Shoreline Protection Project
Town River Bay
Quincy, Massachusetts

Operation and Maintenance Manual

January 1993

US Army Corps of Engineers
New England Division

OPERATION AND MAINTENANCE MANUAL
EMERGENCY SHORELINE PROTECTION PROJECT
TOWN RIVER BAY
QUINCY, MASSACHUSETTS

FOREWORD

The Town River Bay shoreline protection project, consisting of about 280 feet of stone slope protection, was designed and constructed to stabilize a section of shoreline along Town River Bay in the Germantown section of Quincy. The successful functioning of the stabilization works is not assured solely by the construction of the project, since the forces of nature, including effects of wave damage and flooding from abnormally high tides, will continue to attack the shoreline. If the system is to perform the functions for which it was designed, it must be carefully maintained not only during periods of normal tidal stages, but also during subsequent flood periods.

The purpose of this manual is to provide information regarding actual maintenance procedures and outline the responsibilities of the parties involved. In accordance with fully executed local cooperation agreements, non-Federal interests are responsible for operation and maintenance of the project. Therefore, the Massachusetts Department of Environmental Management (DEM), or their designated representative, should assure that several local individuals be familiar with this project and have a thorough understanding of the recommended methods of maintaining the system.

The general flood control Regulations for Operation and Maintenance of Flood Control Works quoted herein were approved by the acting Secretary of War on 9 August 1944. Established by the Department of Defense, the improvement of rivers and harbors and other waterways for flood control and other purposes, formerly under jurisdiction of the Secretary of War, became the responsibility of the Secretary of the Army. References herein to the Secretary of War and War Department shall be construed to mean, respectively, the Secretary of the Army and the Department of the Army. Where reference is made to the Division Engineer in the Regulations included in this manual, it shall be construed to mean the Division Engineer, New England Division, Corps of Engineers.

OPERATION AND MAINTENANCE MANUAL
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SECTION I

INTRODUCTION

1. AUTHORIZATION

Construction of the shoreline stabilization project adjacent to the Town River Bay in the city of Quincy, Massachusetts was authorized by the Chief of Engineers on August 13, 1990, pursuant to the authority contained in Section 14 of the 1946 Flood Control Act, as amended.

2. LOCATION

The city of Quincy is located in Norfolk County in eastern Massachusetts, approximately 10 miles southeast of Boston. Quincy is bordered to the west by the town of Milton, to the south by the town of Weymouth, and to the east by the Atlantic Ocean.

The erosion site is located in the Germantown section of Quincy along the Town River Bay shorefront on the south side of the Taffrail Road Housing Project. This housing project is administered by the Quincy Housing Authority.

3. DESCRIPTION OF DAMAGE

The erosion problem is the result of high tides and associated wave action which accompany the many coastal storms affecting the northeast. Erosion of the steep shoreline embankment in this area resulted in the undermining of a chain link fence and a sidewalk in the housing development and left one house only 10-feet from the eroding embankment. Continued erosion would have threatened several houses in the development.

4. DESCRIPTION OF PROJECT

The shoreline stabilization consists of stone revetment with 2 feet of stone protection underlain by 1 foot of gravel bedding placed on a 1 vertical on 2 horizontal slope. The stone portion of the revetment extends to 5 feet above mean high water level on the Town River Bay. The upper portion consists of six inches of topsoil and seed placed over compacted earth fill. The revetment is approximately 280 feet long and 15 feet high.

5. PROTECTION PROVIDED

Construction of the shoreline stabilization will provide permanent erosion control to about 280 feet of embankment along the south side of the Taffrail Road Housing Project

6. CONSTRUCTION HISTORY

The project was constructed by the Calli Corporation of Natick, Massachusetts during the period from May 12, 1992 to June 8, 1992, at a cost of $28,850.

7. ASSURANCES OF LOCAL COOPERATION

The Army Corps of Engineers and the Massachusetts DEM entered into an agreement for local cooperation for this embankment stabilization project on December 31, 1990. The agreement provides that the local sponsor shall, among other required responsibilities, maintain the project after its completion without cost to the Federal Government. A copy of the formal local assurances is included as Appendix B.

8. PLANS

Reduced size drawings showing the project as actually constructed is included as Appendix D.

SECTION II

GENERAL REGULATIONS

9. PURPOSE OF THIS MANUAL

The purpose of this manual is to present detailed information to be used as a guide in complying with "Flood Control Regulations - Maintenance and Operation of Flood Control Works" as approved by the Acting Secretary of War on 9 August 1944, and published in this volume as Appendix A. In executing assurances of local cooperation, the Massachusetts DEM has agreed to maintain and operate the completed works in accordance with these regulations. The regulations which are intended to cover all local protection projects constructed by the Department throughout the United States are general in nature, and obviously cannot give detailed instructions for the maintenance and operation of a specific project. The details set forth in this manual for maintenance and operation for the Town River Bay project are intended to supplement the regulations to permit obtaining all the benefits and protection against erosion for which the project was designed. Failure to maintain and operate the project as required by the regulations and as detailed herein could cause property losses and could result in an irreparable loss of confidence in the shoreline protection system.

10. GENERAL RULES AND REGULATIONS

Paragraph 208.10 (a) of the regulations prescribed by the Secretary of War gives general rules for the maintenance and operation of structures and facilities constructed by the United States for local protection. Applicable portions are quoted below to avoid the necessity for cross reference and are further defined by remarks under each quotation.

"(1) The structures and facilities constructed by the United States for local flood protection shall be continuously maintained in such a manner and operated at such times and for such periods as may be necessary to obtain the maximum benefits;"

These requirements cannot be overstressed, and the DEM officials must make adequate provisions for funds, personnel, equipment and materials to allow for the proper maintenance and operation of the protective works.

"(2) The State, political subdivision thereof, or other responsible local agency, which furnished assurance that it will maintain and operate flood control works in accordance with the regulations prescribed by the Secretary of War, as required by

law, shall appoint a permanent committee consisting of or headed by an official hereinafter called the "Superintendent," who shall be responsible for the development and maintenance of, and directly in charge of, an organization responsible for the efficient operation and maintenance of all of the structures and facilities during flood periods and for continuous inspection and maintenance of the project works during periods of low water, all without cost to the United States;"

The committee should be composed of competent members, preferably persons experienced in engineering or construction works. The committee must be given broad authority to carry out its responsibilities. Upon receipt of this manual, the name; address; and office and home telephone numbers of the Superintendent, and any changes thereof, shall be furnished to the Division Engineer, New England Division, Corps of Engineers, 424 Trapelo Road, Waltham, Massachusetts. A form for this submittal is contained in Appendix C.

(3) N/A

"(4) No encroachment or trespass which will adversely affect the efficient operation or maintenance of the project works shall be permitted upon the right-of-ways for the protective facilities;"

Right-of-ways and easements have been established for which access to the project can be provided in order to allow equipment which may be necessary to perform the maintenance of the project. These right-of-ways are essential and must be kept open at all times.

"(5) No improvement shall be passed over, under, or through the walls, levees, improved channels or floodways, nor shall any excavation or construction be permitted within the limits of the project right-of-way, nor shall any change be made in any feature of the works without prior determination by the Division Engineer of the War Department or an authorized representative that such improvement, excavation, construction, or alteration will not adversely affect the functioning of the protective facilities. Such improvements or alterations as may be found to be desirable and permissible under the above determination shall be constructed in accordance with standard engineering practice. Advice regarding the effect of proposed improvements or alterations on the functioning of the project and information concerning methods of construction acceptable under standard engineering practice shall be obtained from the Division Engineer or, if otherwise obtained, shall be submitted for his approval. Drawings or prints showing such improvements or alterations as finally constructed shall be furnished the Division Engineer after completion of the work;"

Any contemplated improvements or alterations as outlined above must be submitted to the U.S. Army Corps of Engineers, New England Division, 424 Trapelo Road, Waltham, Massachusetts, and the approval of the Division Engineer obtained prior to the Massachusetts DEM or their designated representative authorizing the work. All requests for approval shall be in writing and complete drawings in duplicate. Both sets, which shall be in reproducible form, must be submitted along with a full description of the work intended. The DEM will be held responsible for obtaining prior approval from the Corps of Engineers for any improvements or alterations proposed by itself, private parties, or any public parties. The DEM, or their designated representative, shall furnish the Division Engineer as-built drawings, in duplicate, of the completed work.

"(6) It shall be the duty of the Superintendent to submit a semi-annual report to the Division Engineer covering inspection, maintenance, and operation of the protective works;"

See paragraph 13 of this manual for instructions on submitting reports.

"(7) The Division Engineer, or his authorized representatives, shall have access at all times to all portions of the protective works;"

The Division Engineer, or his representatives, will make periodic inspections of the protective works to determine if the project is being properly maintained and operated by the DEM, or their designated representative.

"(8) Maintenance measures or repairs which the Division Engineer deems necessary shall be promptly taken or made;"

The DEM, or their representative, should maintain the facilities and keep them in good repair and not wait for the Division Engineer to call such matters to its attention. Upon request, the Division office will advise the DEM how to make any major repairs to the facilities.

"(9) Appropriate measures shall be taken by local authorities to insure that the activities of all local organizations operating public or private facilities connected with the protective works are coordinated with those of the Superintendent's organization during flood periods;"

The project is designed to provide bank stabilization and to protect the Town River Bay embankment against erosion.

"(10) The War Department will furnish local interests with an Operation and Maintenance Manual for each completed project, or

separate useful part thereof, to assist them in carrying out their obligations under these regulations;"

The flood control committee should familiarize itself with the contents of this manual. The DEM, or their representative, is encouraged to call on the Division Office of the Corps of Engineers for any additional advice or instructions required by them in carrying out the DEM's obligations for maintaining and operating the protection facilities.

11. MAINTENANCE

a. The word "maintenance" as used in this manual applies to the upkeep, repair, replacement and care of the work constructed by the United States and turned over to the Massachusetts DEM. If the work is neglected there will be deterioration and possible failure in flood time when there is dire need of dependable protection.

b. Maintenance includes a regular walking inspection over the entire system. The purpose of the inspection is to detect any deterioration of project features that indicates a need for repair or replacement.

12. OPERATION

a. The term "operation" as used in this manual, refers to the actual functions of the various features of the protection works during abnormal tides.

b. When abnormal tides are expected, it is important that the Superintendent make immediate decisions, take prompt action and has the authority to carry out his decisions to insure proper continued operation of the protection works.

c. To insure correct operation, the following items are considered to be essential:

(1) At least one person (preferably 2 or 3) be familiar with the protection project including the various types of materials comprising it.

(2) The sources of these materials should be established ahead of time. If possible a small amount of each type of material should be stockpiled nearby for quick use.

(3) Sufficient loading, hauling and placing equipment should be readily available for providing and placing the repair materials.

(4) Sufficient experienced personnel should be readily available for patrolling and performing the repair work.

13. REPORTS

a. The regulations prescribed by the Secretary of the Army call for semi-annual reports to be submitted by the Superintendent to the Division Engineer covering inspection and maintenance. Inspection of the protective facilities shall be made immediately following floods and otherwise at intervals not exceeding 90 days as required by regulations.

b. To assist the Superintendent in making the inspection, a sample form is included in Appendix C. The Superintendent shall have additional copies printed for use in submitting his reports.

c. The semi-annual reports shall be submitted in triplicate to the Division Engineer each May and November. The reports will be submitted in letter form with copies of the inspection forms covering the inspections made during the period of the reports. The reports shall cover the following points:

(1) A description of the maintenance work performed in the preceding six months.

