STATE OF MONTANA

DEPARTMENT OF FISH AND GAME

Helena, MT 59601
January 18, 1978

RECEIVED
JAN 19 1979
ENVIRONMENTAL QUALITY COUNCIL

JW
DM

Mr. Terry Carmody, Executive Director
Environmental Quality Council
Helena, MT 59601

Dear Terry:

Enclosed are two copies of FG-N-102, Petty Creek Fishing Access Site and FG-N-103, Brickyard Fishing Access Site. Both projects will furnish recreational opportunities close to the city of Missoula.

We hope these documents will satisfy the requirements of the Environmental Policy Act. If you have any questions, please let us know.

Sincerely,

James A. Posewitz

James A. Posewitz, Administrator
Ecological Services Division

sd

cc: State Architect
Department of Highways
Missoula County Commissioners
Water Quality Bureau
Recreation & Parks Division

FG-N-103

PRELIMINARY ENVIRONMENTAL REVIEW

for

BRICKYARD FISHING ACCESS SITE

NOVEMBER, 1978

RECREATION AND PARKS DIVISION

MONTANA DEPARTMENT OF FISH AND GAME

I. DESCRIPTION OF PROPOSED ACTION

Developments for this area are intended to provide access to the Clark Fork River. Specific development will include construction of approximately 8,000 square feet of graveled roadway and boat ramp, installation of 680 linear feet of split rail fence, and the installation of 60 barrier posts.

It is anticipated that this project will be advertised during the spring of 1978 with construction scheduled for the summer of 1979.

II DESCRIPTION OF THE EXISTING ENVIRONMENT

A. Description of the Area

1. Region

This region lies in the heart of the northern Rocky Mountains and as a result is predominantly mountainous with only a few relatively narrow inter-mountain valleys. The major valleys of the region were at one time the ancient bed of glacial Lake Missoula. This region is rich in historic sites that pertain to exploration, early trade and settlement, Indian relationships, the military and mining.

2. Project Area

The project area is located on the north side of the Clark Fork River approximately 600 feet upstream from the Bandmann Bridge. The lot is between two occupied residential lots at the intersection of Brickyard Hill Road and Montana 200. Access is from Brickyard Hill Road.

B. Physical Environment

1. Geology

The geology of the site consists of alluvium which is mainly valley fill consisting of silt, sand and gravel. It includes some terrace deposits and glacial drift of Pleistocene age in some areas. The older part of the alluvium, where present, is probably of Pliocene age.

2. Soils

Soils on the site are generally a deposition of alluvial soil material deposited over glacial lacustrian terraces.

The valley area in geological times was a portion of the ancient Missoula Lake Basin. Geologic evidence shows that the Clark Fork River was dammed several times during the Pleistocene Epoch. The basin was flooded and drained during successive glaciations and interglaciations. The large volume of water moved through the narrow valley of the Clark Fork whenever ancient Lake Missoula drained. There were more than 200 feet of unconsolidated glacial lacustrian gravel, sand and clay deposited during the glacial periods. The present drainage system is eroded into these deposits. The low terraces and the Clark Fork floodplain are composite erosional stream deposits.

3. Surface Water

The Clark Fork River flows along the eastern boundary of the site. it is one of the largest rivers in the state and provides excellent trout fishing.

4. Vegetation

Vegetation on the site includes stands of willows and cottonwoods.

The general vegetation type is a cottonwood-willow-dogwood classification. Shrubs include snowberry and Wild rose.

5. Groundwater

The distribution of available groundwater is limited to unconsolidated aquifers in the river valley. Almost all of the alluvium is within the inferred outline of ancient glacial Lake Missoula. Within this alluvium are intervals of sand and gravel which are reservoirs for groundwater, and from which numerous wells withdraw water. Many of the groundwater appropriations in this area claim less than 25 gallons per minute, but a few claim 1,000 or more gallons per minute. The average well depth is about 100 feet below the surface of the flood-plain. The water table lies deeper than 10 feet below the land surface.

