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**DETAILED PROJECT REPORT
AND
ENVIRONMENTAL ASSESSMENT**

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S C D
JUN 25 1992

SECTION 14 EMERGENCY STREAMBANK PROTECTION

**TURKEY RIVER
CLAYTON COUNTY ROAD 1620
BETWEEN
ELKPORT AND OSTERDOCK, IOWA**

DECEMBER 1991

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Many members of the Rock Island District assisted in the preparation of this report. Primary study team personnel who are familiar with the technical aspects of the study are listed below:

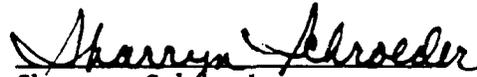
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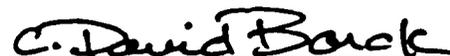
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US Army Corps
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Rock Island District

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OUR WORK

SYLLABUS

This report addresses the problem of streambank erosion on the left descending bankline of the Turkey River paralleling County Road 1620, approximately 3 miles northwest of Osterdock, sec. 32, T. 92 N., R. 3 W., Jefferson Township, Clayton County, Iowa. The study area involves approximately 1,250 linear feet of bankline, which has undergone severe erosion damages during the June 1990 and August 1991 flooding events. Clayton County was declared a disaster area after each of these major floods.

Under the authority of Section 14 of the 1946 Flood Control Act, as amended, Rock Island District, U.S. Army Corps of Engineers, representatives made a site visit to Clayton County, Iowa, in August 1991, to investigate the severity of the erosion along County Road 1620 and to determine the feasibility of providing assistance to the county in protecting this site.

This Detailed Project Report recommends minimal clearing of the bankline, placing approximately 7,800 tons (5,200 cubic yards) of riprap for approximately 1,250 linear feet, and shaping to provide a 2 horizontal on 1 vertical slope. The area from the bankline toe to the top of the bank will be covered with a minimum of 18 inches of Iowa Class "D" riprap. The total construction cost is estimated to be \$213,000. The project satisfies the criteria for Federal participation with a benefit-to-cost ratio of 2.5.

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TURKEY RIVER
 CLAYTON COUNTY ROAD 1620
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 ELKPORT AND OSTERDOCK, IOWA

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SECTION 1 - INTRODUCTION

STUDY REQUEST

In a letter dated December 27, 1990, the Clayton County, Iowa, Board of Supervisors, represented by the County Engineer, requested assistance from the Rock Island District, U.S. Army Corps of Engineers, under the authority provided by Section 14 of the 1946 Flood Control Act, as amended. The request was in regard to erosion along the left descending bankline of the Turkey River which parallels County Road 1620 between Elkport and Osterdock, Iowa.

The Rock Island District requested funds to initiate a Section 14 study for Clayton County and received a work allowance in June 1991.

Rock Island District representatives made a site visit in July 1991 to determine the urgency and severity of the erosion problem at the site.

STUDY AUTHORITY

The authority for this study and report is Section 14 of the 1946 Flood Control Act, as amended by the Water Resources Development Act of 1986. The authority, as amended, states:

That the Secretary of the Army is authorized to allot from any appropriations heretofore and hereinafter made for flood control, not to exceed \$12,500,000 per year, for the construction, repair, restoration, and modification of emergency streambank and shoreline protection work to prevent damages to highways, bridge approaches, public works, churches, hospitals, schools, and other nonprofit public services, when in the opinion of the Chief of Engineers such work is advisable: Provided, that no more than \$500,000 shall be allotted for this purpose at any single locality from the appropriations for any one fiscal year.

STUDY SCOPE

STUDY AREA

The study area, as shown on plate 1, is located along the left descending bankline of the Turkey River, approximately 3 miles northwest of Osterdock, Iowa, in sec. 32, T. 92 N., R. 3 W., Jefferson Township, Clayton County, Iowa, and has a drainage area of approximately 1,560 square miles at the study site.

The Turkey River, a tributary to the Mississippi River, has a drainage area of approximately 1,560 square miles at the study site, parallels County Road 1620 for approximately 1,250 linear feet at the proposed project location, and flows southeasterly through Clayton County, Iowa.

The height of the bankline is approximately 18 feet (see plate 2). The soil is a loamy, sandy type with intermittent areas of sandstone. The area near the study site is generally agricultural. At the site, the road runs between a high bluff and the river.

DETAIL OF INVESTIGATION

This Emergency Detailed Project Report and Environmental Assessment is intended to serve as the decision document, with sufficient detail to allow approval of the project and initiation of the preparation of plans and specifications.

RELATED STUDIES, REPORTS, AND EXISTING WATER PROJECTS

No previous study has been made by the Rock Island District, Corps of Engineers, of this immediate area. The county requested Section 14 emergency streambank protection assistance for several areas along the Turkey River within Clayton County which are being studied individually since they are located on different roadways.

SECTION 2 - PLAN FORMULATION

PUBLIC CONCERNS

The Clayton County Engineer has been concerned about continued erosion along the Turkey River bankline that parallels the county road. The county has had continuous erosion problems with this farm-to-market road. The past 2 years, the county experienced two damaging flooding events. Although the county has made every effort to protect their roads, the disastrous flooding events in August 1990 and again in June 1991 have financially burdened the county, and they are unable to adequately protect all the damaged areas.

The public is concerned because County Road 1620 is the shortest route between Elkport and Osterdock on the north side of the Turkey River.

EXISTING CONDITIONS

Approximately 1,250 linear feet of roadway is being threatened by bankline erosion. In some areas, the top of bank is cutting into the road shoulder. The past 2 years have been declared flood disaster years in Clayton County, and present conditions are such that the water is flowing at a higher elevation with higher velocities, thereby contributing to continuous erosion at the study site. During the last two flooding events, water elevations were 4 feet above the road surface elevation.

FUTURE CONDITIONS WITHOUT PROJECT

The historical erosion rate is calculated at 1.0 foot per year. If immediate action is not taken to curtail further erosion, it is very probable the integrity of the county road will be jeopardized by piping, causing the top of bank to slide into the river within this year. With loss of road use, the public will be forced to use an alternate route to market and town.

PLANNING OBJECTIVES

NATIONAL OBJECTIVES

The plan formulation process to accomplish flood damage reduction is formulated and directed by a national planning objective, consistent with

protecting the Nation's environment, pursuant to national environmental statutes, applicable Executive Orders, and other Federal planning requirements.

Water and land-related resources project plans should be formulated to alleviate problems and to take advantage of opportunities in ways that contribute to that objective.

Contributions to the National Economic Development (NED) are increases in the net value of the national output of goods and services, expressed in monetary units. Contributions to NED are the direct benefits that accrue in the planning area and the rest of the Nation, and include increases in the net value of those goods and services that are marketed, and those that may not be marketed.

SPECIFIC OBJECTIVES

Specific objectives include preventing economic losses due to failure and loss of the county road and minimizing adverse impacts of flood damage reduction measures on the resources.

PLANNING CONSTRAINTS

This study is constrained by all laws of the United States and the State of Iowa, all Executive Orders of the President, and all engineering regulations of the Corps of Engineers. This study also is constrained by the study authority as stated in Section 1 of this report.

ALTERNATIVE SOLUTIONS

The alternative considered in detail to curtail the erosion in the study area was to clear and shape the bankline and then place Iowa Class "D" riprap along the bankline to the top of bank elevation at 649.0 feet National Geodetic Vertical Datum (NGVD). Road relocation was considered, but the initial site visit revealed that the road is situated between the river and a high bluff line, and relocation would be impossible at the site.

SELECTED PLAN

Analysis revealed that Iowa Class "D" riprap protection along approximately 1,250 linear feet of the bankline would be the least costly and would

maximize the net benefits. This alternative would effectively curtail the severe erosion which is now threatening the integrity of the county road.

The proposed work consists of bank clearing, minimal grading, placing Iowa Class "D" riprap on rock fill along the entire 1,250-foot reach, and shaping to provide a 2:H on 1:V slope (see plates 2 and 3).

The total estimated amount of material to be placed beneath the calculated ordinary high water (OHW) elevation of 635.3 feet National Geodetic Vertical Datum (NGVD) is 1.7 cubic yards per linear foot of river bank.

The local sponsor, Clayton County, acting through the Board of Supervisors, will be responsible for cost-sharing construction of the project and 100 percent of the operation and maintenance of the completed project, as prescribed by the Corps of Engineers.

HYDRAULIC ANALYSIS AND BANK PROTECTION DESIGN

Flow Analysis

A flow frequency relationship is readily available for the Turkey River at the USGS gaging station No. 05412500 at Garber. This relationship is shown graphically on plate 4. The gage is close to the erosion site; therefore, the flow frequency relationship at the gage can be transferred to the erosion site using the drainage area ratio to the 0.55 power. This exponent is typical for this region of Iowa. The gage values and erosion site values are shown below in table 1.

TABLE 1

	<i>Flow Frequency</i>	
<u>Frequency</u>	<u>Garber Gage</u> 1,525 sq mi <u>Flow (cfs)</u>	<u>Erosion Site</u> 1,558 sq mi <u>Flow (cfs)</u>
2-yr	15,700	15,900
5-yr	21,400	21,650
10-yr	25,000	25,300
50-yr	32,200	32,600
100-yr	35,200	35,600

Flooding Levels

An HEC-2 backwater deck was developed from bank surveys and USGS quadrangle sheets. The above flow values were input into the HEC-2 deck to derive the flooding levels listed in table 2.