(2) The number and classification of men working on maintenance, regularly and intermittently.

(3) Description of any work performed by contract on the repair or improvements of the project.

SECTION III

SHORELINE PROTECTION WORK

14. DESCRIPTION

The shoreline protection accomplished by the Army Corps of Engineers consists of stabilizing 282 feet of embankment along the city of Quincy's Town River Bay with stone slope protection. The protection consists of stone slope protection placed on a 1 on 2 slope, about 15 feet high. Additional information is given in paragraph 4 of this manual and in the drawings in Appendix D.

15. MAINTENANCE

Paragraph 208.10(g) (1) of the prescribed regulations sets forth rules for the maintenance of channels and floodways. These rules are quoted below, followed by brief comments where applicable to clarify these rules as they apply to the project.

Channels and Floodways - (1) Maintenance. - Periodic inspections of improved channels and floodways shall be made by the Superintendent to be certain that:

(i) N/A

(ii) N/A

(iii) N/A

"(iv) Banks are not being damaged by rain or wave wash and that no sloughing of banks has occurred;"

Banks shall be inspected for damage by rain, wave wash or sloughing and repaired promptly using materials similar to that used in their original construction. Inspections shall be made at intervals not to exceed 90 days. Immediate steps will be taken to remedy any adverse conditions disclosed by such inspections.

"(v) Riprap sections ... are in good condition;"

Rock slope protection must be maintained in good condition to resist erosion. Any damage or loss of riprap due to slides or vandalism must be corrected. Periodic checks should be made of the riprap to detect movement, damage or losses: and prompt corrective actions should be taken. Such inspection shall be made at intervals not to exceed 90 days. Immediate steps shall be taken to remedy any adverse conditions disclosed by such inspections.

(vi) N/A

16. OPERATION

Paragraph 208.10(g) (2) of the prescribed regulations gives rules for operation of channel. These rules are paraphrased below with regard to the project.

(1) Operation. The project shall be inspected during periods of high tides and measures taken to protect those reaches being attacked by the current and direct wave actions. Large objects which become lodged against the bank shall be removed. The project shall be thoroughly inspected immediately following each major high water period. As soon as practicable thereafter, all snags and other debris shall be removed and all damage to the riprap protection shall be repaired.

APPENDIX A

REGULATIONS PRESCRIBED
BY THE
SECRETARY OF THE ARMY

TITLE 33-NAVIGATION AND NAVIGABLE WATERS

Chapter II-Corps of Engineers War Department-Part 208-Flood Control Regulations Maintenance and Operation of Flood Control Works

(Retyped verbatim from orignal document)

Pursuant to the provisions of Section 3 of the Act of Congress approved June 22, 1936, as amended and supplemented (49 Stat. 1571; 50 Stat. 877; and 55 Stat. 638; 33 U.S.C. 701c; 701c-1), the following regulations are hereby prescribed to govern the maintenance and operation of flood control works:

208.10 *Local flood protection works; maintenance and operation of structures and facilities-* (a) *General.*

(1) The structures and facilities constructed by the United States for local flood protection shall be continuously maintained in such a manner and operated at such times and for such periods as amy be necessary to obtain the maximum benefits.

(2) The State, political subdivision thereof, or other responsible local agency, which furnished assurance that it will maintain and operate flood control works in accordance with the regulations prescribed by the Secretary of War, as required by law, shall appoint a permanant committee consisting of or headed by an official hereinafter called the "Superintendent", who shall be responsible for the development and maintenance of, and directly in charge of, an organization responsible for the efficient operation and maintenance of all of the structures and facilities during flood periods and for continuous inspection and maintenance of the project works during periods of low water, all without cost to the United States.

(3) A reserve supply of materials needed during a flood emergency shall be kept on hand at all times.

(4) No encroachment or trespass which will adversely affect the efficient operation or maintenance of the project works shall be permitted upon the rights-of-way for the protective facilities.

(5) No improvement shall be passed over, under, or through the walls, levees, improved channels or floodways, nor shall any excavation or construction be permitted within the limits of the project right-of-way, nor shall any change be made in any feature of the works without prior determination by the District Engineer of the War Department or his authorized representative that such improvement, excavation, construction, or alteration will not adversely affect the functioning of the protective facilities. Such improvements or alterations as may be found to be desirable and permissible under the above determination shall be constructed in accordance with standard engineering practice. Advice regarding the effect of proposed improvements or alterations on the functioning of the project and information concerning methods of construction acceptable under standard engineering practice shall be obtained from the District Engineer or, if otherwise obtained, shall be submitted for his approval. Drawings or prints showing such improvements or alterations as finally constructed shall be furnished the District Engineer after completion of the work.

(6) It shall be the duty of the Superintendent to submit a semi-annual report to the District Engineer covering inspection, maintenance, and operation of the protective works.

(7) The District Engineer or his authorized representatives shall have access at all times to all portions of the protective works.

(8) Maintenance measures or repairs which the District Engineer deems necessary shall be promptly taken or made.

(9) Appropriate measures shall be taken by local authorities to insure that the activities of all local organizations operating public or private facilities connected with the protective works are coordinated with those of the Superintendent's organization during flood periods.

(10) The War Department will furnish local interests with an Operation and Maintenance Manual for each completed project, or separate useful part thereof, to assist them in carrying out their obligations under these regulations.

(b) *Levees-*(1) *Maintenance.* The Superintendent shall provide at all times such maintenance as may be required to insure serviceability of the structures in time of flood. Measures shall be taken to promote the growth of sod, exterminate burrowing animals, and to provide for routine mowing of the grass and weeds, removal of wild growth and drift deposits, and repair of damage caused by erosion or other forces. Where practicable, measures shall be taken to retard bank erosion by planting of willows or other suitable growth areas riverward of the levees. Periodic inspections shall be made by the Superintendent to insure that the above maintenance measures are being effectively carried out and further, to be certain that:

(i) No unusual settlement, sloughing, or material loss of grade or levee cross-section has taken place;

(ii) No caving has occurred on either the land side or the river side of the levee which might affect the stability of the levee section;

(iii) No seepage, saturated areas, or sand boils are occurring;

(iv) Toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged;

(v) Drains through the levees and gates on said drafters are in good working condition;

(vi) No revetment work or riprap has been displaced, washed out, or removed;

(vii) No action is being taken, such as burning grass and weeds during appropriate seasons, which will retard or destroy the growth of the sod;

(viii) Access roads to and on the levee are being properly maintained;

(ix) Cattle guards and gates are in good condition;

(x) Crown of levee is shaped so as to drain readily, and roadway thereon, if any, is well shaped and maintained;

(xi) There is no unauthorized grazing or vehicular traffic on the levees;

(xii) Encroachments are not being made on the levee right-of-way which might endanger the structure or hinder its proper and efficient functioning during times of emergency.

Such inspections shall be made immediately prior to the beginning of the flood season; immediately following each major high water period, and otherwise at intervals not exceeding 90 days, and such immediate times as may be necessary to insure the best possible care of the levee. Immediate steps will be taken to correct dangerous conditions disclosed by such inspections. Regular maintenance repair measures shall be accomplished during the appropriate season as scheduled by the Superintendent.

(2) *Operation:* During flood periods the levee shall be patrolled continuously to locate possible sand boils or unusual wetness of the landward slope and to be certain that:

(i) There are no indications of slides or sloughs developing;

(ii) Wave wash or scouring action is not occurring;

(iii) No low reaches of levee exist which may be overtopped;

(iv) No other conditions exist which might endanger the structure.

Appropriate advance measures will be taken to insure the availability to adequate labor and materials to meet all contingencies. Immediate steps will be taken to control any condition which endangers the levee and to repair the damaged section.

(c) *Flood walls*- (1) *Maintenance.* Periodic inspections shall be made by Superintendent to be certain that:

(i) No seepage, saturated areas, or sand boils are occurring;

(ii) No undue settlement has occurred which affects the stability of the wall or its water tightness;

(iii) No trees exist, the roots of which might extend under the wall & offer accelerated seepage paths;

(iv) The concrete has not undergone cracking, chipping, or breaking to an extent which might affect the stability of the wall or its water tightness;

(v) There are no encroachments upon the right-of-way which might endanger the structure or hinder its functioning in time of flood;

(vi) Care is being exercised to prevent accumulation of trash and debris adjacent to walls, and to insure that no fires are being built near them;

(vii) No bank caving conditions exist riverward of the wall which might endanger its stability;

(viii) Toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged.

Such inspections shall be made immediately prior to the beginning of the flood season, immediately following each major high water period, and otherwise at intervals not exceeding 90 days. Measures to eliminate encroachments and effect repairs found necessary by such inspections shall be undertaken immediately. All repairs shall be accomplished by methods acceptable in standard engineering practice.

(2) *Operation.* Continuous patrol of the wall shall be maintained during flood periods to locate possible leakage at monolith joints or seepage underneath the wall. Floating plant or boats will not be allowed to lie against or tie up to the wall. Should it become necessary during a flood emergency to pass anchor cables over the wall, adequate measures shall be taken to protect the concrete and construction joints. Immediate steps shall be taken to correct any conditions which endangers the stability of the wall.

(d) *Drainage structures* - (1) *Maintenance.* Adequate measures shall be taken to insure that inlet and outlet channels are kept open and that trash, drift, or debris is not allowed to accumulate near drainage structures. Flap gates and manually operated gates and valves on drainage structures shall be examined, oiled, and trial operated at least once every 90 days. Where drainage structures are provided with stop log or other emergency closures, the condition of the equipment and its housing shall be inspected regularly and a trial installation of the emergency closure shall be made at least once each year. Periodic inspections shall be made by the Superintendent to be certain that:

(i) Pipes, gates, operating mechanisms, riprap, and headwalls are in good condition;

(ii) Inlet and outlet channels are open;

(iii) Care is being exercised to prevent the accumulation of trash and debris near the structures in that no fires are being built near bituminous coated pipes;

(iv) Erosion is not occurring adjacent to the structures which might endanger its water tightness or stability.

Immediate steps will be taken to repair damage, replace missing or broken parts, or remedy adverse conditions disclosed by such inspections.

(2) *Operation.* Whenever high water conditions impede, all gates will be inspected a short time before water reaches the invert of the pipe and any object which might prevent closure of the gate shall be removed. Automatic gates shall be closely observed until it has been ascertained that they are securely closed. Manually operated gates and valves shall be closed as necessary to prevent inflow of flood water. All drainage structures and levees shall be inspected frequently during floods to ascertain whether seepage is taking place along the lines of their contact with the embankment. Immediate steps shall be taken to correct any adverse conditions.

(e) *Closure structures* - (1) *Maintenance.* Closure structures for the traffic openings shall be inspected by the Superintendent every 90 days to be certain that:

(i) No parts are missing;

(ii) Metal parts are adequately covered with paint;

(iii) All moveable parts are in satisfactory working order;

(iv) Proper closure can be made promptly when necessary;

(v) Sufficient materials are on hand for the erection of sandbag closures and that the location of such materials will be readily accessible in times of emergencies.

Tools and parts shall not be removed for other use. Trial erections of one or more closure structures shall be made once each year, alternating the structures chosen so that each gate will be erected at least once in each three-year period. Trial erections of all closure structures shall be made whenever a change is made in key operating personnel. Where railroad operation makes trial erection of a closure structure in feasible, rigorous inspection and drill of operating personnel may be substitute therefore. Trial erection of sandbag closures is not required. Closure materials will be carefully checked prior to and following flood periods, and damaged or missing parts shall be repaired or replaced immediately.

