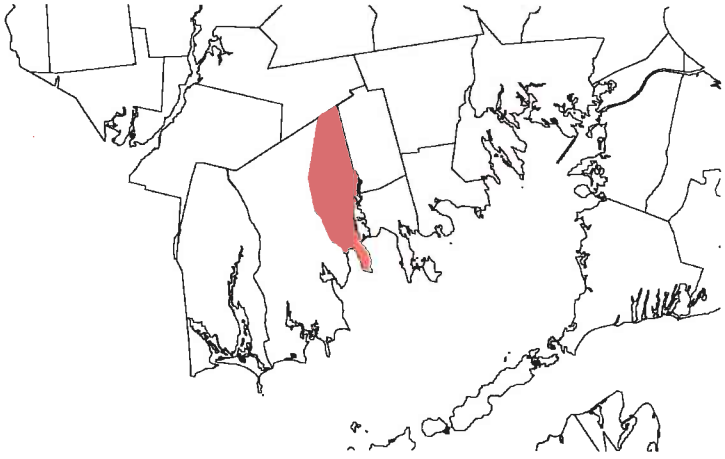
*Massachusetts Coastal Infrastructure*
*Inventory and Assessment Project*
*Coastal Hazards Commission*

# South Coastal

dcr

## New Bedford



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# South Coastal

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# Section I

# Coastal Hazards Infrastructure and Assessment Program

INTRODUCTION

PURPOSE

DEVELOPMENT OF MassGIS DATABASE ATTRIBUTES

DEVELOPMENT OF REPAIR / RECONSTRUCTION COSTS

# *Massachusetts Coastal Infrastructure Inventory and Assessment Project Coastal Hazards Commission*

## Section I – Coastal Hazards Infrastructure and Assessment Program

### INTRODUCTION

The Project and Client

The Commonwealth of Massachusetts has initiated a Coastal Hazards Commission (CHC) to identify the vulnerability of the state to coastal hazards. As one of five working groups working under the CHC, the 20-Yr Infrastructure Plan was to establish a prioritization for the repair of coastal structures. The focus areas of the Working Group include:

- Publicly owned infrastructure
- Infrastructure for which State is responsible
- Inventory of public hazards infrastructure
- Evaluation on conditions
- Development for a prioritization of work
- Estimation of capital and maintenance costs

The 20-Yr Infrastructure Working Group is led by Representative Frank Hynes with CZM as the lead State Agency overseeing the management of the project. The Massachusetts coastline has been broken up into 4 major regions consisting of the North Shore, Boston, South Coast, and the Cape and Islands. The South Shore (the Towns of Hull, Cohasset, Seekonk, Hingham, Plymouth, Kingston, Scituate and Duxbury) was previously evaluated by Bourne Consulting Engineering as a demonstration project in 2006.

Consultant Team

The consultant team that performed the demonstration project was led by Bourne Consulting Engineering (***BCE***) of Franklin, MA who was responsible for overall project management, specified areas of field assessments, and research. Assisting ***BCE*** was Applied Coastal Research and Engineering Inc.of Mashpee, MA, Childs Engineering Corporation, of Medfield, MA., and Waterfront Engineer LLC of Stratham, NH.

### PURPOSE

Study Purpose

CZM seeks to identify the capacity of Massachusetts coastal structures to resist major coastal storms and prevent storm damage. In working toward this goal, CZM has initiated a program to perform an assessment of Commonwealth owned and/or maintained coastal structures. The first phase of this program was the performance of a demonstration project for coastal structures located on the South Shore. The demonstration project identified existing structures, their general conditions, ability to provide coastal protection and the probable cost for repairs. The information collected and developed has been incorporated into the MassGIS system to allow use for developing a 20 Year Coastal Infrastructure Plan.

The demonstration project served as a basis for the current statewide inventory assessment of all Commonwealth coastal structures and the needs for their maintenance and/or repair.

Goals of Study

The goals of the Massachusetts Coastal Infrastructure Inventory and Assessment Project include:

- To identify all the coastal structures the state either owns or has responsibility to maintain for the 4 regions included within the study
- Of the structures identified, determine the structure location and characteristics, the structure condition relative to providing coastal protection and the structure importance in relation to what it is protecting.
- To the degree possible, identify the structure elevation and the FIRM mapping flood elevation and category.
- To the degree possible, identify structure owner and available documents from local, state and federal agencies.
- To establish an estimated cost to rehabilitate the coastal structures to provide the level of project established in the structure's original design.
- Provide the information in a format compatible for incorporation into the MassGIS system

Limit of Study

Due to the time constraints and the amount of effort necessary to collect, process and compile the information, the following are identified as limitations of the information presented:

- All property ownership was taken as presumed. No legal investigation of ownership was performed during the project. Property ownership is based on town assessor maps. Where structures were located outshore of assessor map defined property lines, it was assumed to be Town land unless other information indicated otherwise. Where structures were located outshore of Mean Low Water, property is assumed to be State owned.

- The structure ownership was based on assessor maps and research at the local, state and federal levels. Where there was indication of public work on a structure on Town land or on private property, the structure was presumed to be Town owned. Where the structure was on state property, the structure was presumed to be state owned. Where ownership of the structure was not clear but was located on private property, the structure ownership was defined as unknown.

- The study included town and state owned structures as it was assumed that most town owned structures received state funding at some level for construction and/or maintenance.
    - Structures that were determined to be private were not included.
    - Undocumented structures considered to be on private land, but having the potential to have been publicly built and/or maintained, were identified as having an "unknown ownership".

- The prioritizing of structures was based primarily on risk to general infrastructure and density of housing. Infrastructure included was buildings. The study did not consider all infrastructure issues including:
    - No consideration on utility impacts – water, electrical, sewer, gas
    - No consideration of roadway and bridge protection
    - Evacuation routes were not considered within the investigation
    - Location of Emergency Shelters were not included in priority assessments

- Research was performed at the local, state and federal levels. The local research was limited to location and documenting available coastal structure contract drawings. Research at DCR was restricted to available historic construction plans for coastal structures at the MA-DCR Waterways office in Hingham, MA, and MA-DCR Division of Urban Parks and Recreation in

Boston, MA. No investigation of state archives was performed. Research at MA DEP Chapter 91 and USACE was limited to recorded permits and licenses found in their files. No investigation was performed at the Registry of Deeds.

## DEVELOPMENT OF MassGIS DATABASE ATTRIBUTES

The specific attributes that would be incorporated into the MassGIS system were developed based on the scope of work and the goals to be achieved. The following was established to standardize the data collection and presentation and to allow total flexibility for sorting by attributes in the final GIS database. The attributes identified below were input into a MS Access database which was used to manage the data from all eight communities within a single file.

Database Attributes

- Attribute Descriptions/Definitions

Structure Number: A unique structure number was given to each coastal structure. The number was based on existing numbering systems that include the State Department of Environmental Protection community number followed by the local community assessor's parcel numbering system. The last three digits of the number represent the structure within the parcel. Where structures extend over several parcels, the structure is referenced to a parcel that is approximately in the center of the structure. Where Town assessor's references include letters, those are also included within the structure number. Some communities have block numbering within their numbering system and these are included. Communities without block numbering still have the block numbering included but these are illustrated as all zeros for that specific segment.

Structures that are on Town property, which would otherwise not have a parcel number, are referenced to a parcel that is in the immediate vicinity of the coastal structure.

On this basis, the following is the general numbering convention:

**CCC-MMM-BBB-PPP-SSS**

| | | |
|---|---|---|
| Where: | CCC | DEP Community Number |
| | MMM | Community Map Number |
| | BBB | Block Number (000 if no block numbering system) |
| | PPP | Community Parcel Number |
| | SSS | Structure Number |

Property Ownership: All property ownership was on a "presumed" basis as no legal verification of ownership was performed. The ownership of the property was classified under four basic areas which were private ownership (Private), Town ownership (Local), Commonwealth of Massachusetts ownership (State), federal government ownership (Federal) or unknown. Property ownership was based on Town assessor's maps. Where the location was located above Mean Low Water, and not within a defined parcel, the property ownership was presumed to be the Town unless documentation was found to indicate otherwise. Where a structure was located offshore of Mean Low Water, the property ownership was presumed to be federal.

Structure Ownership: The ownership of all structures is presumed as no verification of ownership was performed. Ownership of the structure was determined by research into historic state and federal

permits and the entity indicated on the permits as the applicant. Where no other information was found, the following was utilized:

- Structures located on private land but appearing to be significant structures were identified as owned by the Town or as "Unknown". Unknown was used were there was a question of local or private ownership.
- Structures on Town property were assumed to be owned by the Town
- Structures that were located off-shore were presumed to be federally owned
- Structures that were identified as being privately owned were eliminated from the database

Basis of Ownership: The basis of structure ownership was provided to give rationale to the structure ownership and identified the research resource that identified the ownership or the methodology otherwise used. The responses utilized were limited to the following:

- DPW – DPW Employee Interview
- DCR - Contract Drawings
- DEP – Ch 91 License
- USACE – Permits
- Property Ownership
- Offshore Structure

Structure Owner's Name: Ownerships names reflect the presumed owner of publicly owned structures. As this was for public structures only, the ownership was restricted to the community name, the state agency or the federal agency.

Earliest Structure Record: The year of the oldest document located for the structure. The information is determined from the document research performed on the structure from local, state and federal agencies. If no documents could be found than this entry is denoted as 'Unknown". Where documentation of the structure could be found, the date from the oldest document was utilized.

Primary Structure / Secondary Structure: Many of the coastal structures consisted of combined structures which were rated separately. It was typically found that one structure was significantly more predominant (Ex. Bulkhead/Seawall) and was therefore identified as the Primary Structure while a smaller structure might exist in front (ex. Revetment) of it. The type, height and material of each structure are identified separately. The condition of each structure was based on the Primary Structure. Where there was no secondary structure, the fields were left blank.

Structure Type: The structure type was categorized into five basic coastal structure categories which were Bulkhead/Seawall, Revetment, Coastal Beach, Coastal Dune, and Jetty/Groin.

Structure Material: The identification of the coastal structure's material of construction was performed and represents the primary material. Stone structures consisted of both mortared and non-mortared conditions.

Structure Height: Each type of structure was categorized by its visible height in feet which was broken into four specific ranges which are:

< 5 feet  5 to 10 feet  10 to 15 feet  >15 feet

Structure Condition: A preliminary assessment of the condition for each structure was performed by the field teams. This was by visual observation only and no detailed investigation was performed. The condition assessments were based on a predefined five level rating system that ranged from Rating A for Excellent Condition to Rating F for Critical Condition. A detailed listing of the conditions and their definitions can be seen in Exhibit A.

Priority Rating: In order to account for the need for protection at any one site, a five level priority rating system was established. This allowed for consideration of public infrastructure protection, density of residential housing for development of structure overall importance for coastal protection. The ratings range from Level 1 for no infrastructure or residence protection to Level 5 for critical inshore infrastructure protection and/or high density residential. The detailed listing and definitions for the priority categories can be seen in Exhibit B.

Structure Repair / Reconstruction Cost: A preliminary estimation of construction costs to maintain or repair structures was made based on the preliminary field assessment of the structures. A Repair Cost Matrix was developed based on structure type, condition, height and material and can be seen in Exhibit C. Once each structure's type, height, and material classifications were determined, the cost per foot for the structure was determine from the Repair Cost Matrix and multiplied by the length of the structure to obtain the estimated repair/restoration cost. The cost matrix repair costs include a 20 percent construction cost contingency as well as 10 percent costs for engineering and permitting.

Structure Length: The length of each structure is provided and utilized in the development of the repair/reconstruction costs. The lengths are given to the nearest foot and taken as the linear distance along the structure, as determined by the GPS location, which takes into account structure angles and curvature.

Structure Elevation: The elevation of structures was determined in feet from existing information where available. The datum used is NAVD 88 and elevations are to the nearest foot. From a previous study much of the south shore coastal structures had elevations defined based on LIDAR mapping data. Where available structure documentation with elevations was found, in areas with no LIDAR data, the information was included within the structure information. Where there was no LIDAR information or existing documentation, the item has been left blank.

> LIDAR (Light Detection and Ranging) is technology that is currently being used for high-resolution topographic mapping by mounting a LIDAR sensor, integrated with Global Positioning System (GPS) and inertial measurement unit (IMU) technology, to the bottom of aircraft and measuring the pulse return rate to determine surface elevations.

FEMA Zone and Elevation: For each structure the FEMA Flood Insurance Rate Maps (FIRM) were researched for their Flood Zone designation and their Base Flood Elevation from the most recent FIRM maps for the specific Town. The elevations are provided in feet on the same datum as the FIRM maps (NGVD) with no adjustments or conversions.

Structure Comments: The engineering team provided a brief description and comment on the structure at the time of the field assessments which is provided in support of the condition rating that was given for the structure.

Pictures: At the time of the field assessments, digital photographs were taken to provide a general overview of the structure. The number of pictures was limited to a maximum of six. The first photograph for each structure is shown on the Structure Assessment Form. The list of all photographs is provided on the form.

Town Documents: Town documents represent the structure information that could be found in the Town's DPW/Engineering Department records. Where particular records could be found, a table of document information was developed and included within the database with limited descriptions.

MA - DCR Documents: MA-DCR documents represent the structure information that could be found within DCR – Waterways office in Hingham Where particular records could be found, a table of document information was developed and included within the database with limited descriptions.

MA - DEP Chp. 91 Licenses: MA-DEP Chapter 91 license documents represent the structure information that could be found within MA-DEP Chp 91 records in Boston. Where particular records could be found, they were scanned as pdf files and attached to the structure through the GIS database information. In addition, a table of license document information was developed and included within the database with limited descriptions

USACE Permits: USACE Permits represent the structure information that could be found within the Army Corp of Engineers regulatory office in Concord, MA. Where particular records could be found, they were scanned as pdf files and attached to the structure through the GIS database information. In addition, a table of license document information was developed and included within the database with limited descriptions.

## DEVELOPMENT OF REPAIR / RECONSTRUCTION COSTS

A matrix to be used within the database has been developed to assess likely rehabilitation/repair costs to restore the coastal structures to their original design condition. No attempt was made to assess the level of exposure and associated level of protection that might be required to meet current design standards for these structures. These costs are only an estimation to bring these structures back to their original design intent based on 2006 construction costs.

The development of the cost matrix is based on the following:

Structure Condition Ratings – The condition of the coastal structures was determined in the field by the survey crew which was led by an engineer with waterfront structure assessment and design experience. The definitions of the rating criteria utilized for the assessments are presented elsewhere.

The cost implications for each rating condition are as follows:

- A Rating Structures not requiring any maintenance, repair or rehabilitation cost and would not be expected to experience damage if subject to a major coastal storm event
- B Rating Structures requiring limited or no repair and would be expected to experience only minor damage if subject to a major coastal storm event. The value of these maintenance costs is assumed to be 10 percent of the construction cost.
- C Rating Structures requiring moderate to significant level of repair or reconstruction and would be expected to experience significant damage if subject to a major coastal storm event. The structure is presumed to be effective under a major storm event. The value of the repair costs is assumed to be 50 percent of the construction cost.
- D Rating Structures requiring significant level of rehabilitation or total reconstruction and would be expected to experience significant damage or possibly fail if subject to a major coastal storm event. The value of the repair costs is assumed to be 100 percent of the construction cost.

- F Rating Structures requiring complete reconstruction and would expect to provide little or no protection from a major coastal storm event. The value of the repair costs is assumed to be 100 percent of the construction cost plus a cost for removal/disposal of the original structure.

Height of Structure – Height of a structure is a major factor in the structure cost and therefore was identified as a significant factor is assessing rehabilitation/repair construction costs. The structures were broken down into four major categories which were:

| | |
|---|---|
| < 5' | Structures that were less than five feet in height |
| 5'-10' | Structures five to 10 feet in height |
| 10'-15' | Structures over 10 feet to 15 feet in height |
| > 15' | Structures greater than 15 feet in height – assumed 20 feet typical |

Length of Structure – Length is based on field GPS location with measurements rounded to the nearest foot.

Bulkhead / Seawall Structures – These structures are assumed to be constructed out of concrete, steel, stone or wood with each having its own criteria for establishing costs. For each structure type the following was assumed:

- Concrete Seawalls – These walls were assumed to be gravity structures with the volume of concrete used based on the bottom width being one-half of the structure height. Costs of construction were based on a per cubic yard estimate that varied from $350 to $630 per cubic yard depending on the structure height. Values for excavation and demolition of existing structure were also included.
- Stone Seawalls - These walls were treated the same as concrete seawalls and assumed to be gravity structures with the volume of the structure based on the bottom width being one-half of the structure height. Costs of construction were based on a per cubic yard estimate that varied from $350 to $630 per cubic yard depending on the structure height. Values for excavation and demolition of existing structure were also included.
- Steel Bulkheads – Steel bulkheads were presumed to be constructed with steel sheet piling. Tie back systems were presumed for structures 10 feet or greater in height. Shorter walls were assumed to have a cantilever design. The total depth of sheeting was presumed to be two times the exposed height. The cost for construction varied from $40 per square foot to $60 per square foot plus the cost of excavation and demolition.
- Timber Bulkheads – Timber bulkheads were presumed to be constructed with timber piles at eight foot on center, horizontal wales and vertical four inch sheathing. The unit costs for installed materials used were $1,500 per pile and $7.50 per bfm.

Revetment Structures – Revetment structures were presumed to be constructed of dry placed (no concrete) stone with a two on one slope and a horizontal toe and crown equal to the thickness layer established for each height condition. The total thickness of the revetment layers varied from six to ten feet with the cost of armor and under-layer stone assumed to be $50 per ton and the crushed stone base to be $15 per ton.

Groins and Jetties – Groins and jetties were assumed to be the same materials and construction as the revetment structures but would have two sides and therefore double the quantities.

Coastal Beaches – Costs for restoration of Coastal beaches presumed the placement of beach renourishment sands at a 1-on-20 slope over the existing beach conditions. The cost for deposition of sand assumed relatively close source of material and utilized $20 per cubic yard for the material installed.

Coastal Dunes – Restoration of coastal dunes assumed a cross section of renourished sand with a one-on-four slope on one side of a 25 foot width at the defined dune height. The cost for deposition of sand assumed relatively close source of material and utilized $20 per cubic yard for the material installed.

Contingency – A contingency of 20 percent was added to all costs to reflect the unknowns associated with this level of rehabilitation/repair estimating.

Engineering and Regulatory Approvals – A ten percent increase to the cost matrix prices was assessed to represent the engineering design and regulatory approval requirements for the restoration of these structures.

# EXHIBIT A

## Structure Condition Table – 5 Level Rating System

| Preliminary Condition Assessment | | Definition Based Upon Perceived Immediacy of Action and Potential to Cause Damage if Not Corrected | Level of Action Required |
|---|---|---|---|
| **A** | Excellent | Like new condition. Structure expected to withstand major coastal storm without damage.<br>Stable landform (beach, dune or bank). Adequate system exists to provide protection from major coastal storm | None |
| **B** | Good | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present.<br>Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure | Minor |
| **C** | Fair | Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure.<br>Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide additional material for full protection and extended life | Moderate |
| **D** | Poor | Structure exhibits advanced levels of deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure has strong risk of significant damage and possible failure during a major coastal storm Structure should be monitored until repairs/reconstruction can be initiated. Actions taken to reconstruct structure to regain full capacity to resist a major coastal storm.<br>Landform eroded, stability threatened. Landform not adequate to provide protection during major coastal storm. Actions taken to recreate landform to adequate limits for full protection from a major coastal storm. | Major |
| **F** | Critical | Conditions of structure/landform may warrant emergency stabilization as failure may result in potential loss of property and/or life. Landform eroded, loss of integrity<br>Structure exhibits critical levels of deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure provides little or no protection from a major coastal storm. Actions taken to totally reconstruct structure to regain full capacity.<br>Landform stability is severely compromised, rate of erosion/material loss may be increasing, and landform does not provide adequate protection from a major coastal storm. Actions taken to recreate landform to adequate limits for full protection from a major coastal storm. | Immediate |

## EXHIBIT B

**Priority Rating System** - 5 Level Rating System

| Preliminary Priority Level Assessment | | Level Based Upon Perceived Immediacy of Action and Presence of Potential Risk to Inshore Structures if Not Corrected | Level of Action Required |
|---|---|---|---|
| **I** | None | No Inshore Structures or Residential Dwelling Units Present | Long Term Planning Considerations |
| **II** | Low Priority | Inshore Structures Present with Limited potential for Significant Infrastructure Damage | Future Project Consideration |
| **III** | Moderate Priority | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) | Consider for Active Project Improvement Listing |
| **IV** | High Priority | High Value Inshore Structures with Potential for Infrastructure Damage and/or Moderate Density Residential Dwellings (1-10 dwellings impacted / 100 feet of shoreline) | Consider for Next Project Construction Listing |
| **V** | Immediate / Highest Priority | Critical Inshore Structures Present with Potential for Infrastructure Damage and/or High Density Residential Dwellings Conditions of structure may warrant emergency stabilization as failure may result in potential loss of property and/or life. (>10 dwellings impacted / 100 feet of shoreline ) | Consider For Immediate Action Due to Public Safety and Welfare Issues |

**CZM SOUTH SHORE COASTAL INFRASTRUCTURE INVENTORY AND ASSESMENT PROJECT**

**EXHIBIT C**

**September 14, 2006**

**REPAIR / REHABILITATION COSTING DATA**

Cost per linear foot of structure

| STRUCTURE TYPE | STRUCTURE MATERIALS | STRUCTURE HEIGHT | STRUCTURE CONDITION RATING A | B | C | D | F |
|---|---|---|---|---|---|---|---|
| BULKHEAD/ SEAWALL | CONCRETE | Under 5 Feet | $0 | $84 | $425 | $850 | $983 |
| | | 5 To 10 Feet | $0 | $152 | $759 | $1,518 | $1,782 |
| | | 10 To 15 Feet | $0 | $251 | $1,254 | $2,508 | $2,970 |
| | | Over 15 Feet | $0 | $396 | $1,980 | $3,960 | $4,752 |
| | STEEL | Under 5 Feet | $0 | $54 | $273 | $546 | $680 |
| | | 5 To 10 Feet | $0 | $165 | $825 | $1,650 | $1,848 |
| | | 10 To 15 Feet | $0 | $251 | $1,254 | $2,508 | $2,772 |
| | | Over 15 Feet | $0 | $343 | $1,716 | $3,432 | $3,795 |
| | STONE | Under 5 Feet | $0 | $84 | $425 | $850 | $983 |
| | | 5 To 10 Feet | $0 | $152 | $759 | $1,518 | $1,782 |
| | | 10 To 15 Feet | $0 | $251 | $1,254 | $2,508 | $2,970 |
| | | Over 15 Feet | $0 | $396 | $1,980 | $3,960 | $4,752 |
| | WOOD | Under 5 Feet | $0 | $86 | $431 | $862 | $994 |
| | | 5 To 10 Feet | $0 | $127 | $632 | $1,265 | $1,463 |
| | | 10 To 15 Feet | $0 | $161 | $804 | $1,608 | $1,872 |
| | | Over 15 Feet | $0 | $202 | $1,008 | $2,017 | $2,380 |
| COASTAL BEACH | SAND | Under 5 Feet | $0 | $26 | $132 | $264 | $264 |
| | | 5 To 10 Feet | $0 | $127 | $634 | $1,267 | $1,267 |
| | | 10 To 15 Feet | $0 | $224 | $1,122 | $2,244 | $2,244 |
| | | Over 15 Feet | $0 | $396 | $1,980 | $3,960 | $3,960 |
| COASTAL DUNE | SAND | Under 5 Feet | $0 | $18 | $93 | $186 | $186 |
| | | 5 To 10 Feet | $0 | $48 | $238 | $476 | $476 |
| | | 10 To 15 Feet | $0 | $79 | $395 | $790 | $790 |
| | | Over 15 Feet | $0 | $132 | $660 | $1,320 | $1,320 |
| REVETMENT | STONE | Under 5 Feet | $0 | $66 | $333 | $664 | $730 |
| | | 5 To 10 Feet | $0 | $120 | $601 | $1,201 | $1,300 |
| | | 10 To 15 Feet | $0 | $157 | $781 | $1,564 | $1,696 |
| | | Over 15 Feet | $0 | $247 | $1,234 | $2,468 | $2,666 |
| GROIN | STONE | Under 5 Feet | $0 | $132 | $664 | $1,328 | $1,460 |
| | | 5 To 10 Feet | $0 | $240 | $1,201 | $2,402 | $2,600 |
| | | 10 To 15 Feet | $0 | $314 | $1,564 | $3,128 | $3,392 |
| | | Over 15 Feet | $0 | $494 | $2,468 | $4,937 | $5,333 |

NOTE: Repair / Rehabilitation Costs include 10% for engineering and regulatory approvals and 20 % construction contingency.

# Section II

# New Bedford

## Section II – Community Findings – City of New Bedford

### COMMUNITY DESCRIPTION

The City of New Bedford consists of a land area of 20.14 square miles out of a total area of 24.04 square miles and had a population of 93,768 in the 2000 census. The City is located on the south coast of Massachusetts and its location can be seen on this report's cover. The estimated length of shoreline that is directly exposed to open ocean waves is 5.7 miles with the remaining shoreline semi-protected by offshore structures or landforms. The City is protected from major coastal storms by both natural and man-made shoreline structures that require maintenance to insure the long term protection of its coastline. The man-made and publicly owned structures that protect the City were investigated for their ability to provide adequate protection from major coastal storms. Structures have been identified as publicly owned, including coastal dunes and beaches, based on evidence of investment of public funds made to create/enhance/maintain these structures. The assessment did not include floating or pile supported structures as they are assumed not to provide any significant coastal protection from major storm events.

### STRUCTURE INVENTORY

Within the City of New Bedford, there were 37 structures which had public or unknown ownership which provide significant coastal protection. The location of the structures can be seen in Sheets 1 through Sheet 8 in Section II-B of this report. The structures were categorized by their type and by their structural condition based on a preliminary field assessment. The distribution of structures by type and condition can be seen in the following table:

**STRUCTURE TYPE AND QUANTITY - City of New Bedford**

| Primary Structure (1) | Total Structures | Structure Condition Rating A | B | C | D | F | Total Length |
|---|---|---|---|---|---|---|---|
| Bulkhead / Seawall | 20 | | 13 | 5 | 2 | | 16905 |
| Revetment | 8 | | 3 | 4 | 1 | | 4250 |
| Breakwater | | | | | | | |
| Groin / Jetty | 9 | 2 | 4 | 2 | 1 | | 4825 |
| Coastal Dune | | | | | | | |
| Coastal Beach | | | | | | | |
| | 37 | 2 | 20 | 11 | 4 | | 25980 |

Within the above table, the total length of each type of structure is also provided. The structures are listed by the type which is providing the primary coastal protection. Many sites have multiple structure types at the same location (i.e. revetment in front of seawall). These secondary structures, although not identified within these tables, are included in the development of repair/rehabilitation costs.

The development of repair costs has been included by structure type and by condition. In the City of New Bedford's case there are a total of 35 structures which would require approximately $ 17.2 million to bring all the coastal structures to "A" Rating. Most critical will be the structures in the "D" and "F" classifications as those are assumed to undergo some level of damage or failure during the next major coastal storm event. To reconstruct these structures, identified in the preliminary survey as being in poor condition, an estimated $ 5.2 million would be required to upgrade the City's coastal protection.

**STRUCTURE REPAIR / RECONSTRUCTION COST - City of New Bedford**

| Primary Structure (1) | Total Structures | Structure Condition Rating A | B | C | D | F | Total Cost |
|---|---|---|---|---|---|---|---|
| Bulkhead / Seawall | 20 | | $ 2,806,980 | $ 7,070,250 | $ 2,322,540 | | $ 12,199,770 |
| Revetment | 9 | | $ 489,133 | $ 636,728 | $ 2,222,220 | | $ 3,348,081 |
| Breakwater | | | | | | | $ - |
| Groin / Jetty | 8 | | $ 420,000 | $ 660,660 | $ 612,612 | | $ 1,693,272 |
| Coastal Dune | | | | | | | $ - |
| Coastal Beach | | | | | | | $ - |
| | 37 | $- | $ 3,716,113 | $ 8,367,638 | $ 5,157,372 | $ - | $ 17,241,123 |

Based on the limited research within the scope of this project research, the presumed ownership of the structures was established on an initial basis and would be subject to more intense review in future tasks. Structures identified as being owned privately were excluded from further consideration. Although ownership of the land on which the structure was located was a factor, the structure ownership was treated as a separate issue from land ownership. For the City of New Bedford the breakdown of structures by assumed ownership is as follows:

**STRUCTURE OWNERSHIP / REPAIR COST - City of New Bedford**

| Primary Structure (1) | Total Structures | Structure Condition Rating A | B | C | D | F | Total Cost |
|---|---|---|---|---|---|---|---|
| Town Owned | 32 | | $ 3,639,949 | $ 6,351,998 | $ 5,157,372 | | $ 15,149,319 |
| Commonwealth of Massachusetts | 5 | | $ 76,164 | $ 2,015,640 | | | $ 2,091,804 |
| Federal Government Owned | | | | | | | $ - |
| Unknown Ownership | | | | | | | $ - |
| | 37 | $- | $ 3,716,113 | $ 8,367,638 | $ 5,157,372 | $ - | $ 17,241,123 |

The identification of presumed ownership was not based on the investigation of legal documents but relied on property ownership and from construction and regulatory documents that were found. A more detailed investigation of legal documents and agreements would be required where structure ownership is disputed. A more detailed identification of structure type, length, condition and location can be found in Section II-B which contains Structure Assessment Reports for each individual structure found.

## SUMMARY

The enclosed reports and associated documents reflects the City of New Bedford's coastal structure information that will eventually be input into a state-wide GIS database and will be accessible through MassGIS. This data, when compiled state-wide, will be critical in the development of both short term and long term planning for maintaining and improving Massachusetts coastal protection.