TABLE 2

Flooding Levels

<u>Frequency</u>	<u>Flood Level</u>
2-yr	648.7
5-yr	651.0
10-yr	652.2
50-yr	654.5
100-yr	655.2

Ordinary High Water Elevation

The OHW elevation corresponds to the 25-percent duration elevation, or the elevation which is equalled or exceeded 25 percent of the time. An analysis of historical daily flow records at the Garber gage gives a 25 percent duration flow value at the gage of 1,000 cubic feet per second. This value can be transferred to the erosion site by the ratio of the drainage areas. This computation gives a 25 percent duration flow at the erosion site of 1,010 cubic feet per second. An HEC-2 backwater deck was developed from bank surveys and USGS quadrangle sheets. Inputting the 25 percent duration flow into the HEC-2 deck gives an OHW elevation of 635.3 feet NGVD.

Alternatives

The alternative that was investigated in detail to protect the road from further erosion was placing riprap on the bank. This method has been used successfully in other nearby reaches of the Turkey River. Therefore, other methods of bank protection were not investigated in detail.

Bank Protection Evaluation

The riprap protection was designed in accordance with procedures outlined in the revised Chapter 14 of EM 1110-2-1601. The plates and tables referred to below are from this publication. Average channel velocity

was developed from an HEC-2 run and was 4.2 feet per second (fps). Using Plate 14-3, toe velocity was estimated at 5.6 fps. From Plate 14-7, the required minimum d_{30} was 0.3 foot. The recommended slope that the riprap should be placed at is 2.0:H on 1:V. As shown on Table 14-1, a 12-inch-thick layer of 165 pcf riprap provides a minimum d_{30} of 0.48 foot and therefore satisfies the above requirements. A 6-inch-thick bedding layer should be provided beneath the riprap. Experience with previous nearby projects on the Turkey River has shown that 18 inches of Iowa Class "D" riprap would provide adequate protection. A 6-inch-thick bedding layer should not be provided beneath the Class "D" riprap because the riprap layer will be placed on rock fill. The following is the required minimum riprap gradation:

<u>Percent Lighter by Weight</u>	<u>Limits of Stone wt., lbs.</u>	<u>Class "D" Stone wt., lbs.</u>
100	86-35	250
50	26-17	90
15	13-5	-
5	-	5

The riprap should be placed to the top of the bank. Extra protection at the toe of the bank should not be necessary. A field inspection indicated that previous erosion has probably been caused by piping and subsequent sloughing. The bedding layer discussed above should address the piping problem. The bank toe appears to be very stable. Toe erosion should not be a problem at this site.

ENVIRONMENTAL ASSESSMENT

Purpose and Alternatives

The purpose of this Environmental Assessment (EA) is to evaluate the impacts of various measures proposed to prevent the failure due to erosion of a section of County Road 1620 along the Turkey River (plate 1). The alternatives considered include: (1) clearing, shaping, and riprapping the river bank; (2) road relocation; and (3) no action. The preferred alternative, clearing, shaping, and riprapping, is described in detail in Section 2 of this report.

Road relocation was rejected because the road is located between the Turkey River and a steep bluffline at the study site, leaving relocation as an infeasible solution.

The no action alternative was rejected because continued erosion at the site would result in unacceptable impacts on water quality and aquatic organisms and would lead to the loss of the road.

An environmental review of the preferred alternative indicates there would be no significant effects on the environment, with any effects being short-term and minimal. Therefore, an Environmental Impact Statement (EIS) will not be prepared for this project. Because the proposed action is subject to provisions of Section 404 of the Clean Water Act, a 404(b)(1) evaluation has been prepared (Appendix A). Application has been made for Section 401 certification.

Relationship to Environmental Requirements

The proposed action would comply with Federal environmental laws, Executive Orders and policies, and State and local laws and policies, including the Clean Air Act, as amended; the Clean Water Act, as amended; the Endangered Species Act of 1973, as amended; the Fish and Wildlife Coordination Act of 1958, as amended; the Land and Water Conservation Fund Act of 1966, as amended; the National Environmental Policy Act of 1969; the National Historic Preservation Act of 1966, as amended; Executive Order 11988, Protection of Floodplain Management; and Executive Order 11990, Protection of Wetlands.

The proposed action would not result in the conversion of prime, unique, or state or locally important farmland to nonagricultural uses; therefore, this project is in compliance with the Farmland Protection Policy Act of 1981.

The Turkey River is currently a candidate for Federal listing as a National Wild or Scenic River; hence, the proposed action is being coordinated with the National Park Service in accordance with the provisions of the Wild and Scenic Rivers Act of 1968.

Environmental Setting

The Turkey River is a tributary of the Mississippi River and flows generally southeasterly through the northeast corner of Iowa. The surrounding landscape is composed of timbered, unglaciated areas characterized by steep limestone bluffs that rise above the valley floor. Agricultural fields are interspersed on the floodway.

Natural Resources

The project site is located on a slight outside bend of the left descending bank of the river channel approximately 3 miles upstream of Osterdock, Clayton County, Iowa (plate 1). Substrate at this location is primarily

sand. A detailed description of existing conditions at the project site is given earlier in this section.

Vegetation along the streambank consists of a variety of weedy species that is typical for disturbed roadside areas. Interspersed along the streambank are occasional woody species such as silver maple (*Acer saccharinum*) and box elder (*Acer negundo*) saplings. Herbaceous species present include: reed canary grass (*Phalaris arundinacea*), barnyard grass (*Echinochloa crus-galli*), foxtail grass (*Setaria* sp.), pigweed (*Amaranthus* sp.), lamb's quarters (*Chenopodium album*), false nettle (*Boehmeria cylindrica*), velvet-leaf (*Abutilon theophrastii*), common ragweed (*Ambrosia artemisiifolia*), giant ragweed (*Ambrosia trifida*), lady's thumb (*Polygonum persicaria*), smartweed (*Polygonum* sp.), monkey-flower (*Mimulus ringens*), false pimpernel (*Lindernia dubia*), Queen Anne's Lace (*Daucus carota*), and common milkweed (*Asclepias syriaca*). This habitat provides limited food and cover for wildlife species that utilize open riparian corridors.

Part of the project area has been denuded of vegetation as a result of the placement of emergency rock/dirt fill when the road was threatened from high water.

There will be some long-term loss (25 years or longer) of vegetation as a result of this project. Three mature trees will have to be removed during the construction phase. The three tree species (one each) are silver maple, box elder, and hackberry (*Celtis occidentalis*).

Endangered Species

Three federally listed endangered species are listed for this area: bald eagle (*Haliaeetus leucocephalus*), Iowa Pleistocene snail (*Discus macclintocki*), and northern wild monkshood (*Aconitum noveboracense*). Suitable habitat for the Iowa Pleistocene snail and monkshood, namely algific slopes, is not found at the project site. Eagles are restricted to wintertime residence along the Mississippi River and are not found in the project vicinity and will not be impacted. Therefore, no impacts to any populations of federally listed rare, threatened, or endangered species are expected to occur from the proposed action.

Coordination with the Iowa Department of Natural Resources indicated that the project area contains no known populations of any State listed rare, threatened, or endangered species (Appendix B).

Environmental Effects

No significant adverse impacts to natural resources would result from construction of the proposed project. Because the project area is a county road, local wildlife is adapted to some level of disturbance. Therefore,

project construction activities will have only short-term and temporary impacts to wildlife.

To permit access of construction equipment to the project site, the loss of three mature trees is unavoidable. This loss is regrettable but is not considered to be significant since the area adjacent to the project is extensively wooded for considerable distances upstream, downstream, and inland.

Some initial, minor loss of benthic organisms may result from construction of the proposed project. However, after placement of riprap is completed, the affected area should quickly recolonize. Increased interstices will be provided by the rock scour protection and will enable crevice-inhabiting invertebrates to recolonize and maintain or increase in-stream biodiversity compared to preconstruction levels.

Completion of this project would not negatively impact recreational use of the river.

Temporary increases in turbidity may occur during project construction. However, once construction is complete, turbidity will return to preconstruction levels or lower since sediments will no longer be eroding into the river system at this site. There will be an increase in noise levels and a decline in air quality during the construction phase. These impacts are minor and will not permanently affect the area since the project is not located near residences or businesses.

No mining activity is present at the project site, and no mineral resources will be affected by the proposed project.

Economic and Social Effects

The socioeconomic impacts associated with providing streambank erosion protection for County Road 1620 would be positive. Community cohesion in the project area would be positively affected; the proposed streambank protection project would provide for continued use of the roadway, eliminating the need for travelers to use a longer, more time consuming detour route. In addition, the project would require no residential relocations and would result in no significant impacts to community or regional growth.

Services to and from the affected area would be positively impacted by the project. Placement of streambank protection would maintain the shortest access route to the affected area, avoiding additional travel expenses and delays in emergency vehicle response times. Public facilities would benefit from reduced damages from flood-related erosion. The project would eliminate the potential life, health, and safety threat before it necessitated the closing of the roadway. (The roadway would be closed to traffic once bank erosion posed a threat to travelers.)

The project would result in no significant impacts to property values or related tax revenues. Project construction would result in no noticeable impacts to employment or the labor force in Clayton County, Iowa. No changes in business or industrial activity would be noticed during or after construction, and no business or farm relocations would be required.

Heavy machinery would generate temporary increases in noise levels during construction; however, disturbance to residents and businesses would be minimal. No significant long-term noise impacts would result in the project area; however, traffic related noise levels would increase along the detour route. The aesthetics of the affected waterway property would not be adversely impacted; the existing shoreline is badly eroded and features little vegetative cover.