(2) *Operation.* Erection of each moveable closure shall be started in sufficient time to permit completion before flood waters reach the top of the structure sill. Information regarding the proper method of erecting each individual closure structure, together with an estimate of the time required by an experienced crew to complete its erection will be given in the Operation and Maintenance Manual which will be furnished local interests upon completion of the project. Closure structures will be inspected frequently during flood periods to ascertain that no undue leakage is occurring and that drains provided to care for the ordinary leakage are functioning properly. Boats or floating plant shall not be allowed to tie up to closure structures or to discharge passengers or cargo over them.

(f) *Pumping plants*

(1) *Maintenance.* Pumping plants shall be inspected by the Superintendent at intervals not to exceed 30 days during flood seasons and 90 days during off-flood seasons to insure that all equipment is in order for instant use. At regular intervals, proper measures shall be taken to provide for cleaning plant, buildings, and equipment, repainting as necessary, and lubricating all machinery. Adequate supplies of lubri-

cants for all types of machine, fuel for gasoline or diesel powered equipment, and flashlights or lanterns for emergency lighting shall be kept on hand at all times. Telephone service shall be maintained at pumping plants. All equipment, including switch gear, transformers, motors, pumps, valves, and gates shall be trial operated and checked at least once every 90 days. Megger tests of all insulation shall be made whenever wiring has been subject to undue dampness and otherwise at intervals not to exceed one-year period. A record shall be kept showing the results of such test period. Wiring disclosed to be in an unsatisfactory condition by such tests shall be brought to a satisfactory condition or shall be properly replaced. Diesel and gasoline engines shall be started at such intervals and allowed to run for such length of time as may be necessary to insure their service ability in times and emergencies. Only skilled electricians and mechanics shall be employed on test and repairs. Operating personnel for the plant shall be present during tests. Any equipment removed from the station for repair or replacement shall be repaired or replaces as soon as practible and shall be trial operated after reinstallation. Repairs requiring removal of equipment from the plant shall be made during off-flood seasons insofar as practicable.

(2) *Operation.* Competent operators shall be on duty at pumping plants whenever it appears that necessity for pump operation is imminent. The operator shall thoroughly inspect, trial operate, and place in readiness all plant equipment. The operator shall be familiar with the equipment manufacturers' instructions and drawings and with the "Operating Instructions" for each station. The equipment shall be operated in accordance with the above hyphened mentioned "Operation Instructions" and care shall be exercised at proper lubrication is being supplied all equipment, and that no overheating, undue vibration or noise is occurring. Immediately upon final recession of flood waters, the pumping station shall be thoroughly cleaned, pumphouse sumps flushed, and equipment thoroughly inspected, oiled and greased. A record or log of pumping plant operation shall be kept for each station, a copy of which shall be furnished to the District Engineer following each flood.

(g) *Channels and Floodways* - (1) *Maintenance.* Periodic inspections of improved channels and floodways shall be made by the Superintendent to be certain that:

(i) The channel or floodway is clear of debris, weeds, and wild growth;

(ii) The channel or floodway is not being restricted by the depositing of waste material, building of unauthorized structures or encroachments;

(iii) The capacity of the channel or floodway is not being reduced by the formation of shoals;

(iv) Banks are not being damaged by rain or wave wash, and that no sloughing of banks has occurred;

(v) Riprap sections and deflection dikes and walls are in good condition;

(vi) Approach and egress channels adjacent to the improved channel or floodway are sufficiently clear of obstructions and debris to permit proper functioning of the project works.

Such inspections shall be made prior to the beginning of the flood season and otherwise intervals not to exceed 90 days. Immediate steps will be taken to remedy any adverse conditions disclosed by such inspections. Measures will be taken by the Superintendent to promote the growth of grass on bank slopes and earth deflection dikes. The Superin-tendent shall provide for periodic repair and cleaning of debris basins, check dams, and related structures as may be necessary.

(2) *Operations.* Both banks of the channel shall be protrolled during periods of high waters and measures shall be taken to protect those reaches being attacked by the current or by wave wash. Appropriate measures shall be taken to prevent the formation of jams of ice or debris. Large objects which become lodged against the bank shall be removed. The improved channel or floodway shall be thoroughly inspected immediately following each major high water period. As soon as practicable there- after, all snags and other debris shall be removed and all damage to the banks, riprap, deflection dikes and walls, drainage outlets, or other flood control structures repaired.

(h) *Miscellaneous Facilities* - (1) *Maintenance.* Miscellaneous structures and facilities constructed as part of the protective works and other structures and facilities which function as a part of, or affect the efficient functioning of the protective works, shall be periodically inspected by the Superintendent and the appropriate maintenance measures taken. Damaged or unserviceable parts shall be repaired or replaced without delay. Areas used for ponding in connection with pumping plants or for temporary storage of interior runoff during flood period shall not be allowed to become filled with silt, debris, or dumped material. The Superintendent shall take proper steps to prevent restriction of bridge openings and, where applicable, shall provide temporary raising during floods of bridges which restrict channel capacities during high flows.

(2) *Operation.* Miscellaneous facilities shall be operated to prevent or reduce flooding during periods of high water. Those facilities constructed as part of the protective works shall not be used for purposes other than flood protection without approval of the District Engineer unless design therefore.

(49 Stat. 1571, 50 Stat. 877; and 55 Stat. 638; 33 U.S.C. 701c; 701c-1) (Regs. 9 August 1944, CE SPEWF)

[SEAL] J.A. ULIO
Major General
The Adjutant General

[F.R. Doc 44-12255; Filed, August 16, 1944; 9:44 a.m.]

APPENDIX B

ASSURANCES OF LOCAL COOPERATION

Sec 14 Form LCA
27 Jan 89

UNITED STATES ARMY CORPS OF ENGINEERS

CONTINUING AUTHORITIES PROGRAM

SECTION 14
SINGLE PURPOSE
EMERGENCY STREAMBANK OR SHORELINE PROTECTION WORKS

****

LOCAL COOPERATION AGREEMENT

BETWEEN

THE DEPARTMENT OF THE ARMY

AND

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DIVISION OF WATERWAYS

[FULL NAME OF LOCAL SPONSOR]

FOR THE CONSTRUCTION OF THE

TOWN RIVER BAY EMERGENCY SHORELINE PROTECTION
QUINCY, MASSACHUSETTS

[FULL NAME OF PROJECT]

THIS AGREEMENT, entered into this 31st day of December, 19 90, by and between the DEPARTMENT OF THE ARMY (hereinafter referred to as the "Government"), acting by and through the New England [LOCATION OF DISTRICT] Division [DISTRICT/DIVISION], U.S. Army Corps of Engineers, and Commissioner, Department of Environmental Management, Commonwealth of Massachusetts

[LOCAL SPONSOR]
(hereinafter referred to as "Local Sponsor"), acting by and through Richard E. Kendall, Commissioner, Department of Environmental Management

[TITLE OF PERSON SIGNING THIS AGREEMENT]
WITNESSETH THAT:

WHEREAS, the authority for the construction of the Town River Bay Emergency Shoreline Protection Project

[NAME OF PROJECT]
at Taffrail Road Housing Project, at Town River Bay in Quincy, Massachusetts

[SPECIFIC LOCATION OF PROJECT]
(hereinafter referred to as the "Project", as defined in Article I.a. of this Agreement) is contained in Section 14 of the Flood Control Act of 1946, as amended, 33 U.S.C. 701r; and

WHEREAS, Section 14 of the Flood Control Act of 1946, as amended, limits the amount the Federal Government can expend on a single project to $500,000; and,

WHEREAS, construction of the Project is described in a report entitled Detailed Project Report, Taffrail Road Housing Project, Town River Bay, Quincy, Massachusetts, Emergency Shoreline Protection

prepared by New England Division, dated July 1989 and approved by Chief of Engineers on October 23, 1989; and,
[DATE]

WHEREAS, Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, specifies the cost-sharing requirements applicable to the Project; and

WHEREAS, Section 221 of the Flood Control Act of 1970, Public Law 91-661, as amended, provides that the construction of any water resources project by the Secretary of the Army shall not be commenced until each non-Federal interest has entered into a written agreement to furnish its required cooperation for the project; and,

[ONLY ONE OF THE TWO FOLLOWING "WHEREAS" CLAUSES WILL APPLY' STRIKE THROUGH THE CLAUSE WHICH DOES NOT APPLY']

OPTION 1:

~~WHEREAS the Project qualifies for a reduction of the maximum non-Federal cost share of pursuant to guidelines which implement Section 103(m) of the Water Resources Development Act of 1986 Public Law 99-662 published in 33 C.F.R. Sections 241.1 - 241.6 entitled "Flood Control Cost-Sharing Requirements Under~~

~~the Ability to Pay Provision and the reduced maximum non-Federal cost share as determined by the Ability to Pay test, xxxxx percent, derived as set out in Exhibit xxxxx to this Agreement, subject, however, to the cost limitations placed on the Federal Government by Section 103 of the Flood Control Act of 1946, as amended; and~~

OPTION 2:

WHEREAS, the Project does not qualify for a reduction of the maximum non-Federal cost share pursuant to guidelines which implement Section 103(m) of the Water Resources Development Act of 1986, Public Law 99-662, published in 33 C.F.R. Sections 241.1 - 241.16, entitled "Flood Control Cost-Sharing Requirements Under the Ability to Pay Provision"; and

WHEREAS, the Local Sponsor has the authority and capability o furnish the cooperation hereinafter set forth and is willing to participate in cost-sharing and financing in accordance with the terms of this Agreement;

NOW, THEREFORE, the parties agree as follows:

ARTICLE I - DEFINITION AND GENERAL PROVISION

For purposes of this Agreement:

a. The term "Project" shall mean construction of approximately 250 linear feet of slope protection along Town River, Bay. The slope protection will consist of a stone revetment and will protect a housing project which is located along the shoreline.

[DESCRIBE THE WORK TO BE UNDERTAKEN PURSUANT TO THIS AGREEMENT IN SUFFICIENT DETAIL AS IS NECESSARY TO AVOID ANY CONFUSION OVER WHAT WORK IS, OR IS NOT INCLUDED; REFERENCE THE PROJECT REPORT, IF APPROPRIATE; IF MORE SPACE IS NEEDED, REFERENCE AND SECURELY ATTACH A SEPARATE SHEET AND HAVE ALL SIGNATORIES INITIAL IT WHEN THEY SIGN.]

b. The term "total project costs" shall mean all costs incurred by the Local Sponsor and the Government directly related to construction of the Project. Such costs shall include, but not necessarily be limited to, costs of applicable engineering and design, costs of preparation of contract plans and specifications, actual construction costs, costs of alterations

or relocations of railroad bridges and approaches thereto, supervision and administration costs, costs of construction contract dispute settlements or awards, and the value of lands, easements, and rights-of-way (to the extent that the lands, easements and rights-of-way are not already owned as part of the facility being protected), relocations, and dredged material disposal areas provided for the Project by Local Sponsor, but shall not include any costs for betterments, operation, repair, maintenance, replacement no rehabilitation, nor Government costs for planning studies.

c. The term "period of construction" shall mean the time from the advertisement of the first construction contract to the time of acceptance of the Project by the Contracting Officer.

d. The term "Contracting Officer" shall mean the U.S. Army Engineer for the New England [LOCATION] Division [DISTRICT/DIVISION], or his designee.

e. The term "highway" shall mean any highway, thoroughfare, roadway, street, or other public or private road or way.

f. The term "fiscal year" shall mean one fiscal year of the United States Government, unless otherwise specifically indicated. The Government fiscal year begins on October 1 and ends on September 30.

g. The term "functional portion of the Project" shall mean a completed portion of the Project determined by the Contracting Officer to be suitable for tender to the Local Sponsor to operate and maintain in advance of completion of construction of the entire Project.

h. The term "relocations" shall mean alterations, modifications, lowering or raising in place, and/or new construction related to, but not limited to, existing: railroads, highways, bridges, including railroad bridges and approaches thereto and highway bridges, buildings, commercial and gas pipelines, public utilities (such as municipal water and sanitary sewer lines, telephone lines, and storm drains), aerial facilities supported by poles or by other means, which, if damaged, would not normally have an adverse effect on the project structure, cemeteries, and other facilities, structures, and improvements determined by the Government to be necessary for the construction, operation and maintenance of the Project.

i. The term "involuntary acquisition" shall mean the acquisition of lands, easement, and rights-of-way by eminent domain.

j. Words which appear between brackets, whether they appear between or within lines of text, do not constitute a part of this Agreement. They are intended only as instructions regarding the proper completion of this Agreement.