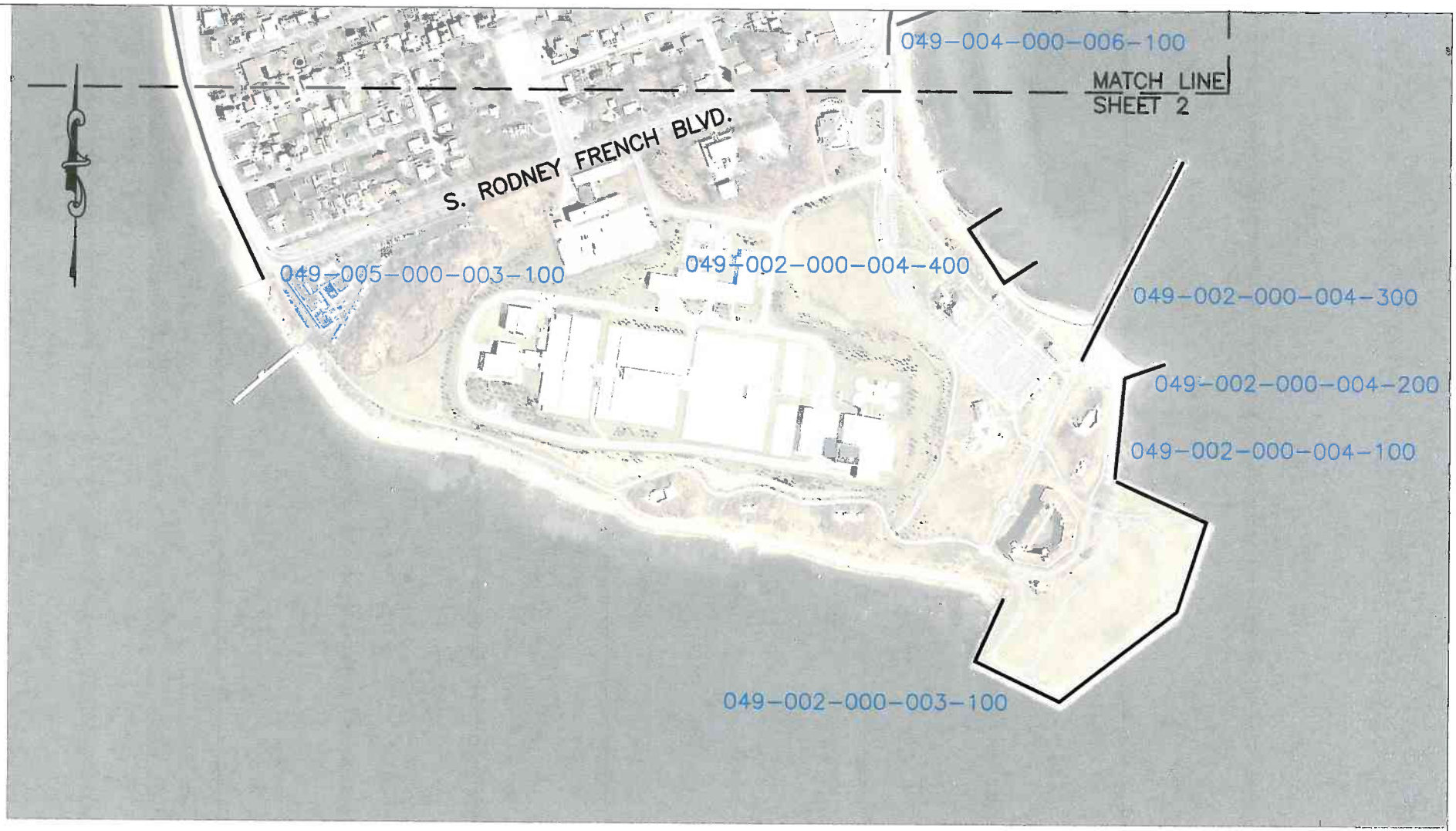
This database will also provide relatively quick access to identify available documentation for these structures as well as the ability to be updated as coastal structure improvements are made.

# Section II - New Bedford

# Part B

# Structure Assessment Reports

BCE




# COASTAL STRUCTURE LOCATION PLAN

TOWN OF NEW BEDFORD
COASTAL INFRASTRUCTURE INVENTORY
AND ASSESSMENT PROJECT
JULY 2007

0 150

SCALE: 1" = 150'-0"

BCE Bourne Consulting Engineering

SHEET 1

File: X:\27652-\27667\South Coast\New Bedford\dwg\New Bedford.dwg


# COASTAL STRUCTURE LOCATION PLAN

TOWN OF NEW BEDFORD
COASTAL INFRASTRUCTURE INVENTORY
AND ASSESSMENT PROJECT
JULY 2007

0 150

SCALE: 1" = 150'-0"

BCE Bourne Consulting Engineering
2 Davol Street
Franklin, MA 02038
TEL. (508) 553-0000 FAX. (508) 553-0000

SHEET 2

File: x:\27652-\27667\South Coast\New Bedford\dwg\New Bedford.dwg


# COASTAL STRUCTURE LOCATION PLAN

TOWN OF NEW BEDFORD
COASTAL INFRASTRUCTURE INVENTORY
AND ASSESSMENT PROJECT
JULY 2007

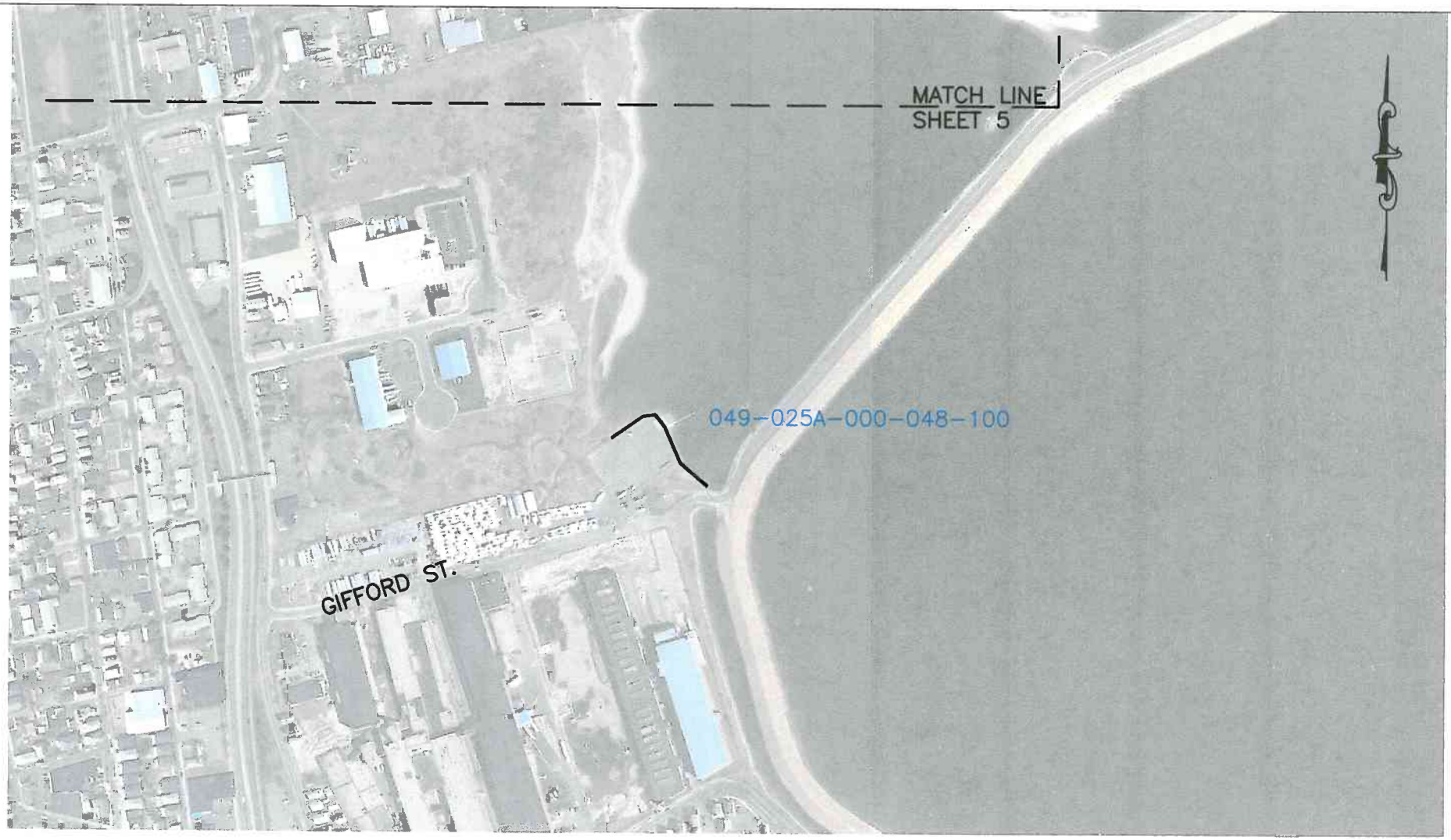
0 150

SCALE: 1" = 150'-0"

BCE Bourne Consulting Engineering

SHEET 3

File: X:\27652-\27667\South Coast\New Bedford\dwg\New Bedford.dwg




# COASTAL STRUCTURE LOCATION PLAN

TOWN OF NEW BEDFORD
COASTAL INFRASTRUCTURE INVENTORY
AND ASSESSMENT PROJECT
JULY 2007

0 150
SCALE: 1" = 150'-0"

BCE Bourne Consulting Engineering
3 Bank Street
Franklin, MA 02038
TEL. (508) 533-8600 FAX. (508) 533-8660

SHEET 4

File: X:\27652-\27667\South Coast\New Bedford\dwg\New Bedford.dwg


# COASTAL STRUCTURE LOCATION PLAN

TOWN OF NEW BEDFORD
COASTAL INFRASTRUCTURE INVENTORY
AND ASSESSMENT PROJECT
JULY 2007

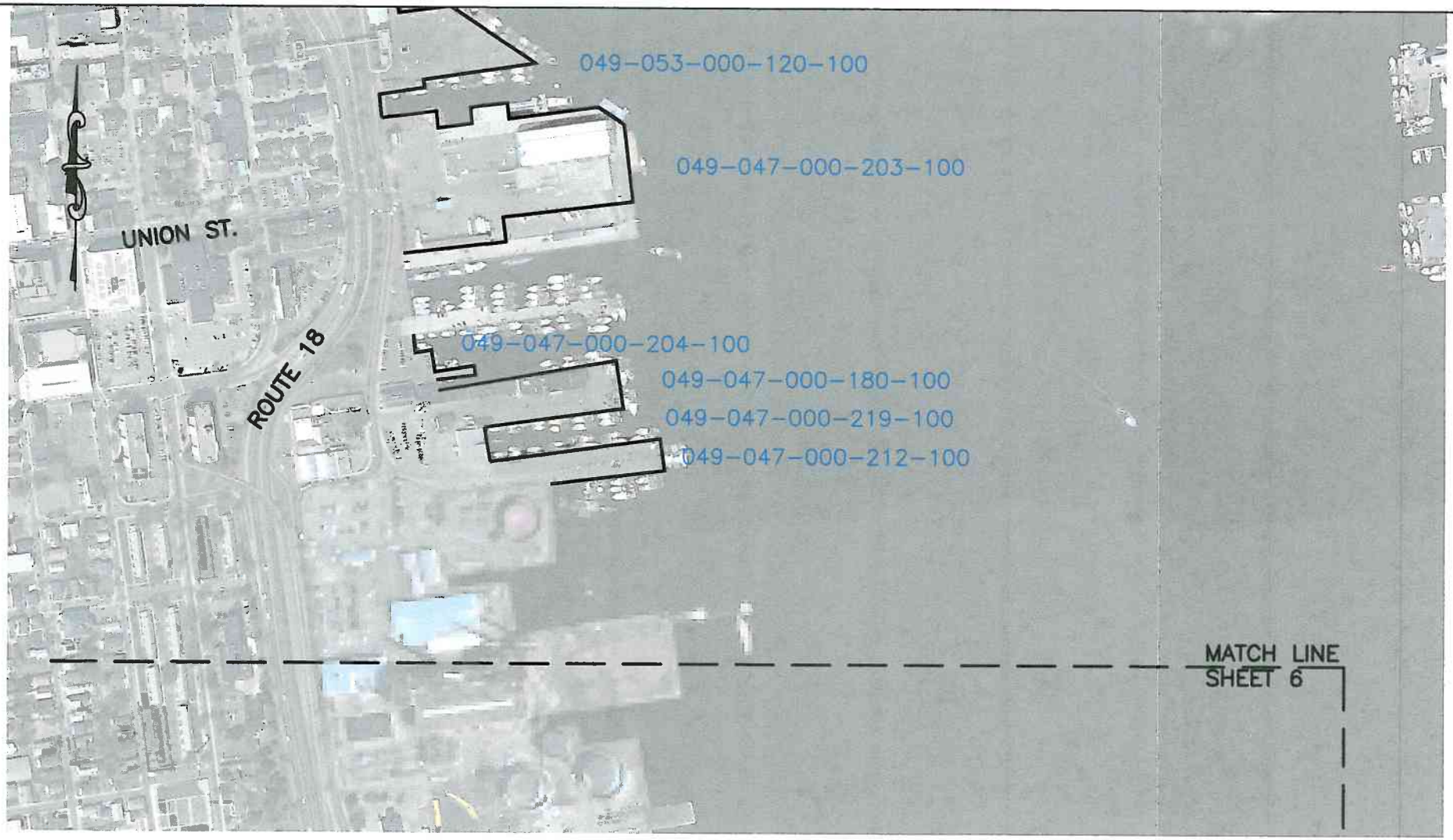
0 150

SCALE: 1" = 150'-0"

BCE Bourne Consulting Engineering
3 Bank Street
Franklin, MA 02038
TEL. (508) 533-4000 FAX (508) 533-4099

SHEET 5

File: X:\27652-\27667\South Coast\New Bedford\dwg\New Bedford.dwg




# COASTAL STRUCTURE LOCATION PLAN

TOWN OF NEW BEDFORD
COASTAL INFRASTRUCTURE INVENTORY
AND ASSESSMENT PROJECT
JULY 2007

0 150

SCALE: 1" = 150'-0"

BCE Bourne Consulting Engineering
3 Bank Street
Franklin, MA 02038
TEL. (508) 553-0000 FAX. (508) 553-0000

SHEET 6


# COASTAL STRUCTURE LOCATION PLAN

TOWN OF NEW BEDFORD
COASTAL INFRASTRUCTURE INVENTORY
AND ASSESSMENT PROJECT
JULY 2007

0 150

SCALE: 1" = 150'-0"

BCE Bourne Consulting Engineering
3 Bank Street
Franklin, MA 02038
TEL. (508) 533-4000 FAX. (508) 533-4001

SHEET 7

File: x:\27652-\27667\South Coast\New Bedford\dwg\New Bedford.dwg


# COASTAL STRUCTURE LOCATION PLAN

TOWN OF NEW BEDFORD
COASTAL INFRASTRUCTURE INVENTORY
AND ASSESSMENT PROJECT
JULY 2007

0 150

SCALE: 1" = 150'-0"

BCE Bourne Consulting Engineering
3 Bank Street
Franklin, MA 02038
TEL. (508) 553-0000 FAX. (508) 553-0000

SHEET 8

File: X:\27652-\27667\South Coast\New Bedford\dwg\New Bedford.dwg

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-002-000-003-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | Fort Rodman | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1967 | $413,457.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 1675 Feet | Feet NAVD 88 | v9 | 25 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Revetment | Stone | Over 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The place stone revetment has stones that are approximately 6 feet by 6 feet by 3 feet in size. The stones are on a 1 to 1 slope. The stones are not placed tightly together. Understones are visible in many areas. The crest is 15 feet wide. There is no visible scour.

| | |
|---|---|
| *Condition Rating* | B |
| | Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority Rating* | II |
| | Low Priority |
| *Action* | Future Project Consideration |
| *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

## Structure Images:

049-002-000-003-100-PHO1A.JPG

049-002-000-003-100-PHO1B.JPG

## Structure Documents:

| | | | |
|---|---|---|---|
| USACE | May 1969 | Proposed Seawall | 049-002-000-003-100-COE1A |
| DEP | July 1967 | Plan Accompanying | 049-002-000-003-100-LIC1A |
| DEP | September 1 | Plan Accompanying | 049-002-000-003-100-LIC1B |
| DEP | March 1992 | Plan Accompanying | 049-002-000-003-100-LIC1C |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-002-000-004-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | Fort Rodman | 8/2/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1992 | $39,640.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 330 Feet | Feet NAVD 88 | V14 | 19 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Revetment | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The placed stone revetment is at a 1 on 2 slope. The stones are average 3 feet by 2 feet by 2 feet in size. There is minor stone settling and movement. There is no visible scour. There is a small park behind the revetment

| | | | |
|---|---|---|---|
| *Condition Rating* | B Good | *Priority Rating* | I None |
| *Level of Action* | Minor | *Action* | Long Term Planning Considerations |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. | *Description* | No Inshore Structures or Residential Dwelling Units Present |

Structure Images:

049-002-000-004-100-PHO1A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| DEP | March 1992 | Plan Accompanying | 049-002-000-004-100-LIC1A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-002-000-004-200

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | Fort Rodman | 8/2/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1958 | $300,250.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 250 Feet | Feet NAVD 88 | V14 | 19 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Groin/ Jetty | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The dumped stone groin is submerged at mean high water. The stones are approximately 4 feet by 2 feet by 3 feet in size. The stones were not placed tightly and there are signs of stone movement.

| | |
|---|---|
| *Condition Rating* | C |
| | Fair |
| *Level of Action* | Moderate |
| *Description* | Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | I |
| | None |
| *Action* | Long Term Planning Considerations |
| *Description* | No Inshore Structures or Residential Dwelling Units Present |

Structure Images:

049-002-000-004-200-PHO2A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| MA-DCR | September 1 | Proposed Shore | 049-002-000-004-200-DCR2A |
| DEP | March 1992 | Plan Accompanying | 049-002-000-004-200-LIC2A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-002-000-004-300

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | Merchant Mariner Memorial Walkway | 8/2/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1955 | $0.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 740 Feet | Feet NAVD 88 | | Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Groin/ Jetty | Stone | 10 to 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The stone blocks have a cast in place walkway on top of them. The walkway is approximately 15 feet high. The stones are well set. There is no visible scour or stone movement.

| | | | |
|---|---|---|---|
| *Condition Rating* | A Excellent | *Priority Rating* | I None |
| *Level of Action* | None | *Action* | Long Term Planning Considerations |
| *Description* | Like new condition. Structure expected to withstand major coastal storm without damage. Stable landform (beach, dune or bank). Adequate system exists to provide protection from major coastal storm. | *Description* | No Inshore Structures or Residential Dwelling Units Present |

## Structure Images:

049-002-000-004-300-PHO3A.JPG

049-002-000-004-300-PHO3B.JPG

## Structure Documents:

| | | | |
|---|---|---|---|
| USACE | September 2 | City of New Bedford, | 049-002-000-004-300-COE3A |
| MA-DCR | May 1955 | Proposed Hurricane | 049-002-000-004-300-DCR3A |
| MA-DCR | June 1956 | Proposed Hurricane | 049-002-000-004-300-DCR3B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-002-000-004-400

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | Fort Rodman | 8/2/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1956 | $612,612.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 255 Feet | Feet NAVD 88 | V14 | 19 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Groin/ Jetty | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The set of 2 dumped stone groins have stones that are approximately 4 feet by 3 feet by 3 feet in size. There are also pieces of concrete and granite block. There are signs of stone movement and section loss.

| | |
|---|---|
| *Condition Rating* | D |
| | Poor |
| *Level of Action* | Major |
| *Description* | Structure exhibits advanced levels of deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure has strong risk of significant damage and possible failure during a major coastal storm. Structure should be monitored until repairs/reconstruction can be initiated. Actions taken to reconstruct structure to regain full capacity to resist a major coastal storm. Landform eroded, stability threatened. Landform not adequate to provide protection during major coastal storm. Actions taken to recreate landform to adequate limits for full protection from a major coastal storm. |

| | |
|---|---|
| *Priority Rating* | I |
| | None |
| *Action* | Long Term Planning Considerations |
| *Description* | No Inshore Structures or Residential Dwelling Units Present |

Structure Images:

049-002-000-004-400-PHO4A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| MA-DCR | June 1956 | Proposed Hurricane | 049-002-000-004-400-DCR4A |
| MA-DCR | January 195 | Proposed Shore | 049-002-000-004-400-DCR4B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-004-000-002-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | East Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1958 | $92,928.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 1100 Feet | Feet NAVD 88 | V14 | 17 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Concrete | Under 5 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The cast in place wall is 1 foot wide. There is minor cracking and spalling. There is a sidewalk, road, and parking lot located behind it and a sandy beach in front of it. There is no visible scour.

| | | | |
|---|---|---|---|
| *Condition Rating* | B Good | *Priority Rating* | II Low Priority |
| *Level of Action* | Minor | *Action* | Future Project Consideration |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. | *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

**Structure Images:**

049-004-000-002-100-PHO1A.JPG

**Structure Documents:**

| | | | |
|---|---|---|---|
| MA-DCR | January 195 | Proposed Shore | 049-004-000-002-100-DCR1A |
| MA-DCR | March 1966 | Proposed Shore | 049-004-000-002-100-DCR1B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-004-000-002-200

Key: community-map-block-parcel-structure

Property Owner: Local

Location: East Rodney French Boulevard

Date: 7/19/2007

Presumed Structure Owner: Local

Based On Comment:

Owner Name: New Bedford

Earliest Structure Record: Unkown

Estimated Reconstruction/Repair Cost: $180,576.00

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 720 Feet | Feet NAVD 88 | V14 | 17 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Stone | 10 to 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The stone block seawall with cast in place cap has stones that are approximately 5 feet by 2 feet. They are mortared together. There is no sign of scour or stone movement. Above the wall is a park. The cap has minor cracks and spalling.

| | |
|---|---|
| *Condition Rating* | B<br>Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority Rating* | II<br>Low Priority |
| *Action* | Future Project Consideration |
| *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-004-000-002-200-PHO2A.JPG

Structure Documents:

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-004-000-002-300

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | East Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1958 | $60,000.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 250 Feet | Feet NAVD 88 | V14 | 19 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Groin/ Jetty | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The dumped stone groin has a slope of 1 on 2. There is minor stone movement and settling. There is no visible scour.

| | | | |
|---|---|---|---|
| *Condition Rating* | B Good | *Priority Rating* | II Low Priority |
| *Level of Action* | Minor | *Action* | Future Project Consideration |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. | *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

**Structure Images:**

049-004-000-002-300-PHO3A.JPG

**Structure Documents:**

| | | | |
|---|---|---|---|
| USACE | October 195 | Proposed Groin and | 049-004-000-002-300-COE3A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-004-000-006-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | East Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1958 | $72,000.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 300 Feet | Feet NAVD 88 | V14 | 19 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Groin/ Jetty | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The placed stone groin has stones that are approximately 4 feet by 2 feet by 3 feet in size. The crest is one stone wide. There is no sign of scour or stone movement.

| | | | |
|---|---|---|---|
| *Condition Rating* | B Good | *Priority Rating* | II Low Priority |
| *Level of Action* | Minor | *Action* | Future Project Consideration |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. | *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-004-000-006-100-PHO1A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| USACE | March 1966 | Proposed Shore | 049-004-000-006-100-COE1A |
| MA-DCR | January 195 | Proposed Shore | 049-004-000-006-100-DCR1A |
| MA-DCR | March 1966 | Proposed Shore | 049-004-000-006-100-DCR1B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-005-000-003-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1956 | $2,222,220.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 1850 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Revetment | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The placed stone revetment has stones that are approximately 4 feet by 3 feet by 2 feet in size. The stones are at a 1 on 1 slope. There are areas of stone movement. There is visible erosion and minor scour at the toe of the slope. Boardwalk, road, and houses are located behind the structure.

| | |
|---|---|
| *Condition Rating* | D<br>Poor |
| *Level of Action* | Major |
| *Description* | Structure exhibits advanced levels of deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure has strong risk of significant damage and possible failure during a major coastal storm. Structure should be monitored until repairs/reconstruction can be initiated. Actions taken to reconstruct structure to regain full capacity to resist a major coastal storm. Landform eroded, stability threatened. Landform not adequate to provide protection during major coastal storm. Actions taken to recreate landform to adequate limits for full protection from a major coastal storm. |

| | |
|---|---|
| *Priority Rating* | III<br>Moderate Priority |
| *Action* | Consider for Active Project Improvement Listing |
| *Description* | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) |

Structure Images:

049-005-000-003-100-PHO1A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| MA-DCR | August 1956 | Proposed Hurricane | 049-005-000-003-100-DCR1A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-005-000-003-100-DCR1B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-006-000-002-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | East Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | Unkown | $540,450.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 450 Feet | Feet NAVD 88 | V14 | 19 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Groin/ Jetty | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

Three placed stone groins with moderate voids and section loss, but no visible scour. The stones are approximately 4 feet by 2 feet by 2 feet in size.

| | |
|---|---|
| *Condition Rating* | C<br>Fair |
| *Level of Action Description* | Moderate<br>Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | II<br>Low Priority |
| *Action Description* | Future Project Consideration<br>Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-006-000-002-100-PHO1A.JPG

Structure Documents:

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-007-000-112-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| State | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| State | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| MA-DCR | 1957 | $36,036.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 300 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Revetment | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

Placed riprap at a 1 on 1 slope against a boat ramp. There is minor stone movement and visible scour. The stones are placed tightly throughout.

| | | | |
|---|---|---|---|
| *Condition Rating* | B Good | *Priority Rating* | II Low Priority |
| *Level of Action* | Minor | *Action* | Future Project Consideration |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. | *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

**Structure Images:**

049-007-000-112-100-PHO1A.JPG

**Structure Documents:**

| | | | |
|---|---|---|---|
| USACE | September 1 | Proposed Boat | 049-007-000-112-100-COE1A |
| USACE | April 1977 | Proposed Shore | 049-007-000-112-100-COE1B |
| MA-DCR | July 1957 | Proposed Boat | 049-007-000-112-100-DCR1A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-007-000-112-100-DCR1B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-007-000-112-200

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| State | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| State | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| MA-DCR | 1957 | $20,064.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 80 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Stone | 10 to 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The stone block seawall is mortared. The stones average 2 feet by 1.5 feet by 2 feet in size. The corners are beginning to unravel and there is some settling.

| | |
|---|---|
| *Condition Rating* | B<br>Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority Rating* | II<br>Low Priority |
| *Action* | Future Project Consideration |
| *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-007-000-112-200-PHO2A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| USACE | September 1 | Proposed Boat | 049-007-000-112-200-COE2A |
| USACE | April 1977 | Proposed Shore | 049-007-000-112-200-COE2B |
| MA-DCR | July 1957 | Proposed Boat | 049-007-000-112-200-DCR2A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-007-000-112-200-DCR2B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-007-000-112-300

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| State | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| State | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| MA-DCR | 1956 | $180,180.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 300 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Revetment | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

Placed stone revetment is at a 1 on 1 slope. The stones are approximately 4 feet by 3 feet in size. There are areas of erosion and stone movement. The crest is one stone length wide.

| | |
|---|---|
| *Condition Rating* | C |
| | Fair |
| *Level of Action* | Moderate |
| *Description* | Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | II |
| | Low Priority |
| *Action* | Future Project Consideration |
| *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

## Structure Images:

049-007-000-112-300-PHO3A.JPG

## Structure Documents:

| | | | |
|---|---|---|---|
| USACE | September 1 | Proposed Boat | 049-007-000-112-300-COE3A |
| USACE | April 1977 | Proposed Shore | 049-007-000-112-300-COE3B |
| MA-DCR | August 1956 | Proposed Hurricane | 049-007-000-112-300-DCR3A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-007-000-112-300-DCR3B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-007-000-112-400

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| State | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| State | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| MA-DCR | 1956 | $20,064.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 80 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Stone | 10 to 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The stone block seawall is mortared. The stones average 2 feet by 1.5 feet by 2 feet in size. The corners are beginning to unravel and there is some stone settling.

| | |
|---|---|
| *Condition Rating* | B<br>Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority Rating* | II<br>Low Priority |
| *Action* | Future Project Consideration |
| *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-007-000-112-400-PHO4A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| MA-DCR | August 1956 | Proposed Hurricane | 049-007-000-112-400-DCR4A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-007-000-112-400-DCR4B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-009-000-286-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1977 | $542,322.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 2490 | | V14 | 18 |
| Feet | Feet NAVD 88 | | Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Concrete | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| Revetment | Stone | Under 5 Feet |

Structure Summary :

The cast in place wall is 2 feet wide. There is a walkway, road, and houses located behind it. There is no visible scour. There is minor cracking and spalling. Areas of the wall has riprap set at a 1 on 2 slope with stones that are approximately 3 feet by 2 feet by 1 foot in size.

| | |
|---|---|
| *Condition Rating* | B<br>Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority Rating* | III<br>Moderate Priority |
| *Action* | Consider for Active Project Improvement Listing |
| *Description* | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) |

## Structure Images:

049-009-000-286-100-PHO1A.JPG

049-009-000-286-100-PHO1B.JPG

049-009-000-286-100-PHO1C.JPG

## Structure Documents:

| | | | |
|---|---|---|---|
| USACE | April 1977 | Proposed Shore | 049-009-000-286-100-COE1A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-009-000-286-100-DCR1A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-009-000-286-200

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1958 | $168,000.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 700 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Groin/ Jetty | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

Set of three placed stone groins with stone that are approximately 5 feet by 3 feet. The stones are set at a 1 on 1 slope. There is minor scour and stone movement is visible. The is no visible scour at the toe.

| | |
|---|---|
| *Condition* | B |
| *Rating* | Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority* | III |
| *Rating* | Moderate Priority |
| *Action* | Consider for Active Project Improvement Listing |
| *Description* | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) |

## Structure Images:

049-009-000-286-200-PHO2A.JPG

## Structure Documents:

| | | | |
|---|---|---|---|
| USACE | May 1958 | Proposed Sand Fill | 049-009-000-286-200-COE2A |
| USACE | April 1977 | Proposed Shore | 049-009-000-286-200-COE2B |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-009-000-286-200-DCR2A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-010-000-198-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | East Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | Unkown | $1,396,560.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 920 Feet | Feet NAVD 88 | V14 | 19 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Concrete | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The stone bulkhead is mortarted together. The stones average 3 feet by 2 feet in size. There is a cast in place cap on the bulkhead. There is a sidewalk, small park, a factory, and street located behind the structure. Moderate scour at the toe and many areas of section loss and stone loss.

| | |
|---|---|
| *Condition Rating* | D<br>Poor |
| *Level of Action* | Major |
| *Description* | Structure exhibits advanced levels of deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure has strong risk of significant damage and possible failure during a major coastal storm. Structure should be monitored until repairs/reconstruction can be initiated. Actions taken to reconstruct structure to regain full capacity to resist a major coastal storm. Landform eroded, stability threatened. Landform not adequate to provide protection during major coastal storm. Actions taken to recreate landform to adequate limits for full protection from a major coastal storm. |

| | |
|---|---|
| *Priority Rating* | IV<br>High Priority |
| *Action* | Consider for Next Project Construction Listing |
| *Description* | High Value Inshore Structures with Potential for Infrastructure Damage and/or Moderate Density Residential Dwellings ( 1-10 dwellings impacted / 100 feet of shoreline) |

Structure Images:

049-010-000-198-100-PHO1A.JPG

Structure Documents:

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-011-000-030-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1958 | $63,756.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 420 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Concrete | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The cast in place wall is 1 foot wide with a walkway, road, and houses behind it. There is minor cracking and spalling, and no visible scour.

| | |
|---|---|
| *Condition Rating* | B<br>Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority Rating* | III<br>Moderate Priority |
| *Action* | Consider for Active Project Improvement Listing |
| *Description* | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) |

**Structure Images:**

049-011-000-030-100-PHO1A.JPG

049-011-000-030-100-PHO1B.JPG

**Structure Documents:**

| | | | |
|---|---|---|---|
| MA-DCR | January 195 | Proposed Shore | 049-011-000-030-100-DCR1A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-011-000-030-100-DCR1B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-011-000-030-200

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1958 | $45,540.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 60 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Concrete | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The cast in place wall is 1 foot wide with public bath house behind it. There is minor cracking and spalling,and no visible scour.

| | |
|---|---|
| *Condition Rating* | C |
| | Fair |
| *Level of Action* | Moderate |
| *Description* | Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | II |
| | Low Priority |
| *Action* | Future Project Consideration |
| *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-011-000-030-200-PHO2A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| MA-DCR | January 195 | Proposed Shore | 049-011-000-030-200-DCR2A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-011-000-030-200-DCR2B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-011-000-030-300

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1958 | $106,260.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 140 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The mortared, stacked stones are approximately 3 feet by 1 foot in size. There is a cast in place concrete picnic area above the stones. There are many areas of section loss in the mortar. There are minor areas of scour.

| | |
|---|---|
| *Condition Rating* | C |
| | Fair |
| *Level of Action* | Moderate |
| *Description* | Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | II |
| | Low Priority |
| *Action* | Future Project Consideration |
| *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-011-000-030-300-PHO3A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| MA-DCR | January 195 | Proposed Shore | 049-011-000-030-300-DCR3A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-011-000-030-300-DCR3B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-011-000-030-400

Key: community-map-block-parcel-structure

Property Owner: Local

Location: West Rodney French Boulevard

Date: 7/19/2007

Presumed Structure Owner: Local

Based On Comment:

Owner Name: New Bedford

Earliest Structure Record: 1958

Estimated Reconstruction/Repair Cost: $0.00

Length: 315 Feet

Top Elevation: Feet NAVD 88

FIRM Map Zone:

FIRM Map Elevation: Feet NGVD

Primary Type: Groin/ Jetty

Primary Material: Stone

Primary Height: 5 to 10 Feet

Secondary Type:

Secondary Material:

Secondary Height:

Structure Summary :

Placed stone groin with stones that are approximately 5 feet by 3 feet by 2 feet in size. The stones are at a 1 on 1 slope. Behind the structure is a small park. The groin starts at about mean low water.

| | |
|---|---|
| *Condition* | A |
| *Rating* | Excellent |
| *Level of Action* | None |
| *Description* | Like new condition. Structure expected to withstand major coastal storm without damage. Stable landform (beach, dune or bank). Adequate system exists to provide protection from major coastal storm. |

| | |
|---|---|
| *Priority* | II |
| *Rating* | Low Priority |
| *Action* | Future Project Consideration |
| *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-011-000-030-400-PHO4A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| USACE | May 1958 | Proposed Sand Fill | 049-011-000-030-400-COE4A |
| USACE | April 1977 | Proposed Shore | 049-011-000-030-400-COE4B |
| MA-DCR | January 195 | Proposed Shore | 049-011-000-030-400-DCR4A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-011-000-030-400-DCR4B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-012-000-247-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | East Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1981 | $270,270.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 450 Feet | Feet NAVD 88 | V14 | 19 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Revetment | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The placed stone revetment has a 1 on 2 slope with stones that average 4 feet by 2 feet in size. The stones are mortared together. There is moderate mortar loss and stone settlement.

| | |
|---|---|
| *Condition Rating* | C |
| *Level of Action* | Fair |
| *Description* | Moderate |
| | Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | I |
| *Action* | None |
| *Description* | Long Term Planning Considerations |
| | No Inshore Structures or Residential Dwelling Units Present |

Structure Images:

049-012-000-247-100-PHO1A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| USACE | March 1981 | Proposed Timber | 049-012-000-247-100-COE1A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-012-000-247-200

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | East Rodney Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1981 | $33,264.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 100 Feet | Feet NAVD 88 | | Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Revetment | Stone | Under 5 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The dumped stone riprap is adjacent to the precast boat ramp. The stones are 400 to 500 pounds on average.

| | |
|---|---|
| *Condition Rating* | C |
| *Level of Action* | Fair |
| *Description* | Moderate |
| | Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | II |
| *Action* | Low Priority |
| *Description* | Future Project Consideration |
| | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-012-000-247-200-PHO2A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| USACE | March 1981 | Proposed Timber | 049-012-000-247-200-COE2A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-013-000-055-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1958 | $925,980.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 610 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Concrete | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| Revetment | Stone | |

Structure Summary :

The cast in place wall is 1 foot wide with a road and houses behind it. There are areas of section loss, cracking, and scour at the toe. There is minor erosion behind the wall.

| | |
|---|---|
| *Condition Rating* | D<br>Poor |
| *Level of Action* | Major |
| *Description* | Structure exhibits advanced levels of deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure has strong risk of significant damage and possible failure during a major coastal storm. Structure should be monitored until repairs/reconstruction can be initiated. Actions taken to reconstruct structure to regain full capacity to resist a major coastal storm. Landform eroded, stability threatened. Landform not adequate to provide protection during major coastal storm. Actions taken to recreate landform to adequate limits for full protection from a major coastal storm. |

| | |
|---|---|
| *Priority Rating* | III<br>Moderate Priority |
| *Action* | Consider for Active Project Improvement Listing |
| *Description* | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) |

**Structure Images:**

049-013-000-055-100-PHO1A.JPG

**Structure Documents:**

| | | | |
|---|---|---|---|
| MA-DCR | January 195 | Proposed Shore | 049-013-000-055-100-DCR1A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-013-000-055-100-DCR1B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-013-000-055-200

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | West Rodney French Boulevard | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1958 | $120,000.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 500 Feet | Feet NAVD 88 | V14 | 18 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Groin/ Jetty | Stone | 5 to 10 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

Set of two placed stone groins. Stones are approximately 5 feet by 3 feet by 2 feet in size. The stones are at a 1 on 1 slope. The crest is made up of 5 stones making it approximately 10 feet wide. There is no sign of stone movement or scour.

| | |
|---|---|
| *Condition Rating* | B<br>Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority Rating* | III<br>Moderate Priority |
| *Action* | Consider for Active Project Improvement Listing |
| *Description* | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) |

Structure Images:

049-013-000-055-200-PHO2A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| USACE | April 1977 | Proposed Shore | 049-013-000-055-200-COE2A |
| MA-DCR | January 195 | Proposed Shore | 049-013-000-055-200-DCR2A |
| MA-DCR | November 1 | Proposed Sand Fill - | 049-013-000-055-200-DCR2B |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-025A-000-048-100

Key: community-map-block-parcel-structure

Property Owner: Local

Location: Gifford Street

Date: 7/19/2007

Presumed Structure Owner: Local

Based On Comment:

Owner Name: New Bedford

Earliest Structure Record: Unkown

Estimated Reconstruction/Repair Cost: $153,014.00

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 460 Feet | Feet NAVD 88 | A1 | 6 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Revetment | Stone | Under 5 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The dumped riprap has stones that are approximately 200 to 300 pounds each. The stones are at a 1 on 1 slope. There is a parking lot behind the structure and a boat ramp adjacent to it. There is moderate stone movement and section loss.

| | |
|---|---|
| *Condition Rating* | C |
| | Fair |
| *Level of Action* | Moderate |
| *Description* | Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | I |
| | None |
| *Action* | Long Term Planning Considerations |
| *Description* | No Inshore Structures or Residential Dwelling Units Present |

Structure Images:

049-025A-000-048-100-PHO1A.JPG

Structure Documents:

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-037-000-305-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | South Pier | 8/2/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | Unkown | $391,248.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 1560 Feet | Feet NAVD 88 | A1 | 6 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Concrete | 10 to 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The cast in place concrete bulkhead has a fish processing plant behind it. There is minor cracking and spalling on the bulkhead. At the time of the survey, the fender system was being repaired.

| | |
|---|---|
| *Condition Rating* | B<br>Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority Rating* | IV<br>High Priority |
| *Action* | Consider for Next Project Construction Listing |
| *Description* | High Value Inshore Structures with Potential for Infrastructure Damage and/or Moderate Density Residential Dwellings ( 1-10 dwellings impacted / 100 feet of shoreline) |

Structure Images:

049-037-000-305-100-PHO1A.JPG

Structure Documents:

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-047-000-180-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | Homer's Wharf | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | Unkown | $411,840.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 1200 Feet | Feet NAVD 88 | A1 | 6 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Steel | Over 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The sheet pile bulkhead has a steel cap. There is moderate corrosion at the tidal zone, but no visible erosion behind the piles. The bulkhead has fender piles in the corners. There is a parking lot, fishing equipment storage, warehouses, and building above the structure.

| | |
|---|---|
| *Condition Rating* | B<br>Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority Rating* | III<br>Moderate Priority |
| *Action* | Consider for Active Project Improvement Listing |
| *Description* | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) |

Structure Images:

049-047-000-180-100-PHO1A.JPG

Structure Documents:

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-047-000-203-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| State | State Pier | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| State | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| DCR | 2075 | $2,376,000.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 1200 Feet | Feet NAVD 88 | A1 | 6 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Stone | Over 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The stone block seawall has a cast in place concrete cap which is approximately 10 feet in height. There is moderate to severe cracking and spalling on the concrete. Damaged fender piles are in front of the structure. Connected to the structure are timber piles supporting the pier. There is also a ferry terminal on the pier.

| | |
|---|---|
| *Condition Rating* | C<br>Fair |
| *Level of Action Description* | Moderate<br>Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | V<br>Immediate / Highest Priority |
| *Action Description* | Consider For Immediate Action Due to Public Safety and Welfare Issues<br>Critical Inshore Structures Present with Potential for Infrastructure Damage and/or High Density Residential Dwellings Condition of structure may warrant emergency stabilization as failure may result in potential loss of property and/or life. (>10 dwellings impacted / 100 feet of shoreline ) |

## Structure Images:

049-047-000-203-100-PHO1A.JPG
049-047-000-203-100-PHO1B.JPG
049-047-000-203-100-PHO1C.JPG

## Structure Documents:

| | | | |
|---|---|---|---|
| MA-DCR | April 1939 | Proposed Timber | 049-047-000-203-100-DCR1A |
| MA-DCR | May 1946 | Proposed Pier | 049-047-000-203-100-DCR1B |
| MA-DCR | October 194 | New Bedford State | 049-047-000-203-100-DCR1C |
| MA-DCR | April 1961 | Proposed Pier | 049-047-000-203-100-DCR1D |
| MA-DCR | December 1 | Proposed Bulkhead - | 049-047-000-203-100-DCR1E |
| MA-DCR | May 1999 | Harbor Development | 049-047-000-203-100-DCR1F |
| MA-DCR | May 2002 | New Bedford harbor | 049-047-000-203-100-DCR1G |
| DEP | August 1979 | Plan Accompanying | 049-047-000-203-100-LIC1A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-047-000-204-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | Coal Pocket Pier | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1984 | $595,650.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 475 Feet | Feet NAVD 88 | A1 | 6 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Concrete | 10 to 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The cast in place concrete bulkhead has timber piles that are 2 feet on center outshore. The construction material is not visible below the water line. There is moderate cracking and settling of the concrete. Behind the pier is a parking lot.

| | |
|---|---|
| *Condition Rating* | C |
| | Fair |
| *Level of Action* | Moderate |
| *Description* | Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | III |
| | Moderate Priority |
| *Action* | Consider for Active Project Improvement Listing |
| *Description* | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) |

Structure Images:

049-047-000-204-100-PHO1A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| DEP | June 1984 | Plan Accompanying | 049-047-000-204-100-LIC1A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-047-000-212-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | Leonard's Wharf | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | Unkown | $260,832.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 1040 Feet | Feet NAVD 88 | A1 | 6 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Steel | 10 to 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The sheet pile bulkhead has a steel cap. There is moderate corrosion at the tidal zone. There is no visible erosion behind the piles. There are fender piles along the bulkhead and in the corners. A parking lot and fishing equipment storage are above the structure.

| | | | |
|---|---|---|---|
| *Condition Rating* | B Good | *Priority Rating* | II Low Priority |
| *Level of Action* | Minor | *Action* | Future Project Consideration |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. | *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-047-000-212-100-PHO1A.JPG

049-047-000-212-100-PHO1B.JPG

Structure Documents:

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-047-000-219-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | Between Leonard's Wharf and Homer's Wharf | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | Unkown | $43,560.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 110 | | A1 | 6 |
| Feet | Feet NAVD 88 | | Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Stone | Over 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The sheet pile bulkhead has a steel cap. There is moderate corrosion at the tidal zone, but no visible erosion behind the piles. The bulkhead has fender piles. There is a building directly behind the bulkhead.

| | |
|---|---|
| *Condition Rating* | B<br>Good |
| *Level of Action* | Minor |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. |

| | |
|---|---|
| *Priority Rating* | III<br>Moderate Priority |
| *Action* | Consider for Active Project Improvement Listing |
| *Description* | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) |

**Structure Images:**

049-047-000-219-100-PHO1A.JPG

**Structure Documents:**

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-053-000-120-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | Fisherman's Wharf | 7/19/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1977 | $294,690.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 1175 Feet | Feet NAVD 88 | A1 | 6 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Steel | 10 to 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The sheet pile bulkhead has a steel cap and timber fender system. Above the structure is a small museum, harbor master's office, and parking lot.

| | | | |
|---|---|---|---|
| *Condition Rating* | B Good | *Priority Rating* | III Moderate Priority |
| *Level of Action* | Minor | *Action* | Consider for Active Project Improvement Listing |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. | *Description* | Inshore Structures with potential for Infrastructure Damage and/or Limited Residential Dwellings ( <1 dwelling impacted / 100 feet of shoreline) |

## Structure Images:

049-053-000-120-100-PHO1A.JPG

049-053-000-120-100-PHO1B.JPG

## Structure Documents:

| | | | |
|---|---|---|---|
| USACE | May 1977 | Proposed Bulkhead, | 049-053-000-120-100-COE1A |
| DEP | March 1977 | Plan Accompanying | 049-053-000-120-100-LIC1A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-066-000-165-100

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | North Terminal Bulkhead | 8/2/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1961 | $237,600.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 600 Feet | Feet NAVD 88 | A1 | 6 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Concrete | Over 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The cast in place concrete bulkhead has a factory behind it. There is minor cracking and spalling. The mean high water is approximately 10 feet from the top of the bulkhead. The top of the wall contains drainage holes.

| | | | |
|---|---|---|---|
| *Condition Rating* | B Good | *Priority Rating* | IV High Priority |
| *Level of Action* | Minor | *Action* | Consider for Next Project Construction Listing |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. | *Description* | High Value Inshore Structures with Potential for Infrastructure Damage and/or Moderate Density Residential Dwellings ( 1-10 dwellings impacted / 100 feet of shoreline) |

## Structure Images:

049-066-000-165-100-PHO1A.JPG

## Structure Documents:

| | | | |
|---|---|---|---|
| USACE | July 1979 | Proposed Steel | 049-066-000-165-100-COE1A |
| MA-DCR | January 196 | Proposed Harbor | 049-066-000-165-100-DCR1A |
| DEP | October 196 | Plan Accompanying | 049-066-000-165-100-LIC1A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-066-000-165-200

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | North Terminal Bulkhead | 8/2/2007 |

| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1961 | $247,500.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 625 Feet | Feet NAVD 88 | A1 | 6 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Concrete | Over 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |

Structure Summary :

The cast in place concrete bulkhead has timber fender piles. There is a factory behind the structure. There is minor spalling and cracking in the concrete. Mean high water goes to approximately 10 feet from the top of the bulkhead. The top of the wall contains drainage holes.

| | | | |
|---|---|---|---|
| *Condition Rating* | B Good | *Priority Rating* | IV High Priority |
| *Level of Action* | Minor | *Action* | Consider for Next Project Construction Listing |
| *Description* | Structure observed to exhibit very minor problems, superficial in nature. Minor erosion to landform is present. Structure / landform adequate to provide protection from a major coastal storm with no damage. Actions taken to prevent / limit future deterioration and extend life of structure. | *Description* | High Value Inshore Structures with Potential for Infrastructure Damage and/or Moderate Density Residential Dwellings ( 1-10 dwellings impacted / 100 feet of shoreline) |

Structure Images:

049-066-000-165-200-PHO2A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| MA-DCR | January 196 | Proposed Harbor | 049-066-000-165-200-DCR2A |
| DEP | May 1979 | Plan Accompanying | 049-066-000-165-200-LIC2A |

Prepared By: Bourne Consulting Engineering

CZM Coastal Infrastructure Inventory and Assessment

# Structure Assessment Form

Town: New Bedford

Structure ID: 049-066-000-165-300

Key: community-map-block-parcel-structure

| Property Owner: | Location: | Date: |
|---|---|---|
| Local | North Terminal Bulkhead | 8/2/2007 |

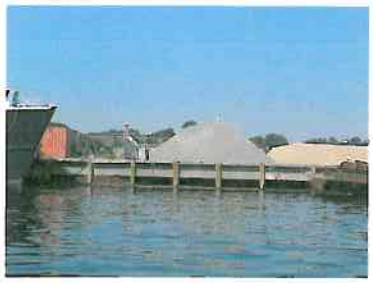
| Presumed Structure Owner: | Based On Comment: |
|---|---|
| Local | |

| Owner Name: | Earliest Structure Record: | Estimated Reconstruction/Repair Cost: |
|---|---|---|
| New Bedford | 1963 | $3,946,800.00 |

| Length: | Top Elevation: | FIRM Map Zone: | FIRM Map Elevation: |
|---|---|---|---|
| 2300 Feet | Feet NAVD 88 | A1 | 6 Feet NGVD |

| Primary Type: | Primary Material: | Primary Height: |
|---|---|---|
| Bulkhead/ Seawall | Steel | Over 15 Feet |

| Secondary Type: | Secondary Material: | Secondary Height: |
|---|---|---|
| | | |



Structure Summary :

The steel sheet pile bulkhead has a concrete cap and timber fender piles on it. Behind the structure is a storage area for sand and gravel as well as warehouses and buildings. There is moderate corrosion at the tidal zone of the sheet piles.

| | |
|---|---|
| *Condition Rating* | C |
| *Rating* | Fair |
| *Level of Action* | Moderate |
| *Description* | Structure is sound but may exhibit minor deterioration, section loss, cracking, spalling, undermining, and/or scour. Structure adequate to withstand major coastal storm with little to moderate damage. Actions taken to reinforce structure to provide full protection from major coastal storm and for extending life of structure. Moderate wind or wave damage to landform exists. Landform may not be sufficient to fully protect shoreline during a major coastal storm. Actions taken to provide addition material for full protection and extended life. |

| | |
|---|---|
| *Priority Rating* | II |
| *Rating* | Low Priority |
| *Action* | Future Project Consideration |
| *Description* | Inshore Structures Present with Limited potential for Significant Infrastructure Damage |

Structure Images:

049-066-000-165-300-PHO3A.JPG

Structure Documents:

| | | | |
|---|---|---|---|
| DEP | June 1963 | Plan Accompanying | 049-066-000-165-300-LIC3A |
| DEP | December 1 | Plan Accompanying | 049-066-000-165-300-LIC3B |
| DEP | March 1966 | Plan Accompanying | 049-066-000-165-300-LIC3C |

Prepared By: Bourne Consulting Engineering

# Section II - New Bedford

# Part C

# Structure Photographs

TOWN: NEW BEDFORD
SOURCE: BCE - FIELD PHOTOGRAPHS
LOCATION: Bourne Consulting Engineering
DATE OF RESEARCH: SEPTEMBER 2007



| BCE Structure No | Document No | Contract/ Drawing Number | Entity | Municipality | Date | Title | Sheets | Location | Description |
|---|---|---|---|---|---|---|---|---|---|
| 049-002-000-003-100 | 049-002-000-003-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-002-000-003-100 | 049-002-000-003-100-PHO1B.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-002-000-004-100 | 049-002-000-004-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-002-000-004-200 | 049-002-000-004-200-PHO2A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-002-000-004-300 | 049-002-000-004-300-PHO3A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-002-000-004-300 | 049-002-000-004-300-PHO3B.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-002-000-004-400 | 049-002-000-004-400-PHO4A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
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| 049-004-000-002-300 | 049-004-000-002-300-PHO3A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-004-000-006-100 | 049-004-000-006-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
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| 049-006-000-002-200 | 049-006-000-002-200-PHO2A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-007-000-112-100 | 049-007-000-112-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-007-000-112-200 | 049-007-000-112-200-PHO2A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-007-000-112-300 | 049-007-000-112-300-PHO3A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-007-000-112-400 | 049-007-000-112-400-PHO4A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-009-000-286-100 | 049-009-000-286-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-009-000-286-100 | 049-009-000-286-100-PHO1B.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-009-000-286-100 | 049-009-000-286-100-PHO1C.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-009-000-286-200 | 049-009-000-286-200-PHO2A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-010-000-198-100 | 049-010-000-198-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |

TOWN: NEW BEDFORD
SOURCE: BCE - FIELD PHOTOGRAPHS
LOCATION: Bourne Consulting Engineering
DATE OF RESEARCH: SEPTEMBER 2007

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 049-011-000-030-100 | 049-011-000-030-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-011-000-030-100 | 049-011-000-030-100-PHO1B.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-011-000-030-200 | 049-011-000-030-200-PHO2A.JPG | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-011-000-030-300 | 049-011-000-030-300-PHO3A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-011-000-030-400 | 049-011-000-030-400-PHO4A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
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| 049-012-000-247-200 | 049-012-000-247-200-PHO2A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-013-000-055-100 | 049-013-000-055-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
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| 049-025A-000-048-100 | 049-025A-000-048-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
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| 049-047-000-180-100 | 049-047-000-180-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-047-000-203-100 | 049-047-000-203-100-PHO1A.JPG | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-047-000-203-100 | 049-047-000-203-100-PHO1B.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-047-000-203-100 | 049-047-000-203-100-PHO1C.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-047-000-204-100 | 049-047-000-204-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-047-000-219-100 | 049-047-000-219-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
| 049-053-000-120-100 | 049-053-000-120-100-PHO1A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |
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| 049-066-000-165-300 | 049-066-000-165-300-PHO3A.jpg | | Bourne Consulting Engineering | New Bedford | August 2007 | DIGITAL IMAGE | 1 | Structure Location | Description□□Structure Condtion Photo at Time of Survey |


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049-002-000-003-100-PHO1B


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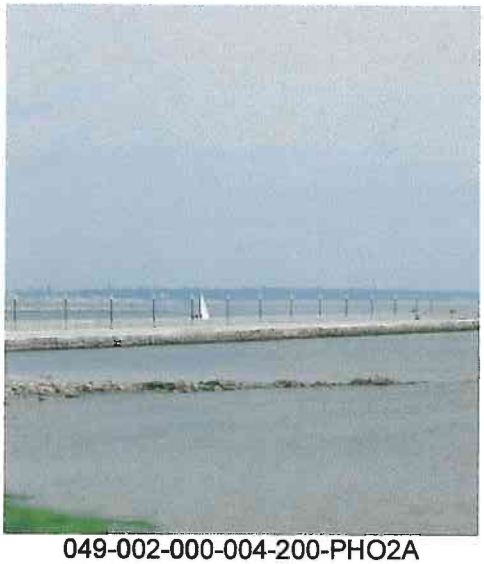
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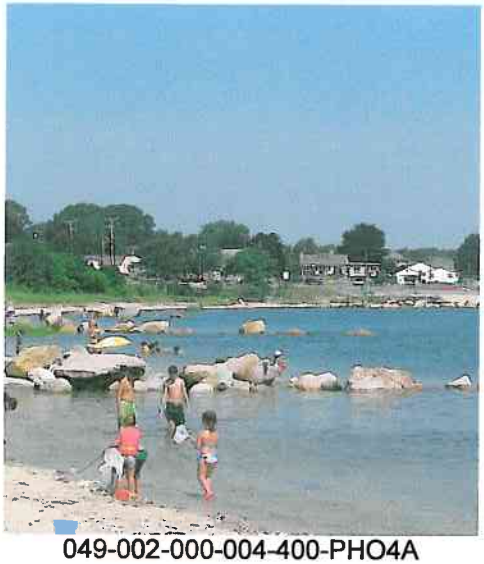
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049-007-000-112-200-PHO2A


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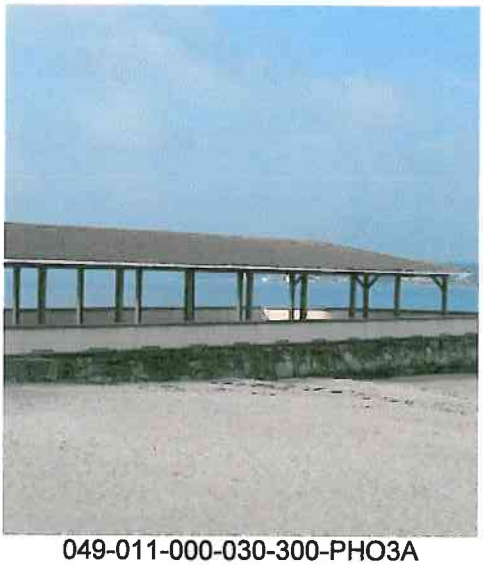
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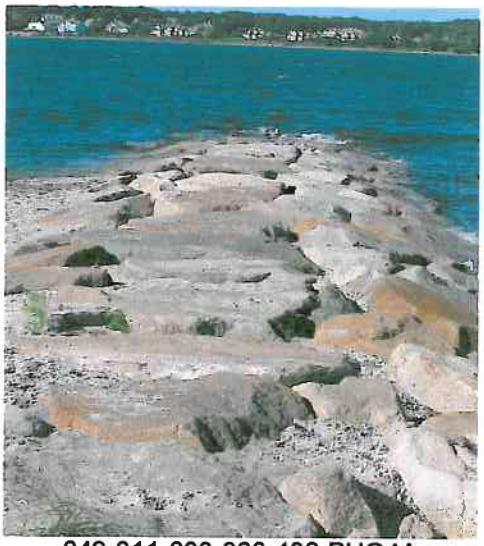
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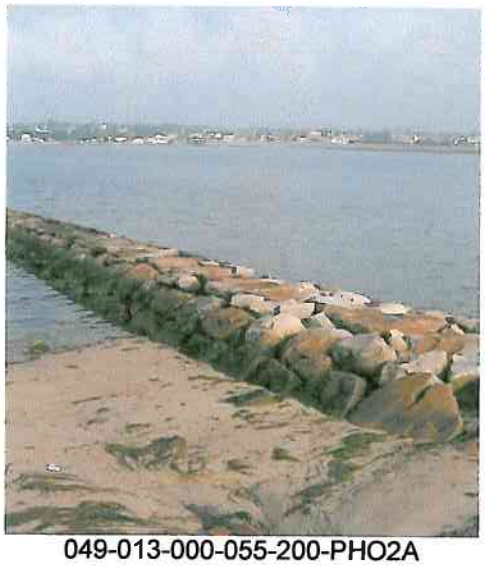
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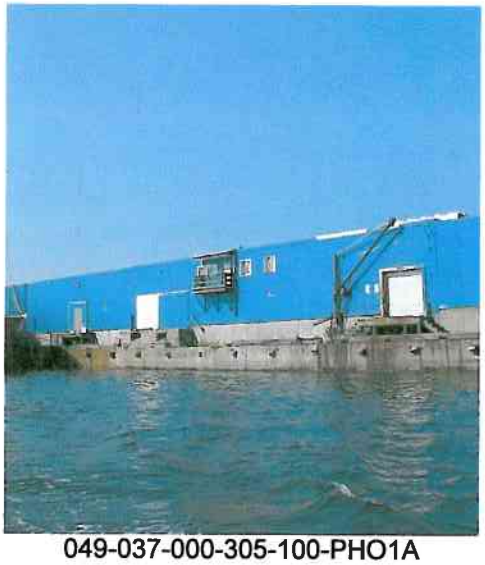
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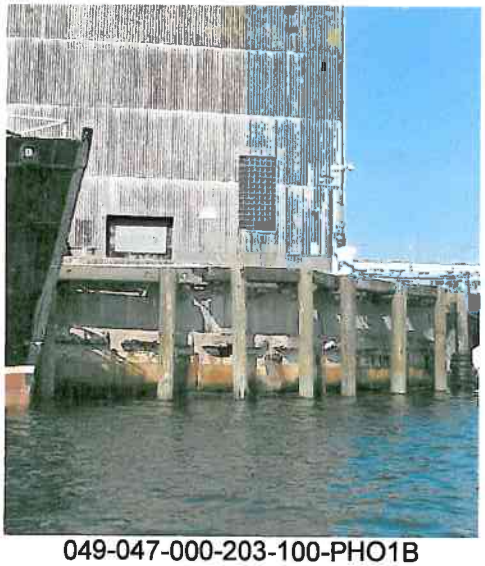
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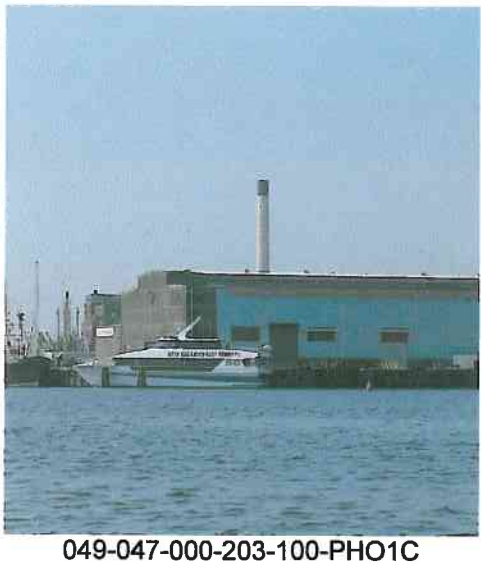
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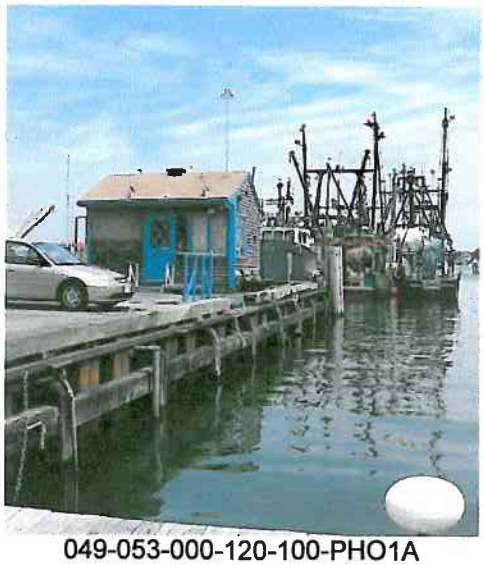
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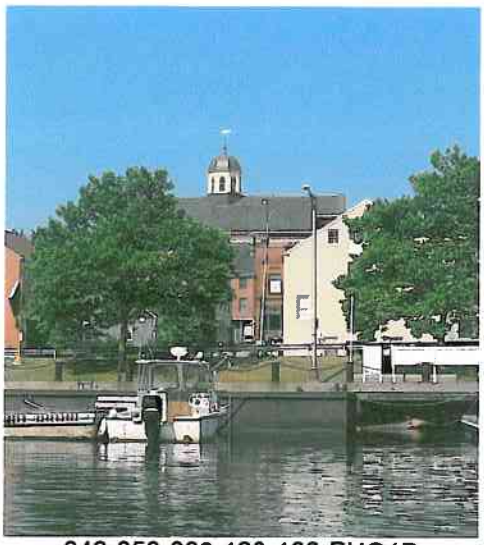
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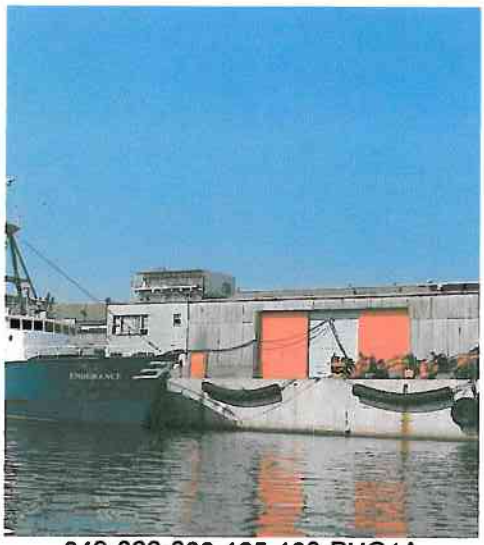
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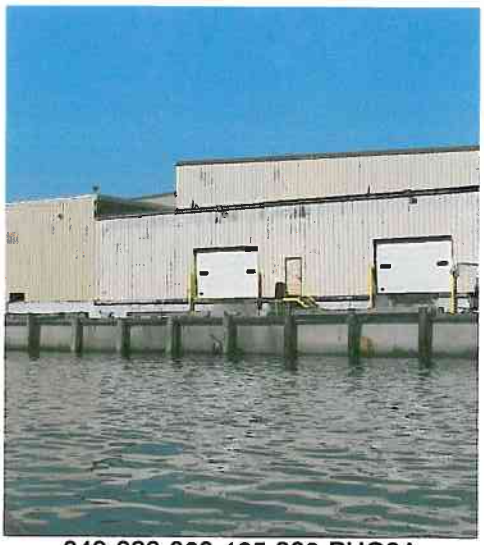
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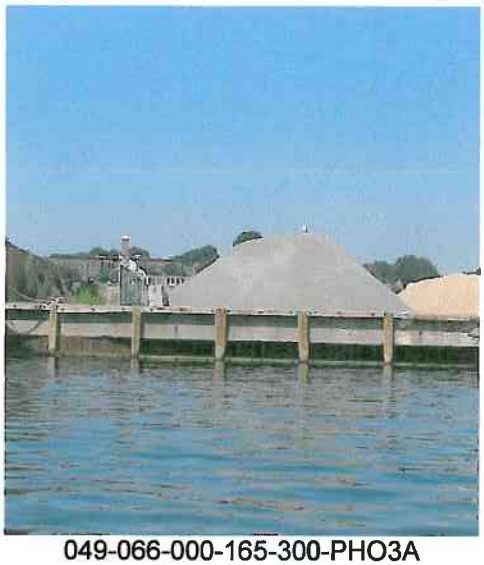