6. Climate

The average high temperature during July in the Missoula vicinity is 84.3^{O} F and the average July rainfall is 0.92 inches. The average high temperature in January is 28.6^{O} F with an average low temperature of 12.9^{O} F with average January precipitation at 1.17 inches, mostly in the form of snow. The average annual precipitation is 13.34 inches.

7. Air Quality

Air quality in the Missoula area is impaired by the lumber processing firms located in this general vicinity. The annual average for total suspended particulates is 76.3 $ug/_{m}3$. In addition, total suspended sulfate and hydrogen sulfide have at times been beyond the state standard.

8. Aquatic

The Clark Fork River provides spectacular trout fishing. The river contains populations of brown trout, rainbow trout, cutthroat trout, whitefish, suckers, and squaw fish.

9. Wildlife

Waterfowl habitat occurs along the Clark Fork River which is used by several species of ducks and Canada geese. Mule deer and white-tailed deer are seen in the general area. Mink, beaver, and muskrat may occur near the site. There are no known endangered species in the immediate vicinity of the site.

C. Human Environment

1. Historical and Archeological

Missoula is located at the crossroads of U.S. Interstate 90, U.S. Highways 12 and 93 and Montana Highway 200. An ancient lake bed, the Missoula Valley was for centruies the home of buffalo and Indians. Lewis and Clark explored the region in 1805 and 1806. Later, more explorers, fur traders and miners travelled the area which saw many skirmishes with Indian tribes in the narrow Hellgate Canyon. The valley became a natural trading place and in 1860 a store was opened to serve the growing traffic. "Law and order" came to Missoula in 1863 with the capture and hanging of four notorious road agents by the famous vigilantes from Virginia City, Montana. Dependable transportation reached Missoula in 1883 with the construction of the Northern Pacific Railway.

2. Transportation

No public transportation systems serve the site. Buses, railroads and major airlines serve the City of Missoula.

3. Socio-Economic

The area's economy is strongly oriented toward the forest industries, with the majority of coniferous timber harvested from nearby national forest land. Some agriculture is practiced, much of it being small cropping and truck farming because of the favorable climate, longer growing season and good soils. Some durable goods manufacturing takes place in Missoula and it provides for sizable employment. Missoula is also the wholesale-retail trade center for the area. Higher education is an important undertaking in the area, with one of the major institutions in the state being located at Missoula.

The northern regional headquarters of the U.S. Forest Service is located in Missoula. In addition to the regional office, other Forest Service facilities in the area include the aerial fire depot, forest fire laboratory, Missoula visitor center, radio station, forest science laboratory, and the Lolo National Forest headquarters.

4. Recreation Use

A rather singular problem exists with respect to the major population center of Missoula and vicinity. While urban recreational facilities are generally available and while there is comparatively easy access to and reasonably adequate quantities of wilderness areas for recreation, it is the middle ground of recreation opportunity that is lacking. Areas which provide for camping and picnicking and related pursuits in natural environment areas, but within easy reach of the urban area, are needed.

The Montana Statewide Outdoor Recreation Plan indicates that the high level of preference indicated for such water-oriented activities as fishing, swimming and boating would indicate increased emphasis placed on providing for these type activities. Fishing because of its popularity in preference and participation should be accorded the attention it deserves, and a program to assure continued and increased access to public fishing waters should be considered.

III. Environmental Impact of Proposed Action

A. Biological Impacts

1. Vegetation

Less than one acre of vegetation will be disturbed as a result of construction to accomplish the proposed action. In addition increased use will result in a deterioration of vegetation on picnic sites and trails.

2. Wildlife

Alteration of the composition and amount of vegetation brought about by increased recreation use and related cultural treatments would normally cause the greatest impact on wildlife populations; however, in this particular case the impact will be minimal, since the site is located between two occupied residenial lots.

B. Physical Impacts

1. Air

Exhaust fumes and dust will result during the construction period and will be prevalent during periods of peak use after the construction is completed. This will be due to increased automotive traffic based upon demand and access to the site.