ARTICLE II - OBLIGATIONS OF PARTIES

a. The Government, subject to and using funds provided by the Local Sponsor and appropriated by the Congress, shall expeditiously construct the Project (including alterations or relocations of railroad bridges and approaches thereto), applying those procedures usually followed or applied in Federal projects, pursuant to Federal laws, regulations, and policies. The Local Sponsor shall be afforded the opportunity to review and comment on all contracts, including relevant plans and specifications, prior to the issuance of invitations for bids. The Local Sponsor also shall be afforded the opportunity to review and comment on all modifications and change orders prior to the issuance to the contractor of a Notice to Proceed. The Government will consider the comments of the Local sponsor, but contract awards, modifications, or change orders and performance of all work on the Project (whether the work is performed under contract or by Government personnel) shall be exclusively within the control of the Government.

b. When the Government determines that the project, or a functional portion of the Project, is complete, the Government shall turn the completed Project or functional portion over to the Local Sponsor, which shall accept the Project or functional portion and be solely responsible for operating, maintaining, and rehabilitating the Project in accordance with Article VIII hereof.

c. As further specified in Article VI hereof, the Local Sponsor shall provide, during the period of construction, a cash contribution of 5 percent of total project costs.

d. As further specified in Article III hereof, the Local Sponsor shall provide all lands, easements, rights-of-way, and dredged material disposal areas, and perform all relocations and alterations of buildings, highways, railroads, bridges (other (excluding railroad bridges and approaches thereto) determined by the Government to be necessary for construction of the Project.

To the extent that any of the lands, easement, or rights-of-way provided under this paragraph are already owned as part of the facility or structure being protected, the value of such interests shall not be included in total project costs nor credited towards the Local Sponsor's contribution required under this Article. At its sole discretion, the Government may perform relocations in cases where it appears that the Local Sponsor's contributions will exceed the maximum non-Federal cost share set out in Article VI.f., subject to the Federal limitation set out in Article II.f.

e. If the value of the contributions provided under paragraphs c. and d. of this Article represents less than 25 percent of total project costs, the Local Sponsor 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.

[ONLY ONE OF THE TWO FOLLOWING SUBPARAGRAPHS WILL APPLY; STRIKE THROUGH THE ONE WHICH DOES NOT APPLY]

OPTION 1:

~~f. The Government's participation in the Project, including all planning studies costs, has a statutory limitation of $500,000. The Local Sponsor shall be responsible for all costs in excess of $500,000, notwithstanding that the Project qualified for a reduction of the maximum non-Federal cost share under the Ability to Pay Test.~~

OPTION 2:

f. The Government's participation in the Project, including all planning studies costs, has a statutory limitation of $500,000. The Local Sponsor shall be responsible for all costs in excess of $500,000.

g. The Local Sponsor shall comply with all items of local cooperation set out in the aforementioned report entitled Detailed Project Report, Town River Bay, Quincy, Massachusetts

prepared by New England Division dated July 1989, and approved by Chief of Engineers on October 23, 1989.
[DATE]

h. No Federal funds may be used to meet the Local Sponsor's share of project costs under this Agreement unless the expenditure of such funds is expressly authorized by statute as verified in writing by the granting agency.

ARTICLE III - LANDS, FACILITIES, AND PUBLIC LAW 91-646 RELOCATION ASSISTANCE

a. The Local Sponsor shall furnish to the Government all lands, easements, and rights-of-way, including suitable borrow and dredged material disposal areas, as may be determined by the Government to be necessary for construction, operation, and maintenance of the Project, and shall furnish to the Government evidence supporting the Local Sponsor's legal authority to grant rights-of-entry to such lands. The necessary lands, easements, and rights-of-way shall be provided prior to the advertisement of any construction contract.

b. The Local Sponsor shall provide or pay to the Government the full cost of providing all retaining dikes, wasteweirs, bulkheads, and embankments, including all monitoring features and stilling basins, that may be required at any dredged material disposal areas necessary for construction of the Project.

c. Upon notification from the Government, the Local Sponsor shall accomplish or arrange for accomplishment at no cost to the Government all alterations and relocations (excluding railroad bridges and approaches thereto), determined by the Government to be necessary for construction of the Project.

d. The Local Sponsor shall comply with the applicable provisions of the Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended, in acquiring lands, easements and rights-of-way for construction and subsequent operation and maintenance of the Project, and inform all affected of applicable benefits, policies, and procedures in connection with said Act.

ARTICLE IV - VALUE OF LANDS AND FACILITIES

a. The value of the lands, easements, and rights-of-way to be included in total project costs and credited towards the Local Sponsor's share of total project costs will be determined in accordance with the following procedures:

1. If the lands, easements, or rights-of-way are owned by the Local Sponsor as of the date the first construction contract for the Project is awarded, the credit shall be the fair market value of the interest at the time of such award. The fair market value shall be determined by an appraisal, to be obtained by the Local Sponsor, which has been prepared by a qualified appraiser who is acceptable to both the Local Sponsor and the Government. The appraisal shall be reviewed and approved by the Government.

2. If the lands, easements, or rights-of-way are to be acquired by the Local Sponsor after the date the award of the first construction contract the Project, the credit shall be the fair market value of the interest at the time such interest is acquired. The fair market value shall be determined as specified in Article IV.a.1. of this Agreement. If the Local Sponsor pays an amount in excess of the appraised fair market value, it may be entitled to a credit for the purchase price paid, if the Local sponsor has secured prior written approval from the Government of the purchase price.

3. Credit for lands, easements, and rights-of-way in the case of involuntary acquisitions which occur within a one-year period preceding the date this Agreement is signed or which occur after the date this Agreement is signed will be based on court awards, or on stipulated settlements that have received prior Government approval.

4. If the Local Sponsor acquires more lands, easements, or rights-of-way than are necessary for project purposes, as determined by the Government, then only the value of such portions of those acquisitions as are necessary for project purposes shall be included in total project costs and credited to the Local Sponsor's share.

5. For lands, easements, or rights-or-way acquired by the Local Sponsor within a five-year period preceding the date this Agreement is signed, or any time after this agreement is signed, credits provided under this paragraph will also include the actual incidental costs of acquiring the interest, e.g., closing and title costs, appraisal costs, survey costs, attorney's fees, plat maps, and mapping costs, as well as the actual amounts expended for payment of any Public Law 91-646 relocation assistance benefits provided in accordance with the obligations under this Agreement.

b. The costs of relocations or modifications of utilities or facilities that will be included in total project costs and credited towards the local sponsor's share of total project costs shall be that portion of the actual costs incurred by the Local Sponsor as set forth below,

1. Highways and Highway Bridges: Only that portion of the cost as would be necessary to construct substitute bridges and highways to the design standard that the Commonwealth of Massachusetts would use in constructing a new bridge or highway under similar conditions of geography and traffic loads.

2. Utility Facilities (Including Railroads): Actual relocation costs, less depreciation, less salvage value, plus the cost of removal, less the cost of betterments. With respect to betterments, new materials shall not be used in any relocation or alteration if materials of value and usability equal to those in the existing facility are available or can be obtained as salvage from the existing facility or otherwise, unless the provision of new material is more economical. If, despite the availability of used material, new material is used, where the use of such new material represents an additional cost, such cost shall not be included in total project costs, nor credited towards the Local Sponsor's share.

ARTICLE V - CONSTRUCTION PHASING AND MANAGEMENT

a. To provide for consistent and effective communication between the Local Sponsor and the Government during the term of construction, the Local Sponsor and the Government shall appoint representatives to coordinate on scheduling, plans, specifications, modifications, contract costs, and other matters relating to construction of the Project. The Local Sponsor will be informed of any changes in cost estimates.

b. The representatives appointed above shall meet as necessary during the term of project construction and shall make such recommendations as they deem warranted to the Contracting Officer.

c. The Contracting Officer shall consider the recommendations of said representatives in all matters pertaining to the project, but the Contracting Officer, having ultimate responsibility for construction of the project, has complete discretion to accept, reject, or modify the recommendations.

ARTICLE VI - METHOD OF PAYMENT

a. The Local Sponsor shall provide during the period of construction, the amounts required under Articles II.c., II.e., and II.f. of this Agreement. Total project costs are presently estimated to be $ 95,000. In order to meet its share, the Local Sponsor must provide a cash contribution presently estimated to be $ 23,750.

b. The required cash contribution shall be provided as follows: [At least 30] calendar days prior to the award of the first construction contract, the Government shall notify the Local Sponsor of the Local Sponsor's estimated share of project costs, including its share of costs attributable to the Project incurred prior to the initiation of construction. Within [15] calendar days thereafter, the Local Sponsor shall provide the Government the full amount of the required contribution by delivering a check payable to "FAO, USAED, NED" to the Contracting Officer representing the Government. In the event that total project costs are expected to exceed the estimate given at the outset of construction, the Government shall immediately notify the Local Sponsor of the additional contribution it will be required to make to meet its share of the revised estimate. Within [45] calendar days thereafter, the Local Sponsor shall provide the Government the full amount of the additional required contribution.

c. The Government will draw on the [funds provided by the Local Sponsor such sums as it deems necessary to cover contractual and in-house fiscal obligations attributable to the Project as they are incurred, as well as project costs incurred by the Government prior to initiation of construction.

d. Upon completion of the Project and resolution of all relevant contract claims and appeals, the Government shall compute the total project costs and tender to the Local Sponsor a final accounting of the Local Sponsor's share of total project costs. In the event the total contribution by the Local Sponsor is less than its required share of total project costs at the time of the final accounting, the Local Sponsor shall, no later than 90 calendar days after receipt of written notice, make a cash payment to the Government of whatever sum is required to meet the Local Sponsor's minimum required share of project costs.

e. In the event the Local Sponsor has made cash contributions in excess of 5 percent of total project costs which result in the local sponsor's having provided more than its required share of total project costs, the Government shall no later than 90 days of the final accounting, subject to the availability of appropriations for that purpose, and subject to the $500,000 Federal limitation set out in Article II.f., return said excess to the Local Sponsor; however, the Local Sponsor shall not be entitled to any refund of the 5 percent cash contribution required pursuant to Article II.c. of this Agreement.

f. If the Local Sponsor's total contribution under this Agreement (including allowable credits for lands, easements, rights-of-way, relocations, and dredged material disposal areas provided for the Project by the Local Sponsor) exceeds ~~EITHER NO IF NO QUALIFICATION UNDER ABILITY TO PAY TEST, OR THE APPROPRIATE AMOUNT IF TO PAY PERCENTAGE, IF THE PROJECT QUALIFIED~~ 50 percent of total project costs, the Government shall, subject to the availability of appropriations for that purpose, and subject to the $500,000.00 Federal Limitation set out in Article II.f., refund the excess to the Local Sponsor no later than 90 calendar days after the final accounting is complete.