Cultural Resources

The State Historical Society of Iowa, Historical Division of the Department of Cultural Affairs, found that there are no historic properties which might be affected by the proposed undertaking. However, if the project work uncovers an item or items which might be of archeological, historical, or architectural interest, or if important new archeological, historical, or architectural value come to light in the project area, reasonable efforts should be made to avoid or minimize harm to the property until the significance of the discovery can be determined.

Coordination

Coordination with governmental agencies and the public has been maintained during the planning process. In accordance with the provisions of the Fish and Wildlife Coordination Act, the Iowa Department of Natural Resources, the U.S. Fish and Wildlife Service, the Clayton County field office of the Soil Conservation Service, and the Clayton County Conservation Board were contacted by telephone. The U.S. Environmental Protection Agency also was contacted by telephone under the provisions of the National Environmental Policy Act and the Clean Air Act. The State Historical Society of Iowa concurred with the District's determination that no significant cultural resources would be affected by the project in a letter dated September 18, 1991 (Appendix B). Coordination was made with the National Park Service by telephone on October 10, 1991, as required by the National Wild and Scenic Rivers Act. The agencies contacted agreed with the evaluation that the net effect of the proposed action would not be significant (Appendix B). Individual agency concerns were addressed earlier in this document. The report will be coordinated with the Iowa Department of Economic Development for review in compliance with Executive Order 12372.

The U.S. Fish and Wildlife Service expressed the desire that steps be considered to minimize negative aesthetic impacts resulting from placement

of riprap along the bankline. Although aesthetics are not of prime consideration in emergency actions, capping the affected area with topsoil that would later be planted to aid soil stabilization was considered. However, this measure was rejected because the highly erodible nature of the river at this location offered too little a chance of this technique being successful.

REAL ESTATE REQUIREMENTS

The Clayton County Road 1620 Section 14 Emergency Streambank Protection project as proposed in this report involves one ownership. The lands required for the protection of the left descending bankline of the Turkey River as described in this report are currently owned by the sponsor and are adequate for project execution. Since the sponsor (Clayton County, Iowa) currently owns the lands which are part of the facility to be protected, the sponsor will not receive credit for these lands.

ECONOMIC ASSESSMENT

Methodology

This study assesses the feasibility of providing protective action necessary to prevent further bank erosion of a county road along the Turkey River in Clayton County, Iowa. The project site is approximately 3 miles northwest of Osterdock, Iowa. June 1991 flooding caused extensive damage to the bankline and, if the erosion is not contained, the road will be endangered. The historic rate of erosion, as determined by the Clayton County Engineer, has been approximately 1 foot per year.

This study recommends placing riprap along 1,250 linear feet of the bankline. The annual benefits and costs of the action were computed using September 1991 price levels and an 8-3/4 percent discount rate. The period of analysis is 50 years.

Benefits of Protective Action

The benefits of protective action are derived from a consideration what would occur if no action were taken. Four potential categories of benefits were examined: (1) detour; (2) road maintenance costs; (3) land loss; and (4) redevelopment.

(1) Detour Costs - Without protective action, the erosion will continue and cause failure of the county road in approximately 2 years (1993), closing it to traffic. Without replacement of the road, motorists

will be forced to use a longer, alternate access route throughout the 50-year period of analysis. Motorists using the detour route will incur additional expenses related to costs for operating vehicles and opportunity of time costs. Benefits derived from avoided detour costs were computed based on the following:

(a) In 1990, the average daily traffic count on the county road was 35 vehicles, as reported by the Clayton County Engineer. This average daily traffic was broken down by vehicle type, detour days per year, and average number of trips per detour day (see table 3).

TABLE 3

Analysis of Average Annual Traffic

<u>Vehicle Type</u>	<u>Detour Days Per Year</u>	<u>Average Daily Number of Trips</u>	<u>Total Annual Number of Trips</u>
Passenger Cars	365	29.4	10,731
Heavy Trucks	302	1.4	423
School Bus	180	5.0	900
Emergency Vehicle	365	.5	182
Mail Vehicle	302	1.0	302
Farm Machinery	118	2.0	<u>236</u>

Total Annual Number of Trips of All Vehicles - 12,774

12,774 - 35 vehicles/day
365 days

(b) The most direct detour route would necessitate that an additional 9 miles be driven, or 18 miles round trip. Other detour routes would further increase detour mileage. At an average of 30 mph, detour time is 0.3 hour.

(c) Farm machinery, heavy trucks, and mail vehicles would have no passengers other than the driver. Passenger cars would have an average of 2 persons; emergency vehicles would have 2 occupants. School buses would have a driver and an average busload of 16 passengers.

(d) The 1991 average variable cost for operating passenger cars and mail vehicles is approximately \$0.29/mile; buses, emergency vehicles, and heavy trucks \$0.61/mile; and farm machinery \$1.02/mile. These figures are based on average maintenance, repair, accessory, tire, fuel, and oil costs, including taxes on gasoline, oil, and tires (see table 4).

TABLE 4

*Summary of Vehicle Operating Costs
Resulting From a 1-Year Road Detour*

<u>Vehicle Type</u>	<u>Extra Mileage Per Day (A) (1)</u>	<u>Total Annual Number of Trips (B)</u>	<u>Operating Cost Per Mile (\$) (C)</u>	<u>Total Additional Operating Cost Per Year (\$) (AxBxC)</u>
Passenger Car	9	10,731	0.29	\$28,008
Heavy Truck	9	423	0.61	2,322
School Bus	9	900	0.61	4,941
Emergency Vehicle	9	182	0.61	999
Mail Vehicle	9	302	0.29	788
Farm Machinery	9	236	1.02	<u>2,166</u>

Total Cost (\$) - \$39,124
(rounded) - \$39,100

(1) one-way detour mileage is 9 miles.

(e) The opportunity cost of time is the value of work or leisure activities foregone for travel purposes. For passenger cars, the value of time for adults and children was assumed to equal 1/3 and 1/12 of the average hourly general wage rate, respectively. The Clayton County, Iowa, 1991 average hourly wage rate is \$7.30, with 40 percent of the area residents being under the age of 18. Therefore, the opportunity cost of time for passenger cars was assumed to be \$1.70/hour/occupant ($\$7.30 \times 0.6 \times 1/3$) + ($\$7.30 \times 0.4 \times 1/12$) = \$1.70).

(f) Approximate hourly wage rates were used as values of time for heavy truck operators (\$6.50), school bus drivers (\$5.32), mail carriers (\$12.00), farm machine operators (\$5.70), and emergency vehicle drivers (\$8.34). School buses require an opportunity cost of time amounting to \$15.05 per hour for 1 driver and 16 children ($\$5.32 + 7.30 \times 1/12 \times 16 = \15.05) (see table 5).

TABLE 5

*Summary of Opportunity of Time Costs
Resulting From a 1-Year Road Detour*

<u>Vehicle Type</u>	<u>Traveler Time/Trip in Hours (A)</u>	<u>Total Annual Number of Trips (B)</u>	<u>Opportunity Time Cost Per Hour (C)</u>	<u>Total Opportunity Time Cost Per Year (AxBxC)</u>
Passenger Car	0.3	10,731	\$3.40	\$10,946
Heavy Truck	0.3	423	6.50	825
School Bus	0.3	900	15.05	4,064
Emergency Vehicle	0.3	182	16.68	911
Mail Vehicle	0.3	302	12.00	1,087
Farm Machinery	0.3	236	5.70	404
			Total Cost (rounded)	\$18,237 18,200

(g) As shown in tables 4 and 5, detour costs resulting from increased vehicle operating costs and opportunity of time costs are \$39,100 and \$18,200, respectively.

(2) Road Maintenance - Closure of the county road along the Turkey River would result in no change in road maintenance cost. The annual maintenance cost for the detour route would increase by a dollar amount equal to the decrease in maintenance costs for the closed roadway, as explained by the Clayton County Engineer.

(3) Land Loss - Benefits derived from avoided land loss are not applicable in this instance.

(4) Redevelopment Benefits - Clayton County, Iowa, does not qualify for redevelopment benefits.

(5) Total Benefits - Average annual benefits from providing streambank erosion protection are \$48,300.

Cost of Recommended Action

The Rock Island District identified the least-cost alternative for protecting the county road along the Turkey River from failure caused by bank erosion. The preventative action involves riprapping the bank, along with end protection to prevent undercutting of the project. The estimated total first cost is \$213,000.

Detailed project first costs and average annual costs, computed at an 8-3/4 percent discount rate over a 50-year period of analysis, are shown in tables 6 and 7. Annual maintenance was calculated assuming that 50 percent of the riprap would be replaced in 25 years (in year 25 following the base year of the project). Due to the short construction period, no interest during construction was calculated. A summary of benefits and costs for the recommended action is shown in table 8. The project is economically justified and is the NED plan.

TABLE 6

*Detailed Estimate of Construction Costs
(September 1991 Price Levels)*

<u>Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost (\$)</u>	<u>Total Unit Cost (\$)</u>
Riprap	7,800	ton	20	156,000
Bank Preparation (include tree removal)	1,250'	job	--	<u>2,500</u>
			Subtotal	158,500
			Contingencies	<u>39,500</u>
			Subtotal	198,000
			Engineering and Design	8,000
			Supervision and Administration	<u>7,000</u>
			Total Project Cost	213,000

Note: The administrative cost for real estate requirements is estimated at \$1,300 (Federal - processing LCA, \$1,000; and non-Federal - \$300).