2. Noise

Increased noise levels will result during the construction period. Noise levels will also increase as increased use of the site is realized.

3. Landscape Alteration

Temporary disruptions to the landscape will occur as a direct result of the construction activity. In the long run however, the aesthetics of the site will be improved.

4. Water

Changes in groundwater flow may occur on areas bisected by roads, but it is not understood what, if any, ecological effects this may have on plant communities; however, no appreciable effect is expected.

5. Solid Waste

Increased use of the site will increase the amount of solid waste and littering.

6. Soil

Some impact will be felt during the construction period, erosion is taking place now due to the activities of the local residents. The implimentation of this project will end the erosion by the local residents but will probably increase the erosion by visitor use. Over all erosion is not expected to increase significantly.

The increased visitor use will cause unavoidable soil compaction on the site. It is not expected to become a serious problem.

7. Health and Safety

The problem of vehicular traffic will be increased, resulting in greater possibilities for conflict and associated increased surveilance and maintenance.

8. Aesthetics

As this area is developed, "open space" will be occupied with some impact to the aesthetics of the area. This plan, however, emphasizes aesthetics as being an important value in the planning process. Management direction stipulates the application of landscape design principles to all surface disturbing projects.

C. Socio-Economic Impacts

The preservation and enhancement of outdoor recreation activities would be the most significant beneficial impact.

Economic impacts upon the area are expected to be very slight. It is anticipated that much of the use of this area would be by local residents.

D. Planned Measures to Minimize Adverse Environmental Impacts

1. Air

Dust pollution will be reduced by use of such diverse methods as dust oiling, sprinkling and restricting use.

2. Roads

Generally, road developments will be designed to fit into the natural terrain as much as possible. Cuts and fills will be kept to a minimum with back slopes as flat as practicable. Ditches will be shallow and will only be used where necessary.

Vegetation types such as trees and shrubs will be removed only when absolutely necessary, and in most cases will be left for screening and will only be cleared selectively.

During construction, equipment will be confined to road surfaces; no traffic will be allowed outside the construction limits in order that other landforms and vegetation will be left unmarred. Turning around on areas outside of construction areas will not be tolerated. Topsoil will be stockpiled before construction and will be replaced on road cuts, fills and road shoulders.

3. Solid Wastes

A "pack-in, pack-out" policy will be encouraged at this site; however, there will be periodic pickup of solid wastes by Parks personnel.

4. Vegetation

All areas disturbed as the result of construction methods used will be loamed, fertilized and seeded with indigenous grasses. Barriers will be placed at critical areas to prevent vehicular traffic from disrupting vegetation. Barriers to be used will consist of native landscape stones or wooden posts.

5. Noise

Noise levels will be somewhat reduced by keeping vehicle speeds to a minimum.

6. Landscape Alteration

The size and location of the site dictate the design rather closely. Design measures will be taken to preserve as much of the natural environment as possible.

7. Soils

As use increases, various degrees of vegetation trampling will occur, resulting in compaction of soil and mechanical injuries to trees. This compaction will be kept to a minimum by the use of barriers, both natural and artificial, to keep foot and vehicular traffic on the graveled surfaces. As a result soil compaction should be kept within the ecological carrying capacity of the site.

E. Favorable Environmental Effects

Aesthetics

The maintenance of pleasing landscape will be maximized remembering that any development proposal will cause change; however, landscape modifications will result in a more harmonious relationship between man-made features and the natural conditions of the area.

F. Adverse Environmental Effects which Cannot be Avoided

1. Air

Air quality will deteriorate to a slight degree during periods of construction due to mechanical equipment operations. Some deterioration will also occur during period of peak recreation use due to vehicular traffic.

2. Water

Surface disturbing activities such as road building will affect some of the physical, chemical and biotic characteristics of water produced in or flowing through the affected area. These adverse effects will be minimized by proper design and layout of the project but cannot be completely eliminated.