ARTICLE VII- DISPUTES

Before any party to this Agreement may bring suit in any court concerning an issue relating to this Agreement, such party must first seek in good faith to resolve the issue through negotiation or other forms of non-binding alternate dispute resolution mutually acceptable to the parties.

ARTICLE VIII - OPERATION MAINTENANCE, REPLACEMENT, AND REHABILITATION

a. After the Government has turned the completed Project, or functional portion of the Project, over to the Local sponsor, the Local Sponsor shall operate, repair, maintain, replace, and rehabilitate the completed Project, or functional portion of the Project, in accordance with regulations or directions prescribed by the Government.

b. The Local Sponsor hereby gives 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, if necessary, for the purpose of completing, operating, repairing, maintaining, replacing, or

rehabilitating the Project. If an inspection shows that the Local Sponsor for any reason is failing to fulfill its obligations under this Agreement without receiving prior written approval from the Government, the Government will send a written notice to the Local Sponsor. If the Local Sponsor persists in such failure for 30 calendar days after receipt of the notice, then the Government shall have a right to enter, at reasonable times and in a reasonable manner, upon lands the Local Sponsor 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 the Local Sponsor of responsibility to meet its obligations as set forth in this Agreement, or to preclude the Government from pursuing any other remedy at law or equity to assure faithful performance pursuant to this Agreement.

ARTICLE IX - RELEASE OF CLAIMS

The Local Sponsor shall hold and save the Government free from all damages arising from the construction and operation of the project, except for damages due to the fault or negligence of the Government or its contractors.

ARTICLE X - HAZARDOUS SUBSTANCES

a. After execution of this Agreement and upon direction by the Contracting Officer, the Local Sponsor shall perform, or cause to be performed, such environmental investigations as are determined necessary by the Government or the Local Sponsor to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC 9601-9675, on lands necessary for Project construction, operation, and maintenance. All actual costs incurred by the Local Sponsor which are properly allowable and allocable to performance of such environmental investigations shall be included in total project costs and cost shared as a construction cost in accordance with Section 103 Public Law 99-662.

b. In the event it is discovered through an environmental investigation or other means that any lands, easements, rights-of-way, or disposal areas to be acquired or provided for the Project contain any hazardous substances regulated under CERCLA, the Local Sponsor and the Government shall provide prompt notice to each other, and the Local Sponsor shall not proceed with the acquisition of land, easements, rights-of-way, or disposal areas until mutually agreed.

c. The Government and the Local Sponsor, shall determine whether to initiate construction, to continue with construction of the Project, or to terminate construction of the project, for the convenience of the Government in any case where hazardous substances regulated under CERCLA are found to exist on any lands necessary for the Project. Should the Government and the Local Sponsor determine to proceed or continue with construction after considering any liability that may arise under CERCLA, as between the Government and the Local Sponsor, the Local Sponsor shall be responsible for any and all necessary clean up and response costs, to include the costs of any studies and investigations necessary to determine an appropriate response to the contamination. Such costs shall not be considered a part of total project costs as defined in this Agreement. In the event the Local Sponsor fails to provide any funds necessary to pay for clean up and response costs or to otherwise discharge its responsibilities under this paragraph upon direction by the Government, the Government may either terminate or suspend work on the Project or proceed with further work as provided in Article XVI.

d. The Local Sponsor and the Government shall consult with each other under the Construction Phasing and Management Article of this Agreement to assure that responsible parties bear any necessary clean up and response costs as defined in CERCLA. Any decision made pursuant to paragraph c of this Article shall not relieve any party from any liability that may arise under CERCLA.

e. The Local Sponsor shall operate, maintain, repair, replace, and rehabilitate the Project in a manner so that liability will not arise under CERCLA.

f. In the event liability does arise in the construction, operation, maintenance, repair, replacement, or rehabilitation of the Project, the Local Sponsor shall indemnify the Government for any clean up costs or response costs for which the Government is found liable under CERCLA, except for such response or cleanup costs which result from negligence of the Government or its contractors during construction.

ARTICLE XI - MAINTENANCE OF RECORDS

The Government and the Local Sponsor shall keep books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement to the extent and in such detail as will properly reflect total project costs. The Government and the Local Sponsor shall maintain such books,

records, documents, and other evidence for a minimum of three years after completion of construction of the Project and resolution of all claims arising therefrom, and shall make available at their offices at reasonable times, such books, records, documents, and other evidence for inspection and audit by authorized representatives of the parties to this Agreement.

ARTICLE XII - FEDERAL AND STATE LAWS

In acting under its rights and obligations hereunder, the Local Sponsor agrees to 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.II 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."

ARTICLE XIII - RELATIONSHIP OF PARTIES

The parties to this Agreement act in an independent capacity in the performance of their respective functions under this Agreement, and neither party is to be considered the officer, agent, or employee of the other.

ARTICLE XIV - OFFICIALS NOT TO BENEFIT

No member of or delegate to the Congress, or resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

ARTICLE XV - COVENANT AGAINST CONTINGENT FEES

The Local Sponsor warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Local Sponsor for the purpose of securing business. For breach or violation of this warranty, the Government shall have the right to annul this Agreement without liability, or, in its discretion, to add to the Agreement or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

ARTICLE XVI -TERMINATION OR SUSPENSION

a. If at any time the Local Sponsor fails to make the payments required under this Agreement, the Secretary of the Army shall terminate or suspend work on the Project until the Local Sponsor is no longer in arrears or unless the Secretary of the Army determines that continuation of work on the Project is in the interest of the United States. Any delinquent payment shall be charged interest at a rate, to be determined by the Secretary of the Treasury, equal to 150 per centum of the average bond equivalent rate of the 13-week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning to each additional 3-month period if the period of delinquency exceeds 3 months.

b. If the Government fails to receive annual appropriations for the Project in amounts sufficient to meet expenditures for the then-current or upcoming fiscal year, the Government shall so notify the Local Sponsor. After 60 calendar days either party may elect without penalty to terminate the Agreement or to defer future performance hereunder; however, deferral of future performance under this Agreement shall not affect existing obligations or relieve the parties of liability for any obligation previously incurred. In the event that either party elects to defer future performance under this Agreement, such time as the Government receives sufficient appropriations or either party elects to terminate the Agreement. In the event that either party elects to terminate this Agreement, the parties shall conclude their activities relating to the Project and proceed to a final accounting in accordance with Article VI.

ARTICLE XVII - NOTICES

a. All notices, requests, demands, and other communications required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and delivered personally, given by prepaid telegram, or mailed by first-class (postage-prepaid), registered, or certified mail, as follows:

If to the Local Sponsor:
Mr. Gene Kavanaugh
Division of Waterways
Department of Environmental Management
200 Cambridge Street
Boston, Massachusetts

[FULL ADDRESS]

If to the Government:
Division Engineer
New England Division
Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254-9149

[FULL ADDRESS]

b. A party may change the address to which such communications are to be directed by giving written notice to the other in the manner provided in this Article.

c. Any notice, request, demand, or other communication made pursuant to this Article shall be deemed to have been received by the addressee at such time as it is personally delivered or on the third business day after it is mailed, as the case may be.

ARTICLE XVIII - CONFIDENTIALITY

To the extent permitted by the law governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

ARTICLE XIX - APPROVAL OF AGREEMENT

The U.S. Army Engineer for the New England [LOCATION] Division [DISTRICT/DIVISION] is authorized to execute this Agreement on behalf of the Government, provided no modification is made to this Agreement other than completion in accordance with the bracketed instructions. If any such modification is made, this Agreement shall be subject to the written approval of the Assistant Secretary of the Army (Civil Works) and is not binding on the Government until so approved.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

THE DEPARTMENT OF THE ARMY

By: Philip R Harris
[SIGNATURE]

PHILIP R. HARRIS
[TYPED NAME]

[SELECT ONE]
~~District~~ Division
Engineer

Date: _____

THE LOCAL SPONSOR

By: Richard E Kendall
[SIGNATURE]

RICHARD E. KENDALL
[TYPED NAME]

Commissioner, Department of
Environmental Management

[TITLE IN FULL]

Date: 12/3/90

Approved By:

Governor Michael S. Dukakis

EXHIBIT A

CERTIFICATION OF AUTHORITY

I, _____, do hereby certify that I am
[TYPED OR PRINTED NAME]
the Attorney General of the Commonwealth of Massachusetts, and that the
[TITLE] [LOCAL SPONSOR]
Department of Environmental Management is a legally constituted public body
[LOCAL SPONSOR]
with full authority and capability to perform the terms of the Agreement between the Department of the Army and Department of Environmental Management [LOCAL SPONSOR] in connection with Town River Bay [NAME OF PROJECT], and damages, if necessary, in the event of the failure to perform, in accordance with Section 221 of Public Law 91-611 and that the person(s) who has/have executed the Agreement on behalf of the Commonwealth of Massachusetts has/have acted within statutory
[LOCAL SPONSOR]
authority.

IN WITNESS WHEREOF, I have made and executed this Certificate of Authority this ____ day of _____, 1990.

[PLACE SEAL AND/OR ACKNOWLEDGEMENT(S) BELOW, IF NECESSARY FOR EXECUTION OF THIS DOCUMENT--THE DEPARTMENT OF THE ARMY DOES NOT REQUIRE EITHER.]

James M. Shannon
[SIGNATURE]

James M. Shannon
[TYPED NAME]

Attorney General
Commonwealth of Massachusetts
[TITLE IN FULL]

CERTIFICATION REGARDING LOBBYING

The undersigned certified, to the best of his or her knowledge and belief that:

(10 No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member off Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreement) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Sponsor

CERTIFICATION REGARDING LOBBYING

The undersigned certified, to the best of his or her knowledge and belief that:

(10 No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person influencing or attempting to influence an officer or employee of any agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member off Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreement) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Sponsor

APPENDIX C

INSPECTION REPORT FORMS

DESIGNATION OF SUPERINTENDENT

Name Of Project: _____

Location: _____

MAINTAINING MUNICIPAL AGENCY:

Agency: _____

Address: _____ Tel. No. _____

"SUPERINTENDENT" - as required by Section 208.10 (a) (2), Chap II, Title 33 USC

Name & Title: _____

Employed by: _____

Business Address: _____

Business Tel. No: _____

Nights, Sundays, Address: _____

Nights, Sundays, Tel. No: _____

Remarks:

Signed _____

Title: _____

Date: _____

NOTE: To be submitted and updated as necessary by the responsible agency which will maintain and operate the works in accordance with regulations prescribed by the Secretary of the Army as required by law (Title 33, Chap. 208, Sec II, USC).