049-066-000-165-300-PHO3A

# Section II - New Bedford

# Part D

# Structure Documents

TOWN DOCUMENT LIST

MA DCR - DOCUMENT LIST

MA DEP – Ch 91 DOCUMENT LIST

- Copies of License Documents

USACE – PERMIT DOCUMENT LIST

- Copies of Permit Documents

CITY: New Bedford
SOURCE: City of New Bedford
LOCATION: CITY
DATE OF RESEARCH: JUNE 2007

# No City Documents for the City of New Bedford

| BCE Structure No | Document No | Contract/ Drawing Number | Entity | Municipality | Date | Title | Sheets | Location | Description |
|---|---|---|---|---|---|---|---|---|---|

TOWN: NEW BEDFORD
SOURCE: MA - DCR
LOCATION: MA - DCR BOSTON and HINGHAM, MA
DATE OF RESEARCH: JULY 2007



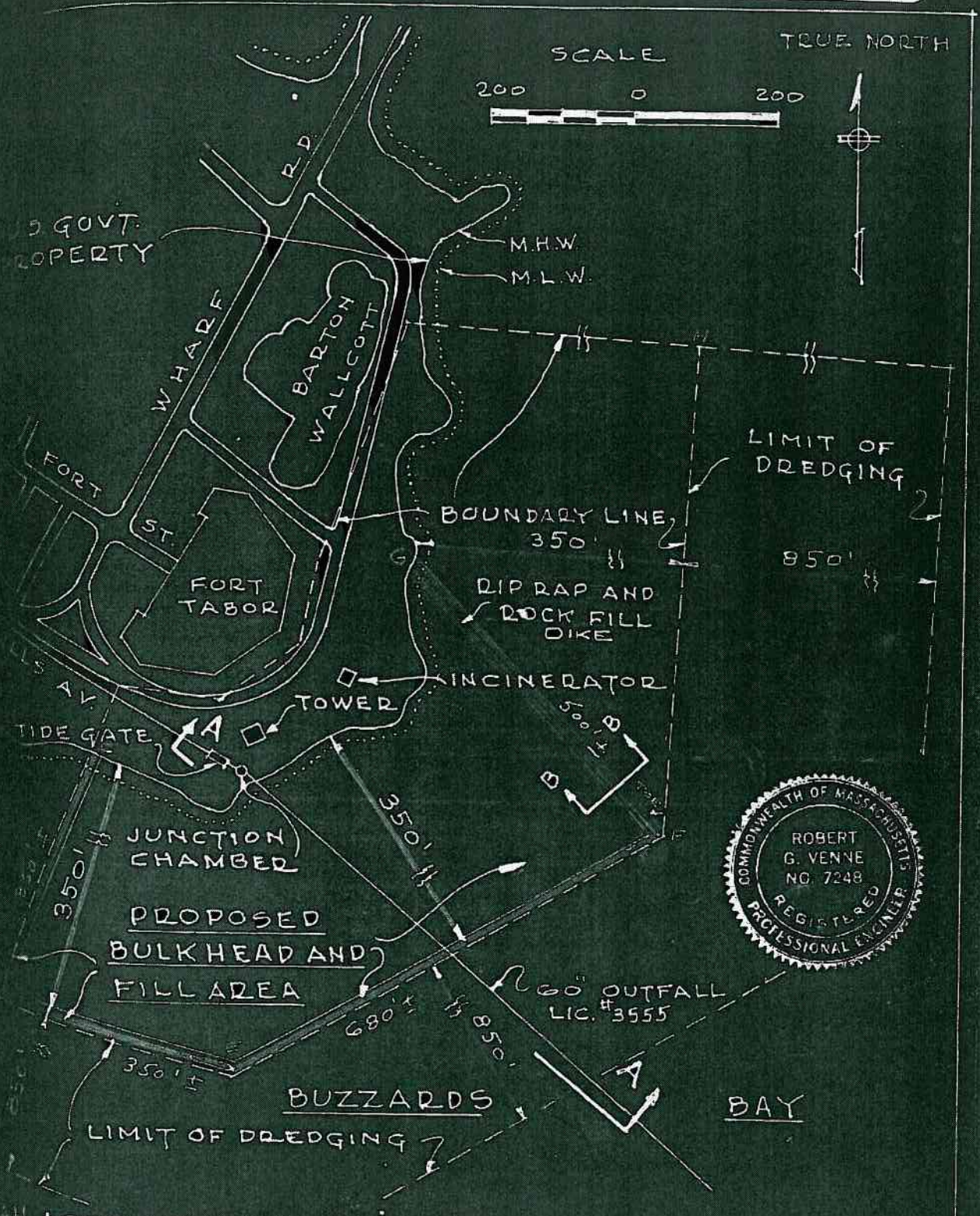
| BCE Structure No | Document No | Contract/ Drawing Number | Entity | Municipality | Date | Title | Sheets | Location | Description |
|---|---|---|---|---|---|---|---|---|---|
| 049-002-000-004-200 | 049-002-000-004-200-DCR2A | 1952 | MA-DCR | New Bedford | September 1958 | Proposed Shore Development - Stone Groin and Sand - Rodney French Boulevard (East) Southerly of City Pier - New Bedford - Prepared for DPW of MA - Division of Waterways | 3 | East Rodney French Boulevard - South of City Pier | Stone Groin and Sand Fill |
| 049-002-000-004-300 | 049-002-000-004-300-DCR3A | 1488 | MA-DCR | New Bedford | May 1955 | Proposed Hurricane Repairs at Four Locations in New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 4 | Marine Park, City Pier, City Beach, Clarks Cove | |
| 049-002-000-004-300 | 049-002-000-004-300-DCR3B | 1585 | MA-DCR | New Bedford | June 1956 | Proposed Hurricane Damage Repairs - Rodney French Boulevard East - New Bedford - Prepared for DPW of MA - Division of Waterways | 6 | At Rodney French Boulevard and Town Pier | Groin and Pier |
| 049-002-000-004-400 | 049-002-000-004-400-DCR4A | 1585 | MA-DCR | New Bedford | June 1956 | Proposed Hurricane Damage Repairs - Rodney French Boulevard East - New Bedford - Prepared for DPW of MA - Division of Waterways | 6 | At Rodney French Boulevard and Town Pier | Groin and Pier |
| 049-002-000-004-400 | 049-002-000-004-400-DCR4B | 1812 | MA-DCR | New Bedford | January 1958 | Proposed Shore Protection - Rodney French Boulevard - East and West - Prepared for DPW of MA - Division of Waterways | 9 | North Half of West Rodney French Boulevard and Poor Farm to Town Pier of East Rodney French Boulevard | Shore Protection |
| 049-004-000-002-100 | 049-004-000-002-100-DCR1A | 1812 | MA-DCR | New Bedford | January 1958 | Proposed Shore Protection - Rodney French Boulevard - East and West - Prepared for DPW of MA - Division of Waterways | 9 | North Half of West Rodney French Boulevard and Poor Farm to City Pier of East Rodney French Boulevard | Shore Protection |
| 049-004-000-002-100 | 049-004-000-002-100-DCR1B | 2533 | MA-DCR | New Bedford | March 1966 | Proposed Shore Improvements - Seawall, Sandfill and Groin - Rodney French Boulevard East - Vicinity of Hudson Street | 2 | Rodney French Boulevard by Hudson Street | Seawall, Sandfilll and Groin |
| 049-004-000-006-100 | 049-004-000-006-100-DCR1A | 1812 | MA-DCR | New Bedford | January 1958 | Proposed Shore Protection - Rodney French Boulevard - East and West - Prepared for DPW of MA - Division of Waterways | 9 | North Half of West Rodney French Boulevard and Poor Farm to City Pier of East Rodney French Boulevard | Shore Protection |
| 049-004-000-006-100 | 049-004-000-006-100-DCR1B | 2533 | MA-DCR | New Bedford | March 1966 | Proposed Shore Improvements - Seawall, Sandfill, and Groin - Rodney French Boulevard East - Vicinity of Hudson Street | 2 | Rodney French Boulevard by Hudson Street | Seawall, Sandfill, and Groin |
| 049-005-000-003-100 | 049-005-000-003-100-DCR1A | 1647 | MA-DCR | New Bedford | August 1956 | Proposed Hurricane Damage Repairs - Rodney French Boulevard West - New Bedford - Prepared for DPW of MA - Division of Waterways | 1 | Portland to Coral Street | Stone Mound |
| 049-005-000-003-100 | 049-005-000-003-100-DCR1B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extensions and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard West | Sand Fill, Groin Extension and Seawall |
| 049-007-000-112-100 | 049-007-000-112-100-DCR1A | 1813 | MA-DCR | New Bedford | July 1957 | Proposed Boat Ramp - Rodney French Boulevard - West - Prepared for DPW of MA - Division of Waterways | | West Rodney French Boulevard | Boat Ramp |
| 049-007-000-112-100 | 049-007-000-112-100-DCR1B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extension and Shore Protection - West Beach Seawall - Clark Point - new Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard - West | Sand Fill, Groin Extension and Seawall |
| 049-007-000-112-200 | 049-007-000-112-200-DCR2A | 1813 | MA-DCR | New Bedford | July 1957 | Proposed Boat Ramp - Rodney French Boulevard - West - Prepared for DPW of MA - Division of Waterways | 1 | West Rodney French Boulevard | Boat Ramp |
| 049-007-000-112-200 | 049-007-000-112-200-DCR2B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extensions and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard - West | Sand Fill, Groin Extension, and Seawall |
| 049-007-000-112-300 | 049-007-000-112-300-DCR3A | 1647 | MA-DCR | New Bedford | August 1956 | Proposed Hurricane Damage Repairs - Rodney French Boulevard West - New Bedford - Prepared for DPW of MA - Division of Waterways | 1 | Portland to Coral Street | Stone Mound |
| 049-007-000-112-300 | 049-007-000-112-300-DCR3B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extension and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard - West | Sand Fill, Groin Extension and Seawall |
| 049-007-000-112-400 | 049-007-000-112-400-DCR4A | 1647 | MA-DCR | New Bedford | August 1956 | Proposed Hurricane Damage Repairs - Rodney French Boulevard West - New Bedford - Prepared for DPW of MA - Division of Waterways | 1 | Portland Street to Coral Street | Stone Mound |
| 049-007-000-112-400 | 049-007-000-112-400-DCR4B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extension and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard West | Sand Fill, Groin Extension and Seawall |
| 049-009-000-286-100 | 049-009-000-286-100-DCR1A | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extensions and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard West | Sand Fill, Groin Extension and Seawall |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 049-009-000-286-200 | 049-009-000-286-200-DCR2A | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extensions and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard West | Sand Fill, Groin Extension and Seawall |
| 049-011-000-030-100 | 049-011-000-030-100-DCR1A | 1812 | MA-DCR | New Bedford | January 1958 | Proposed Shore Protection Rodney French Boulevard - East and West - Prepared for DPW of MA - Division of Waterways | 9 | North Half of West Rodney French Boulevard and Poor Farm to City Pier of East Rodney French Boulevard | Shore Protection |
| 049-011-000-030-100 | 049-011-000-030-100-DCR1B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extensions and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard - West | Sand Fill, Groin Extension, and Seawall |
| 049-011-000-030-200 | 049-011-000-030-200-DCR2A | 1812 | MA-DCR | New Bedford | January 1958 | Proposed Shore Protection Rodney French Boulevard - East and West - Prepared for DPW of MA - Division of Waterways | 9 | North Half of West Rodney French Boulevard and Poor Farm to City Pier of East Rodney French Boulevard | Shore Protection |
| 049-011-000-030-200 | 049-011-000-030-200-DCR2B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extensions and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterway | 11 | Rodney French Boulevard | Sand Fill, Groin Extension and Seawall |
| 049-011-000-030-300 | 049-011-000-030-300-DCR3A | 1812 | MA-DCR | New Bedford | January 1958 | Proposed Shore Protection - Rodney French Boulevard - East and West - Prepared for DPW of MA - Division of Waterways | 9 | North Half of West Rodney French Boulevard and Poor Farm to City Pier of East Rodney French Boulevard | Shore Protection |
| 049-011-000-030-300 | 049-011-000-030-300-DCR3B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extensions and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard - West | Sand Fill, Groin Extension, and Seawall |
| 049-011-000-030-400 | 049-011-000-030-400-DCR4A | 1812 | MA-DCR | New Bedford | January 1958 | Proposed Shore Protection - Rodney French Boulevard - East and West - Prepared for DPW of MA - Division of Waterways | 9 | North Half of West Rodney French Boulevard and Poor Farm to City Pier of East Rodney French Boulevard | Shore Protection |
| 049-011-000-030-400 | 049-011-000-030-400-DCR4B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extensions and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard - West | Sand Fill, Groin Extension and Seawall |
| 049-013-000-055-100 | 049-013-000-055-100-DCR1A | 1812 | MA-DCR | New Bedford | January 1958 | Proposed Shore Protection - Rodney French Boulevard East and West - Prepared for DPW of MA - Division of Waterways | 9 | North Half of Rodney French Boulevard and Poor Farm to City Pier of East Rodney French Boulevard | Shore Protection |
| 049-013-000-055-100 | 049-013-000-055-100-DCR1B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extensions and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard - West | Sand Fill, Groin Extension and Seawall |
| 049-013-000-055-200 | 049-013-000-055-200-DCR2A | 1812 | MA-DCR | New Bedford | January 1958 | Proposed Shore Protection - Rodney French Boulevard - East and West - Prepared for DPW of MA - Division of Waterways | 9 | Northern Half of West Rodney French Boulevard and Poor Farm to City Pier of East Rodney French Boulevard | Shore Protection |
| 049-013-000-055-200 | 049-013-000-055-200-DCR2B | 2905 | MA-DCR | New Bedford | November 1978 | Proposed Sand Fill - Groin Extensions and Shore Protection - West Beach Seawall - Clark Point - New Bedford, MA - Prepared for DPW of MA - Division of Waterways | 11 | Rodney French Boulevard - West | Sand Fill, Groin Extension and Seawall |
| 049-047-000-203-100 | 049-047-000-203-100-DCR1A | 592 | MA-DCR | New Bedford | April 1939 | Proposed Timber Wharf - Building and Dredging - New Bedford | 4 | State Pier | Wharf |
| 049-047-000-203-100 | 049-047-000-203-100-DCR1B | 869 | MA-DCR | New Bedford | May 1946 | Proposed Pier Alteration - State Pier - New Bedford | 2 | State Pier | Bulkhead and Concrete Pier |
| 049-047-000-203-100 | 049-047-000-203-100-DCR1C | 941 | MA-DCR | New Bedford | October 1948 | New Bedford State Pier - Proposed Pier Development Under Chapter 536 Acts of 1946 - Prepared for DPW of MA - Division of Waterways | 6 | State Pier | Whole Project |
| 049-047-000-203-100 | 049-047-000-203-100-DCR1D | 2286 | MA-DCR | New Bedford | April 1961 | Proposed Pier Repairs - State Pier - New Bedford | 5 | State Pier | Bulkhead |
| 049-047-000-203-100 | 049-047-000-203-100-DCR1E | 2512 | MA-DCR | New Bedford | December 1965 | Proposed Bulkhead - State Pier - New Bedford | 3 | State Pier | Bulkhead |
| 049-047-000-203-100 | 049-047-000-203-100-DCR1F | 3 | MA-DCR | New Bedford | May 1999 | Harbor Development Commission - New Bedford State Pier, Ferry Terminal, North Wharf Extension and Site Work | 16 | Ferry Terminal | Retaining Walls |
| 049-047-000-203-100 | 049-047-000-203-100-DCR1G | N/A | MA-DCR | New Bedford | May 2002 | New Bedford harbor Development Commission - New Bedford State Pier - Cruise Ship Berthing Facility | 3 | State Pier | Riprap |
| 049-066-000-165-100 | 049-066-000-165-100-DCR1A | 2227 | MA-DCR | New Bedford | January 1961 | Proposed Harbor Improvements - Acushnet River - New Bedford - Prepared for DPW of MA - Division of Waterways | 42 | North of Pope Island - Hillman Street | |
| 049-066-000-165-200 | 049-066-000-165-200-DCR2A | 2227 | MA-DCR | New Bedford | January 1961 | Proposed Harbor Improvements - Acushnet River - New Bedford - Prepared for DPW of MA - Division of Waterways | 42 | North of Pope Island to Hillman Street | |

TOWN: NEW BEDFORD
SOURCE: DEP
LOCATION: BOSTON, MA
DATE OF RESEARCH: JULY 2007

| BCE Structure No | Document No | Contract/ Drawing Number | Entity | Municipality | Date | Title | Sheets | Location | Description |
|---|---|---|---|---|---|---|---|---|---|
| 049-002-000-003-100 | 049-002-000-003-100-LIC1A | 5271 | DEP | New Bedford | July 1967 | Plan Accompanying the Petition of the City of New Bedford, MA to Erect Bulkhead, Dredge and Place Fill in Buzzards Bay | 2 | Fort Tabor | Bulkhead with Fill |
| 049-002-000-003-100 | 049-002-000-003-100-LIC1B | 5793 | DEP | New Bedford | September 1970 | Plan Accompanying the Petition of City of New Bedford, MA to Construct Seawall Dredge, Place Fill and Install 72" Outfall in Buzzards Bay | 3 | Fort Tabor | Seawall and Fill |
| 049-002-000-003-100 | 049-002-000-003-100-LIC1C | 2895 | DEP | New Bedford | March 1992 | Plan Accompanying Petition of City of New Bedford to Construct and Maintain Drainage Outlets at a Secondary Treatment Facility Rehabilitate an Existing Effluent Outfall, Demolish an Existing Wastewater Treatment Facility and Create a Park Located in the | 7 | Fort Tabor | Seawalls and Riprap |
| 049-002-000-004-100 | 049-002-000-004-100-LIC1A | 2895 | DEP | New Bedford | March 1992 | Plan Accompanying Petition of City of New Bedford to Construct and Maintain Drainage Outlets at a Secondary Treatment Facility Rehabilitate an Existing Effluent Outfall, Demolish an Existing Wastewater Treatment Facility and Create a Park Located in the | 7 | Fort Tabor | Seawall and Riprap |
| 049-002-000-004-200 | 049-002-000-004-200-LIC2A | 2895 | DEP | New Bedford | March 1992 | Plan Accompanying Petition of City of New Bedford to Construct and Maintain Drainage Outlets at a Secondary Treatment Facility Rehabilitate an Existing Effluent Outfall, Demolish an Existing Wastewater Treatment Facility and Create a Park Located in the | 7 | Fort Tabor | Seawall and Riprap |
| 049-047-000-203-100 | 049-047-000-203-100-LIC1A | 586 | DEP | New Bedford | August 1979 | Plan Accompanying Petition of City of New Bedford to Construct and Maintain a Sheet Pile Bulkhead, Fill and Timber Pile and Timber Boardwalk in New Bedford Harbor, New Bedford, MA | 1 | State Pier on Mac Arthur Drive | Steel Sheet Pile Bulkhead |
| 049-047-000-204-100 | 049-047-000-204-100-LIC1A | 1472 | DEP | New Bedford | June 1984 | Plan Accompanying Petition of New Bedford Harbor Development Comm to Construct and Maintain Boardwalk, Timber Pier, Concrete Pier and Piles at Steamship Pier, Acushnet River, New Bedford, MA | 3 | Steamship Pier | Concrete Pier |
| 049-053-000-120-100 | 049-053-000-120-100-LIC1A | 275 | DEP | New Bedford | March 1977 | Plan Accompanying Petition of City of New Bedford to Construct and Maintain Steel Bulkehad, Wood Fender System, Tie Rods and Deadmen, Fender Piles, Solid Fill and To Remove Existing Piers and Structures in New Bedford Harbor, New Bedford, MA | 2 | North of State Pier | Bulkhead |
| 049-066-000-165-100 | 049-066-000-165-100-LIC1A | 4637 | DEP | New Bedford | October 1962 | Plan Accompanying Petition of the City of New Bedford to Build a Bulkhead and Concrete Wall on Relieving Platform and to Fill Solid and to Dredge in the Acushnet River at New Bedford, MA | 2 | North Street and North Water Street | Bulkhead and Concrete Wall |
| 049-066-000-165-200 | 049-066-000-165-200-LIC2A | 564 | DEP | New Bedford | May 1979 | Plan Accompanying Petition of the City of New Bedford to Construct and Maintain a Steel Sheet Pile Bulkhead, Fender Piles, Storm Drainage, Placement of Solid Fill and Dredging in New Bedford Harbor, New Bedford, MA | 4 | Costa Avenue | Fill with Bulkhead |
| 049-066-000-165-300 | 049-066-000-165-300-LIC3A | 4728 | DEP | New Bedford | June 1963 | Plan Accompanying Petition of the City of New Bedford Harbor Development Commission for Placement of Solid Fill in the Acushnet River, New Bedford, MA | 2 | Pearl Street | Fill with Revetment |
| 049-066-000-165-300 | 049-066-000-165-300-LIC3B | 5309 | DEP | New Bedford | December 1967 | Plan Accompanying Petition of the City of New Bedford by its Harbor Development Commission to Construct Steel Sheet Bulkhead, Concrete Unloading Platform, Storm Drainage Systems and to Place Solid Fill and Dredge in the Acushnet River, New Bedford, MA | 4 | Pearl Street | Steel Bulkhead |
| 049-066-000-165-300 | 049-066-000-165-300-LIC3C | 5129 | DEP | New Bedford | March 1966 | Plan Accompanying Petition of the City of New Bedford by its Harbor Development Commission to Construct Steel Sheet Bulkhead, Concrete Unloading Platform, Storm Drainage Systems, to Place Solid Fill and Dredge in the Achushnet River, New Bedford | 4 | Maxfield Street | Steel Bulkhead |

049-002-000-003-100




COMMONWEALTH OF MASSACHUSETTS
ROBERT G. VENNE NO. 7248
REGISTERED PROFESSIONAL ENGINEER

AN ACCOMPANYING THE PETITION OF
OF NEW BEDFORD MASS
ELECT BULKHEAD, DREDGE
PLACE FILL IN BUZZARDS BAY
NE 1967 SHEET 1 OF 2

LICENSE PLAN NO. 5271
APPROVED BY DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
JULY 26 1967
COMMISSIONER - DEPT. OF PUBLIC WORKS
ASSOCIATE COMMISSIONERS

DEPARTMENT OF PUBLIC WORKS

049-002-000-003-100







COMMONWEALTH OF MASSACHUSETTS
ROBERT G. VENNE
NO. 7248
REGISTERED PROFESSIONAL ENGINEER

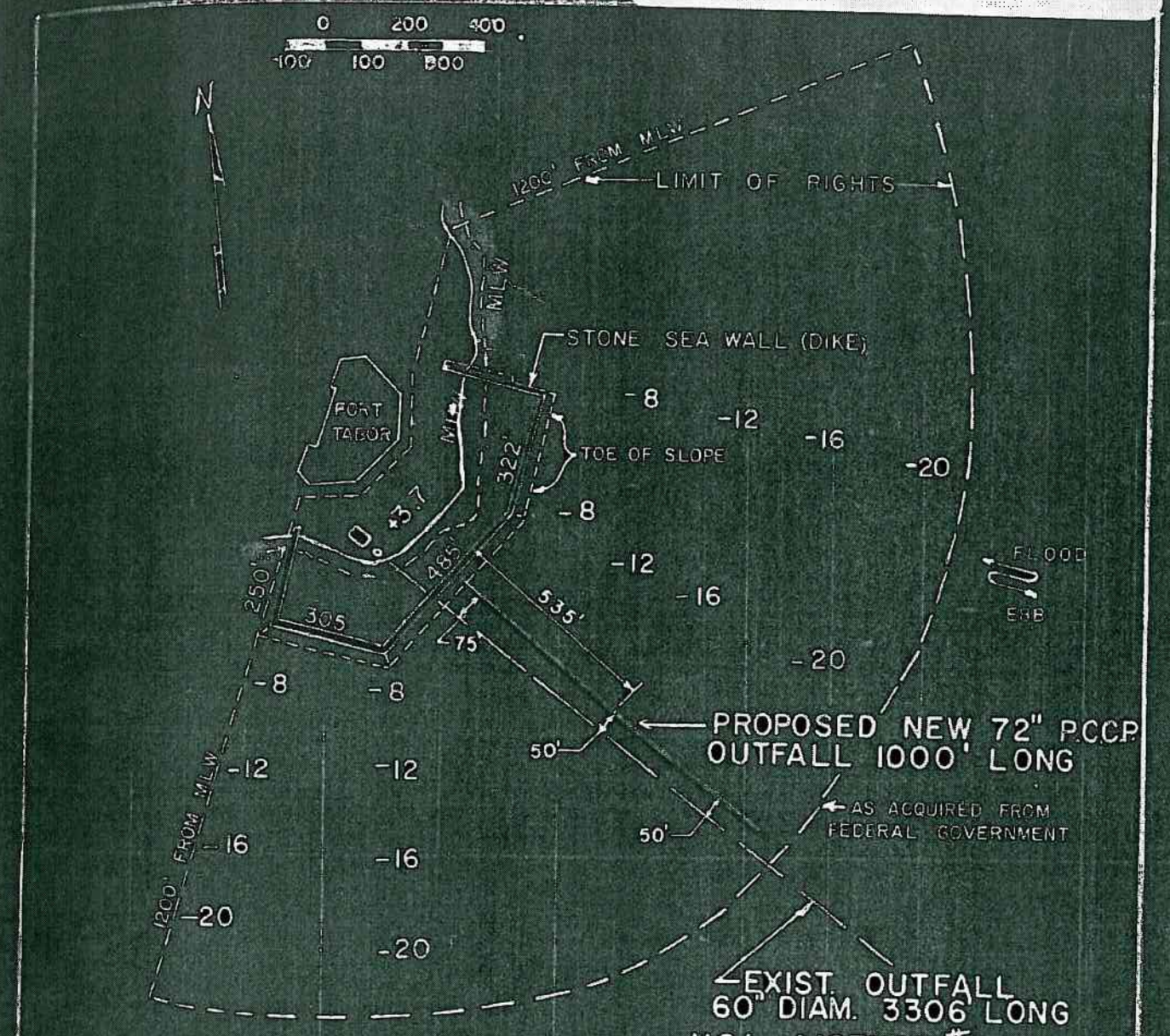
# PLAN ACCOMPANYING THE PETITION OF CITY OF NEW BEDFORD MASS. TO ERECT BULKHEAD, DREDGE AND PLACE FILL IN BUZZARDS BAY.

19 JUNE 1967

SHEET 2 OF 2

LICENSE PLAN NO: 5271
APPROVED BY DEPARTMENT OF PUBLIC WORKS
JULY 26 1967

049-002-000-003-100




SOUNDINGS & ELEV IN FEET
REFER TO M.L.W.