TABLE 7

Annual Cost of Recommended Action

<u>Description</u>	<u>First Cost (\$)</u>	<u>Annual Cost (\$)</u>
Total First Cost	213,000	18,900
Operation & Maintenance [(pw27 x .5 x 156,000)CRF]		<u>700</u>
	Total Annual Cost	19,600

TABLE 8

Summary of Benefits and Costs

<u>Description</u>	<u>Amount (\$)</u>
Project First Cost	213,000
Annualized First Cost	18,900
Annual Maintenance Cost	700
 Total Annual Cost	 19,600
 Average Annual Benefits	 48,300
Net Benefits	28,700
 Benefit-to-Cost Ratio	 2.5

SENSITIVITY ANALYSIS

The present rate of erosion is approximately 2 feet per year under normal conditions. A sensitivity analysis was performed to determine the effect of less than normal precipitation or drought conditions reducing and/or delaying further erosion. Delaying project construction an additional 3 years would result in a benefit-to-cost ratio of 1.9:1, and an additional 7 years would result in a 1.3:1 benefit-to-cost ratio.

COST APPORTIONMENT

Project cost-sharing is in accordance with Public Law 99-662 of the Water Resources Development Act of 1986 and applicable regulations. Total cost apportionment for this project is shown in table 9.

TABLE 9

Cost Apportionment

<u>Non-Federal</u> ...	Estimated Total Project Cost	\$213,000
	25 percent cost-share	<u>x 0.25</u>
	Total Non-Federal Cash Contribution	\$ 53,300
 <u>Federal</u>	Estimated Total Project Cost	 \$213,000
	Less Non-Federal Share	 <u>-53,300</u>
	Total Federal Cost	\$159,700

ABILITY TO PAY ANALYSIS

Section 103 of Public Law 99-662 requires the Corps of Engineers to evaluate a local sponsor's ability to pay the required non-Federal costs of a project. The county does not qualify for a reduced cost-sharing formula. The analysis is based on the project benefit-to-cost ratio and the project area per capita income, as shown in table 10.

TABLE 10

Ability to Pay Analysis

Annual Cost	\$ 19,600	Cost and benefits
Annual Benefits	48,300	for flood control
Total Cost	213,000	
Local Share	53,300	
Benefit-to-Cost Ratio	2.5	Sum of State and
State Factor	91.22	County must be
County Factor	75.47	less than 163.2
		Sum is 166.69

Not Qualified

Base Benefits Floor	70%	1/4 Benefit-to-Cost
% Local Share	25%	Ratio
EF	-0.46	Eligibility Factor

FINANCIAL ANALYSIS

Clayton County, Iowa, is the local sponsor and is willing and able to pay its share of the project cost. Funding for the county's share will be obtained from their county roads fund and is available or can be readily obtained when needed.

SECTION 3 - PLAN IMPLEMENTATION

CORPS OF ENGINEERS

This report will be processed for approval of the selected plan of action and the authorization of funding for construction. Upon approval and appropriation of funding by the Office of the Chief of Engineers, the Rock Island District will be responsible for preparation of plans and specifications and the construction of the project.

COORDINATION

Details of the proposed project have been coordinated with the following Federal, State, and local agencies:

Clayton County, Iowa
Clayton County Conservation Board
Iowa Department of Natural Resources
Iowa State Historical Department, Office of Historic Preservation
U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency
National Park Service

Records of correspondence with members of these agencies can be found in Appendix B - Pertinent Correspondence.

CLAYTON COUNTY

In compliance with Section 221 of Public Law 91-611, the county will, prior to the advertisement of any construction contract for the project, enter into an agreement (Local Cooperation Agreement) with the Government, whereby the county pledges to act as local sponsor for the proposed project and carry out the following responsibilities:

- a. Provide during the period of construction a cash contribution of 5 percent of total project costs.
- b. Provide all lands, easements, and rights-of-way, and dredged material disposal areas, and perform all relocations of utilities and facilities (excluding railroad bridges and approaches thereto) determined by the Government to be necessary for construction of the project.
- c. If the value of the contributions provided under paragraphs a. and b. above represents less than 25 percent of total project costs, the county

shall provide, during the period of construction, an additional cash contribution in the amount necessary to make its total contribution equal to 25 percent of total project costs.

d. Hold and save the Government free from all damages arising from the construction, operation, and maintenance of the project, except for damages due to the fault or negligence of the Government or its contractors.

e. Operate, maintain, repair, replace, and rehabilitate the completed project, or functional portion of the project, in accordance with regulations or directions prescribed by the Government.

f. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Public Law 100-17, and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way for construction and subsequent operation and maintenance of the project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

g. Comply with all applicable Federal and State laws and regulations, including Section 601 of Title VI of the Civil Rights Act of 1964, Public Law 88-352, and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations, as well as Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army."

h. Contribute all project costs in excess of the Federal statutory limitation of \$500,000.

In addition, the county must grant the Government a right to enter, at reasonable times and in a reasonable manner, upon land which it owns or controls for access to the project for the purpose of inspection and for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the project if such inspection shows that the county for any reason is failing to fulfill its obligations under the Agreement and has persisted in such failure after a reasonable notice in writing by the Government, delivered to the county. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Government in such event shall operate to relieve the county of responsibility to meet its obligations as set forth in the Agreement or to preclude the Government from pursuing any other remedy at law or equity.

The county has stated in a letter of assurance, dated November 15, 1991, that they have reviewed the form Local Cost Sharing Agreement and are willing and able to pay its share of the total project costs. Sufficient funds are available through the county's road use budget, and the cash payment can be deposited directly with the Government or in an escrow account, upon demand by the Government.

The estimated total non-Federal share of the total project costs is estimated to be \$53,300. It is anticipated that the county will need to invest \$700 annually to replace lost riprap during the 50-year project life.

SECTION 4 - RECOMMENDATION

I recommend that the plan selected herein, to provide riprap slope protection along Clayton County Road 1620 which parallels the Turkey River between Elkport and Osterdock, Iowa, be implemented as a Federal project, with cost to the United States for construction presently estimated at \$159,700. The plan involves placing approximately 7,800 tons of riprap along about 1,250 linear feet of the Turkey River bankline paralleling County Road 1620. The road will be protected from damages which would cause its failure and prevent the public from using the farm-to-market road between Elkport/Garber and Osterdock.



John R. Brown
Colonel, U.S. Army
District Engineer

FINDING OF NO SIGNIFICANT IMPACT

SECTION 14 EMERGENCY STREAMBANK PROTECTION
TURKEY RIVER, CLAYTON COUNTY ROAD 1620
BETWEEN ELKPORT AND OSTERDOCK, IOWA

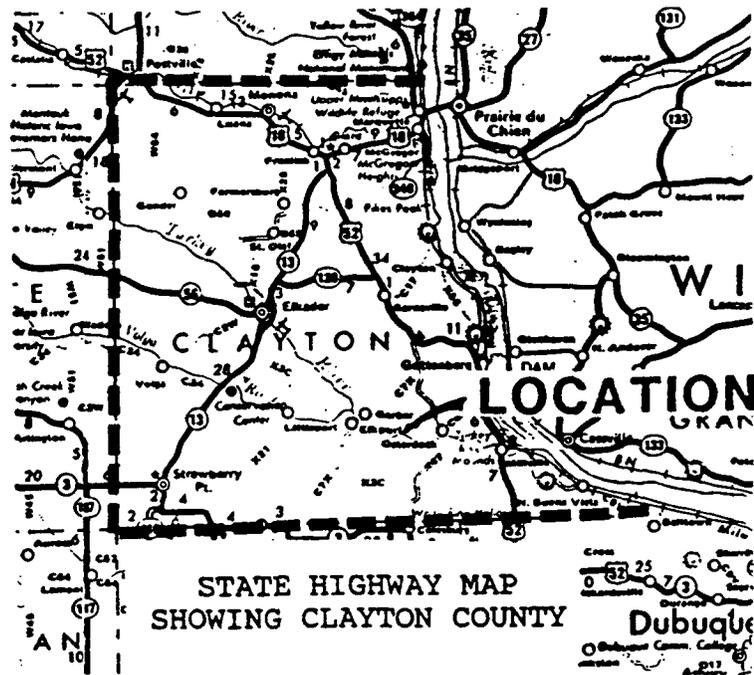
In accordance with the National Environmental Policy Act, the Rock Island District, U.S. Army Corps of Engineers, has assessed the environmental impacts of the above project. The intent of this project is to provide emergency bank protection on the left descending bankline of the Turkey River paralleling County Road 1620 from approximately 3 miles northwest (upstream) of Osterdock, Clayton County, Iowa. The project involves placing approximately 7,800 tons (5,200 cubic yards) of Iowa Class "D" riprap along about 1,250 linear feet of river bank.

This Finding of No Significant Impact is based on the following factors: the proposed project would have only minor and short-term impacts on fish and wildlife resources and on water quality; the project would protect the county road from future damages due to the eroding bankline; and no significant social, economic, environmental, or cultural impacts are anticipated as a result of the proposed action.

The environmental review process indicates that the proposed action does not constitute a major Federal action significantly affecting the environment. Therefore, preparation of an Environmental Impact Statement is not required. This determination may be reevaluated if warranted by later developments.