LOCAL FLOOD PROTECTION PROJECT INSPECTION REPORT

Project:

Maintaining Agency:

Type Inspection: _____Semi-Annual Staff ____90 Day Interim

River Basin: Date of Inspection

Feature	Sat	Unsat	Deficiencies
PUMPING STATIONS - STRUCTURES			
INTERIOR			
EXTERIOR			
PUMPS - MOTORS - ENGINES			
TRIAL OPERATED			
GENERAL CONDITION			
POWER SOURCE			
INSULATION TESTS			
METAL INTAKES/OUTLETS			
GATE VALVES			
GATES - DRAINAGE STRUCTURES			
TRIAL OPERATED			
GENERAL CONDITION			
LUBRICATION			
DIKES - DAMS			
GENERAL CONDITION			
SLOPES/EROSION			
SAND BOILS/CAVING			
TRESPASSING			
SLOPE PROTECTION			
DRAINS			
STOP-LOGS - LOG BOOM			
CONDITION OF LOGS			
AVAILABILITY OF LOGS			
HIGHWAY SLOTS			
STORAGE FACILITIES			
CHANNELS - OUTLET WORKS CHANNEL			
BANKS			
OBSTRUCTION CONTROL			

NED FORM JAN. 66 513

Feature	Sat	Unsat	Deficiencies
CONCRETE STRUCTURES			
SURFACE			
SETTLEMENT			
JOINTS			
DRAINS			
MISCELLANEOUS			
EMERGENCY OPER. PLAN			
EMERGENCY EQUIPMENT			
SEMI-ANNUAL REPORT			

Inspection Party:

Photographs Taken:

Remarks & Additional Comments:

(Indicate Here Observations, Discussions, Specific Feature Deficiencies, Recommendations and any other pertinent information. Use Continuation Sheet if necessary.)

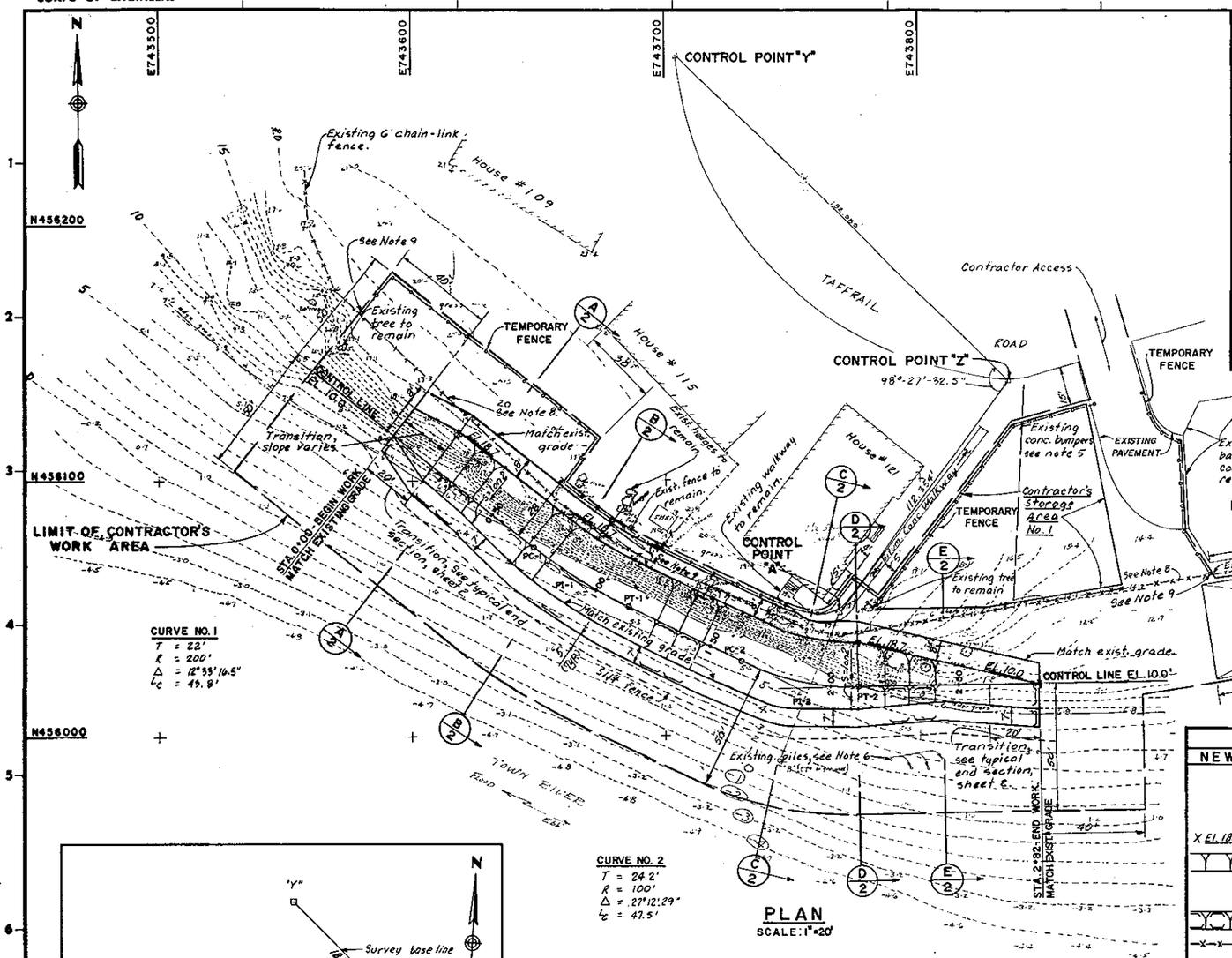
X ALL APPLICABLE ITEMS. IF UNSAT INDICATE SPECIFIC DEFICIENCIES. INDICATE IF NOT APPLICABLE.

DATE	INSPECTED BY: TYPED NAME & TITLE	SIGNATURE

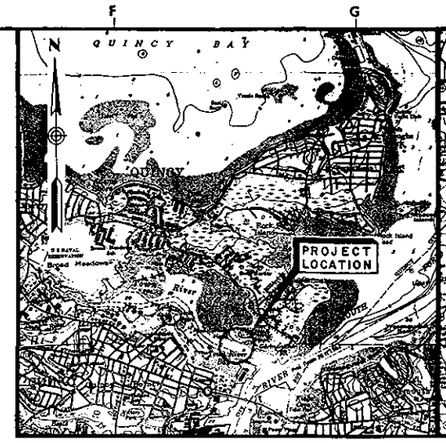
APPENDIX D

AS-BUILT DRAWINGS

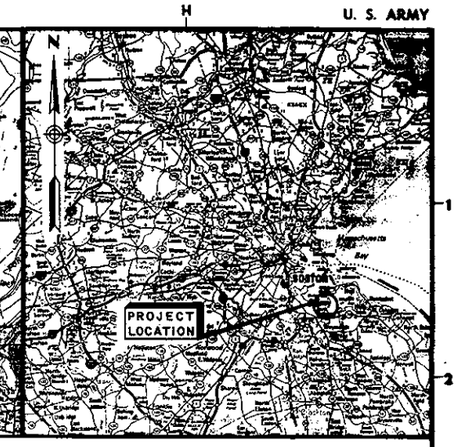
CORPS OF ENGINEERS — U. S. ARMY



PLAN
SCALE: 1" = 20'



VICINITY MAP
SCALE IN FEET
1000 0 1000 2000 3000 4000 5000 FT.



LOCATION MAP
SCALE IN MILES
5 0 5 10 15 MI.

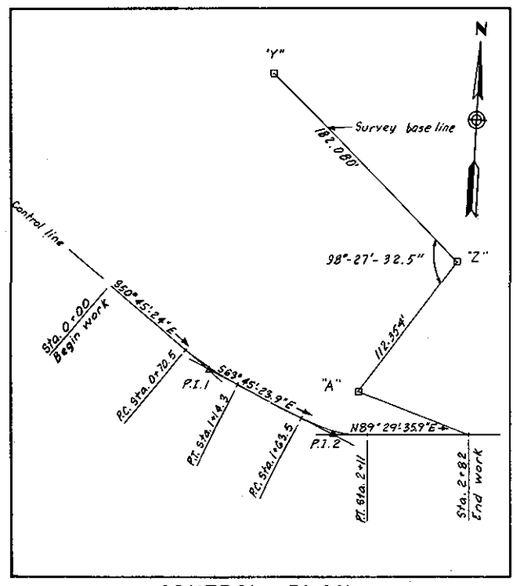
INDEX TO DRAWINGS		
DRAWING NO.	SH. NO.	TITLE
TRB - 1	1	SITE PLAN AND INDEX
TRB - 1	2	TYPICAL SECTIONS
OCE	STANDARD	DRAWINGS
40-16-08	1	FENCE AND DETAILS

NOTES:

1. Topography is based on survey done by Corps of Engineers, Dec. 1989, Book FC 621, Pages 1 through 25.
2. Elevations refer to National Geodetic Vertical Datum of 1929 (N.G.V.D.). Coordinates refer to Massachusetts Coordinate System.
3. Mean high water is +4.99 feet N.G.V.D.
   Mean low water is -4.51 feet N.G.V.D.
4. Predicted times and heights of daily high and low waters for Boston Harbor are available in the 1991 Tide Tables as published by the National Ocean Service.
5. Twelve existing concrete bumpers within the limits of the Contractor's work area are to be removed, stockpiled and reset upon completion of the work.
6. The existing piles shown on the plan are of historical significance and are to remain undisturbed.
7. All trees to remain are to be protected by a construction barrier. See specifications.
8. The existing 6' chain-link fence within the Contractor's Work Area is to be removed. Existing chain-link fabric will be reinstalled with new posts, rails, and accessories in accordance with Standard Drawing No. 40-16-08 and specifications. New fence will retain alignment of existing fence. Existing posts, rails, and accessories are to be disposed of in accordance with the specifications.
9. Temporary fence is to abut the existing fence. See specifications for temporary fence requirements.

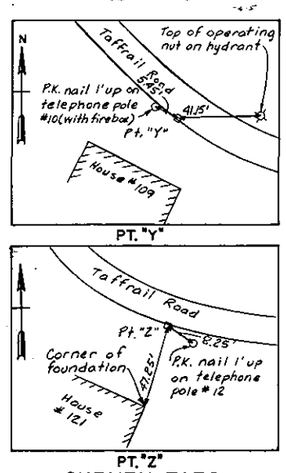
LEGEND		
NEW	EXISTING	DESCRIPTION
		Boulders
		Building
	18	Contours
X El. 18.7	19.6	Spot elevations
		Earth fill
		Existing ground surface
		Stone slope protection
		6' Chain-link fence (See Note 8)
		Fence (to remain)
		Trees
		Temporary fence
		Limit of Contractor's Work Area
		Wooden fence
		Silt fence

As Built Drawing
Contract No. DACW 33-92-C-0020



CONTROL PLAN
SCALE: 1" = 40'

CONTROL POINTS			
POINT	COORDINATES	ELEV. (N.G.V.D.)	REMARKS
"Y"	N 456266.76 E 743705.93	20.66	1/8" drill hole in granite curb
"Z"	N 456137.93 E 743834.60	18.96	1/8" drill hole in granite curb
"A"	N 456047.71 E 743767.65	19.38	P.K. nail in sidewalk
Begin work	N 456119.12 E 743593.31	-	Sta. 0+00.0
P.C. 1	N 456074.52 E 743647.91	-	Sta. 0+70.5 (curve 1)
P.I. 1	N 456060.60 E 743664.95	-	P.I. (curve 1)
P.T. 1	N 456050.87 E 743684.68	-	Sta. 1+14.3 (curve 1)
P.C. 2	N 456029.08 E 743728.90	-	Sta. 1+63.5 (curve 1)
P.I. 2	N 456018.37 E 743750.61	-	P.I. (curve 2)
P.T. 2	N 456018.59 E 743774.81	-	Sta. 2+11.0 (curve 2)
End work	N 456019.21 E 743845.60	-	Sta. 2+82.0



SURVEY TIES
N.T.S.

VALUE ENGINEERING PAYS DIVIDENDS

SAFETY PAYS

GRAPHIC SCALES
1" = 20' 20' 0 20' 40'
1" = 40' 40' 0 40' 80'

REVISION	DATE	DESCRIPTION	BY
	9-25-92	Final field corrections	

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION
CORPS OF ENGINEERS
WALTHAM, MASS.