(P.C.C.P.) PRESTRESSED CONCRETE CYLINDER PIPE

ROBERT C. VENNE
NO. 7248
REGISTERED
PROFESSIONAL ENGINEER

H 5793

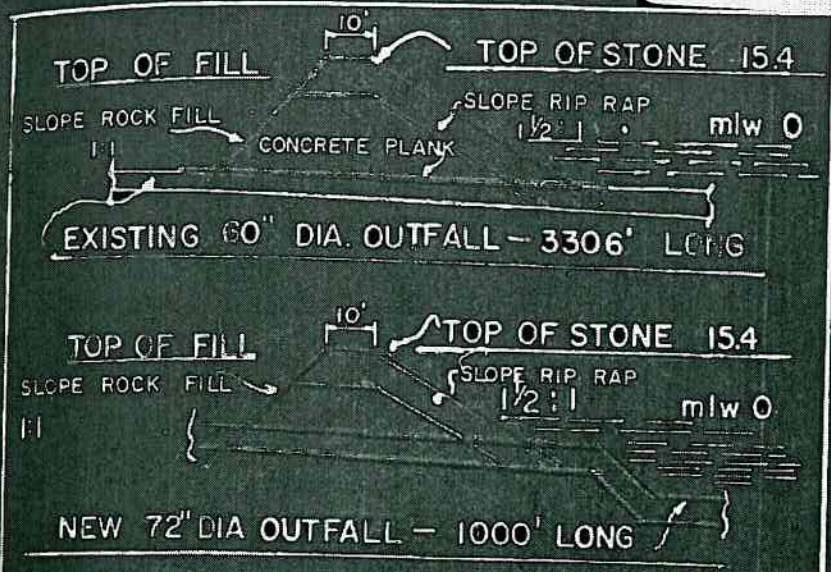
PLAN ACCOMPANYING THE
PETITION OF
CITY OF NEW BEDFORD MASS.
TO CONSTRUCT SEAWALL DREDGE
PLACE FILL AND INSTALL 72"
OUTFALL IN BUZZARDS BAY

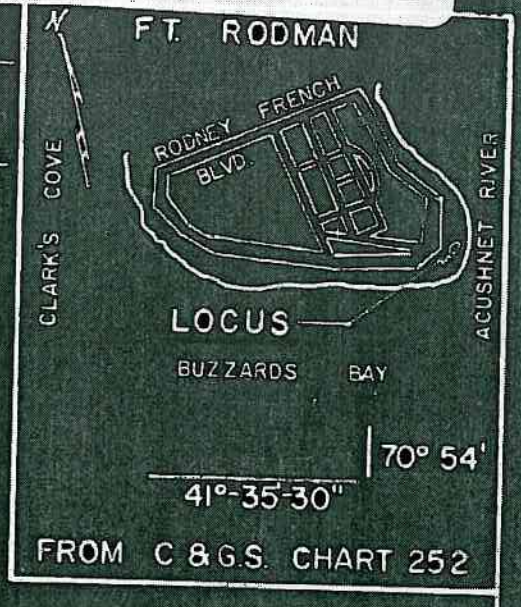
REVISED:
17 SEPT. 1970

SHEET 1 OF 3

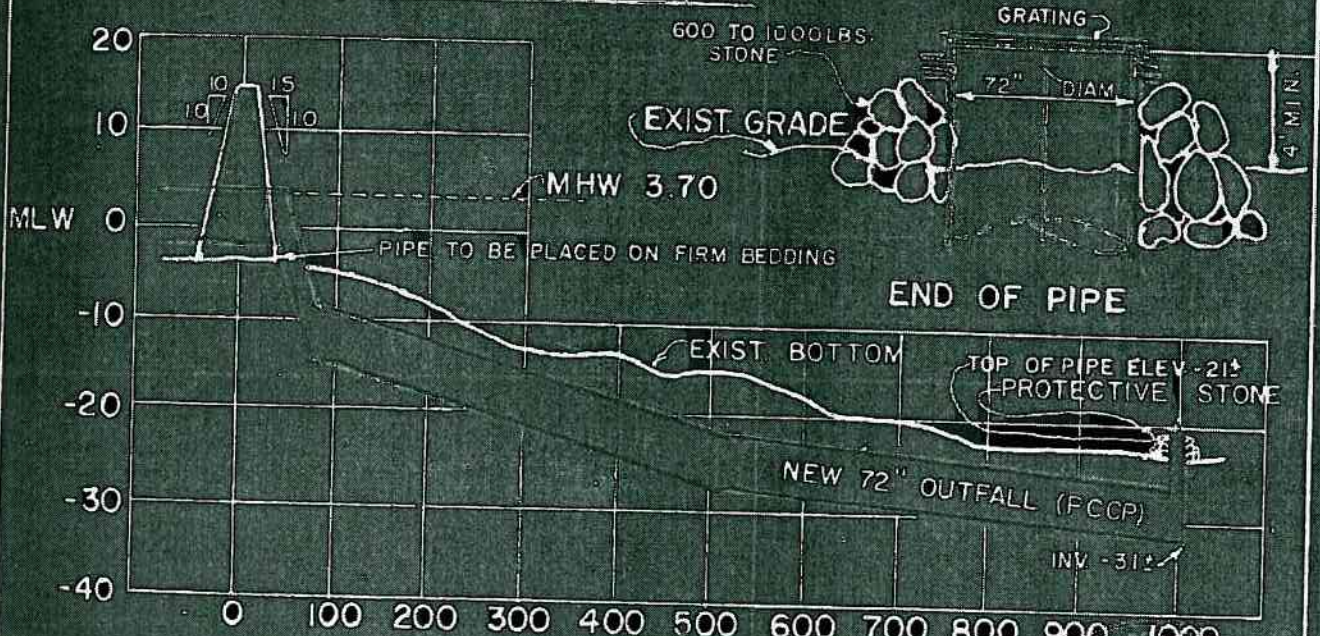
LICENSE PLAN NO. 5793
APPROVED BY DEPARTMENT OF PUBLIC WORKS OF
MASSACHUSETTS
SEPTEMBER 23, 1970
COMMISSIONER OF PUBLIC WORKS
ASSOCIATE
COMMISSIONER

049-002-000-003-100




## SECTIONS THRU STONE SEAWALL




## PROFILE OF NEW 72" OUTFALL

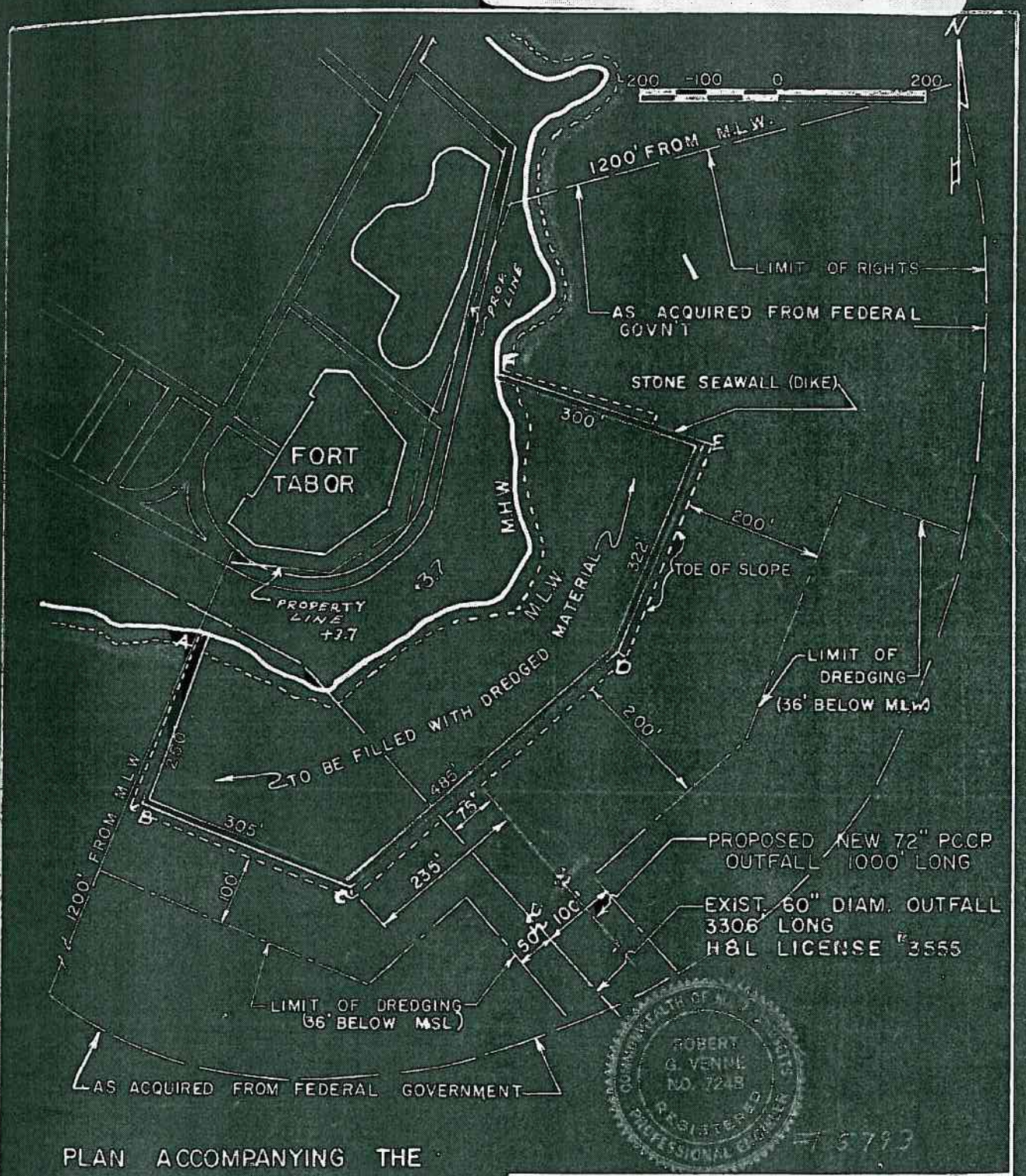
SOUNDINGS & ELEV IN FEET REFER TO MLW.
(PCCP) PRESTRESSED CONCRETE CYLINDER PIPE

4/6/71

PLAN ACCOMPANYING THE
PETITION OF
CITY OF NEW BEDFORD MASS
TO CONSTRUCT SEAWALL, DREDGE,
PLACE FILL AND INSTALL 72"
OUTFALL IN BUZZARDS BAY
& JULY 1970 SHEET 2 OF3

LICENSE PLAN NO. 5793
APPROVED BY DEPARTMENT OF PUBLIC WORKS
SEPTEMBER 23, 1970

049-00a-000-003-100




PLAN ACCOMPANYING THE PETITION OF CITY OF NEW BEDFORD MASS. TO CONSTRUCT A SEAWALL, DREDGE PLACE FILL AND INSTALL A 72" OUTFALL IN BUZZARDS BAY

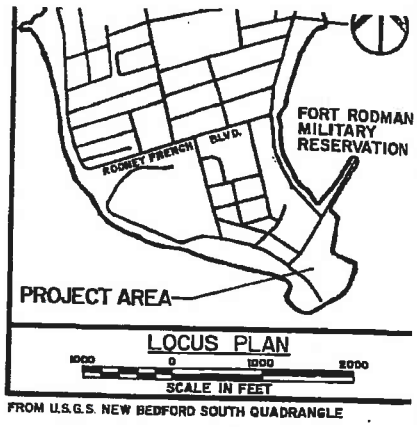
REVISED: 17 SEPT. 1970

SHEET 3 OF 3

LICENSE PLAN NO. 5793
APPROVED BY DEPARTMENT OF PUBLIC WORKS
SEPTEMBER 23 1970

Lic. No.

049-002-000-003-100
049-002-000-004-100
049-002-000-004-200




LOCUS PLAN
1000 0 1000 2000
SCALE IN FEET
FROM U.S.G.S. NEW BEDFORD SOUTH QUADRANGLE

SOUTH RODNEY
SEE SHEET 6 OF 7
FRENCH BLVD.
ABOVE SURGE AREA SUBJECT TO MINIMAL FLOODING
100 YEAR FLOOD PLAIN BOUNDARY
ZONE AE
ZONE AE
SHEET 4
SHEET 3
MEAN HIGH WATER
HISTORIC HIGH WATER
Buzzards Bay
RECREATIONAL DISTRICT
ABOVE SURGE
PROPOSED SECONDARY WASTEWATER TREATMENT FACILITY
ZONE AE
ZONE VE
AREA SUBJECT TO MINIMAL FLOODING
SHEET 3
SHEET 2
Clark's Cove
ZONE VE
PROPOSED TABER PARK
EXISTING WASTEWATER TREATMENT FACILITY

NOTES:
1. HISTORIC LOW WATER IS LOCATED SEAWARD OF THE SUBJECT SITE.
2. MEAN LOW WATER IS LOCATED SEAWARD OF THE SUBJECT SITE AT AN ELEVATION OF -3.95'

LOCATION PLAN
400 200 0 400
SCALE IN FEET

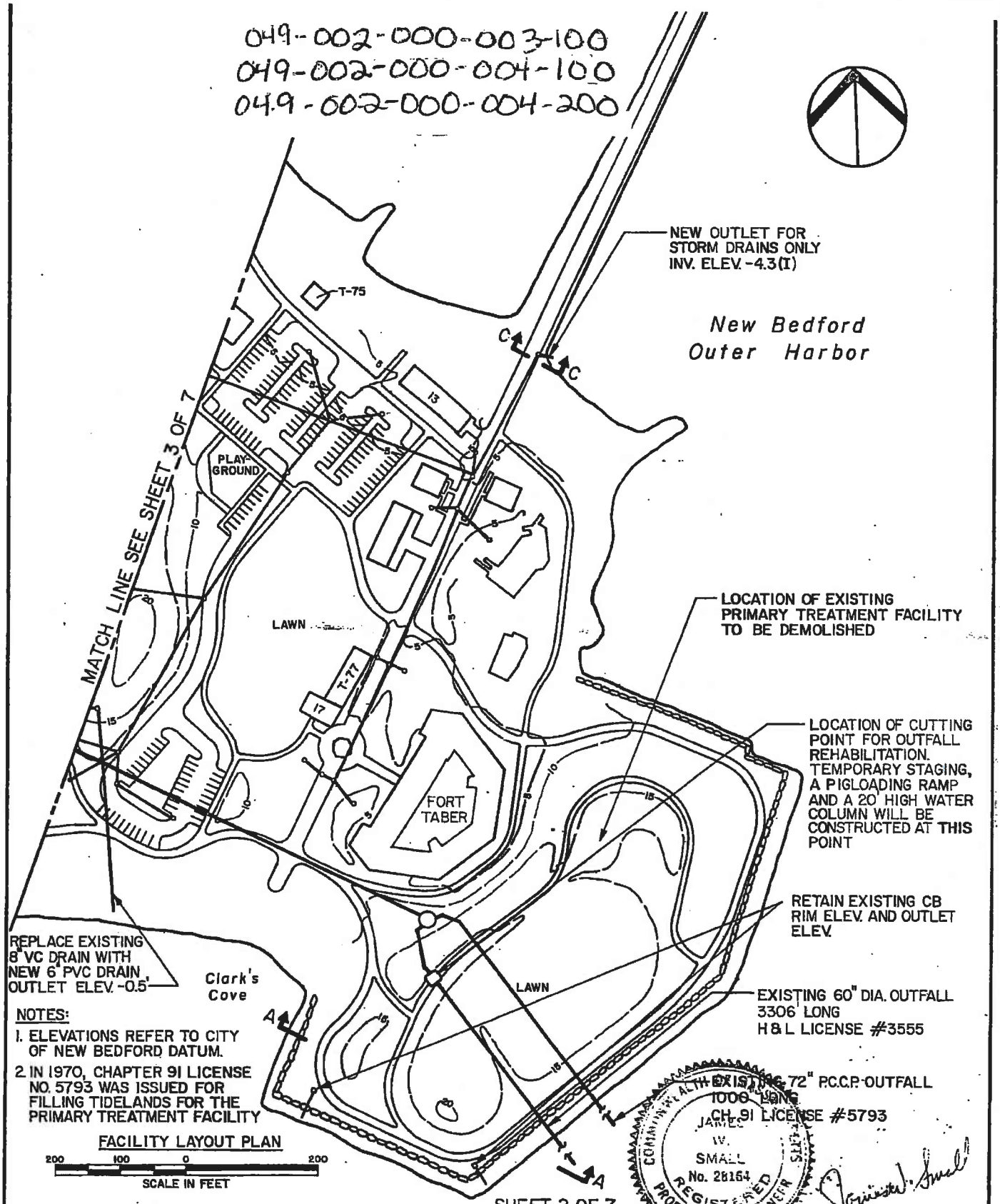
COMMONWEALTH OF MASSACHUSETTS
SMALL
No. 28164
REGISTERED PROFESSIONAL ENGINEER

SHEET 1 OF 7

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

LICENSE PLAN NO. 2895
Approved by Department of Environmental Protection of Massachusetts
COMMISSIONER
DIRECTOR
SECTION CHIEF
MAR 06 1992
DATE

049-002-000-003-100
049-002-000-004-100
049-002-000-004-200




NOTES:

1. ELEVATIONS REFER TO CITY OF NEW BEDFORD DATUM.
2. IN 1970, CHAPTER 91 LICENSE NO. 5793 WAS ISSUED FOR FILLING TIDELANDS FOR THE PRIMARY TREATMENT FACILITY

FACILITY LAYOUT PLAN

200 100 0 200

SCALE IN FEET

JAMES W. SMALL No. 28164 REGISTERED PROFESSIONAL ENGINEER

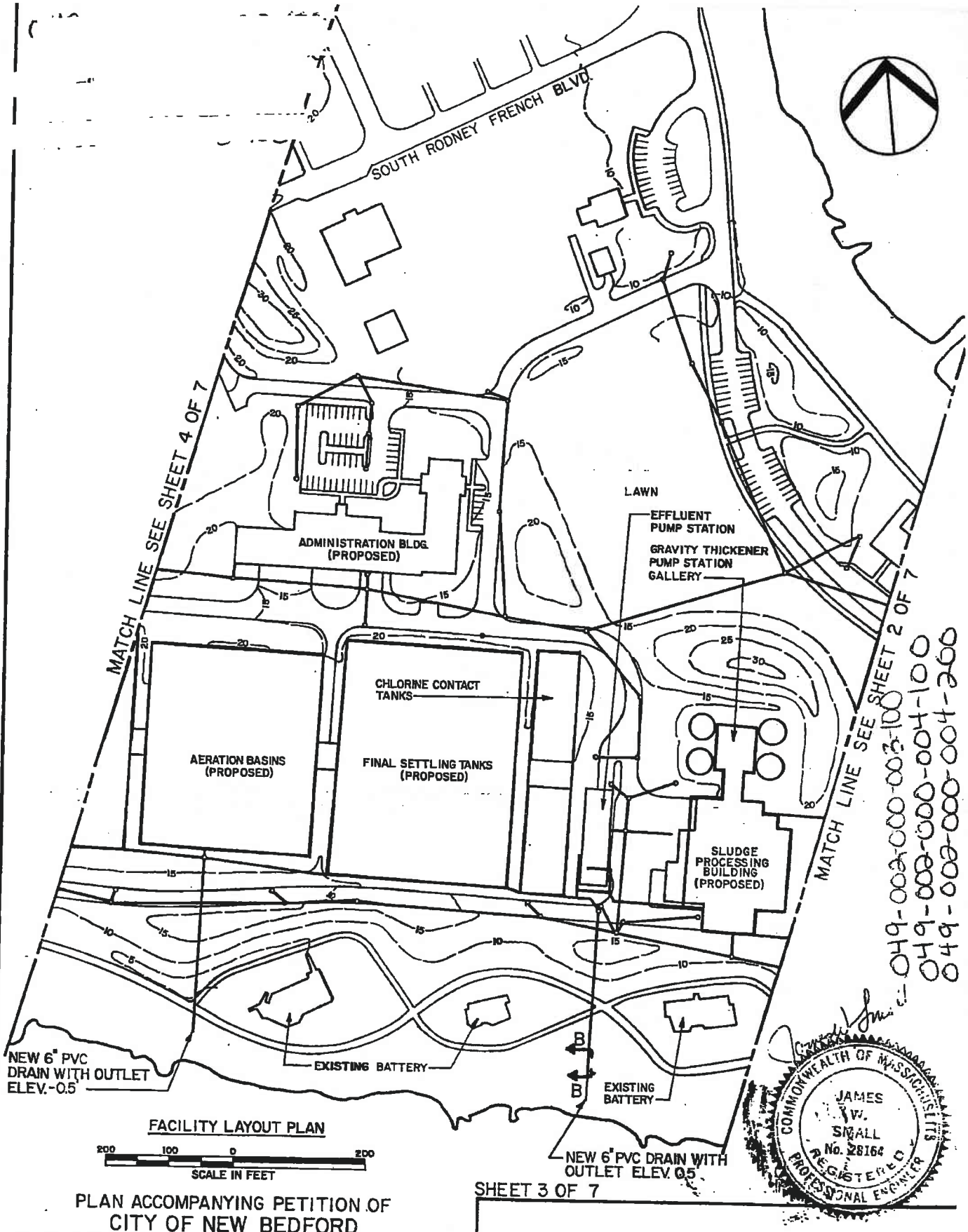
SHEET 2 OF 7

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

LICENSE PLAN NO. 2895

Approved by Department of Environmental Protection

Date: MAR 06 1992




FACILITY LAYOUT PLAN

200 100 0 200

SCALE IN FEET

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

COMMONWEALTH OF MASSACHUSETTS
JAMES W. SMALL
No. 28164
REGISTERED PROFESSIONAL ENGINEER

LICENSE PLAN NO. 2895

Approved by Department of Environmental Protection

Date: MAR 06 1992

OH-649-000-000-004-100
OH-649-000-000-003-100
OH-649-000-000-004-300

LICENSE PLAN NO. 2895

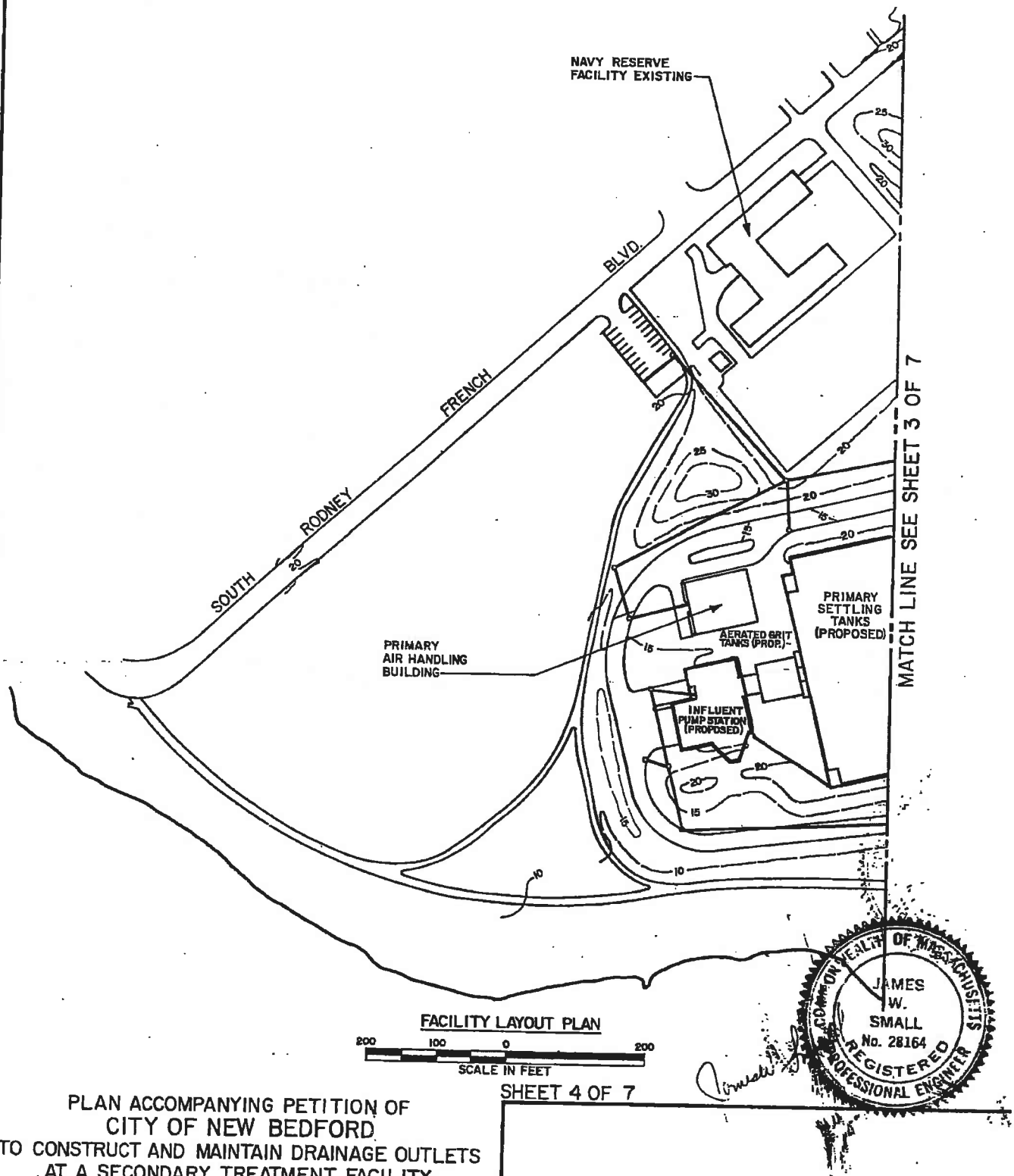
Approved by Department of Environmental Protection

Date: MAR 06 1992

049-002-000-003-100

049-002-000-004-100

049-002-000-004-200




FACILITY LAYOUT PLAN

200 100 0 200

SCALE IN FEET

SHEET 4 OF 7

PLAN ACCOMPANYING PETITION OF

CITY OF NEW BEDFORD

TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS

JUNE 1991

# SITE ABUTTERS
# CITY OF NEW BEDFORD
# WASTEWATER TREATMENT FACILITY
# AND TABER PARK

049-002-000-003-100
049-002-000-004-100
049-002-000-004-200

| | |
|---|---|
| 1, 2 | CITY OF NEW BEDFORD |
| 3 | DENNIS K. AND FAYE E. SILVA, 979 SOUTH RODNEY FRENCH BLVD. |
| 4 | MARY R. FRAGA, 963 SOUTH RODNEY FRENCH BLVD. |
| 5 | JOAQUIM R. AND SANDRA HARRISON, 951 SOUTH RODNEY FRENCH BLVD. |
| 6 | MANUEL V. AND BELLA GOMES FERREIRA, 937 SOUTH RODNEY FRENCH BLVD. |
| 7 | ARTHUR AND DOROTHY ST. PIERRE, 861 SOUTH RODNEY FRENCH BLVD. |
| 8 | ESTELLA M. BINNING, 875 SOUTH RODNEY FRENCH BLVD. |
| 9 | MARGUERITE BRUNELLE, 889 SOUTH RODNEY FRENCH BLVD. |
| 10 | MAURICE J. AND JEAN METCALF, 903 SOUTH RODNEY FRENCH BLVD. |
| 11 | THOMAS A. AND NATALIE HOLDEN, 917 SOUTH RODNEY FRENCH BLVD. |
| 12 | EDMOND D. PIMENTAL, 30 BROCK AVENUE |
| 13 | J. GERARD AND LILLIAN B. BREEN, 15 BROCK AVENUE |
| 14 | FERNANDO M. AND FATIMA C. PEIXOTO, 4 POINT STREET |
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| 18-23 | FREDERICK S. AND DORIS T. SZELA, 171 BAYVIEW AVENUE |
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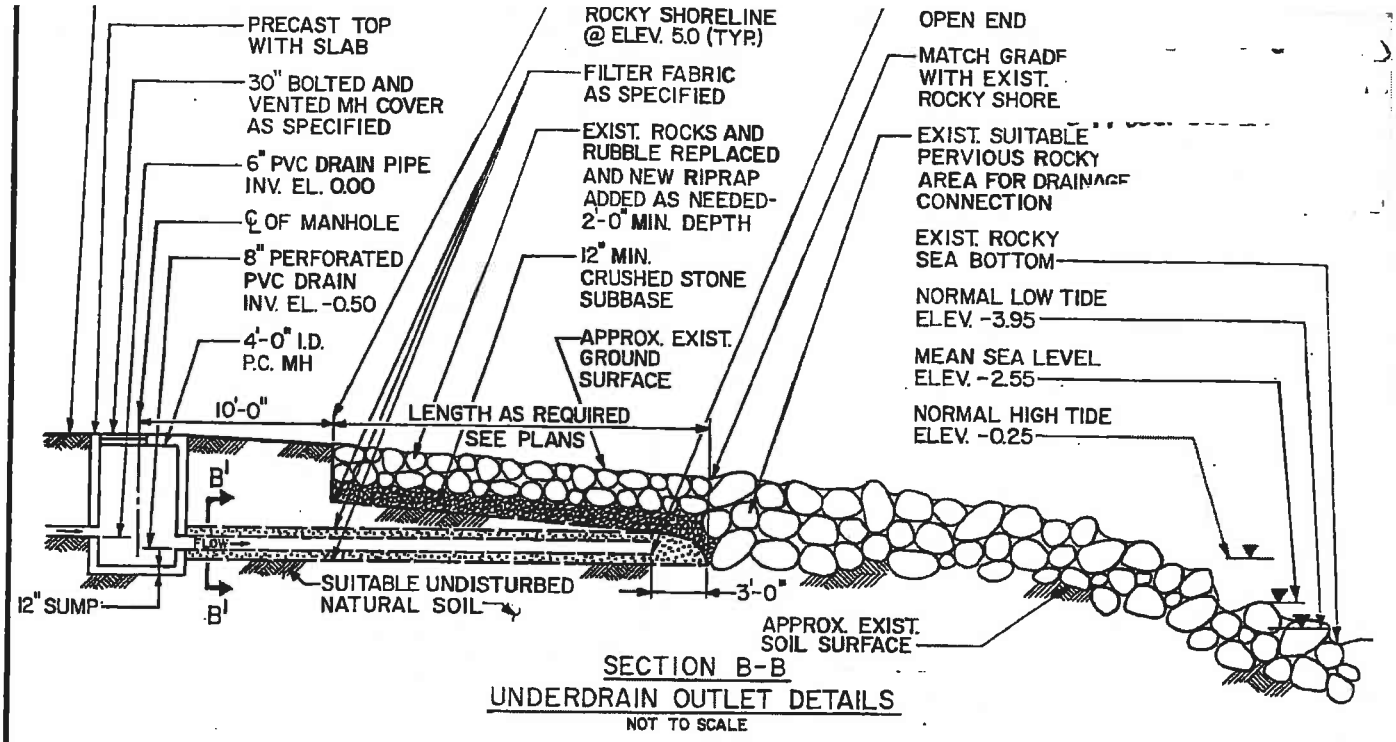
| 29 | CITY OF NEW BEDFORD |

COMMONWEALTH OF MASSACHUSETTS
JAMES W. SMALL
No. 28164
REGISTERED PROFESSIONAL ENGINEER

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

SHEET 5 OF 7

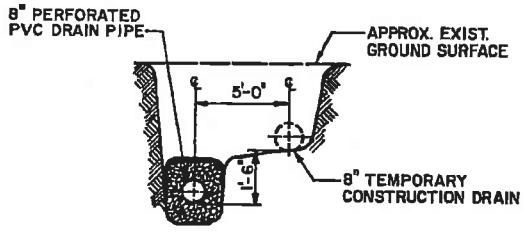
LICENSE PLAN NO. 2895
Approved by Department of Environmental Protection
Date: MAR 06 1992




SECTION B-B

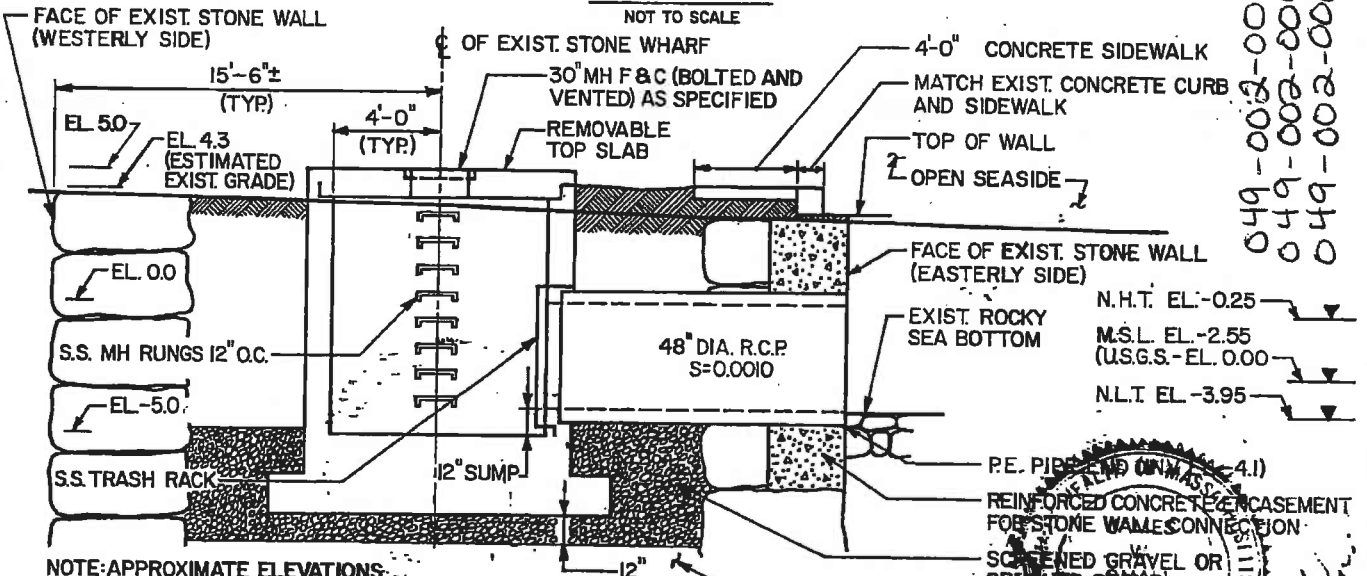
UNDERDRAIN OUTLET DETAILS

NOT TO SCALE




SECTION B'-B'

NOT TO SCALE




NOTE: APPROXIMATE ELEVATIONS FROM CITY DATUM

SECTION A-A

STORM DRAIN OUTLET DETAILS

NOT TO SCALE

SHEET 6 OF 7

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

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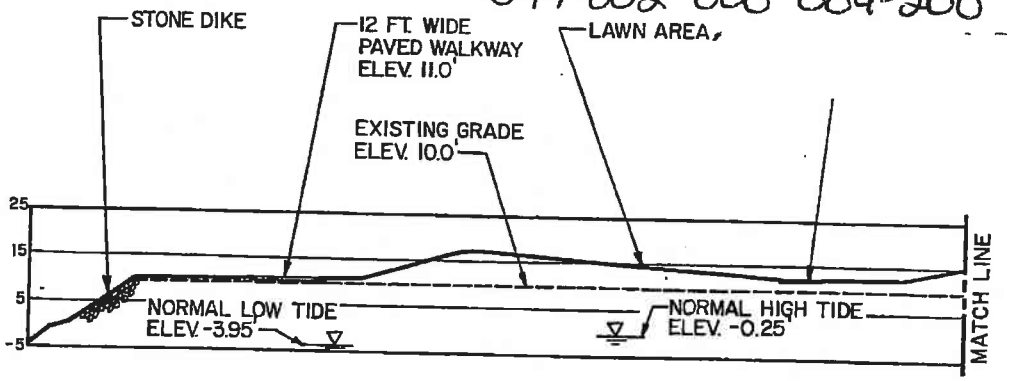
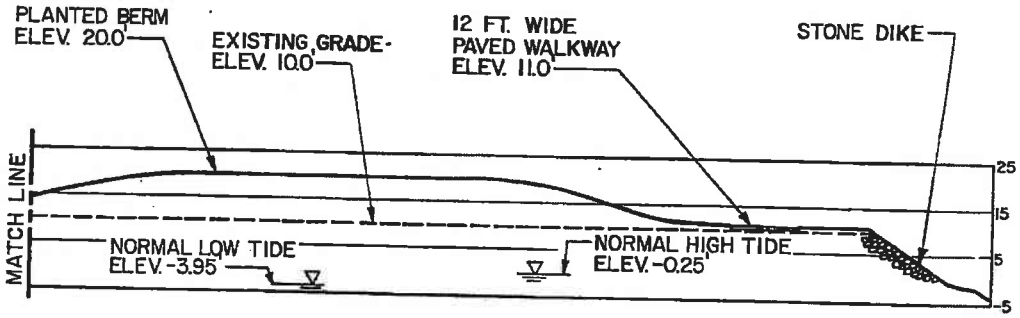
Date: MAR 06 1992

049-002-000-003
049-002-000-001-100
049-002-000-004
049-002-000-002

REGISTERED PROFESSIONAL ENGINEER No. 28164

049-002-000-003.-100
049-002-000-004-100
049-002-000-004-200




SECTION C-C
TABER PARK CROSS SECTION

40 20 0 40
SCALE IN FEET

NOTE: APPROXIMATELY 170,000 CY OF MATERIAL EXCAVATED FOR THE CONSTRUCTION OF THE SECONDARY WASTEWATER TREATMENT FACILITY WILL BE USED TO REGRADE TABER PARK.