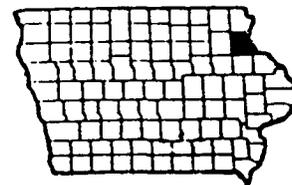
(date)

John R. Brown
Colonel, U.S. Army
District Engineer



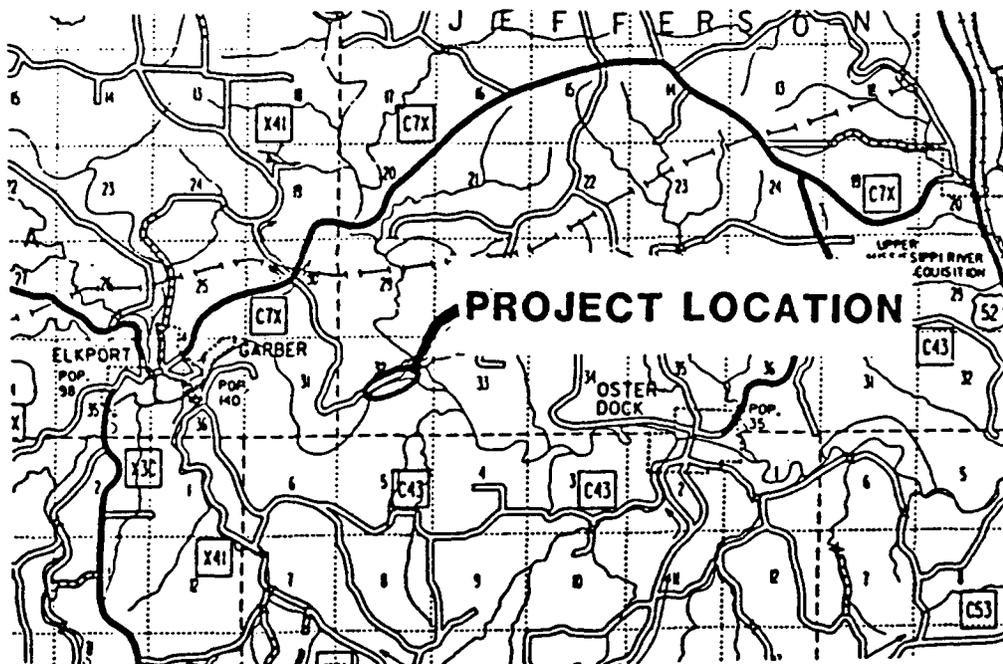
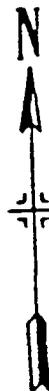
STATE HIGHWAY MAP
SHOWING CLAYTON COUNTY

Dubuque
 O Dubuque Center, College
 A 1917

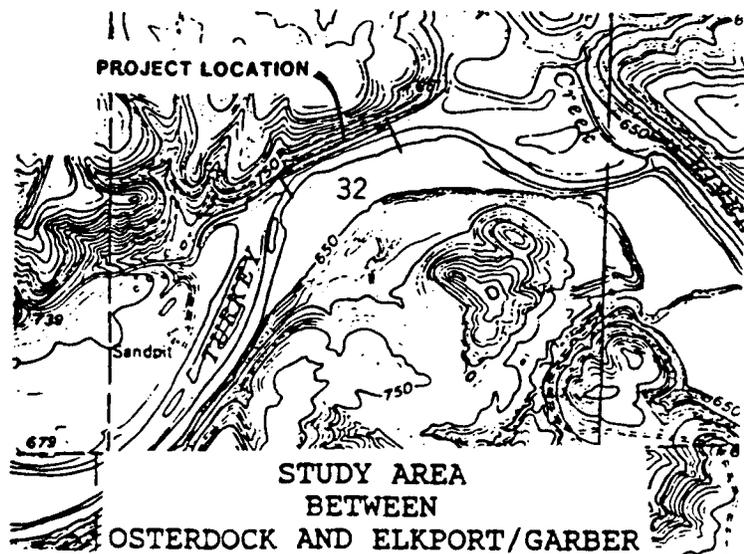


VICINITY MAP

IOWA KEY MAP
SHOWING
COUNTY LOCATION



PROJECT LOCATION



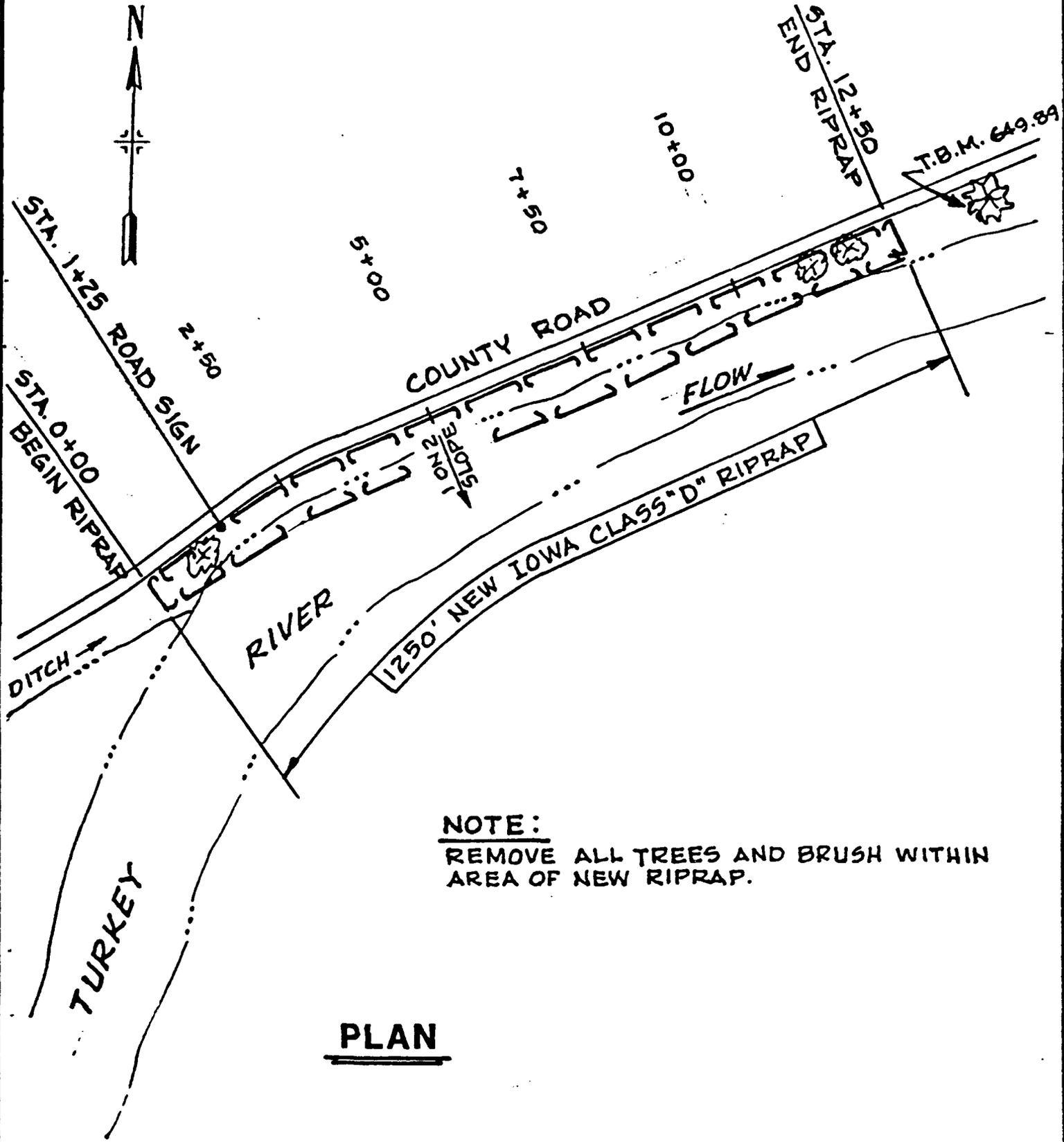
PROJECT LOCATION

STUDY AREA
BETWEEN
OSTERDOCK AND ELKPORT/GARBER

TURKEY RIVER
CLAYTON COUNTY, IOWA

SITE 3 - COUNTY ROAD
BETWEEN ELKPORT AND OSTERDOCK

AREA AND LOCATION MAPS
PLATE I



NOTE:

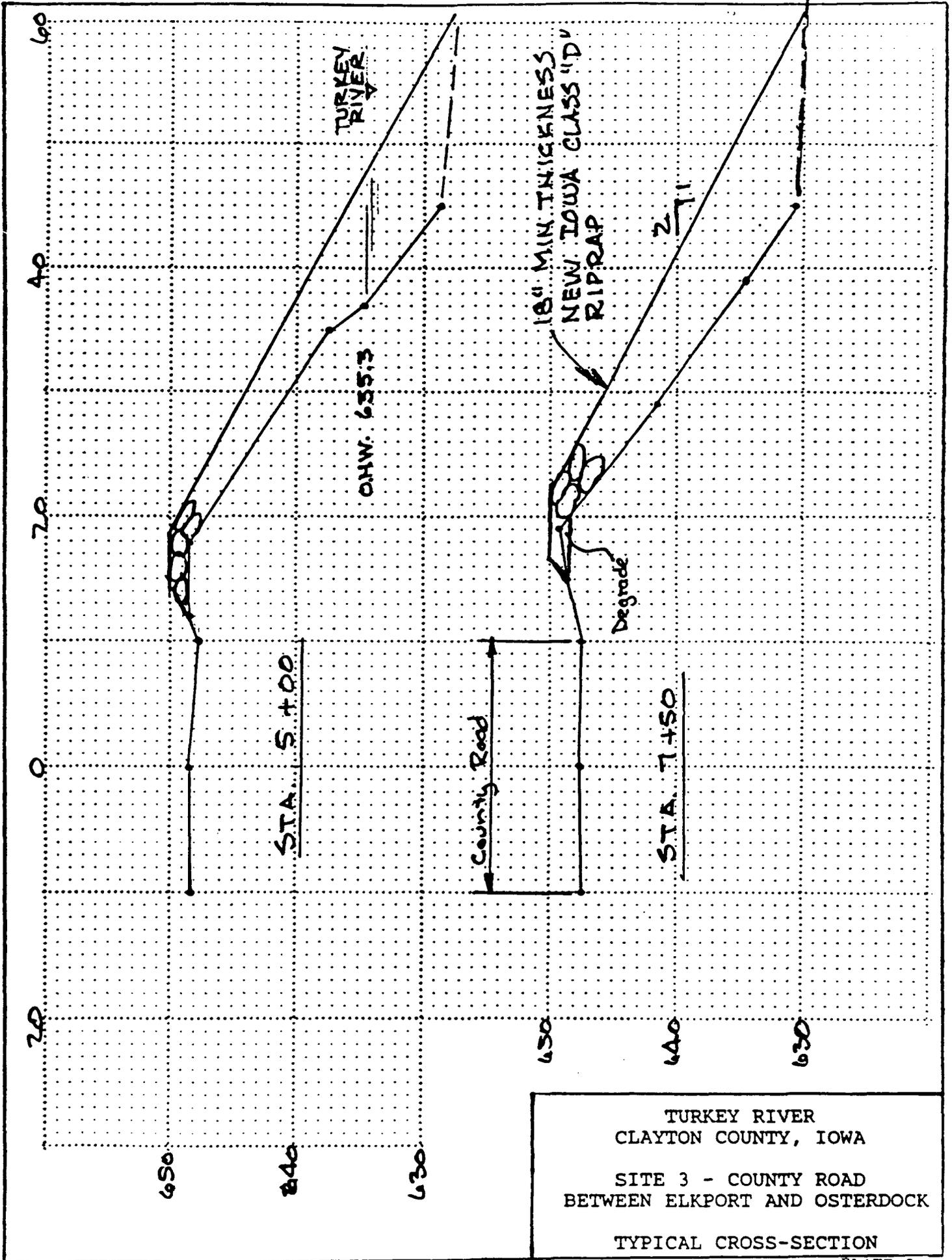
REMOVE ALL TREES AND BRUSH WITHIN AREA OF NEW RIPRAP.

PLAN

TURKEY RIVER
 CLAYTON COUNTY, IOWA

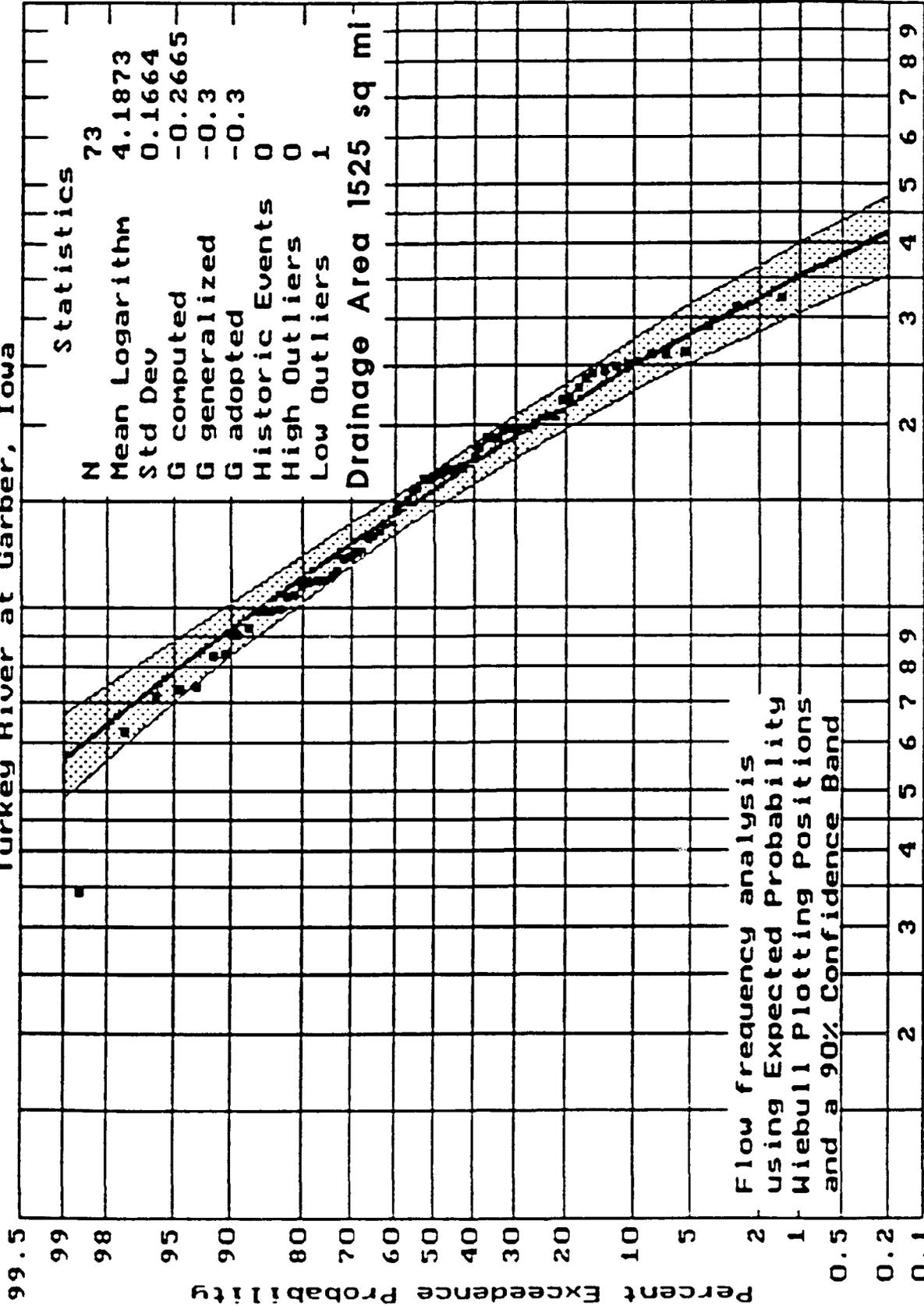
SITE 3 - COUNTY ROAD
 BETWEEN ELKPORT AND OSTERDOCK

PLAN PLATE 2



TURKEY RIVER
 CLAYTON COUNTY, IOWA
 SITE 3 - COUNTY ROAD
 BETWEEN ELKPORT AND OSTERDOCK
 TYPICAL CROSS-SECTION

Turkey River at Garber, Iowa



SECTION 404(b)(1) EVALUATION

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DETAILED PROJECT REPORT
AND ENVIRONMENTAL ASSESSMENT
FOR
SECTION 14 EMERGENCY STREAMBANK PROTECTION

TURKEY RIVER
CLAYTON COUNTY ROAD 1620
BETWEEN
ELKPORT AND OSTERDOCK, IOWA

APPENDIX A
CLEAN WATER ACT
SECTION 404(b)(1) EVALUATION

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DETAILED PROJECT REPORT
AND ENVIRONMENTAL ASSESSMENT
FOR
SECTION 14 EMERGENCY STREAMBANK PROTECTION

TURKEY RIVER
CLAYTON COUNTY ROAD 1620
BETWEEN
ELKPORT AND OSTERDOCK, IOWA

APPENDIX A
CLEAN WATER ACT
SECTION 404(b)(1) EVALUATION

SECTION 1 - PROJECT DESCRIPTION

LOCATION

The project site is located along the left descending bank of the Turkey River adjacent to County Road 1620, approximately 3 miles northwest (upstream) of Osterdock, Jefferson Township, Clayton County, Iowa, in sec. 32, T. 92 N., R. 3 W. (plate 1).

GENERAL DESCRIPTION

This project will provide erosion protection for the threatened area by riprapping 1,250 linear feet of embankment between the riverbed and the road edge. Iowa Class "D" riprap will be placed along the bank and shaped to an approximately 2 horizontal on 1 vertical slope. Riprap will be no less than 18 inches thick. Rock will be placed approximately 13 vertical feet above the ordinary high water mark. Plate 3 of the main report shows a cross section of the project design.

PURPOSE AND AUTHORITY

The purpose of this action is to provide streambank protection to County Road 1620 adjacent to the Turkey River northwest of Osterdock, Iowa. Protection is needed to prevent loss of the road resulting from the erosional forces of the river.

The authority for this study and report is Section 14 of the 1946 Flood Control Act, as amended by the Water Resources Development Act of 1986 (Public Law 99-662).

GENERAL DESCRIPTION OF DREDGED OR FILL MATERIAL

Approximately 7,800 tons (5,200 cubic yards) of riprap and bedding rock will be used. Riprap will consist of quarried stone (generally limestone), and bedding rock will be smaller-sized rock. Both riprap and bedding rock will be chemically stable, natural stone obtained from an approved commercial source.

DESCRIPTION OF PROPOSED PLACEMENT SITE

Riprap will be placed along 1,250 linear feet of the Turkey River shoreline as it parallels and abuts the county road embankment.

Construction activities will require the removal of three mature trees. This is not considered to be a significant loss because of the extent to which the surrounding area is forested.

The vegetation of the affected area consists of grasses and forbs typical for disturbed roadside areas. For a detailed description, refer to the Natural Resources section of the Environmental Assessment in the main report.