DES. BY D.G. — DR. BY R.F.E. — CK. BY J.L.

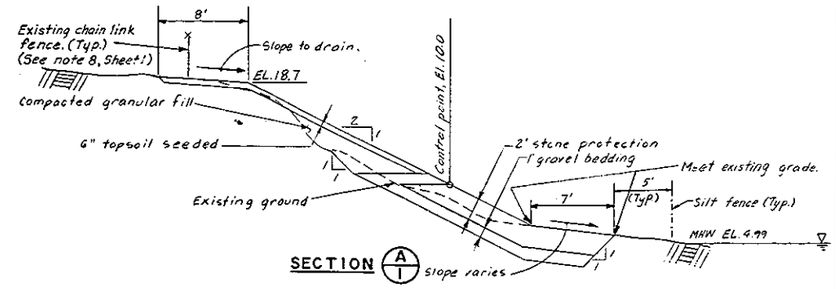
SUBMITTED: CHIEF, CIVIL ENG. BRANCH
APPROVAL RECOMMENDED: CHIEF, DESIGN BRANCH
REVIEWED: PROJECT MANAGER
APPROVAL RECOMMENDED: CHIEF, PROJECT MGMT. DIVISION

WATER RESOURCES DEVELOPMENT PROJECT
QUINCY, MASSACHUSETTS
EMERGENCY STREAMBANK PROTECTION
TOWN RIVER BAY
SITE PLAN AND INDEX

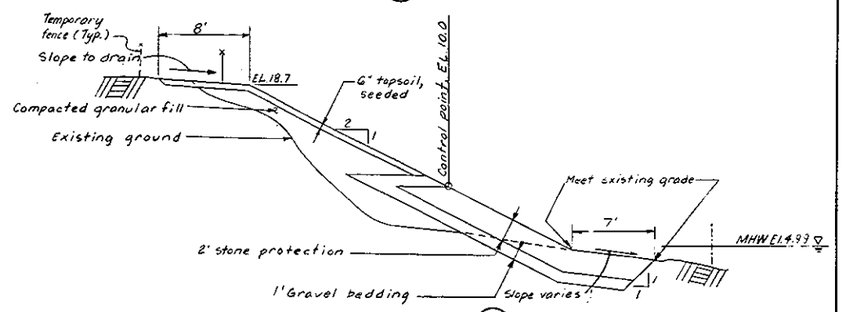
APPROVED: DIRECTOR OF ENGINEERING — DATE JUNE 1990

SCALE AS SHOWN — SPEC. NO. DACW33-92-B-0013
DRAWING NUMBER TRB - 1
SHEET 1

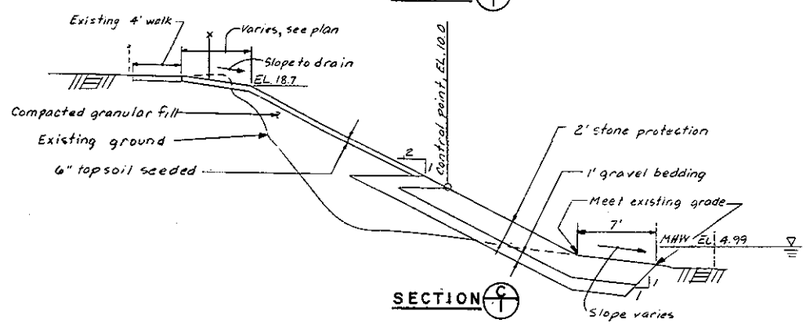
CORPS OF ENGINEERS — U. S. ARMY



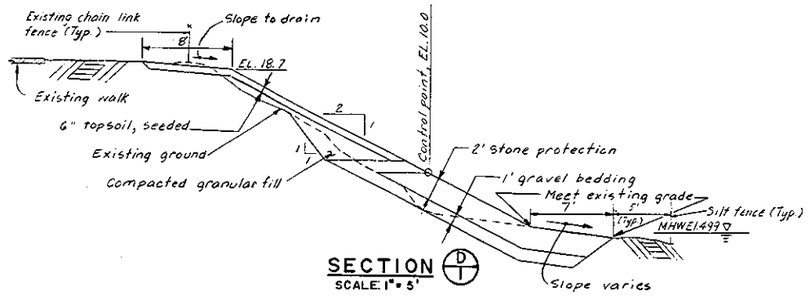
SECTION A/1



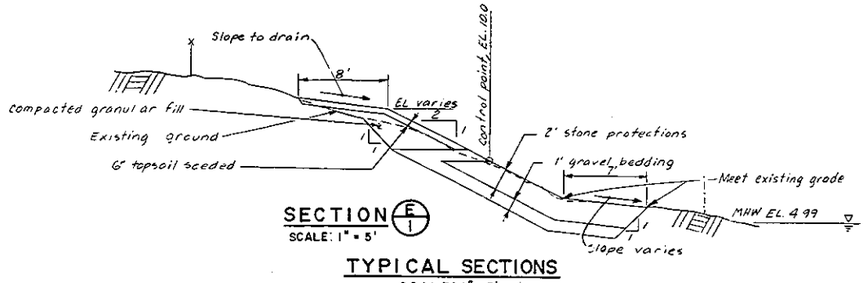
SECTION B/1



SECTION C/1

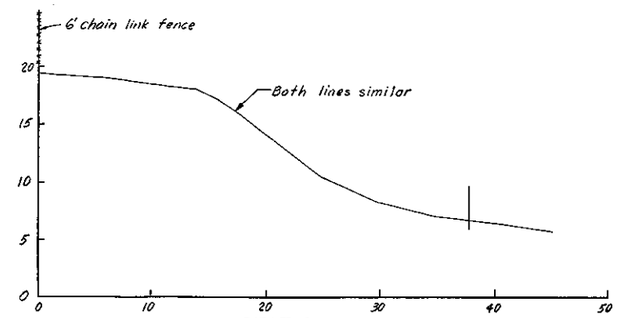


SECTION D/1
SCALE: 1" = 5'

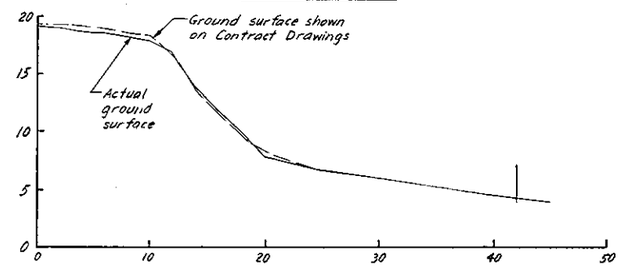


SECTION E/1
SCALE: 1" = 5'

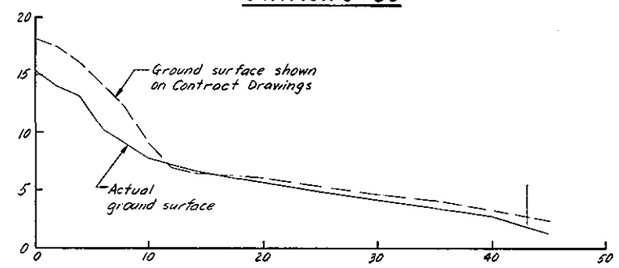
TYPICAL SECTIONS
SCALE: 1" = 5'



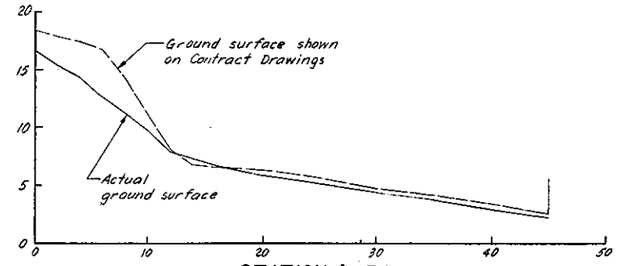
STATION 0+00



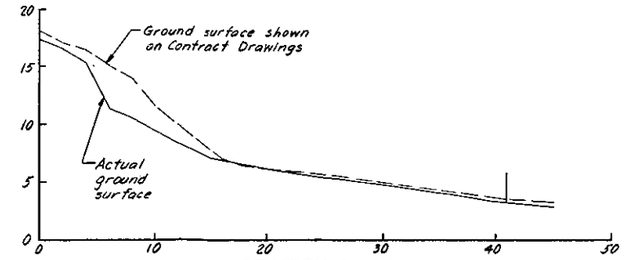
STATION 0+50



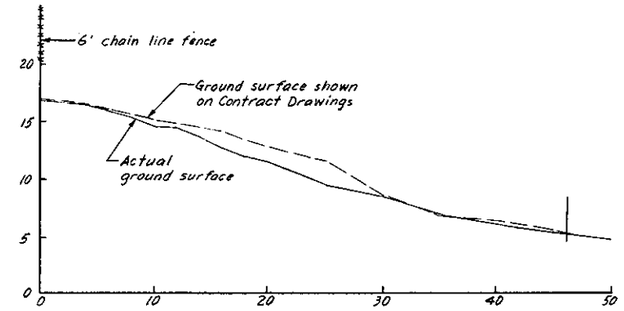
STATION 1+00



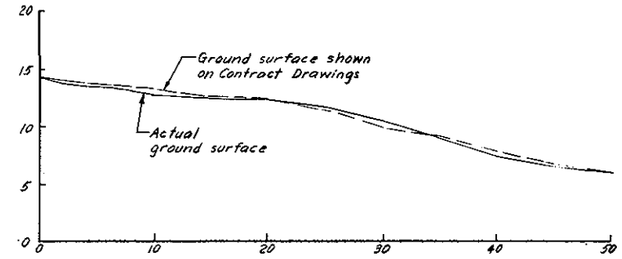
STATION 1+50



STATION 2+00

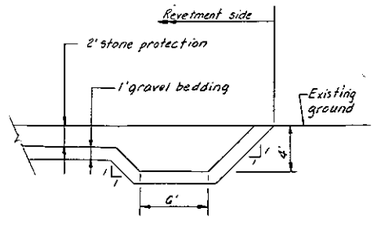


STATION 2+50



STATION 2+83

NOTE:
These sections from Sta. 0+00 to Sta. 2+83 show the difference in elevation between the actual ground surface, prior to construction, and the ground surface shown on the contract drawings.



TYPICAL END SECTION
SCALE: 1" = 5'

As Built Drawing
Contract No. DACW 33-92-C-0020

GRAPHIC SCALES
1" = 5' 5' 0 5' 10'

REVISION	DATE	DESCRIPTION	BY
	9-25-92	Final field corrections	

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION
CORPS OF ENGINEERS
WALTHAM, MASS.

DES. BY D.G. | DR. BY R.F.E. | CK. BY J.L.