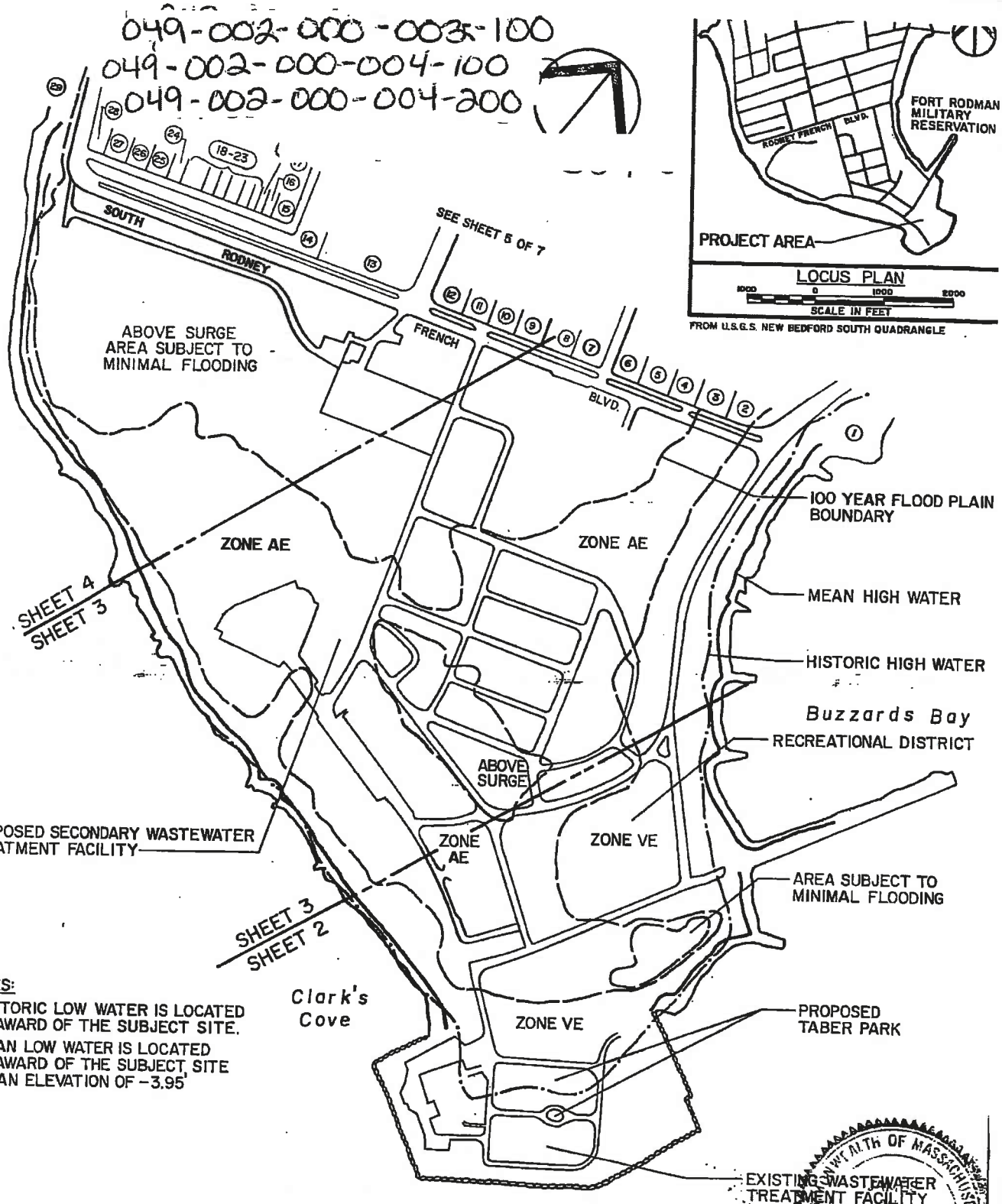
COMMONWEALTH OF MASSACHUSETTS
JAMES W. SMALL
No. 28134
REGISTERED PROFESSIONAL ENGINEER

SHEET 7 OF 7

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

LICENSE PLAN NO. 2895
Approved by Department of Environmental Protection
MAR 06 1992

049-002-000-003-100
049-002-000-004-100
049-002-000-004-200







NOTES:

1. HISTORIC LOW WATER IS LOCATED SEAWARD OF THE SUBJECT SITE.
2. MEAN LOW WATER IS LOCATED SEAWARD OF THE SUBJECT SITE AT AN ELEVATION OF −3.95'

LOCATION PLAN

400 200 0 400

SCALE IN FEET

COMMONWEALTH OF MASSACHUSETTS
No. 28164
REGISTERED PROFESSIONAL ENGINEER

SHEET 1 OF 7

LICENSE PLAN NO. 2895

Approved by Department of Environmental Protection of Massachusetts

COMMISSIONER

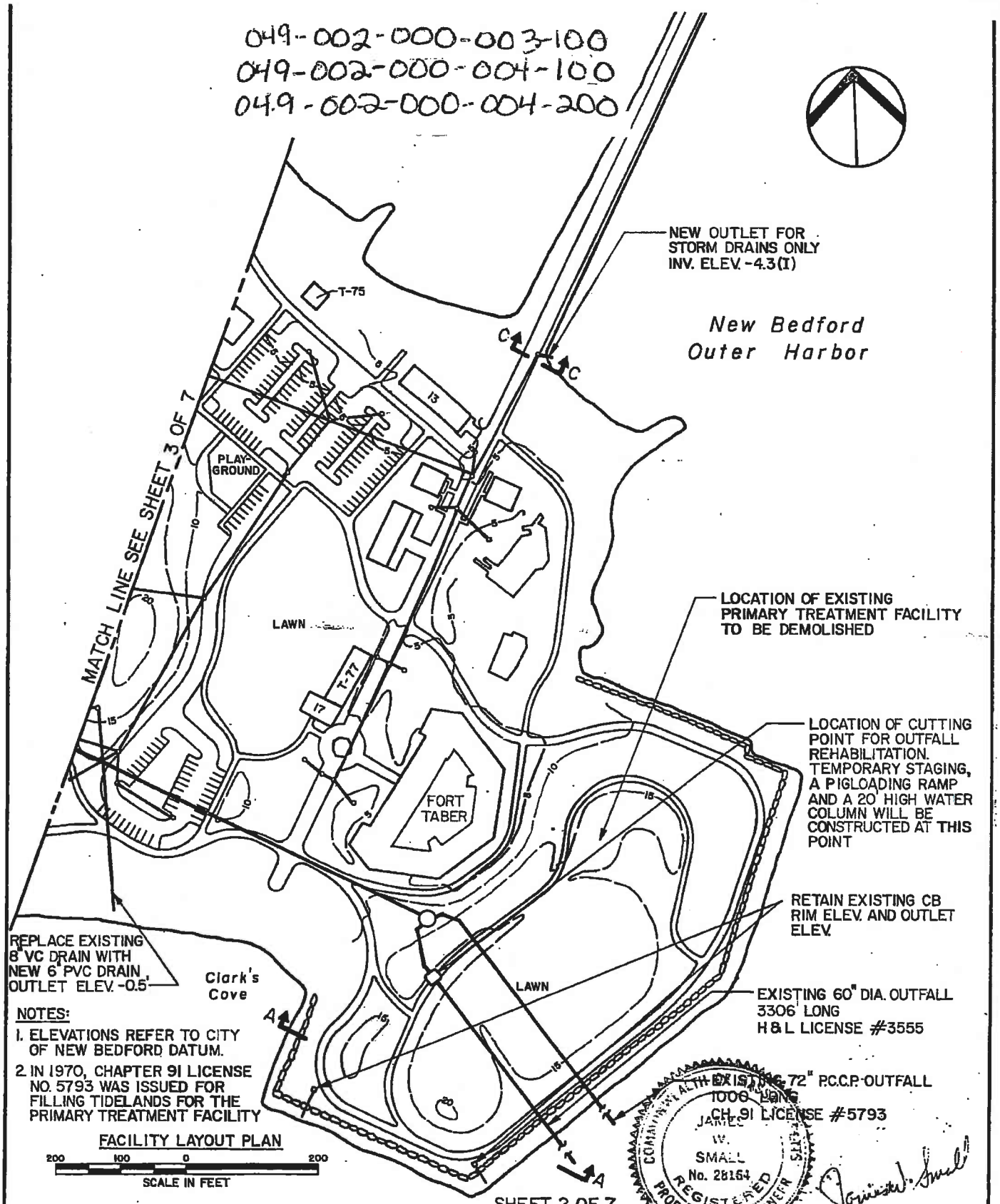
REGION CHIEF

MAR 06 1992

DATE

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

049-002-000-003-100
049-002-000-004-100
049-002-000-004-200




NOTES:

1. ELEVATIONS REFER TO CITY OF NEW BEDFORD DATUM.
2. IN 1970, CHAPTER 91 LICENSE NO. 5793 WAS ISSUED FOR FILLING TIDELANDS FOR THE PRIMARY TREATMENT FACILITY

FACILITY LAYOUT PLAN

200 100 0 200

SCALE IN FEET

SHEET 2 OF 7

COMMONWEALTH OF MASSACHUSETTS
JAMES W. SMALL No. 28164 REGISTERED PROFESSIONAL ENGINEER

PLAN ACCOMPANYING PETITION OF
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JUNE 1991

LICENSE PLAN NO. 2895

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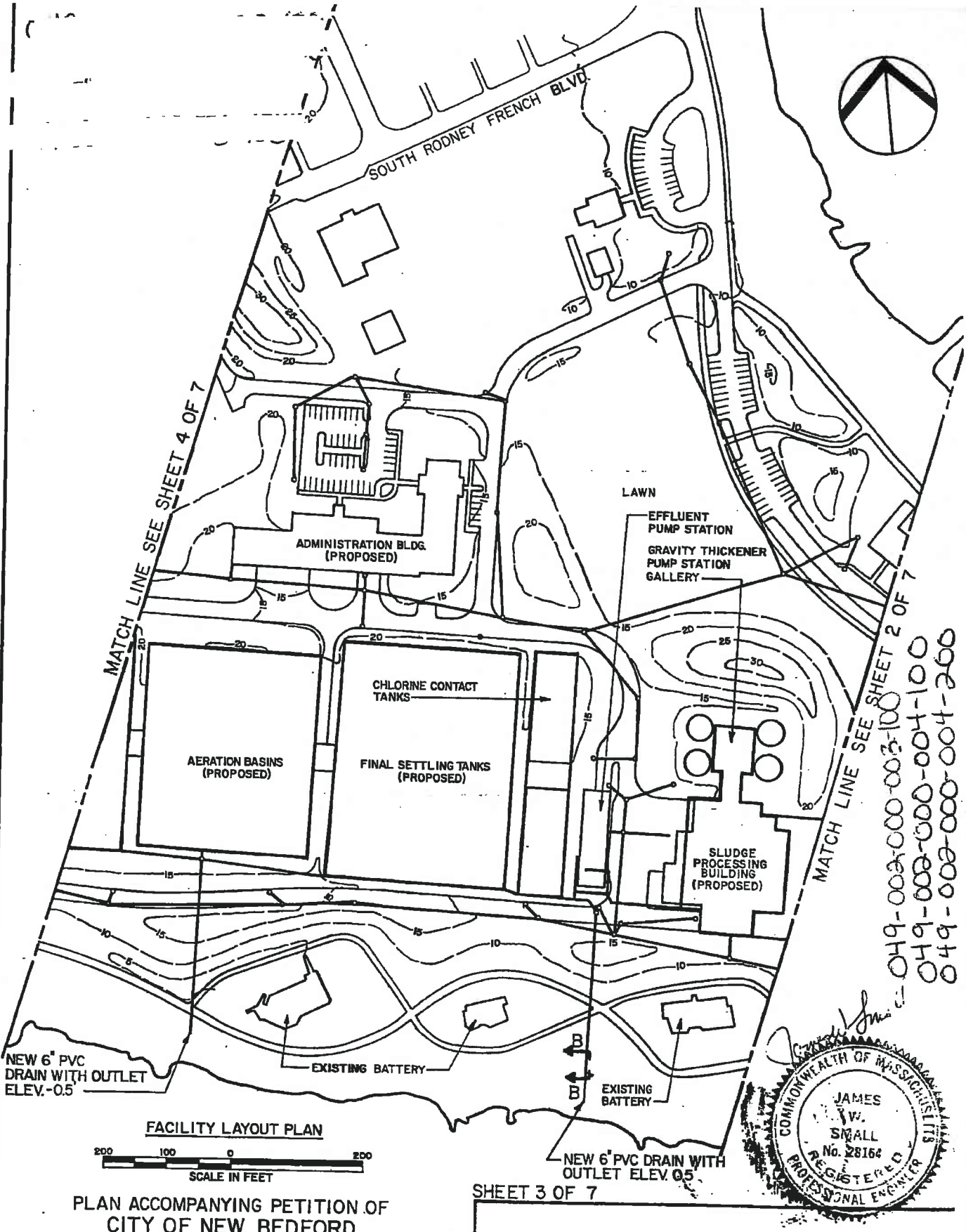
Date: MAR 06 1992




FACILITY LAYOUT PLAN

200 100 0 200

SCALE IN FEET

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
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JUNE 1991

COMMONWEALTH OF MASSACHUSETTS
JAMES W. SMALL
No. 28164
REGISTERED PROFESSIONAL ENGINEER

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Date: MAR 06 1992

049-003-000-003-100
049-004-000-008-000
049-001-000-004-000
049-002-000-001-000

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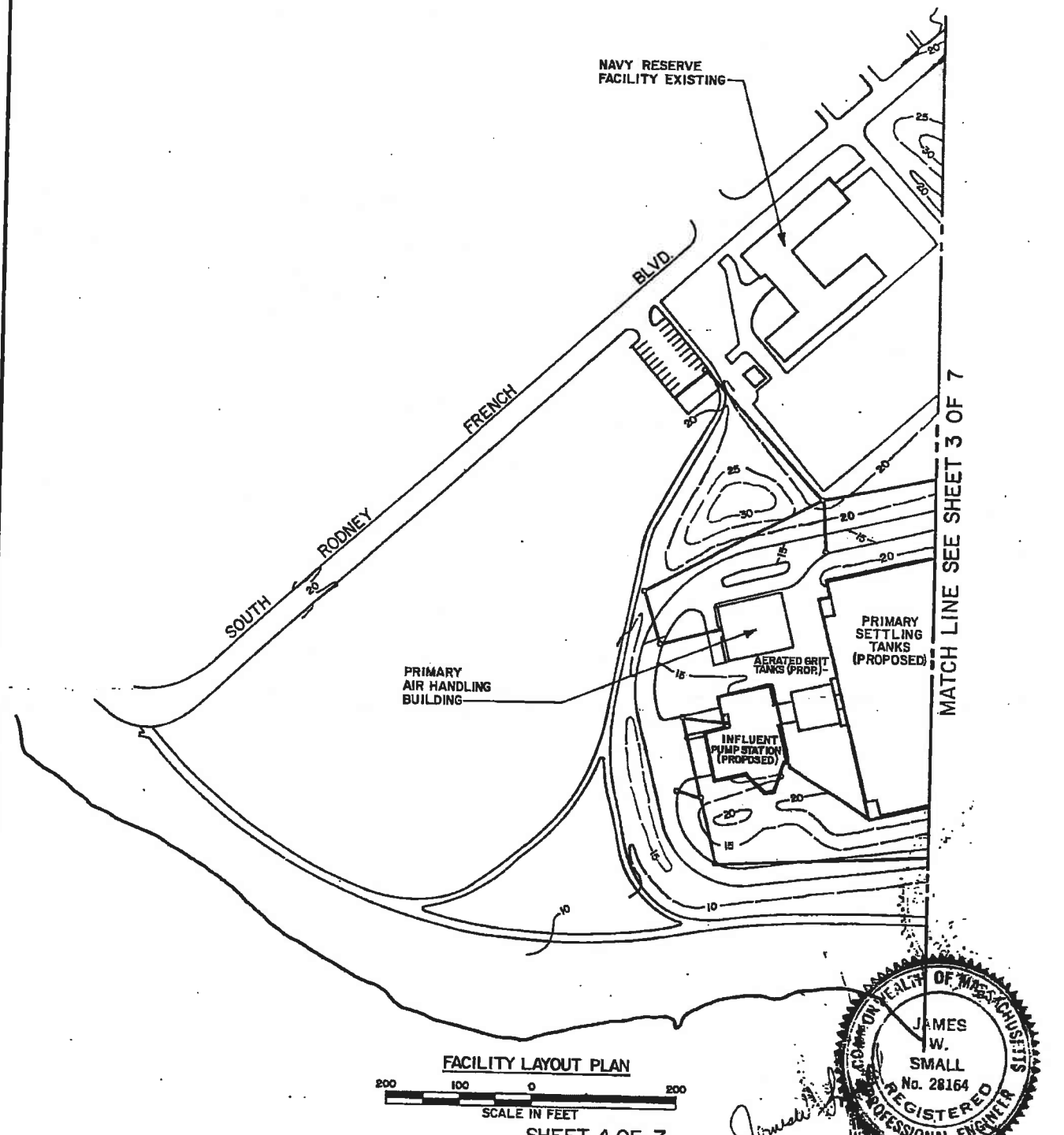
049-002-000-003-100

049-002-000-004-100

049-002-000-004-200




FACILITY LAYOUT PLAN

200 100 0 200

SCALE IN FEET

SHEET 4 OF 7

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
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JUNE 1991

# SITE ABUTTERS
# CITY OF NEW BEDFORD
# WASTEWATER TREATMENT FACILITY
# AND TABER PARK

049-002-000-003-100
049-002-000-004-100
049-002-000-004-200

| | |
|---|---|
| 1, 2 | CITY OF NEW BEDFORD |
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COMMONWEALTH OF MASSACHUSETTS
JAMES W. SMALL
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REGISTERED PROFESSIONAL ENGINEER

PLAN ACCOMPANYING PETITION OF
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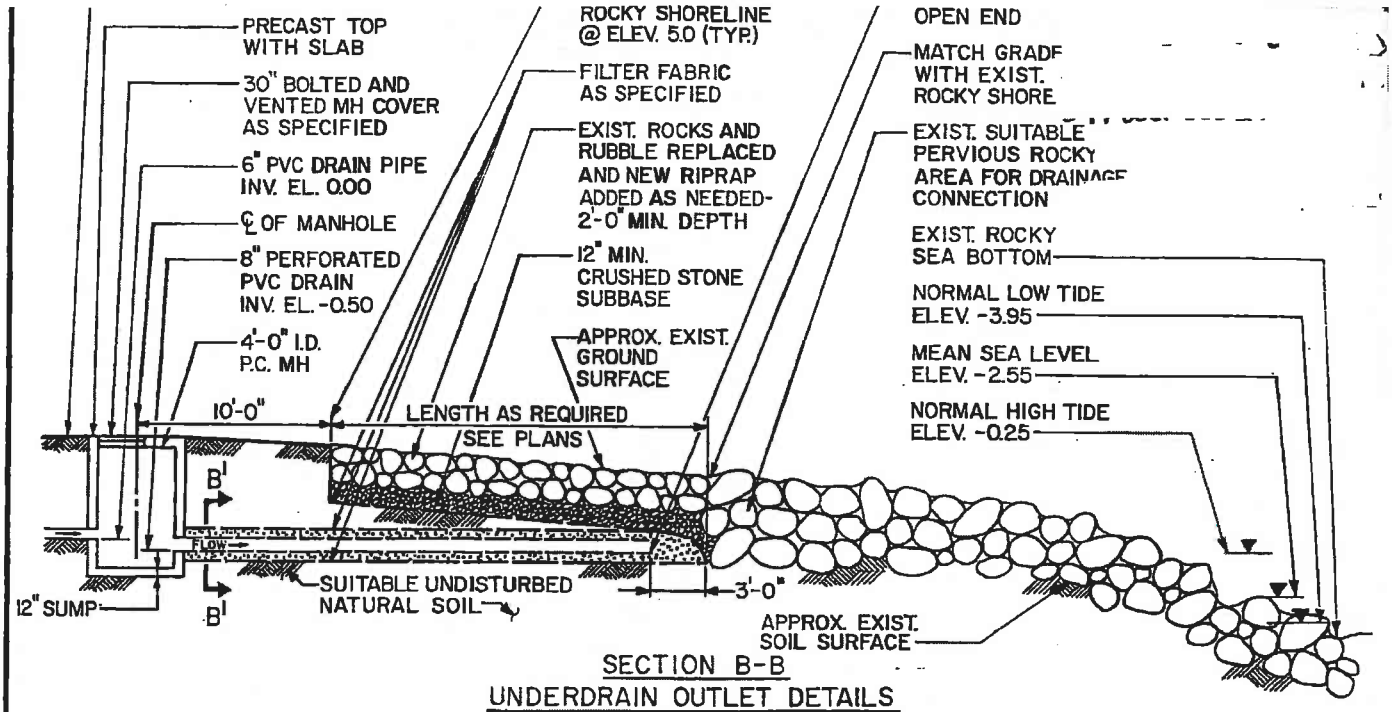
JUNE 1991

SHEET 5 OF 7

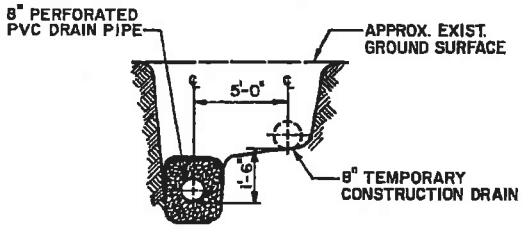
LICENSE PLAN NO. 2895
Approved by Department of Environmental Protection
Date: MAR 06 1992




SECTION B-B

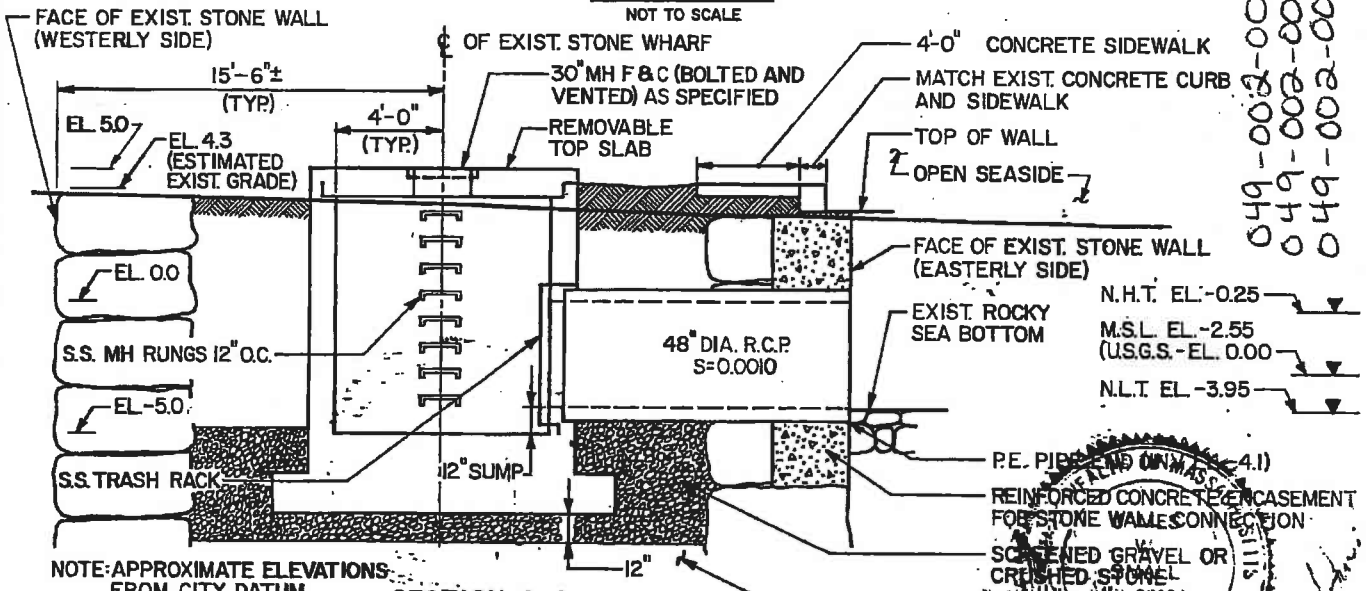
UNDERDRAIN OUTLET DETAILS

NOT TO SCALE




SECTION B'-B'

NOT TO SCALE




NOTE: APPROXIMATE ELEVATIONS FROM CITY DATUM

SECTION A-A

STORM DRAIN OUTLET DETAILS

NOT TO SCALE

049-002-000-003-00
049-002-000-004-100
049-002-000-004-200

SHEET 6 OF 7

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

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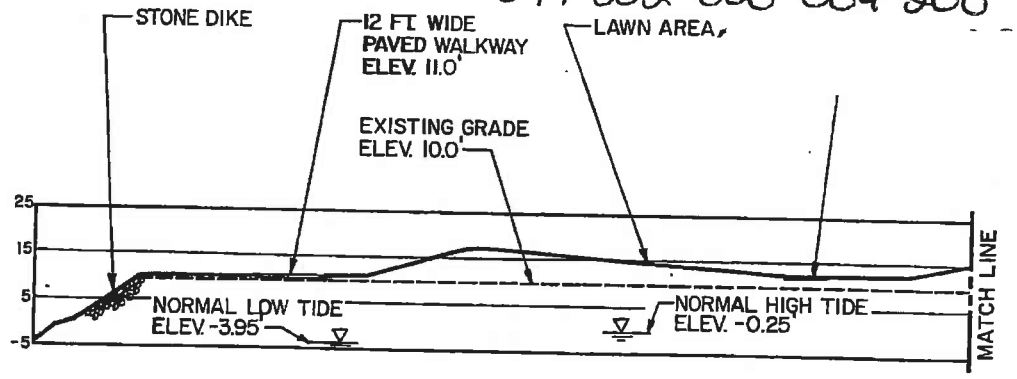
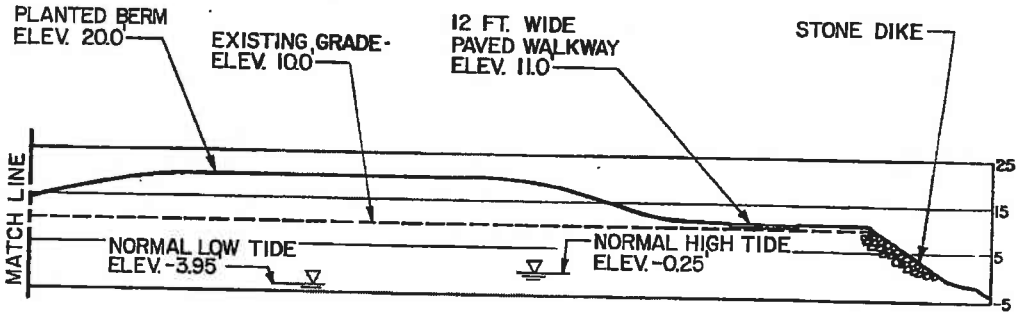
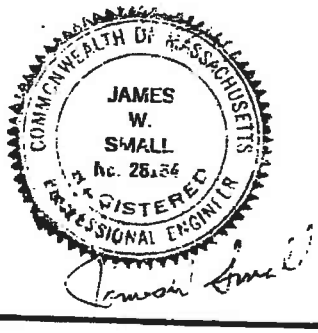
049-002-000-004-200




SECTION C-C
TABER PARK CROSS SECTION


NOTE: APPROXIMATELY 170,000 CY OF MATERIAL EXCAVATED FOR THE CONSTRUCTION OF THE SECONDARY WASTEWATER TREATMENT FACILITY WILL BE USED TO REGRADE TABER PARK.




