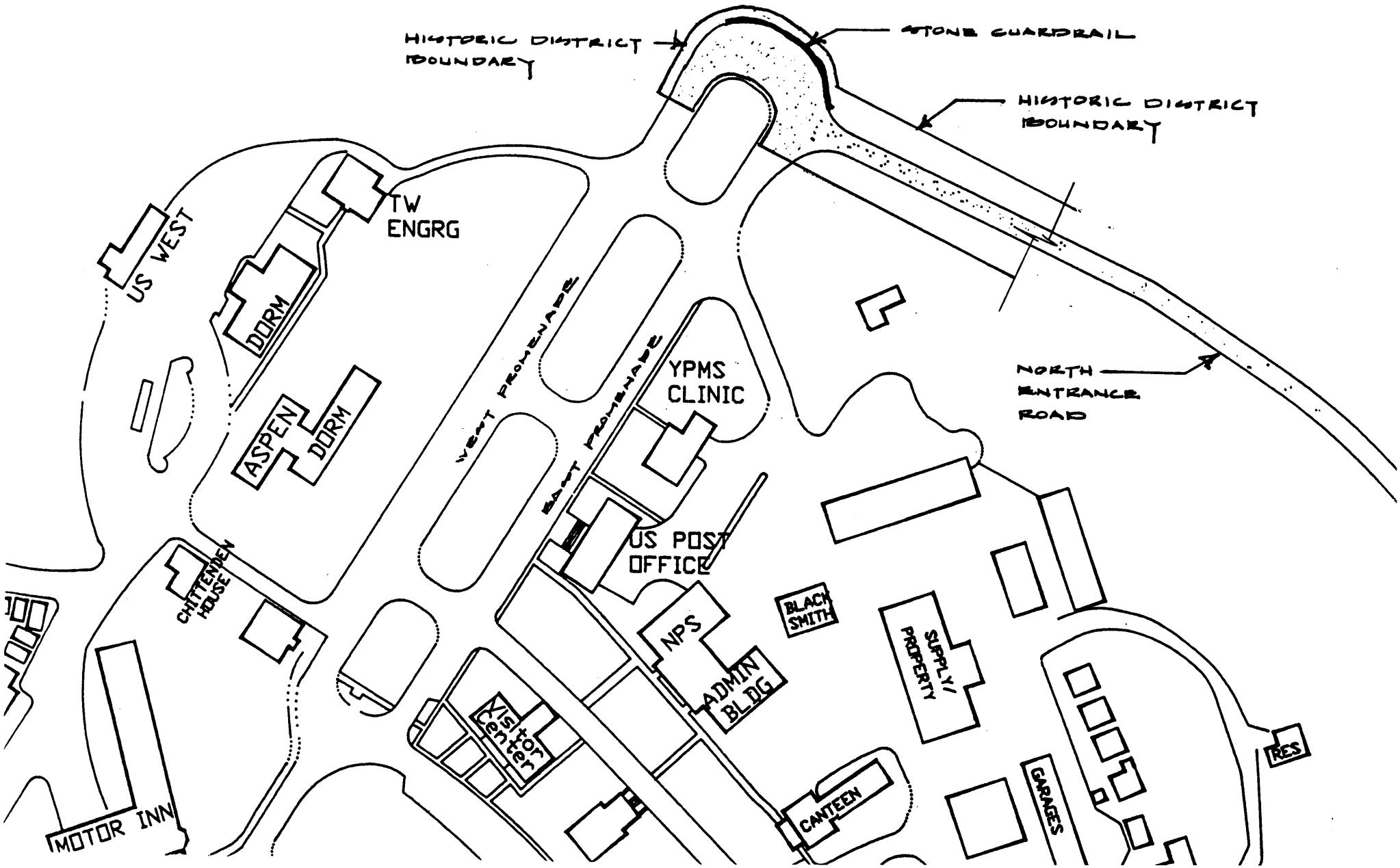
Road

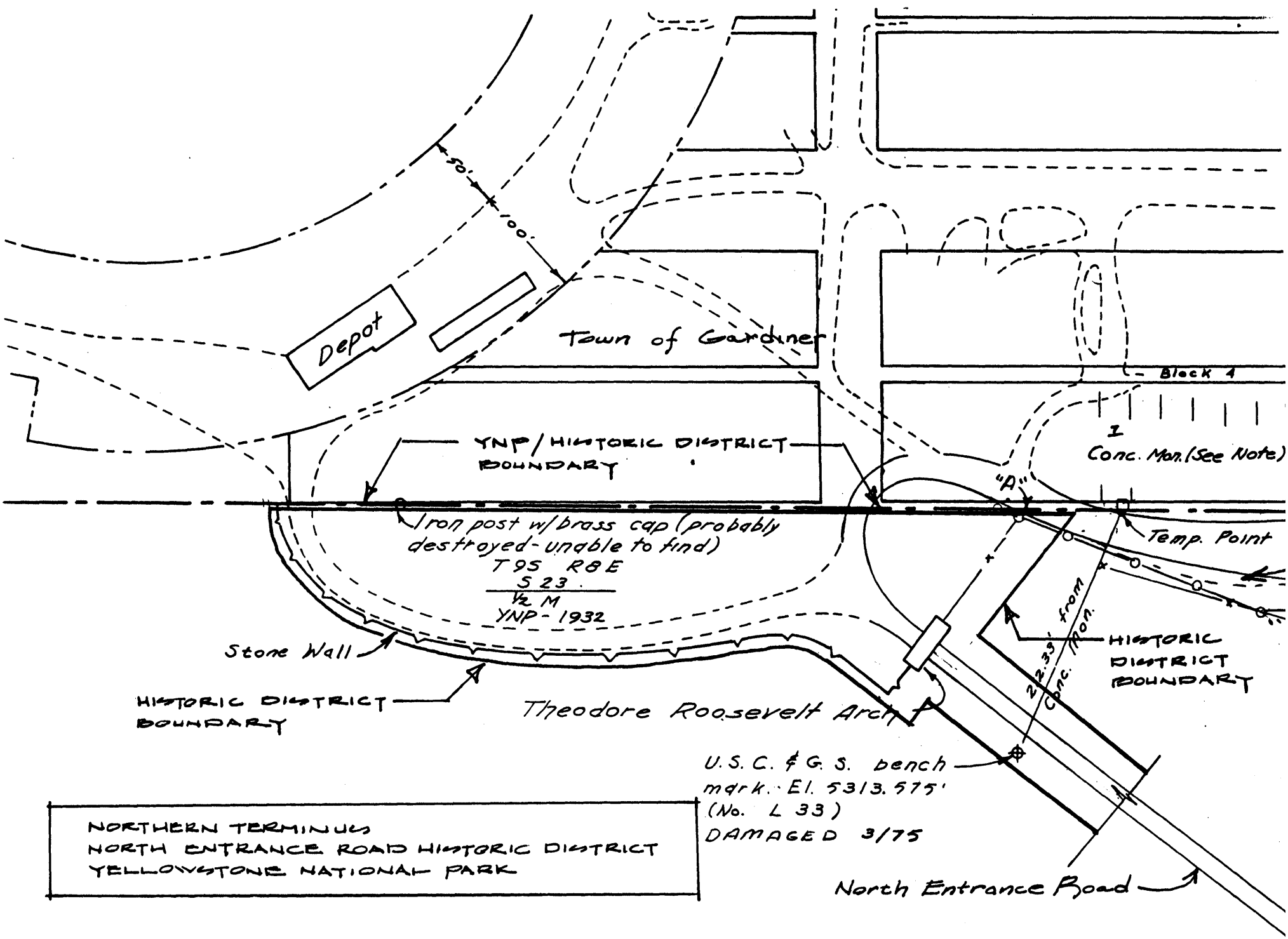
The boundary for the north entrance road continues from the 66-foot gap created by the boundary for the North Terminus – 33 feet on either side of the road's centerline -- for approximately 5.23 miles.

Southern Terminus

Once the boundary reaches the northeastern end of the Mammoth Hot Springs promenade, continue the north road boundary to within 5 feet of the stone guardrail; then follow 5 feet behind the guardrail as it curves to form a pullout. Continue the natural extension of the boundary on the south side of the road across the east promenade drive until it intersects the median strip's concrete curb; turn northeast, northwest, then southwest, following the curb to a point opposite where the south boundary intersects the curb. Then turn northwest, crossing the west promenade drive to a point five feet past the road shoulder. From this point turn northeast and proceed 5 feet from the shoulder until the boundary intersects the line on the north side of the road.

SOUTHERN TERMINUS
NORTH ENTRANCE ROAD HISTORIC DISTRICT
YELLOWSTONE NATIONAL PARK





NORTHERN TERMINUS
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