3. Soil

Regardless of controls exercised, some damage to soils will occur due to increased use. Soil will also be disturbed during periods of construction activity.

4. Aesthetics

Any proposed change will alter the natural appearance of the area; however, landscape management principles will be applied to lessen the impact of the area.

5. Noise

As use increases, noise impact will be felt in areas of heavy use during peak periods. Noise impact will derive primarily from vehicular traffic and group concentrations as well as construction equipment during the development period.

6. Waste Disposal

Litter will be a problem and could be expected to increase with use despite public education campaigns, use of litter barrels, enforcement and encouragement of a "pack-in, pack-out" policy.

7. Vegetation

Regardless of controls exercised, some damage to soils and vegetation will occur due to increased use. Vegetation will be disturbed during periods of construction.

G. Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

Recreation use of the site is expected to increase in the future whether the project is undertaken or not.

1. Under a no-action program, use will increase in direct relationship to population, leisure time and word of mouth advertising. A no-action program will result in noncontrolled use due to increased demands. Accessibility to the site could be made with no controls.

2. If the project is undertaken, visitor use will accelerate, but will be subject to control.

Short-term use, therefore, does not conflict with long-term use relative to recreation. Recreation use leaves more options open than most other single land-use options.

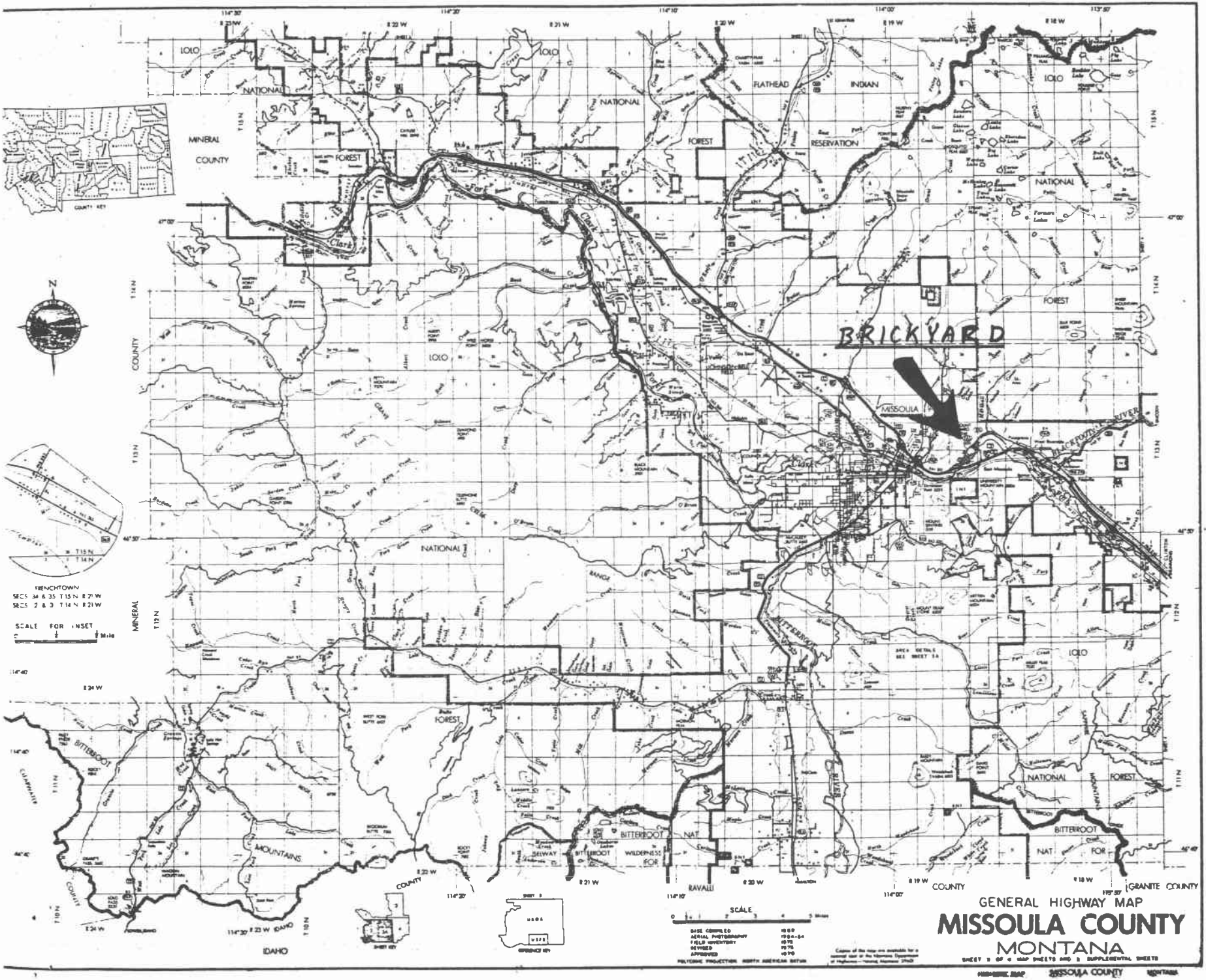
H. Irreversible and Irretrievable Committment of Resources