SHEET 7 OF 7

PLAN ACCOMPANYING PETITION OF
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JUNE 1991

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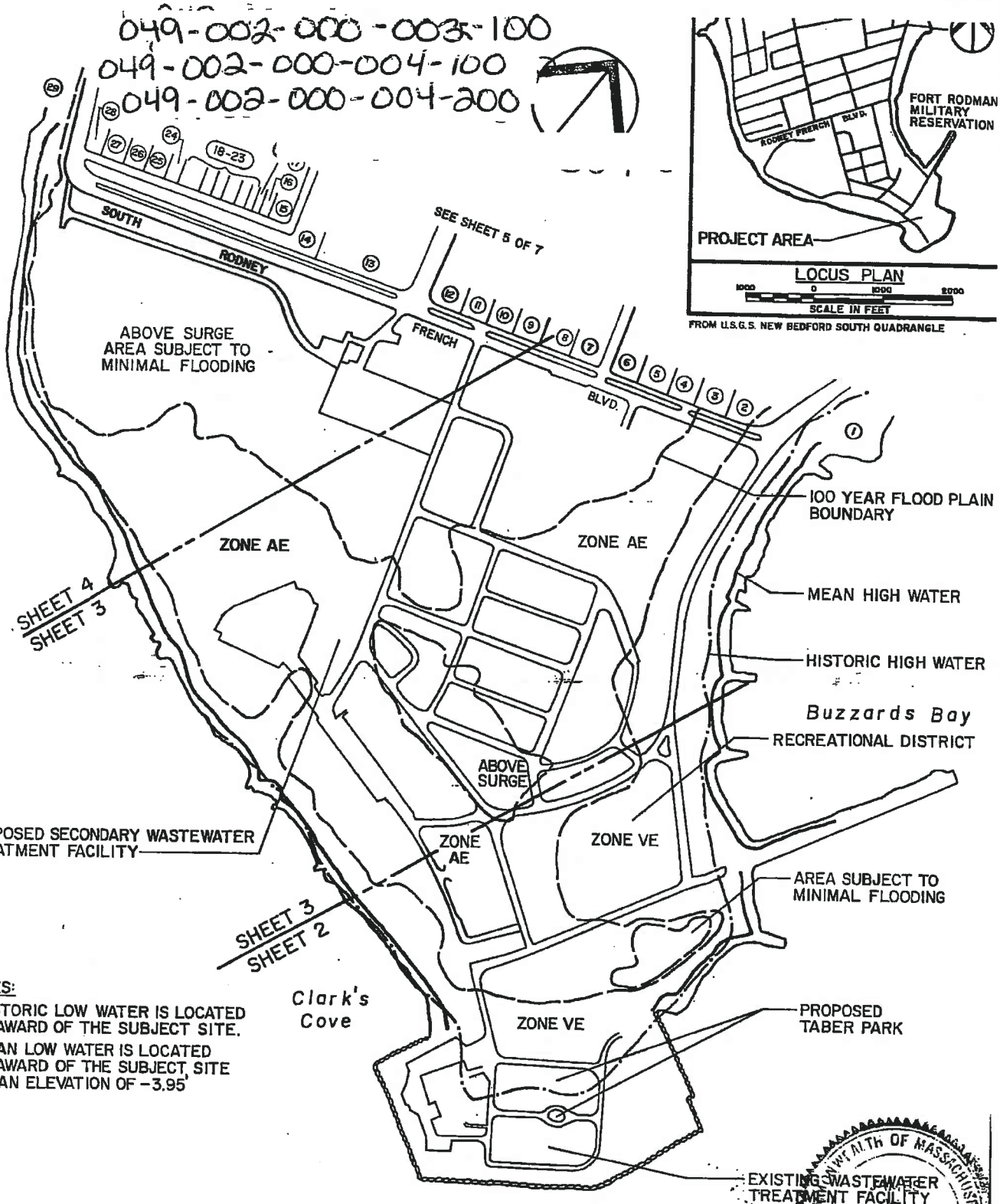



NOTES:

1. HISTORIC LOW WATER IS LOCATED SEAWARD OF THE SUBJECT SITE.
2. MEAN LOW WATER IS LOCATED SEAWARD OF THE SUBJECT SITE AT AN ELEVATION OF -3.95'

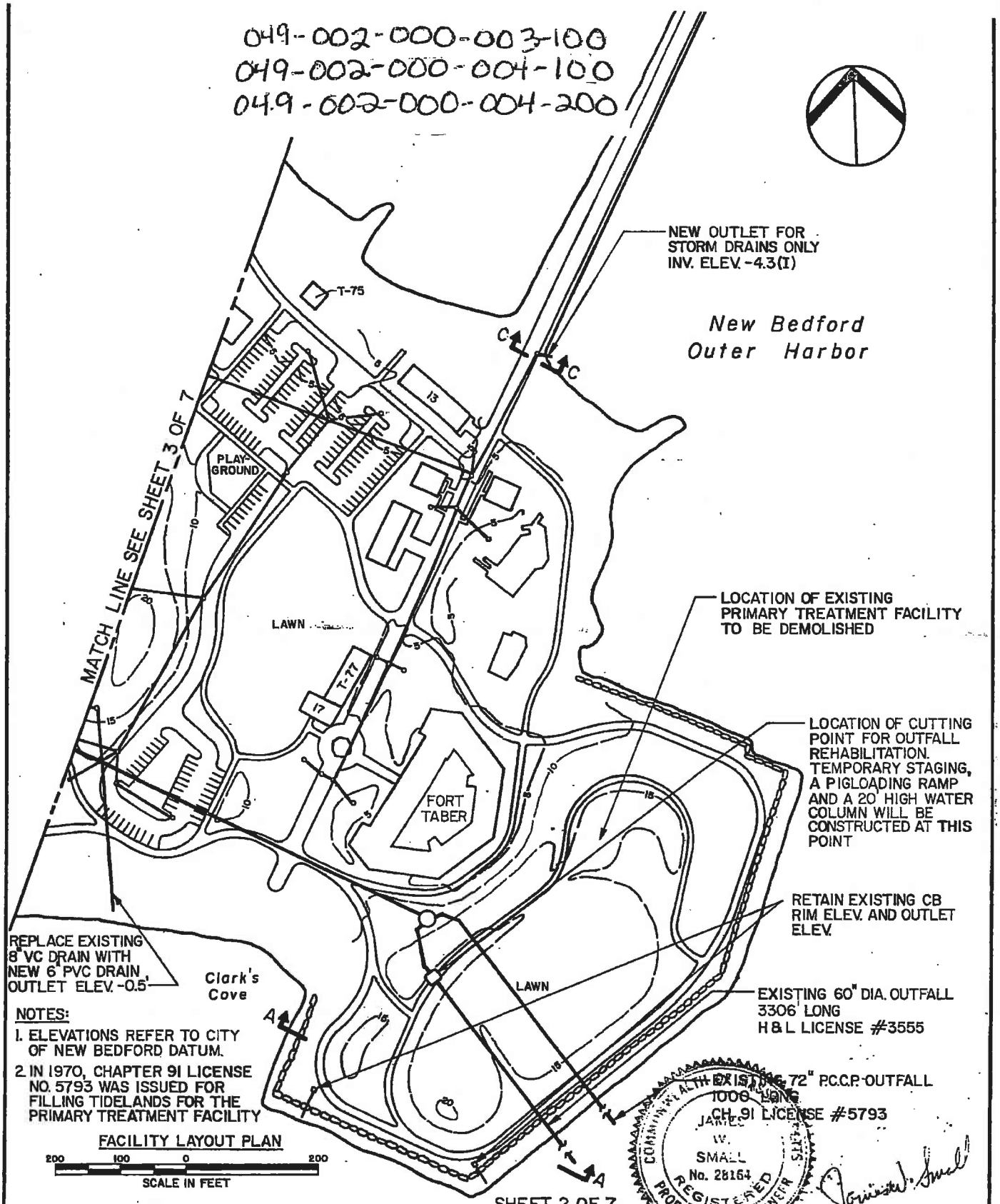
COMMONWEALTH OF MASSACHUSETTS
SMALL
No. 28164
REGISTERED PROFESSIONAL ENGINEER

SHEET 1 OF 7

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

LICENSE PLAN NO. 2895
Approved by Department of Environmental Protection
of Massachusetts
COMMISSIONER
DIRECTOR
DIVISION CHIEF
MAR 06 1992
DATE

049-002-000-003-100
049-002-000-004-100
049.9-002-000-004-200




NOTES:

1. ELEVATIONS REFER TO CITY OF NEW BEDFORD DATUM.
2. IN 1970, CHAPTER 91 LICENSE NO. 5793 WAS ISSUED FOR FILLING TIDELANDS FOR THE PRIMARY TREATMENT FACILITY

FACILITY LAYOUT PLAN

200 100 0 200

SCALE IN FEET

SHEET 2 OF 7

JAMES W. SMALL No. 28164 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
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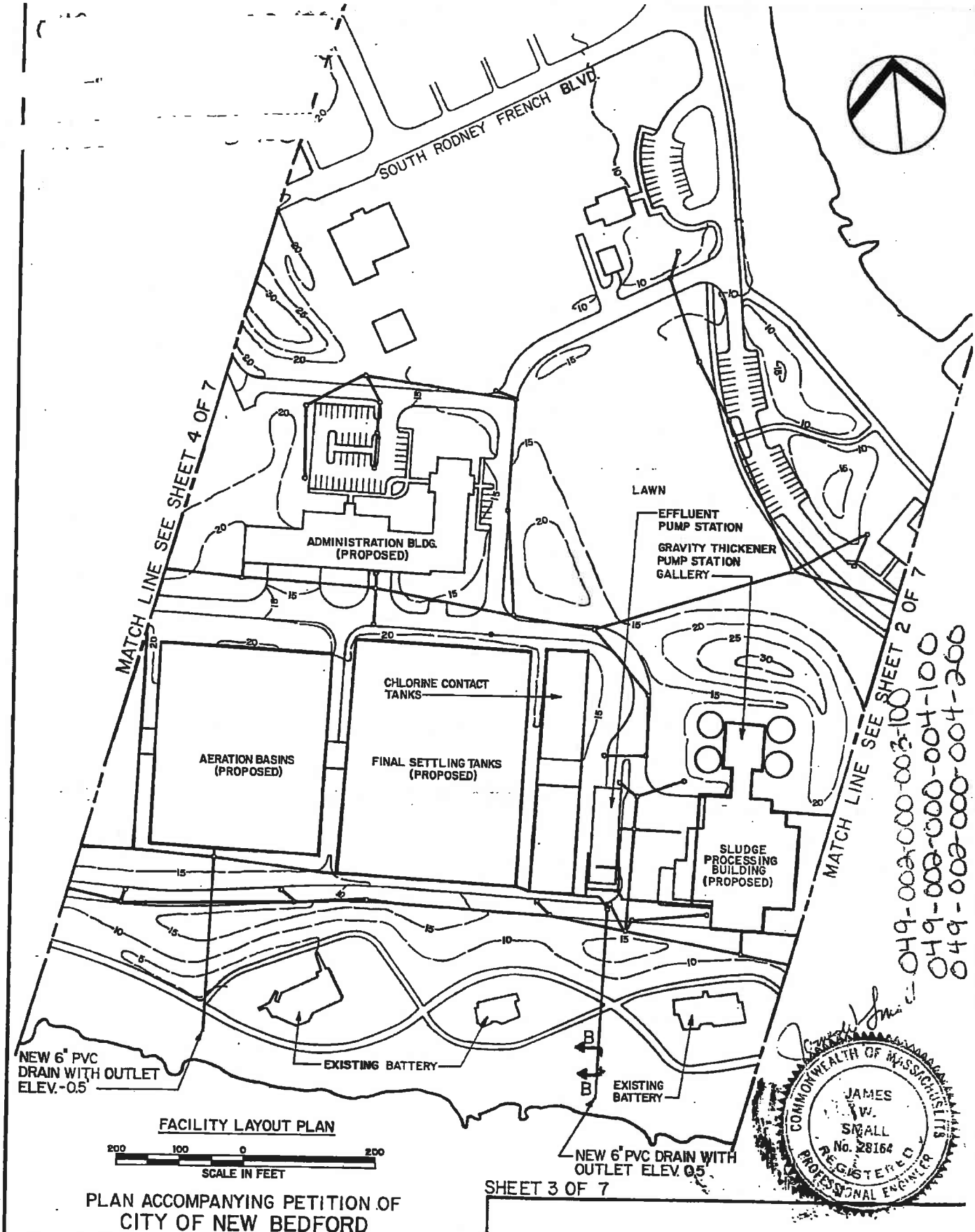
Date: MAR 06 1992




FACILITY LAYOUT PLAN

200 100 0 200

SCALE IN FEET

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

COMMONWEALTH OF MASSACHUSETTS
JAMES W. SMALL
No. 28164
REGISTERED PROFESSIONAL ENGINEER

LICENSE PLAN NO. 2895

Approved by Department of Environmental Protection

Date: MAR 06 1992

049-000-000-003-100
049-000-000-001-100
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049-002-000-004-100

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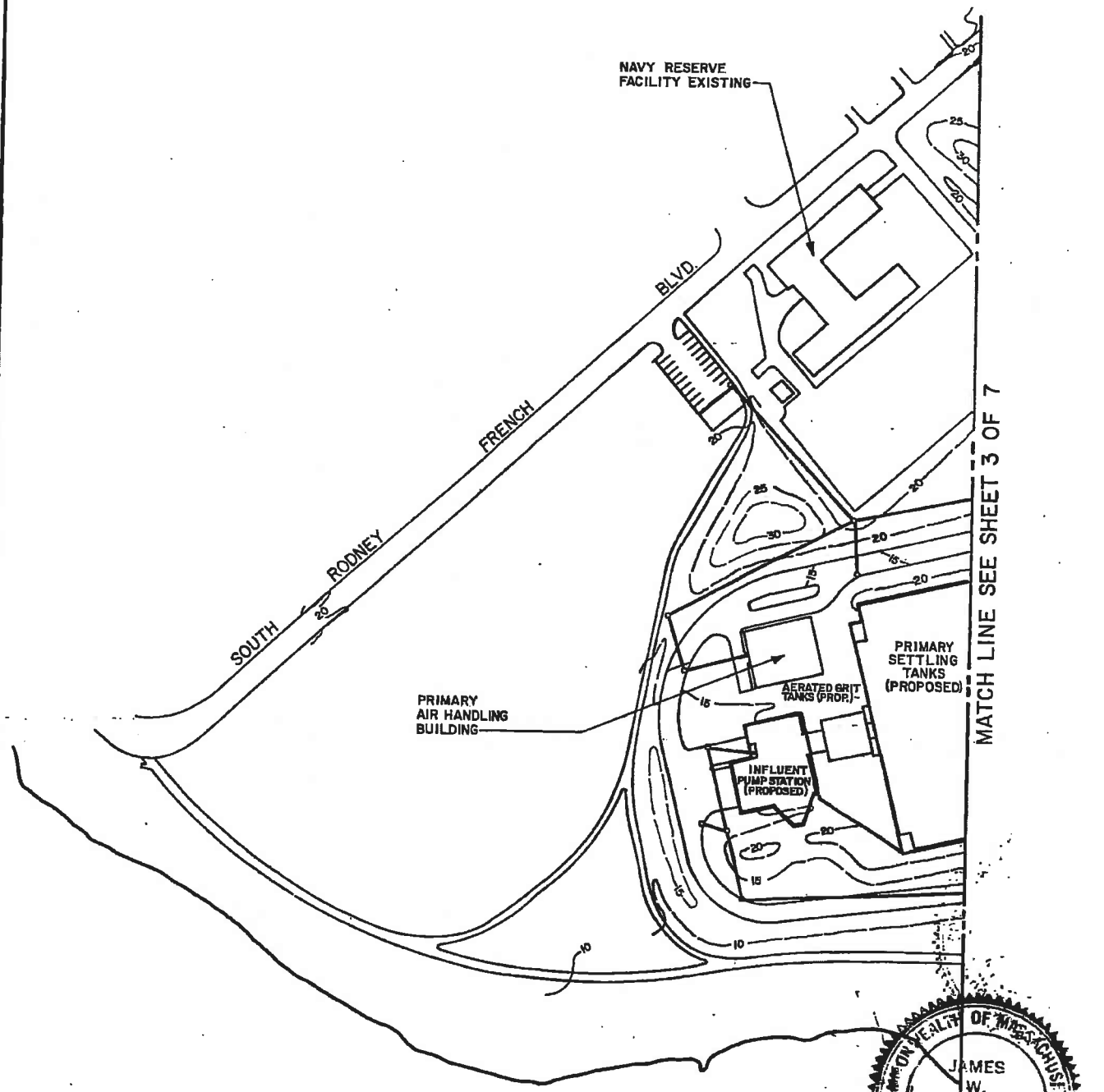


FACILITY LAYOUT PLAN

200 100 0 200

SCALE IN FEET

JAMES W. SMALL No. 28164 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

SHEET 4 OF 7

PLAN ACCOMPANYING PETITION OF

CITY OF NEW BEDFORD

TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS

JUNE 1991

# SITE ABUTTERS
# CITY OF NEW BEDFORD
# WASTEWATER TREATMENT FACILITY
# AND TABER PARK

049-002-000-003-100
049-002-000-004-100
049-002-000-004-200

| | |
|---|---|
| 1, 2 | CITY OF NEW BEDFORD |
| 3 | DENNIS K. AND FAYE E. SILVA, 979 SOUTH RODNEY FRENCH BLVD. |
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COMMONWEALTH OF MASSACHUSETTS
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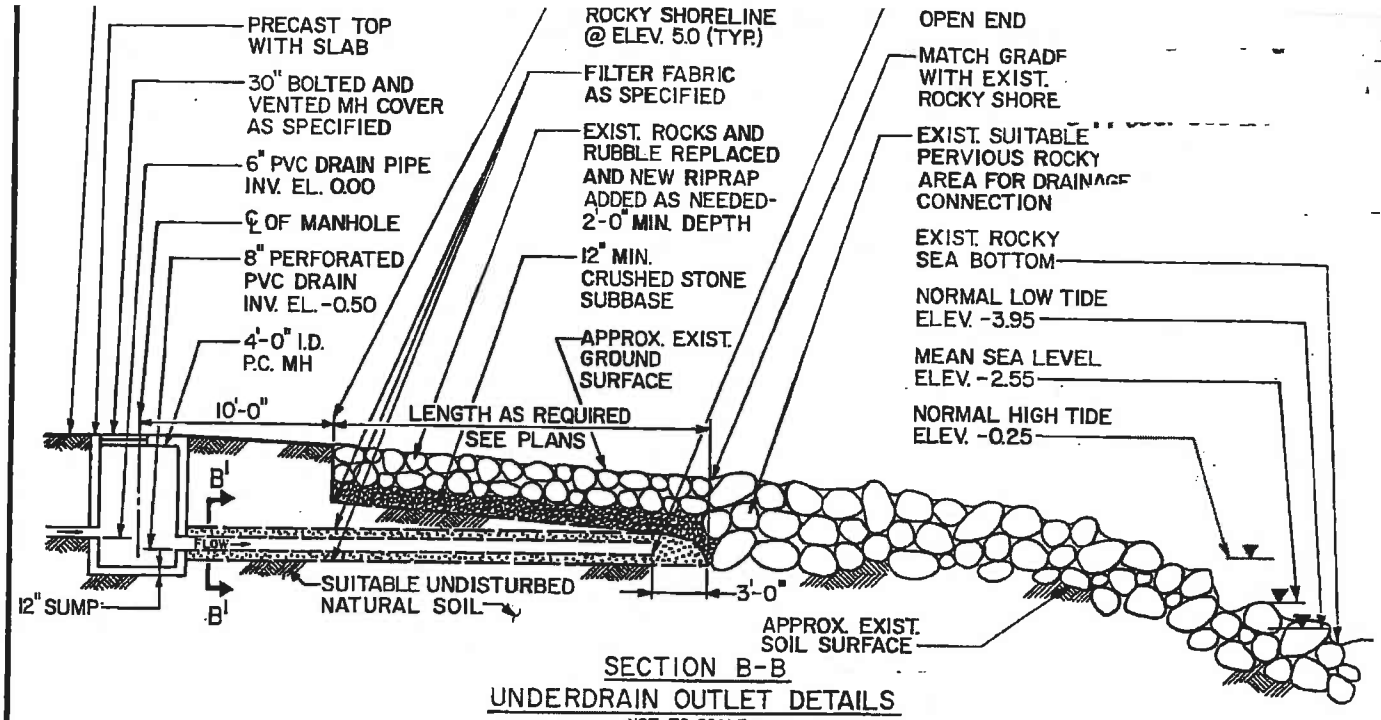
PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

SHEET 5 OF 7

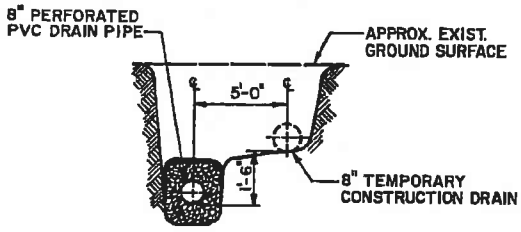
LICENSE PLAN NO. 2895
Approved by Department of Environmental Protection
Date: MAR 06 1992




SECTION B-B

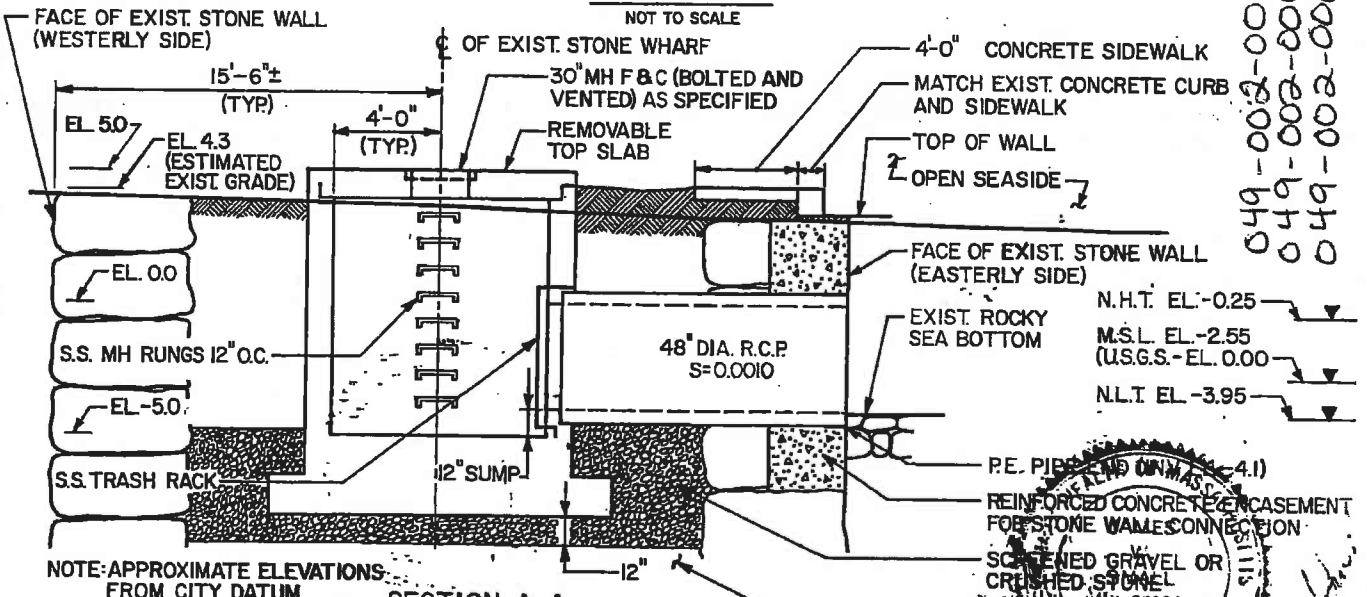
UNDERDRAIN OUTLET DETAILS

NOT TO SCALE




SECTION B'-B'

NOT TO SCALE




NOTE: APPROXIMATE ELEVATIONS FROM CITY DATUM

SECTION A-A

STORM DRAIN OUTLET DETAILS

NOT TO SCALE

SHEET 6 OF 7

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

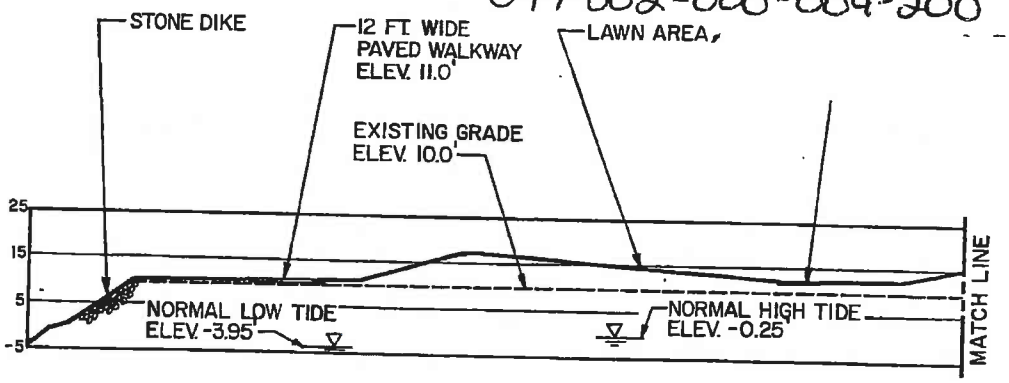
LICENSE PLAN NO. 2895

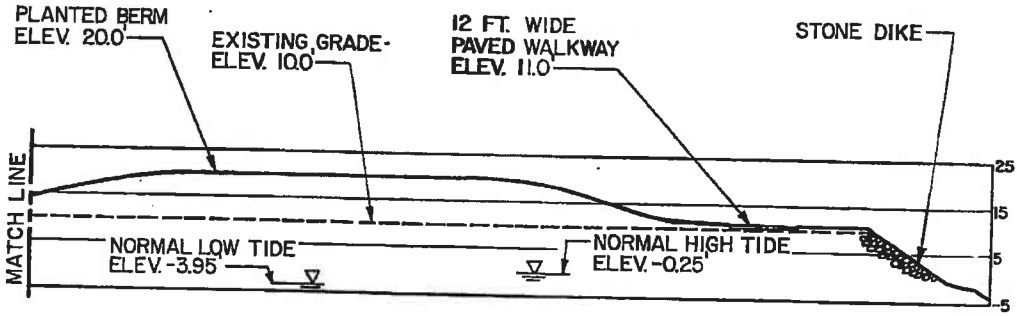
Approved by Department of Environmental Protection

Date: MAR 06 1992

049-002-000-003-00
049-002-000-004-100
049-002-000-004-200

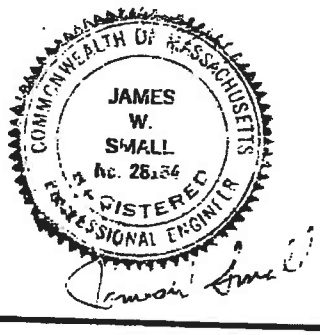
049-002-000-003-100
049-002-000-004-100
049-002-000-004-200




SECTION C-C
TABER PARK CROSS SECTION

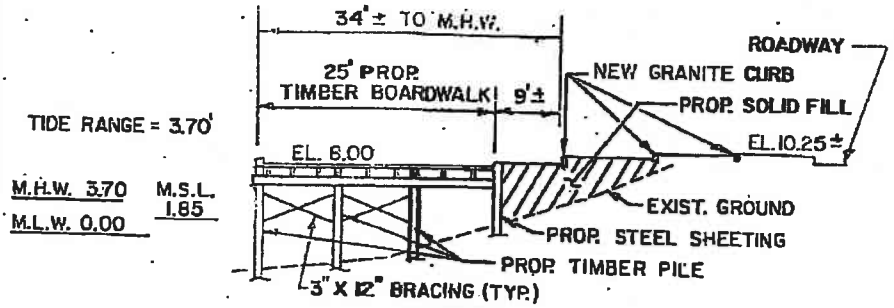

NOTE: APPROXIMATELY 170,000 CY OF MATERIAL EXCAVATED FOR THE CONSTRUCTION OF THE SECONDARY WASTEWATER TREATMENT FACILITY WILL BE USED TO REGRADE TABER PARK.




SHEET 7 OF 7

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN DRAINAGE OUTLETS AT A SECONDARY TREATMENT FACILITY, REHABILITATE AN EXISTING EFFLUENT OUTFALL, DEMOLISH AN EXISTING WASTEWATER TREATMENT FACILITY AND CREATE A PARK LOCATED IN THE VICINITY OF BUZZARDS BAY IN THE CITY OF NEW BEDFORD, COUNTY OF BRISTOL, MASSACHUSETTS
JUNE 1991

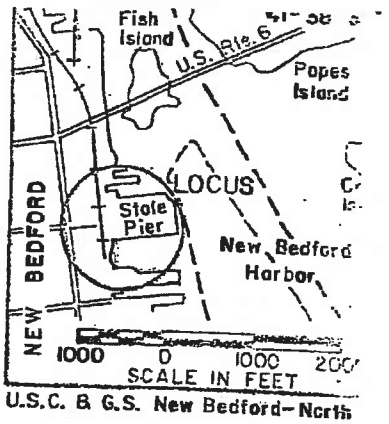
LICENSE PLAN NO. 2895
Approved by Department of Environmental Protection
MAR 06 1992



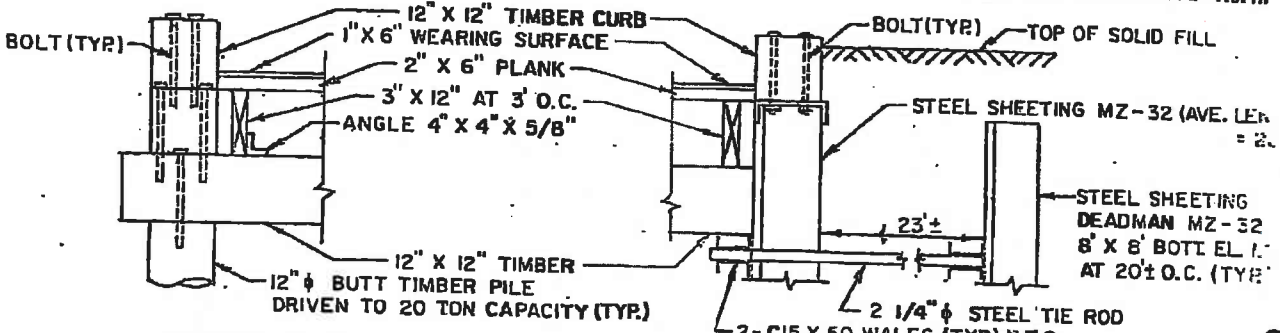

SECTION A-A

0 10 20

scale in feet




U.S.C. & G.S. New Bedford-North




SECTION B-B

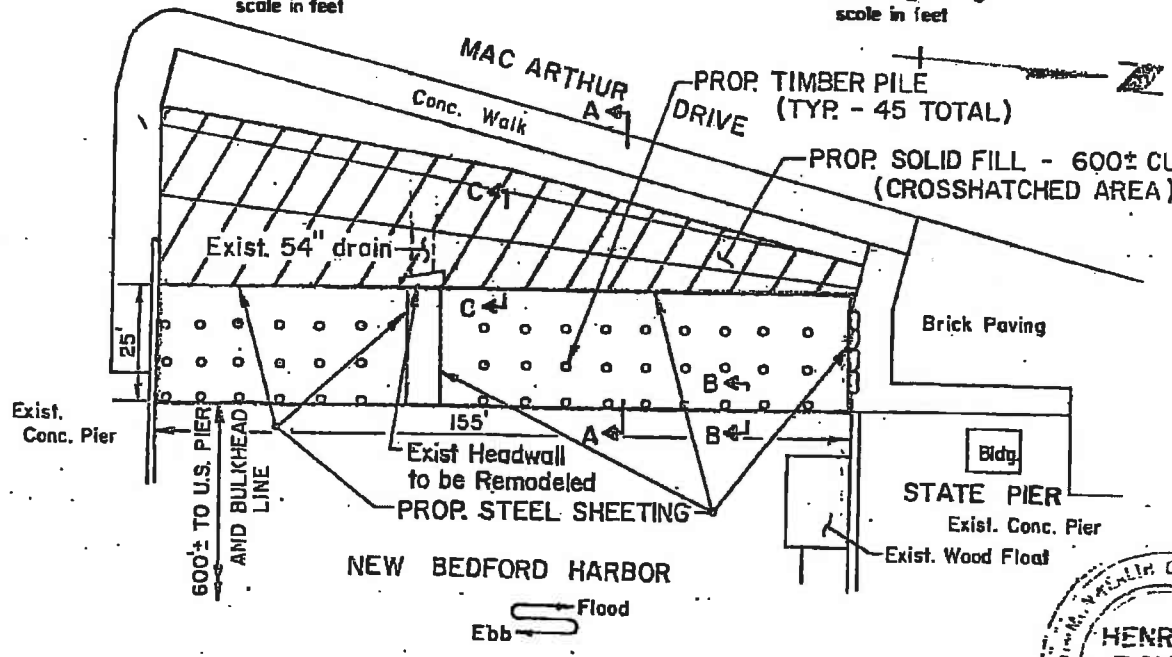
0 1 2 3

scale in feet

SECTION C-C

0 1 2 3

scale in feet




PLAN

0 20 40

scale in feet

049-047-000-179-100

79-W-0039

PLAN ACCOMPANYING PETITION OF CITY OF NEW BEDFORD TO CONSTRUCT AND MAINTAIN A SHEET PILE BULKHEAD, FILL AND A TIMBER PILE AND TIMBER BOARDWALK IN NEW BEDFORD HARBOR NEW BEDFORD, MASS.