DESCRIPTION OF PLACEMENT METHOD

Riprap will be trucked directly to the site. A backhoe or other conventional construction equipment will be used to adjust and shape the materials to the correct dimensions.

SECTION 2 - FACTUAL DETERMINATIONS

PHYSICAL SUBSTRATE DETERMINATIONS

The substrate of the Turkey River at the project location is mostly sand. Given the size of Class "D" riprap, downstream movement of fill material is anticipated to be negligible. Past experience with this riprap for bank stabilization further substantiates this claim.

WATER CIRCULATION, FLUCTUATION, AND SALINITY DETERMINATIONS

WATER

The Turkey River is a freshwater lotic system. The riprap that is proposed to be placed along its shoreline is basically an inert material that will have little effect on water chemistry. Water clarity, odor, taste, salinity, and dissolved gas levels will not be appreciably changed. The nature of the fill will not cause any changes in nutrient levels.

CURRENT PATTERNS AND CIRCULATION

Riprap will be placed parallel to and along the shoreline. Approximately 20 feet of the streambed below the ordinary high water elevation of 635.3 NGVD will be covered by the riprap for the length of the project. Approximately 1.7 cubic yards per linear foot of riprap will be placed below the ordinary high water level. Current patterns and circulation should not be noticeably affected.

NORMAL WATER LEVEL FLUCTUATIONS

The proposed riprap will be aligned to fit along the road embankment/river bank. It will not cause any changes in the natural water levels of the river, nor will it cause any noticeable changes in fluctuation levels immediately upstream or downstream.

SUSPENDED PARTICULATE/TURBIDITY DETERMINATIONS

There will be minor increases in turbidity during construction. However, these increases will be temporary, and turbidity levels will return to

normal upon completion of the project. Post-construction turbidity levels may actually be lower than pre-construction levels during high-water events since bank erosion at the project location will be all but eliminated.

CONTAMINANT DETERMINATIONS

Riprap will be chemically stable and noncontaminating rock obtained from an approved commercial source. No known contaminated substrate will be disturbed.

AQUATIC ECOSYSTEM AND ORGANISM DETERMINATIONS

Fish within the project area will temporarily disperse during construction. Construction activities will be scheduled to avoid the spring spawning season. No unique fishery exists within the project area. No mussel specimens were noted for the immediate project site, making it unlikely that any significant impact will occur to mussel populations. Riprap placement will increase benthos mortality, although reestablishment of benthic populations is expected after project completion. The placement of riprap should have little effect on plankton, nekton, or the aquatic food web.

Riprap provides crevices and spaces for small fish and invertebrates which may lead to increased in-stream biodiversity.

There will be no noticeable effect on special aquatic sites. No sanctuaries, refuges, wetlands, mudflats, or vegetated shallows will be affected.

An evaluation of Federal and State endangered species is given earlier in the Environmental Assessment portion of this document.

In an effort to minimize impacts, the minimum amount of riprap necessary to prevent the loss of the road will be used. Construction will take place under low water conditions to minimize disturbance to the substrate.

PROPOSED PLACEMENT SITE DETERMINATIONS

The mixing of materials into the water will be minimal. The riprap fill will consist of large rock. Construction will take place under low water conditions.

No violations to water quality standards should occur. An application for State certification under Section 401 of the Clean Water Act has been submitted. Aesthetic impacts are not anticipated to be significant (see

page 11 of the main report under "Coordination"). The riprap will extend out from the edge of the roadway approximately 45 feet. Of that 45 feet, approximately 20 feet of the bankline and streambed will be covered below the ordinary high water elevation. A portion of the project site currently contains unvegetated rock/dirt fill that was used to provide emergency protection for the road.

The proposed project should have no effect on human use activities. No municipal or private water supplies will be affected. Recreational or commercial activities should not be negatively impacted. No parks, national or historic monuments, wilderness areas, preserves, or research sites are found within the project area.

DETERMINATION OF THE CUMULATIVE AND SECONDARY EFFECTS ON THE AQUATIC ECOSYSTEM

The placement of riprap will cause a small amount of disturbance to the Turkey River shoreline area. Upon completion of the project, both aquatic and terrestrial organisms will repopulate the site from adjacent areas. No significant cumulative or secondary effects should occur.

**SECTION 3 - FINDINGS OF COMPLIANCE OR NONCOMPLIANCE
WITH THE RESTRICTIONS ON PLACEMENT**

1. No significant adaptations to the guidelines were made relating to this evaluation.
2. The alternative of no Federal action was not feasible because it did not provide for erosion protection for the county road.
3. Certification under Section 401 of the Clean Water Act has been applied for and will be received from the State of Iowa prior to construction.
4. The project will not introduce toxic substances into nearby waters or result in appreciable increases in existing levels of toxic materials.
5. No significant impacts to Federal or State-listed endangered or threatened species will result from this project.
6. The proposed project is in a fresh water inland river system. No marine sanctuaries are involved.
7. No municipal or private water supplies will be affected. Minor impacts will result from the construction site; however, no sensitive or critical habitats will be affected, and no long-term impacts will occur.
8. Project construction materials will be physically and chemically stable.
9. The proposed actions will not significantly affect water quality or the aquatic ecosystem and are in compliance with the requirements of guidelines for Section 404(b)(1) of the Clean Water Act, as amended.

Date

John R. Brown
Colonel, U.S. Army
District Engineer

PERTINENT CORRESPONDENCE

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TERRY E. BRANSTAD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
LARRY J. WILSON, DIRECTOR

District Engineer
U.S. Army Engineer District, Rock Island
ATTN. Planning Division
Clock Tower Building - P.O. Box 2004
Rock Island, Illinois 61204-2004

24 July 1991

Dear Mr. Hanson:

Thank you for inviting our comments on the environmental impact of five Section 14 Emergency Streambank Protection projects on the Turkey River in Clayton County.

I have searched maps and computer records of the project areas and consulted with other Bureau staff members. At this time, the Preserves and Ecological Services data base contains no records of rare species or significant natural communities in the project areas.

Please note that the lack of records in specific areas does not necessarily mean that rare species or significant natural communities are absent. Our data are not the result of thorough field surveys and should not be considered a substitute for on-site inspection.

This letter does not constitute a Department permit. Before this project may proceed, you may need to obtain permits from various Bureaus of this and other state and federal departments.

If you have any questions about this letter or if you require further information, please contact me.

Sincerely,

John Fleckenstein
Bureau of Preserves and
Ecological Services



State Historical Society of Iowa

The Historical Division of the Department of Cultural Affairs

September 18, 1991

In reply refer to:
R&C#: 910922045

Dudley M. Hanson, P. E.
Chief, Planning Division
Rock Island District Corps of Engineers
Clock Tower Building
P. O. Box 2004
Rock Island, IL 61204-2004

RE: EMERGENCY STREAMBANK STABILIZATION - FOUR LOCATIONS ALONG TURKEY RIVER

Dear Mr. Hanson:

Based on the information you provided, we find that there are no historic properties which might be affected by the proposed undertaking. Therefore, we recommend project approval.

However, if the proposed project work uncovers an item or items which might be of archeological, historical or architectural interest, or if important data come to light in the project area, you should make reasonable efforts to avoid or minimize harm to the property until the significance of the discovery can be determined.

Should you have any questions or if the office can be of further assistance to you, please contact the Review & Compliance program at 515-281-8743.

Sincerely,

Kathy Gourley
Archeologist, Review and Compliance Program
Historic Preservation Bureau

/st

cc: Ron Pulcher
Adrian Anderson

402 Iowa Avenue
Iowa City, Iowa 52240
(319) 335-3916

Capitol Complex
Des Moines, Iowa 50319
(515) 281-5111

Montauk
Box 372
Clermont, Iowa 52135
(319) 423-7173

CONVERSATION RECORD

TIME 1100

DATE 9/19/91

TYPE VISIT CONFERENCE TELEPHONE INCOMING OUTGOING

Location of Visit/Conference:

ROUTING	
NAME/SYMBOL	INT

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU: Mike Bronoski

ORGANIZATION (Office, dept., bureau, etc.): USEPA - Kansas City

TELEPHONE NO.: ~~3641~~ FTS 8-276-7291

SUBJECT: 4 Section 14 Projects in Clayton County, Iowa - Coordination with USEPA, Region 7

SUMMARY
I called Mike to obtain his agency's comments regarding the subject. I had faxed him an informational sheet and maps of the project sites at 0930 this morning. (Attached.)

Mike said that his agency has two primary focuses of concern: toxic and hazardous wastes (if any) and impacts to wetlands. He indicated that he was aware that we normally address such concerns in the project EA, but he wanted to remind us that EPA will be reviewing the EAs with these issues in mind. Mike also mentioned that the Region 7 office now has a Wetlands Protection Section which will be part of EPA's review team for all NEPA and 404 documents.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Charlene Carmack	Charlene Carmack	9/19/91

ACTION TAKEN

SIGNATURE	TITLE	DATE

CONVERSATION RECORD

TIME
1330

DATE
2 Oct 91

TYPE

VISIT

CONFERENCE

TELEPHONE

INCOMING

OUTGOING

ROUTING

NAME/SYMBOL	INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

Don Menken

ORGANIZATION (Office, dept., bureau, etc.)

Clayton County Conservation BOARD

TELEPHONE NO.

319
245 1516

SUBJECT

4 Section 14 - Emergency Streambank Protection from Turkey River erosion

SUMMARY

- Informed Mr. Menken of emergency nature of these projects
- (2) Legal description of (location) of all projects
 - (3) Corrective action: clear, shape, riprapping
 - (4) Lengths of streambank to be riprapped
 - (5) Vegetation impacted at each location.