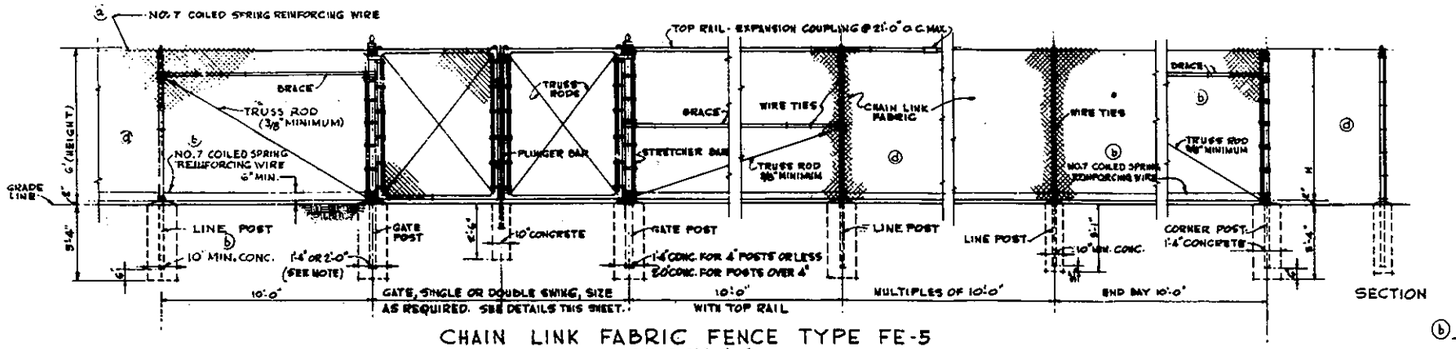
SUBMITTED: CHIEF, CIVIL ENG. BRANCH
APPROVAL RECOMMENDED: CHIEF, DESIGN DIVISION
REVIEWED: PROJECT MANAGER
APPROVAL RECOMMENDED: CHIEF, PROJECT MGMT DIVISION

WATER RESOURCES DEVELOPMENT PROJECT
QUINCY, MASSACHUSETTS

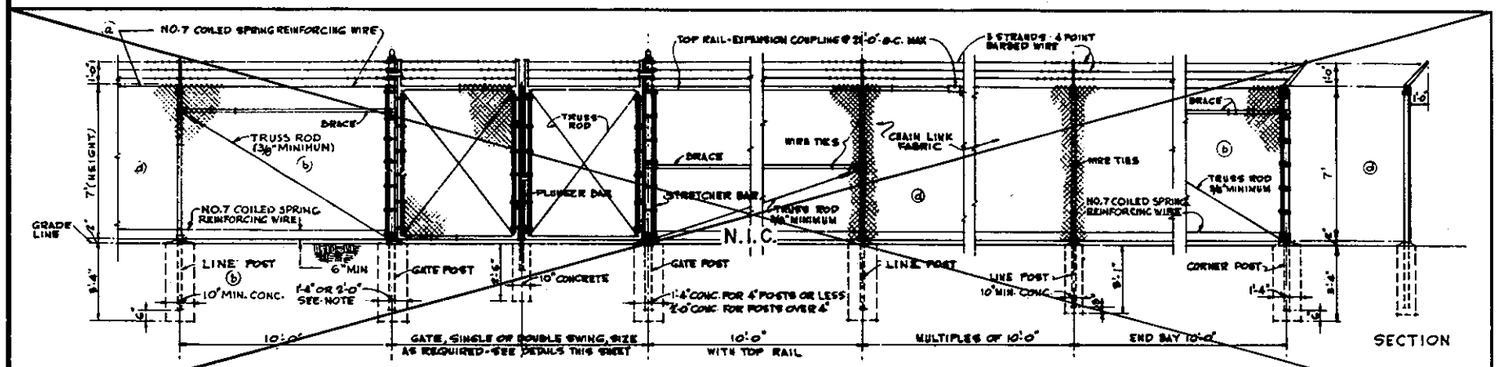
EMERGENCY STREAMBANK PROTECTION
TOWN RIVER BAY
TYPICAL SECTIONS

APPROVED: DIRECTOR OF ENGINEERING
DATE: JUNE 1990

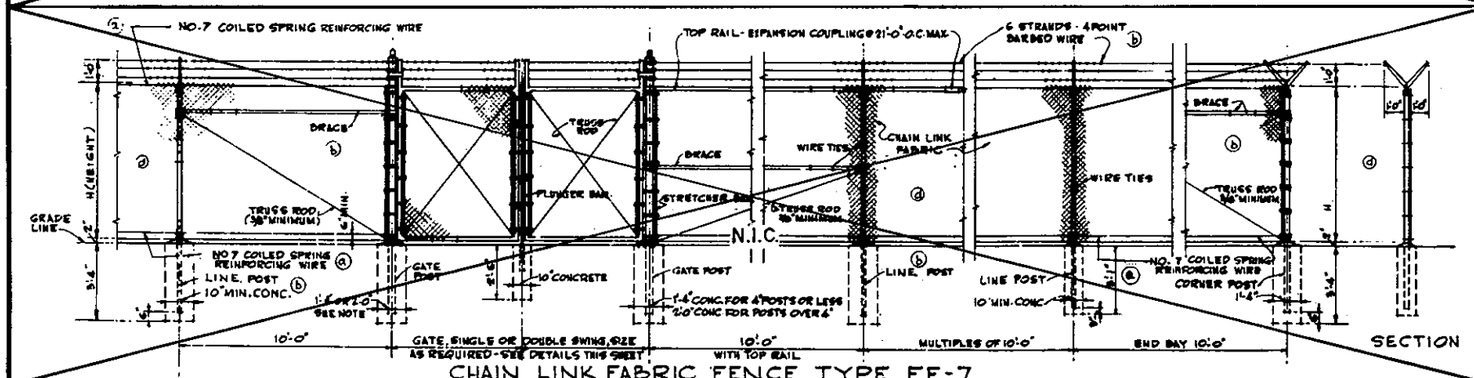
SCALE: AS SHOWN | SPEC. NO. DACW33-92-B-0013
DRAWING NUMBER TRB - 1
SHEET 2



CHAIN LINK FABRIC FENCE TYPE FE-5
SCALE 3/8" = 1'-0"



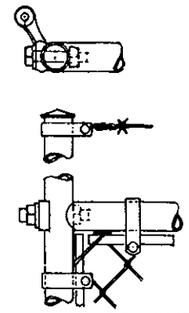
CHAIN LINK FABRIC FENCE TYPE FE-6
SCALE 3/8" = 1'-0"



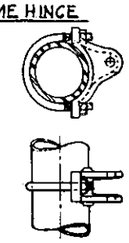
CHAIN LINK FABRIC FENCE TYPE FE-7
SCALE 3/8" = 1'-0"

GENERAL NOTES

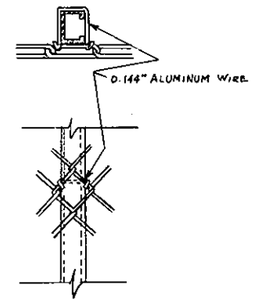
1. DETAILS ARE TO CLARIFY REQUIREMENTS BUT ARE NOT INTENDED TO LIMIT OTHER FENCE SECTIONS AND METHODS OF INSTALLATION SPECIFIED.



ⓑ GATE FRAME HINGE



ⓑ POST HINGE



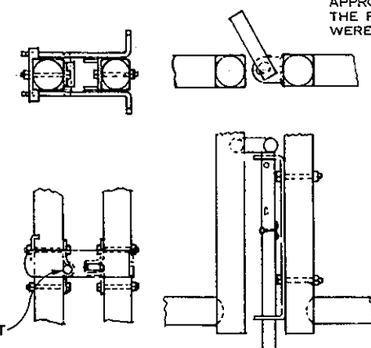
ⓒ C-SECTION LINE POST ATTACHMENTS
NO SCALE

STANDARD PLAN MODIFIED FOR TOWN RIVER BAY

JUNE 1990 SPEC. NO. DACA33-92-B-0013

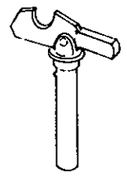
APPROVED FOR NED BY _____
THE FOLLOWING MODIFICATIONS WERE MADE.
FENCE TYPES DELETED

As Built Drawing
Contract No. DACW 33-92-C-0020



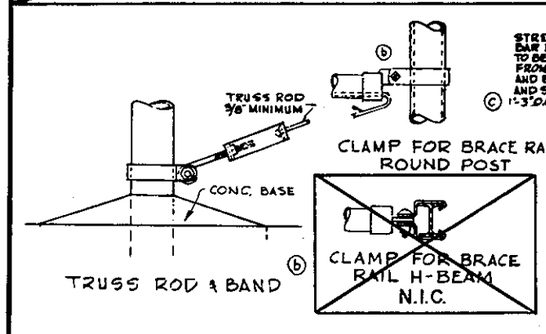
ⓑ LATCH ASSEMBLY

ⓑ DROP BAR ASSEMBLY



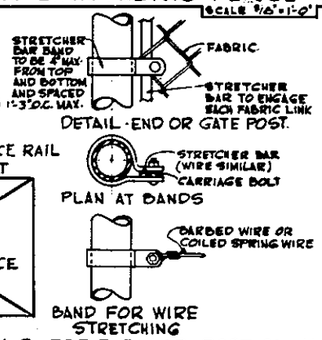
GATE KEEPER
(TO HOLD GATE OPEN)

SWING GATE DETAILS
NO SCALE



TRUSS ROD & BAND

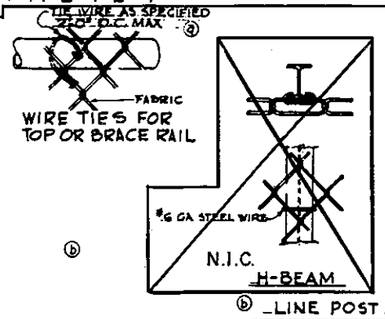
CLAMP FOR BRACE RAIL ROUND POST



DETAIL - END OR GATE POST.

PLAN AT BANDS

BAND FOR WIRE STRETCHING



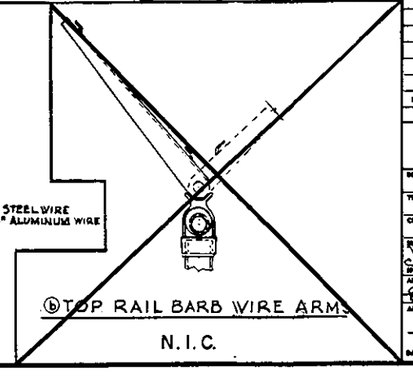
WIRE TIES FOR TOP OR BRACE RAIL

H-BEAM

ROUND POST

ⓑ LINE POST ATTACHMENTS

FASTENING DETAILS - FOR TUBULAR POST OR H-COLUMNS
NO SCALE



ⓑ TOP RAIL BARB WIRE ARMS
N.I.C.

THIS DRAWING SUPERSEDES E 40-16-06

SYMBOL	DESCRIPTION	DATE	APPROVAL
ⓔ	C-SECTION LINE POST ADDED	10 FEB 77	JTI
ⓓ	REFERENCES REMOVED	1 OCT 70	WRH
ⓒ	GENERAL NOTES REVISED; END OR GATE POST DETAIL REVISED	15 JUNE 72	A
ⓑ	GENERAL REVISIONS (SEE DETAILED LIST OF REVISIONS)	26 NOV 54	
ⓐ	NOTES ON SIZE OF COILED SPRING REINF. WIRE AND TIE WIRE CHANGED.	19 APR 33	

REVISIONS

SPECTOR & MONTGOMERY
ARCHITECTS — ENGINEERS
FALLS CHURCH, VIRGINIA

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
MILITARY CONSTRUCTION — ENGINEERING DIVISION
Washington, D. C.

DRAWN BY: KMM
TRACED BY:
CHECKED BY:
SUBMITTED BY: SPECTOR & MONTGOMERY
APPROVED FOR: CHIEF, ENGINEERING DIV., CONSTR. & E.E.
DATE: 3 MAR 91
APPROVED FOR
DATE:

FENCE & DETAILS
TYPE FE-5, FE-6, FE-7

SCALE AS NOTED SPEC. NO.
DRAWING NUMBER 40-16-08
SHEET 1 OF 1