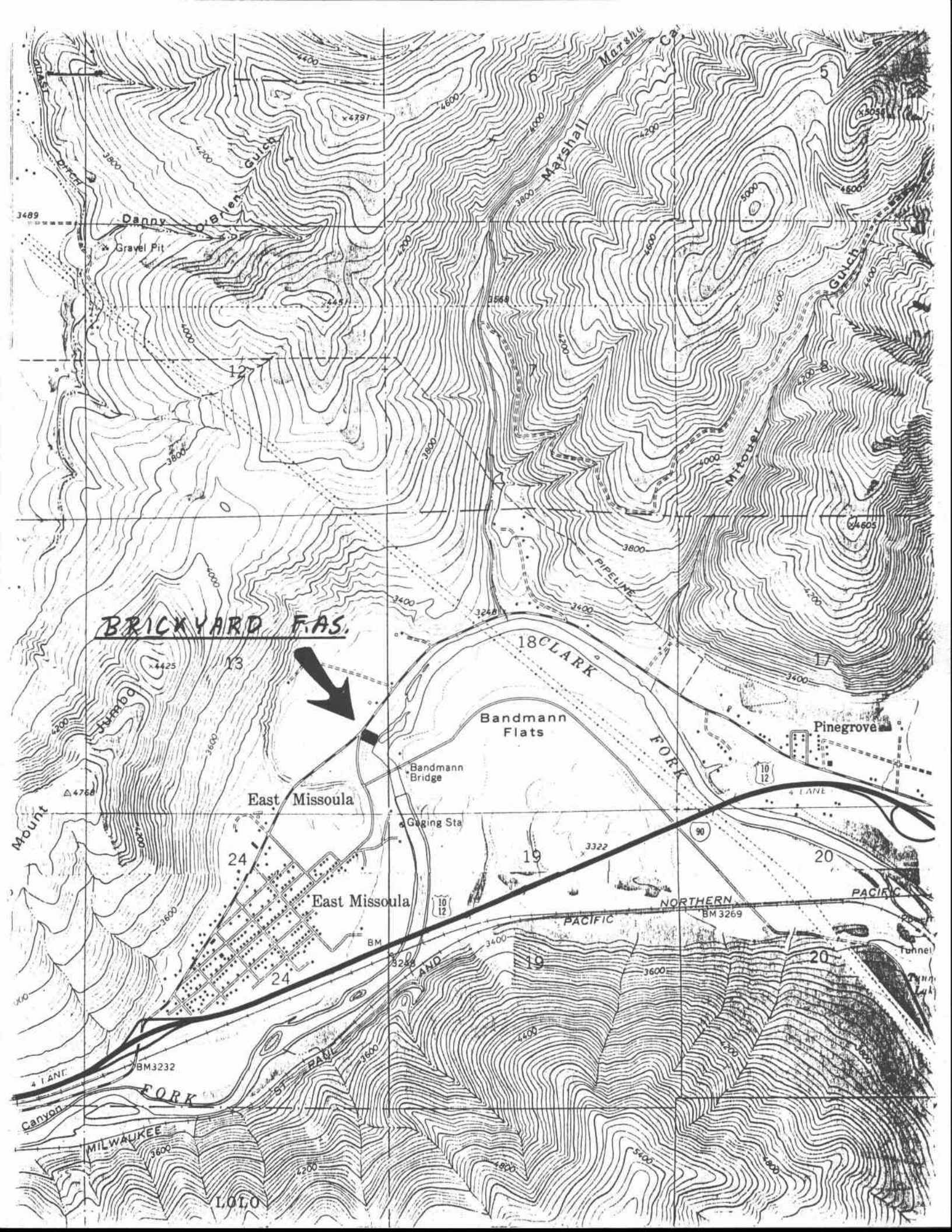
There are no committment of resources involved in the improvement which would be considered irreversible or irretrievable of any significance. Those portions of the recreation area proposed for road improvement will result in conditions as good as, or better than existing. There will be no change in the resource as a result of the proposed construction. It is always possible to remove, fill in, cover over, or otherwise destroy such structures so that the land may be reverted to its former condition. Even though it is technically feasible to convert, however, long-term committments make it irretrievable in a political sense. The State and Federal funds used for improvement are irretrievable. The property cannot revert to it's former use because, by law, since federal funds were used, the property is committed to recreational use.