Mr. Menken said he would review the Project Report when it comes out for public review, but as of now he had no comments or objections.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

Donn McSwine

SIGNATURE

Donn Ivan McSwine

DATE

2 Oct 91

ACTION TAKEN

SIGNATURE

TITLE

DATE

CONVERSATION RECORD

TIME 10:00 AM

DATE 2 Oct 91

TYPE		<input type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input checked="" type="checkbox"/> TELEPHONE	ROUTING	
Location of Visit/Conference:				<input type="checkbox"/> INCOMING		
				<input checked="" type="checkbox"/> OUTGOING		
NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU		ORGANIZATION (Office, dept., bureau, etc.)		TELEPHONE NO.		
DARRYL HAYES		IDNR		515-2818675		
SUBJECT						
4 Sec. 14's in Clayton County, Iowa (Turkey River erosion)						

SUMMARY
 Informed Mr. Hayes of 1) legal descriptions (location); 2) lengths to be riprapped; 3) vegetation to be disturbed by projects; 4) emergency nature of projects.

Informed Mr. Hayes early coordination w/ IDNR on the absence of any known threatened, endangered, or special concern species at any of project location.

Mr. Hayes responded that he would consult with IDNR floodplain management people and get back with me.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Lonn McGuire	Lonn McGuire	2 Oct. 91

ACTION TAKEN

SIGNATURE	TITLE	DATE

	:TIME	:DATE	
CONVERSATION RECORD	:1115	:10 October 1991	
	:	:	
TYPE	() VISIT	() CONFERENCE	(x) TELEPHONE
			: ROUTING
			(x) INCOMING
			() OUTGOING
			:NAME :INT
			:-----:-----
NAME CONTACTED	:ORGANIZATION	:TELEPHONE	:PD :
	:National Park:		✓ PD-E :
Jill Medland	:Service	:(402)221-3481	:PD-F :
			:-----:-----
SUBJECT:	Emergency Streambank Protection		: :
	Section 14, Turkey River, Clayton County, Iowa		: :
			: :
			:-----:-----

SUMMARY:

- Ms. Medland was returning her response to a coordination/information package I sent her concerning the above subject. I was coordinating this project for potential impacts as described in the National Wild and Scenic Rivers Act, as amended.
- She stated that she will formally comment on the proposed projects during the 30-day public comment period.

ACTION REQUIRED

NAME OF PERSON	:SIGNATURE	:DATE
DOCUMENTING CONVERSATION:		
Joseph W. Jordan		:10 October 1991

ACTION TAKEN

SIGNATURE	:TITLE	:DATE
	:	:
	:	:
50271-101	CONVERSATION RECORD	(12-76)

CONVERSATION RECORD

TIME 0830

DATE 21 Oct 91

TYPE

VISIT

CONFERENCE

TELEPHONE

INCOMING
 OUTGOING

ROUTING

NAME/SYMBOL INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

Darryl Hayes

ORGANIZATION (Office, dept., bureau, etc.)

Iowa DNR

TELEPHONE NO.

515 281 8675

SUBJECT

Clayton County / Turkey River Section 14: (4)

SUMMARY

Mr. Hayes said that Iowa had no problems/objections to these projects as long as clean riprap was used. I relayed to him that clean class "D" riprap would ~~be~~ be used.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

Lonn J. McGuire

SIGNATURE

Lonn J. McGuire

DATE

21 Oct 91

ACTION TAKEN

SIGNATURE

TITLE

DATE

CONVERSATION RECORD	TIME 10:20 a.m.	DATE November 12, 1991
---------------------	--------------------	---------------------------

TYPE	() VISIT	() CONFERENCE	(x) TELEPHONE	CF:
			() INCOMING	-----
			(x) OUTGOING	PD Distfile
				PD-E
				✓ PD-F

NAME CONTACTED	ORGANIZATION	TELEPHONE	PD-F
Chuck Davis	U.S. FWS, RIFO	309/793-5800	

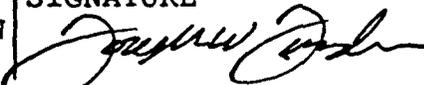
SUBJECT: Section 14 Streambank Protection along the Turkey River, Clayton County, IA - County Road #1620 Site

SUMMARY:

1. I called Mr. Davis to obtain his comments concerning the above project.

2. Mr. Davis suggested that visual impacts should be considered. Placing rip rap along this stretch of the Turkey River would have the most visual impacts of the four proposed sites, Engineering steps should be considered to reduce the visual impacts at this site. Mr. Davis stated he did not have any endangered species concerns with this project.

ACTION REQUIRED:

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Joseph W. Jordan		Nov. 12, 1991

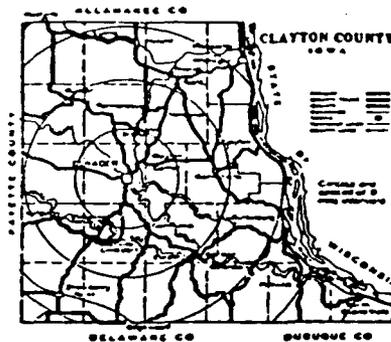
ACTION TAKEN

SIGNATURE	TITLE	DATE

50271-101

CONVERSATION RECORD

(12-76)



ANTHURN, Asst. to the County Engineer
CONNOR, Office Manager
BRINNE BRASE, Bookkeeper

JERRY J. WEBER, P.E.
COUNTY ENGINEER
CLAYTON COUNTY
LETTER OF ASSURANCE

Office Phone 319-245-1782
P.O. Box 456
ELKADER, IOWA 52043

November 13, 1991

Colonel John R. Brown
District Engineer
U.S. Army Engineer District,
Rock Island
Clock Tower Building, P. O. Box 2004
Rock Island, IL 61204-2004

Dear Colonel Brown:

Clayton County has reviewed the draft of the proposed Local Cooperation Agreement covering streambank erosion control on the Turkey River, Section 32, T92N, R3W, Jefferson Township. The Agreement includes the following obligations to be carried out by Clayton County.

a. Provide, without cost to the Government, during the period of construction, all lands, easements, rights-of-way and dredged material disposal areas, and perform all relocations and alteration of buildings, utilities, highways, railroads, bridges (except railroad bridges), sewers, and related and special facilities determined by the Government to be necessary for construction of the project.

b. Make a cash payment of not less than 5 percent of total project costs during the period of construction, regardless of the value of the items in a. above. If the value of the items in a. above is less than 20 percent of total project costs, Clayton County shall, during the period of construction, make such additional cash payments as are necessary to bring its total contribution in cash and value of lands, easements, rights-of-way, and utility and facility alterations and relocations, to an amount equal to 25 percent of total project costs.

c. Pay all project costs in excess of the Federal statutory limitation of \$500,000.

d. Hold and save the Government free from all damages arising from the construction, operation, and maintenance of the project, except for damages due to the fault or negligence of the Government or its contractors.

e. Operate, maintain, replace, and rehabilitate the project or functional element thereof upon completion in accordance with regulations or directions prescribed by the Government.

f. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, approved January 2, 1971, in acquiring lands, easements, and rights-of-way for construction and subsequent operation and maintenance of the project, and inform all affected persons of applicable benefits, policies and procedures in connection with said Act.

g. Comply with Section 601 of Title VI of the Civil Rights Act of 1964 (Public Law 88-352) and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations, as well as Army Regulation 600-7, entitled "Non-Discrimination on Basis of Handicap and Programs and Activities Assisted or Conducted by the Department of the Army".

h. Participate in and comply with applicable Federal flood plain management and flood insurance programs.

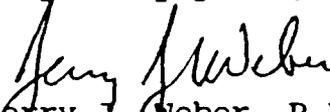
i. Prior to construction, and in accordance with the provisions of Section 221 of Public Law 91-611, Clayton County will enter into a contract with the Government whereby Clayton County will grant the Government a right to enter, at reasonable times and in a reasonable manner, upon land which Clayton County owns or controls for access to the project for the purpose of inspection, and, if necessary for the purpose of completing, operations, repairing, maintaining, replacing or rehabilitating the project. If an inspection shows that Clayton County for any reason of failing to fulfill its obligations under the Agreement without receiving prior written approval from the Government, the Government will send written notice to Clayton County. If Clayton County persists in such failure for 30 calendar days after receipt of notice, then the Government shall have a right to enter, at reasonable times and in a reasonable manner, upon lands Clayton County owns or controls for access to the project for the purpose of completing, operating, repairing, maintaining, replacing or rehabilitating the project. No completion, operation, repair, maintenance, replacement, or rehabilitation by the Government shall operate to relieve Clayton County of responsibility to meet its obligations as set forth in the Agreement, or to preclude the Government from pursuing any other remedy at law or equity to assure faithful performance pursuant to the Agreement.

Clayton County is willing and able to pay its share of the

total project costs. Sufficient funds are available within Clayton County Secondary Road Fund and the cash payment can be deposited directly with the Government upon demand by the Government.

This is to advise that if the Definite Project Report for this project is approved substantially in its present form as reviewed by Clayton County and as submitted for approval by the Corps of Engineers' higher authority, Clayton County is willing, and legally and financially able, to sign the referenced Local Cooperation Agreement which includes the obligations set forth above.

Very truly yours,


Jerry J. Weber, P.E.
Clayton County Engineer

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CEDAR RAPIDS IA 52402

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