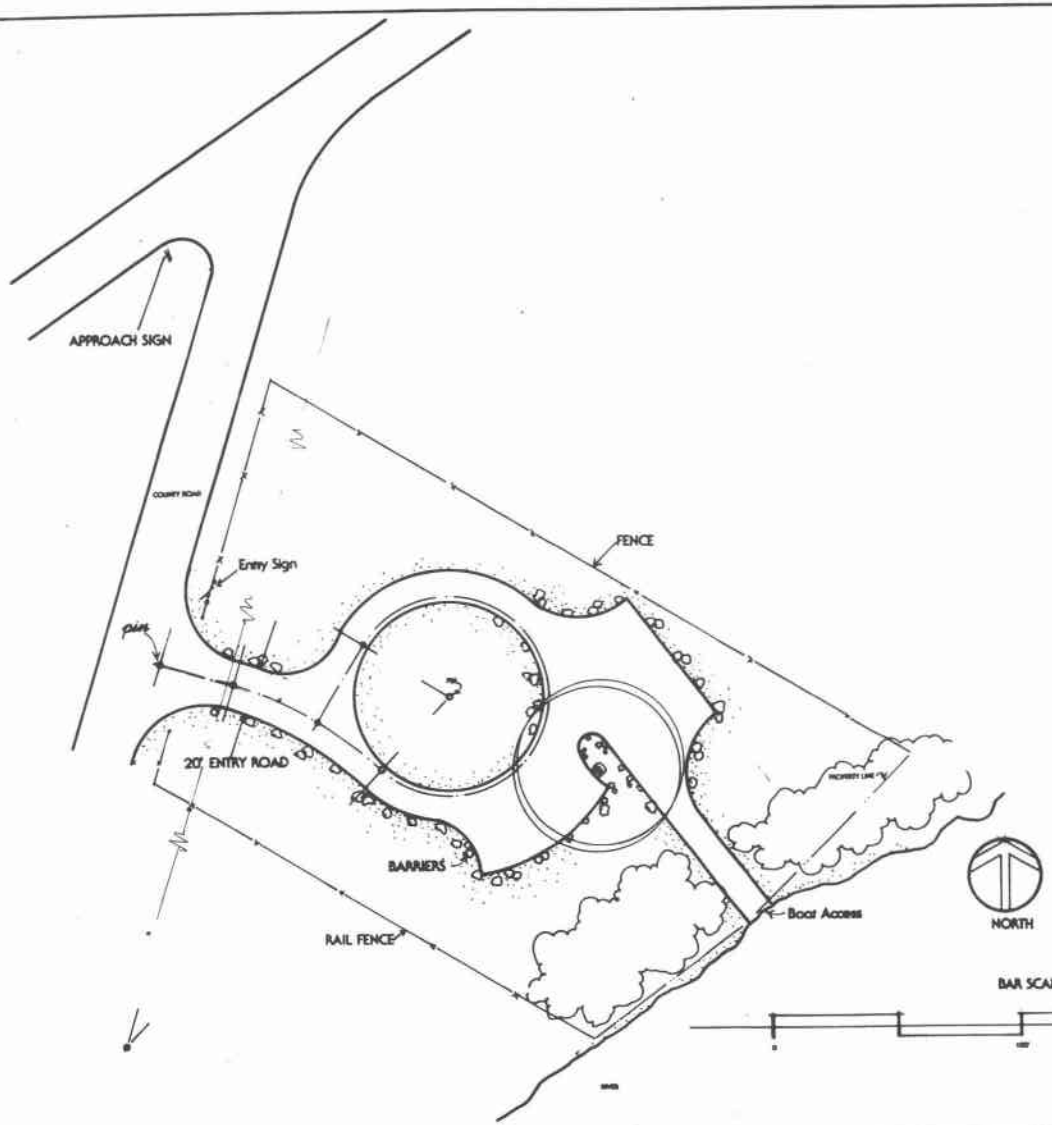
Copies Sent to:

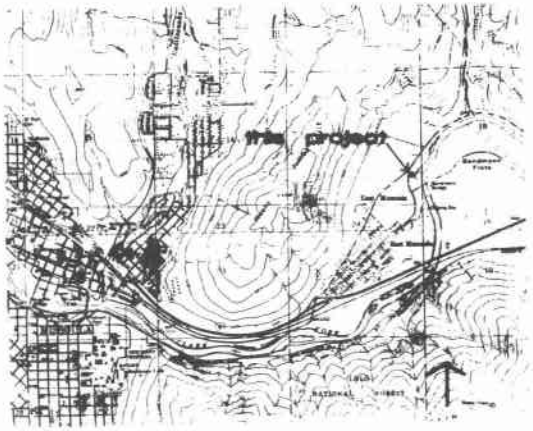
Department of Highways
Missoula County Commission
Water Quality Bureau, Department of Health and Environmental Science
Environmental Quality Council

Compiled by: Rich Misplon
Civil Engineer I
Design and Construction Bureau
Recreation and Parks Division


BRICKYARD
MISSOULA
LOLO
NATIONAL
FOREST
FLATHEAD
INDIAN
RESERVATION
MINERAL
COUNTY
BITTERROOT
MOUNTAINS
IDAHO
GRANITE COUNTY
FRENCHTOWN
SECS 34 & 35 T 15 N R 21 W
SECS 2 & 3 T 14 N R 21 W
SCALE FOR INSET
SCALE
GENERAL HIGHWAY MAP
MISSOULA COUNTY
MONTANA


BRICKYARD F.A.S.
Danny O'Brien Gulch
Gravel Pit
Marshall Gulch
Marshall Ca.
Missouri
PIPELINE
CLARK FORK
Bandmann Flats
Bandmann Bridge
East Missoula
Gaging Sta
Pinegrove
Mount Jumbo
NORTHERN PACIFIC
ST. PAUL AND PACIFIC
MILWAUKEE
Canyon
LOLO
BM 3269
BM3232
Tunnel
4 LANE





vicinity map

APPROVED BY _____ DATE _____

APPROVED BY _____ DATE _____

STATE OF MONTANA
FISH AND GAME COMMISSION
RECREATION AND PARKS DIVISION

master site plan
brickyard fishing access
east missoula, mt.

DRAWN BY: M.E. HAYES	DATE 7/78	SHEET
APPROVED BY	DATE	