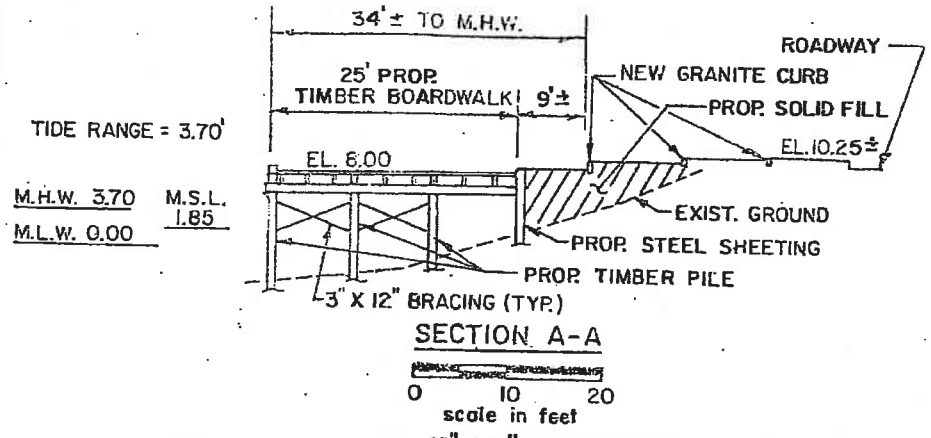
HENRY J. BISHOP & SON NEW BEDFORD, MA

LICENSE PLAN NO. 586

Approved by Department of Environmental Quality Engineering of Massachusetts AUGUST 22, 1979

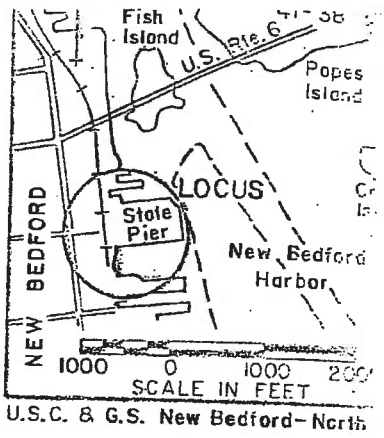
COMMISSIONER

CHIEF ENGINEER

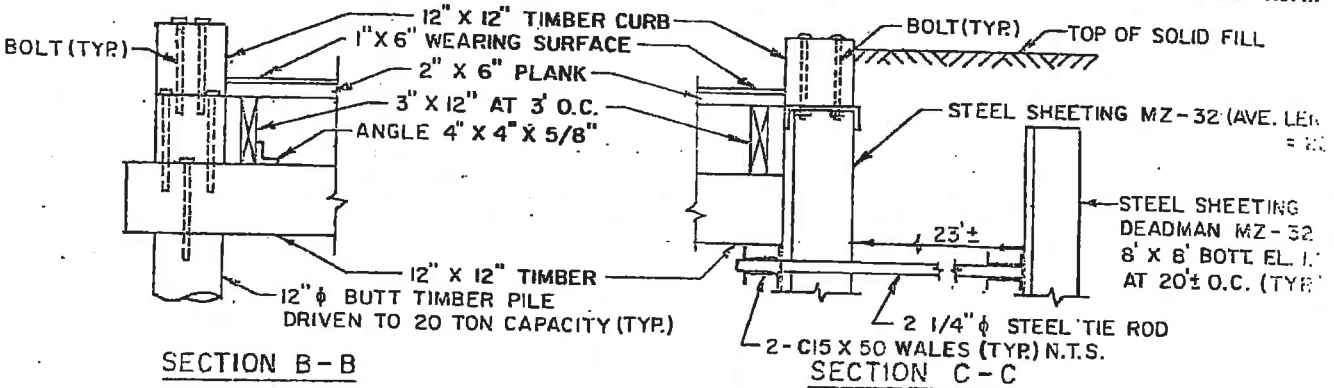



SECTION A-A

0 10 20
scale in feet




U.S.C. & G.S. New Bedford-North

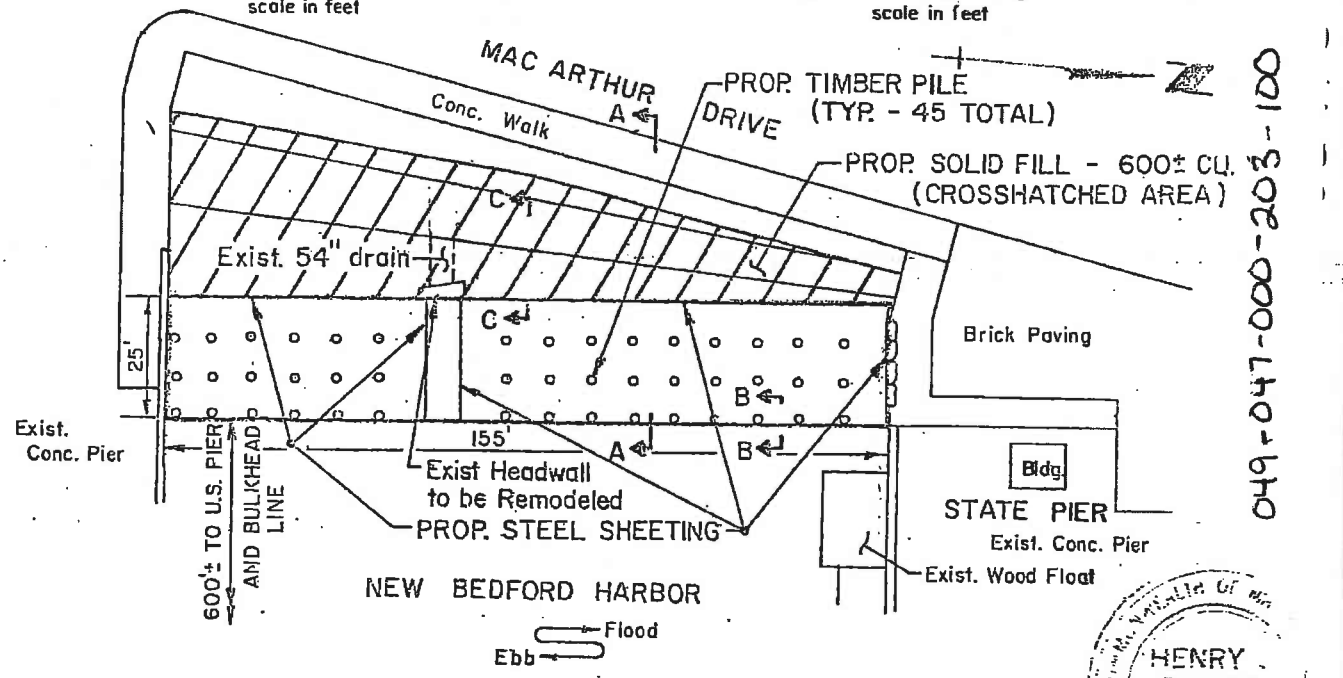



SECTION B-B

0 1 2 3
scale in feet

SECTION C-C

0 1 2 3
scale in feet




PLAN

0 20 40
scale in feet

049-047-000-203-100

79-W-0039

PLAN ACCOMPANYING PETITION OF
CITY OF NEW BEDFORD
TO CONSTRUCT AND MAINTAIN A
SHEET PILE BULKHEAD, FILL AND A
TIMBER PILE AND TIMBER BOARDWALK
IN NEW BEDFORD HARBOR
NEW BEDFORD, MASS.

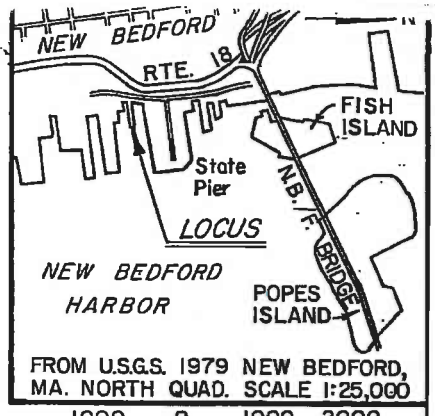
HENRY J. BISHOP & SON NEW BEDFORD, MA

LICENSE PLAN NO. 586

Approved by Department of Environmental Quality Engineering
of Massachusetts AUGUST 22, 1979
COMMISSIONER
CHIEF ENGINEER

N 049-047-000-204-100

Manuel V. Correia, Fredrick E. Roth
& Bruce Roth
P.O. Box L-158
New Bedford, Ma.




Pole

MacArthur Drive

Bldg.

PROP. BOARDWALK

Exist. Gran. Curb

Exist. Stone Blkd.

Exist. Wood Deck

Exist. Conc. & Stone Blkd.

54'±

Aielo Bros. Bldg.

COAL POCKET PIER

M.H.W.

M.L.W.

STEAMSHIP PIER

Exist. Conc. Deck

PROP. TIMBER PILE (TYP.)

PROP. TIMBER PIER (TYP.)

54' (TYP.)

32'

6' (TYP.)

M.L.W.

M.H.W.

STATE PIER

Commonwealth of Massachusetts

Parisi Seafoods Inc.
HOMERS WHARF

PROP. CONC. PIER

100' CLEAR ACCESS ZONE FOR STATE PIER

PROP. TIMBER PILE (TYP.)

MATCH LINE

NOTES:

Elevations and soundings are in feet and tenths and refer to the Datum of Mean Low Water.

This plan prepared for license purposes only, not for construction.

Previous Licenses : 64, 422, 1812, 1977, 2034, 2196, 2515

REVISED 11/8/84
PIER REVISED TO MEET COAST GUARD REQUIREMENTS FOR ACCESS TO STATE PIER.

COMMONWEALTH OF MASSACHUSETTS
ROBERT C. VERKADE
No. 29781
CIVIL
REGISTERED PROFESSIONAL ENGINEER

6-19-84
Robert C. Verkade

## PLAN

80 40 0 80
SCALE IN FEET

84w-105
TIBBETTS ENGINEERING CORP. NEW BEDFORD, MA.

LICENSE PLAN NO 1472

Approved by Department of Environmental Quality Engineering

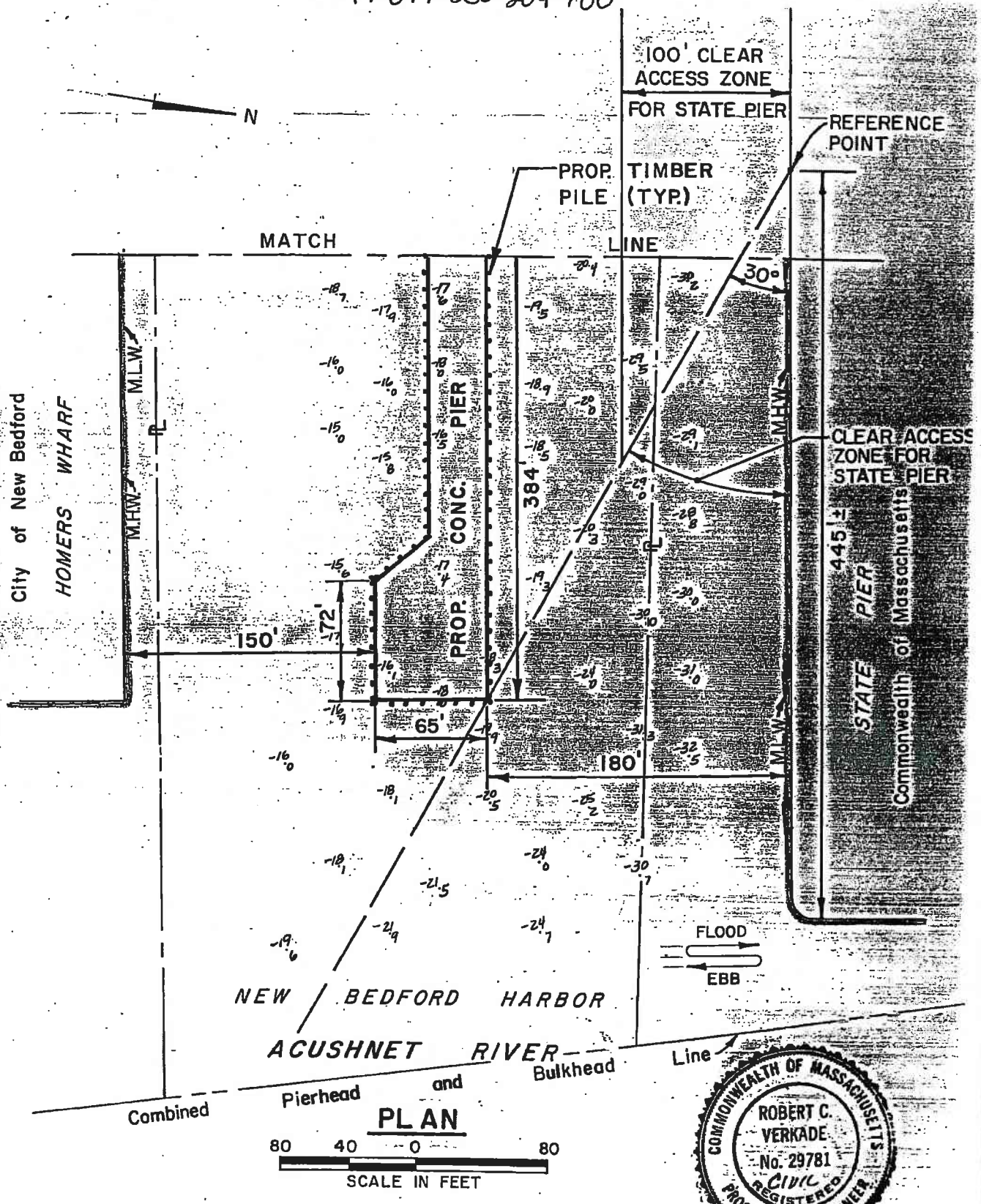
COMMISSIONER

Gary R. Clayton DIVISION DIRECTOR

Charles J. Patch SECTION CHIEF

PLAN ACCOMPANYING PETITION OF NEW BEDFORD HARBOR DEVELOPMENT COMM. TO CONSTRUCT AND MAINTAIN BOARDWALK, TIMBER PIER, CONCRETE PIER AND PILES AT STEAMSHIP PIER, ACUSHNET RIVER. NEW BEDFORD, MA. DATE: JUNE 1984

049-047-000-204-100




COMMONWEALTH OF MASSACHUSETTS
ROBERT C. VERKADE
No. 29781
REGISTERED CIVIC PROFESSIONAL ENGINEER

6-19-84

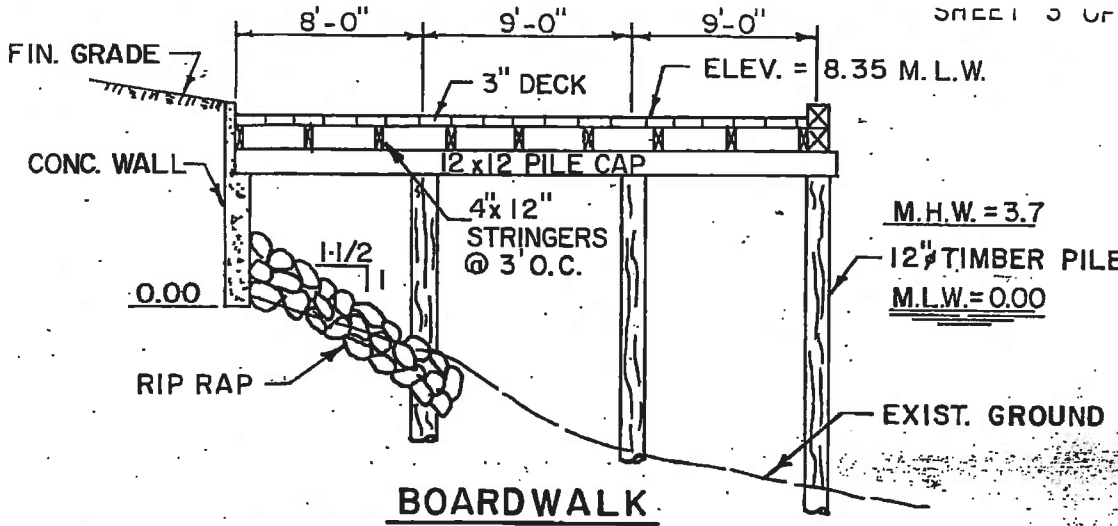
Robert C. Verkade

LICENSE PLAN NO. 1472

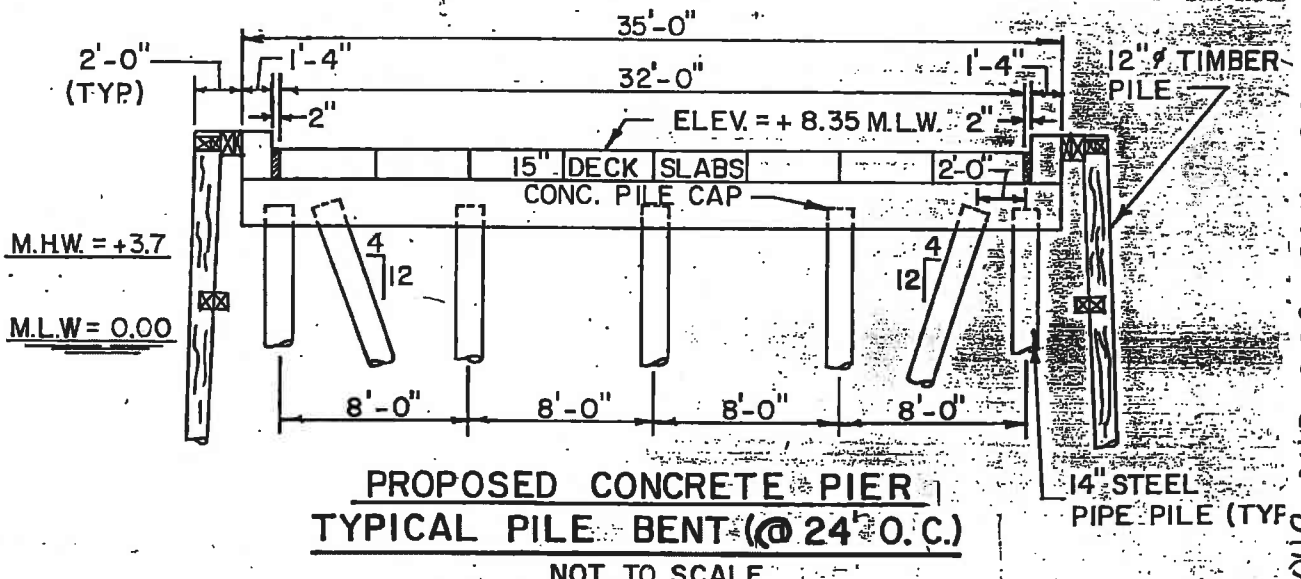
Approved by Department of Environmental Quality Engine

Date

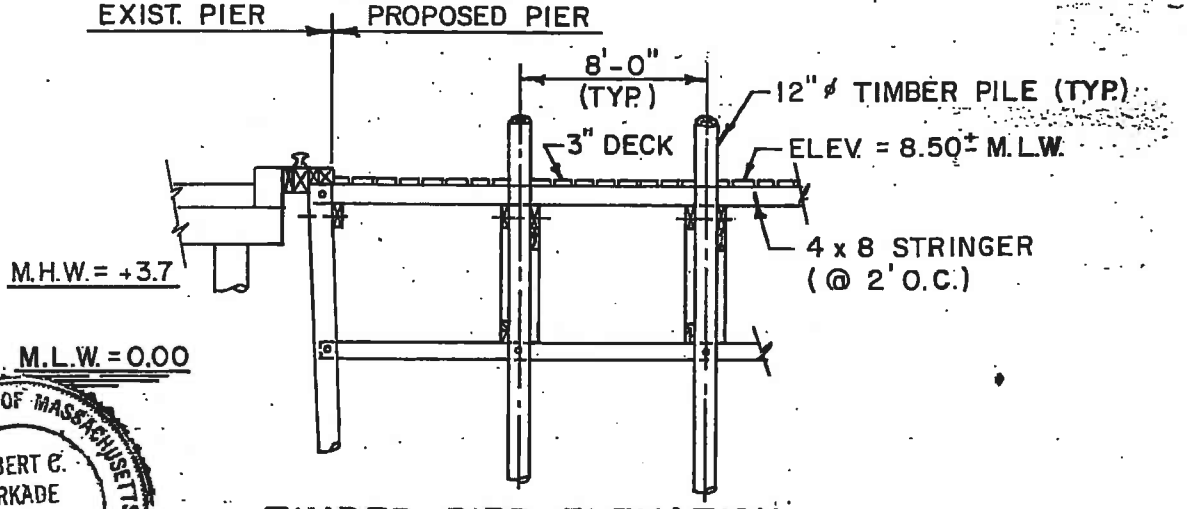
PLAN ACCOMPANYING PETITION OF
NEW BEDFORD HARBOR DEVELOPMENT COMM.
NEW BEDFORD, MA. DATE: JUNE 1984




**BOARDWALK**
NOT TO SCALE




**PROPOSED CONCRETE PIER**
**TYPICAL PILE BENT (@ 24' O.C.)**
NOT TO SCALE




**TIMBER PIER ELEVATION**
NOT TO SCALE

COMMONWEALTH OF MASSACHUSETTS
ROBERT C. VERKADE
No. 29781
CIVIL
REGISTERED
PROFESSIONAL ENGINEER

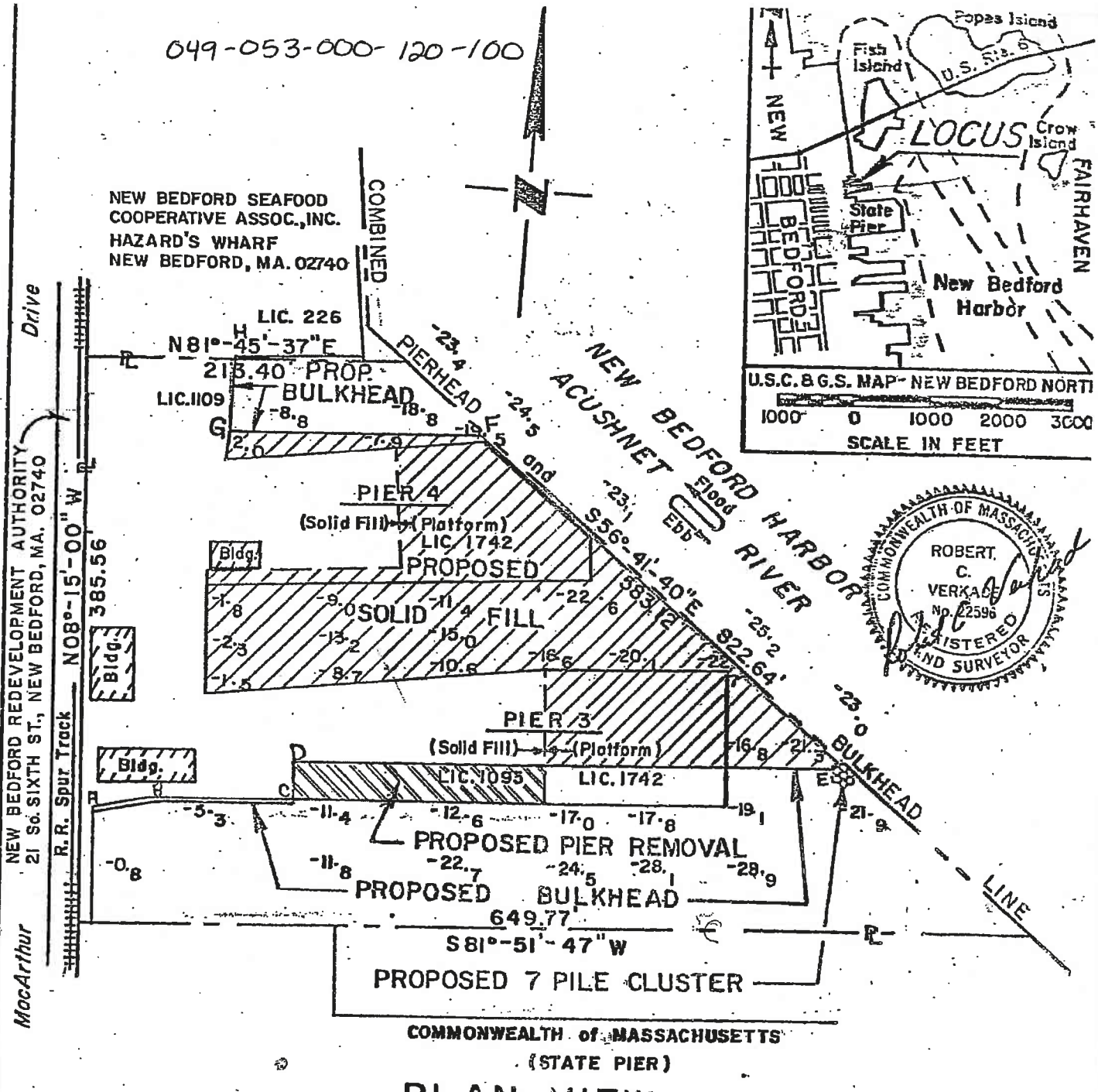
6/19/84
Robert C. Verkade

PLAN ACCOMPANYING PETITION OF
NEW BEDFORD HARBOR DEVELOPMENT COMM.
NEW BEDFORD, MA. DATE: JUNE 1984

PLAN NO. 1472
Approved by Department of Environmental Quality Engine
Date

049-047-000-204-100

049-053-000-120-100




COMMONWEALTH of MASSACHUSETTS

(STATE PIER)

# PLAN VIEW

100 0 100 200

SCALE IN FEET

NOTE:

MATERIAL FROM PROPOSED PIER REMOVAL TO BE DISPOSED ON LAND AT CITY LANDFILL SITE (2,500 C.Y.)

EXISTING CONCRETE PLATFORMS AND PILE SUPPORTS TO BE DEMOLISHED

PLAN ACCOMPANYING PETITION OF

CITY OF NEW BEDFORD

TO CONSTRUCT & MAINTAIN STEEL BULKHEAD, WOOD FENDER SYSTEM, TIE RODS & DEADMEN, FENDER PILES, SOLID FILL and TO REMOVE EXISTING PIERS & STRUCTURES

IN

NEW BEDFORD HARBOR

NEW BEDFORD, MASS.

TIBBETTS ENGINEERING CORP. NEW BEDFORD, MA.

LICENSE PLAN NO. 275

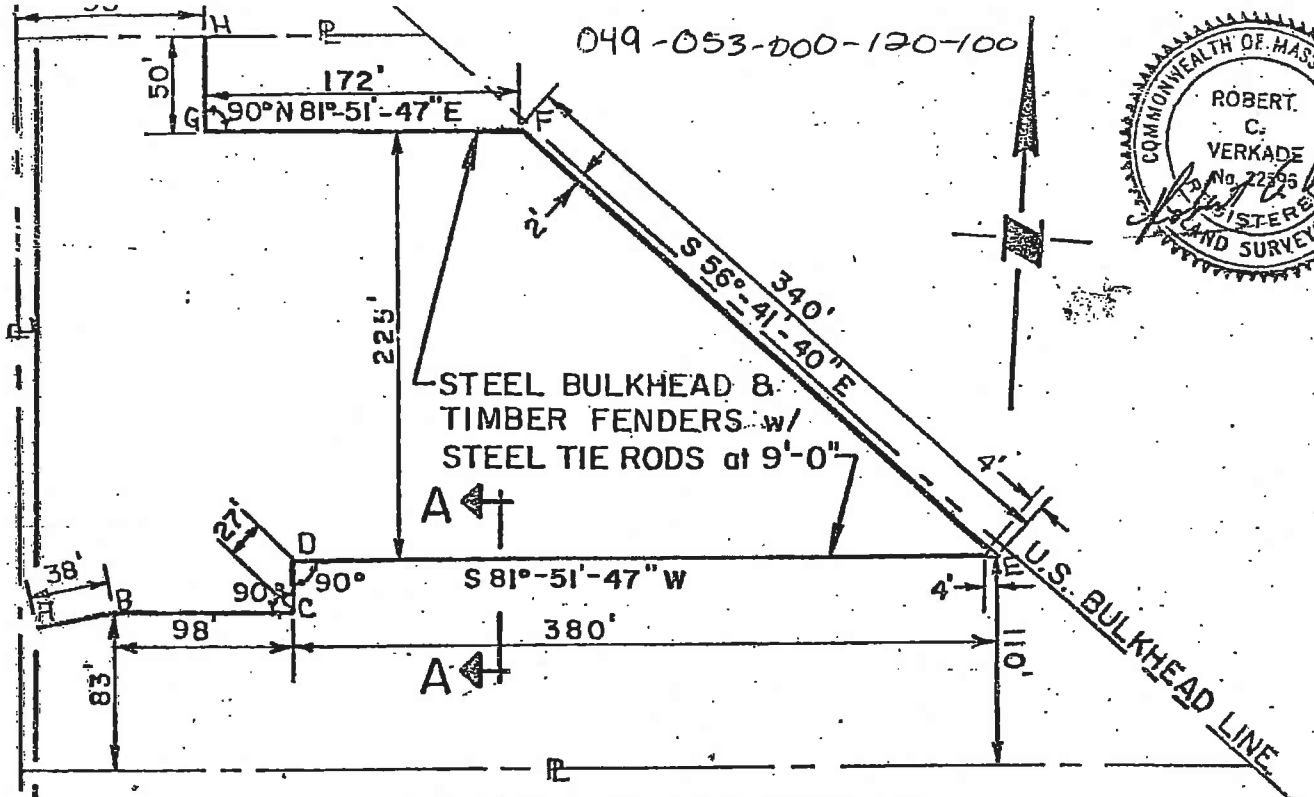
Approved by Department of Environmental Quality Engineering of Massachusetts

MARCH 3, 1977

COMMISSIONER

CHIEF ENGINEER

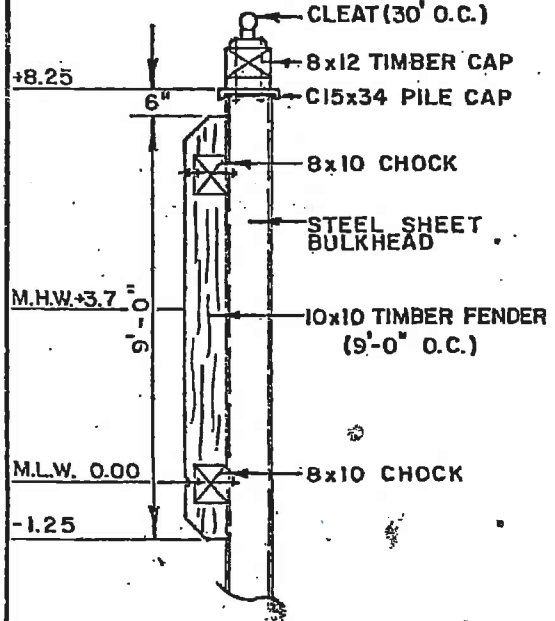
049-053-000-120-100




# PLAN OF BULKHEAD

100 0 100 200

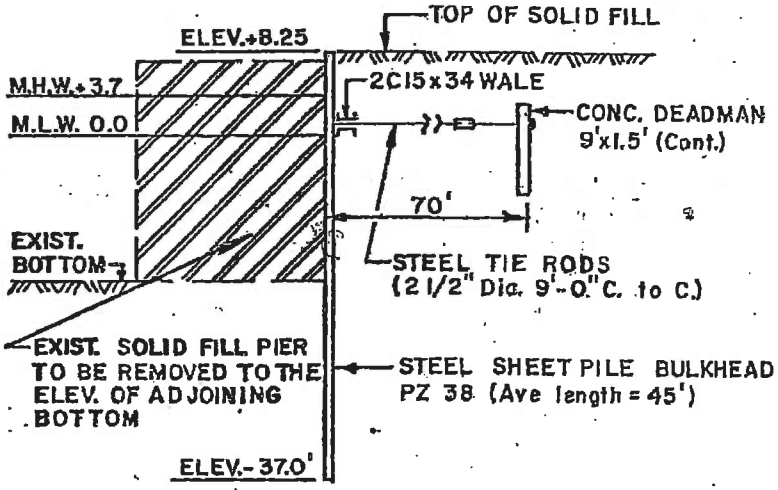
SCALE IN FEET




# FENDER & PILE CAP

4 0 4 8

SCALE IN FEET




# SECTION A-A

20 10 0 20 40

SCALE IN FEET

TIBBETTS ENGINEERING CORP. NEW BEDFORD, MA

PLAN ACCOMPANYING PETITION OF

CITY OF NEW BEDFORD

OCTOBER – 15, 1976

REVISED 11/29/76

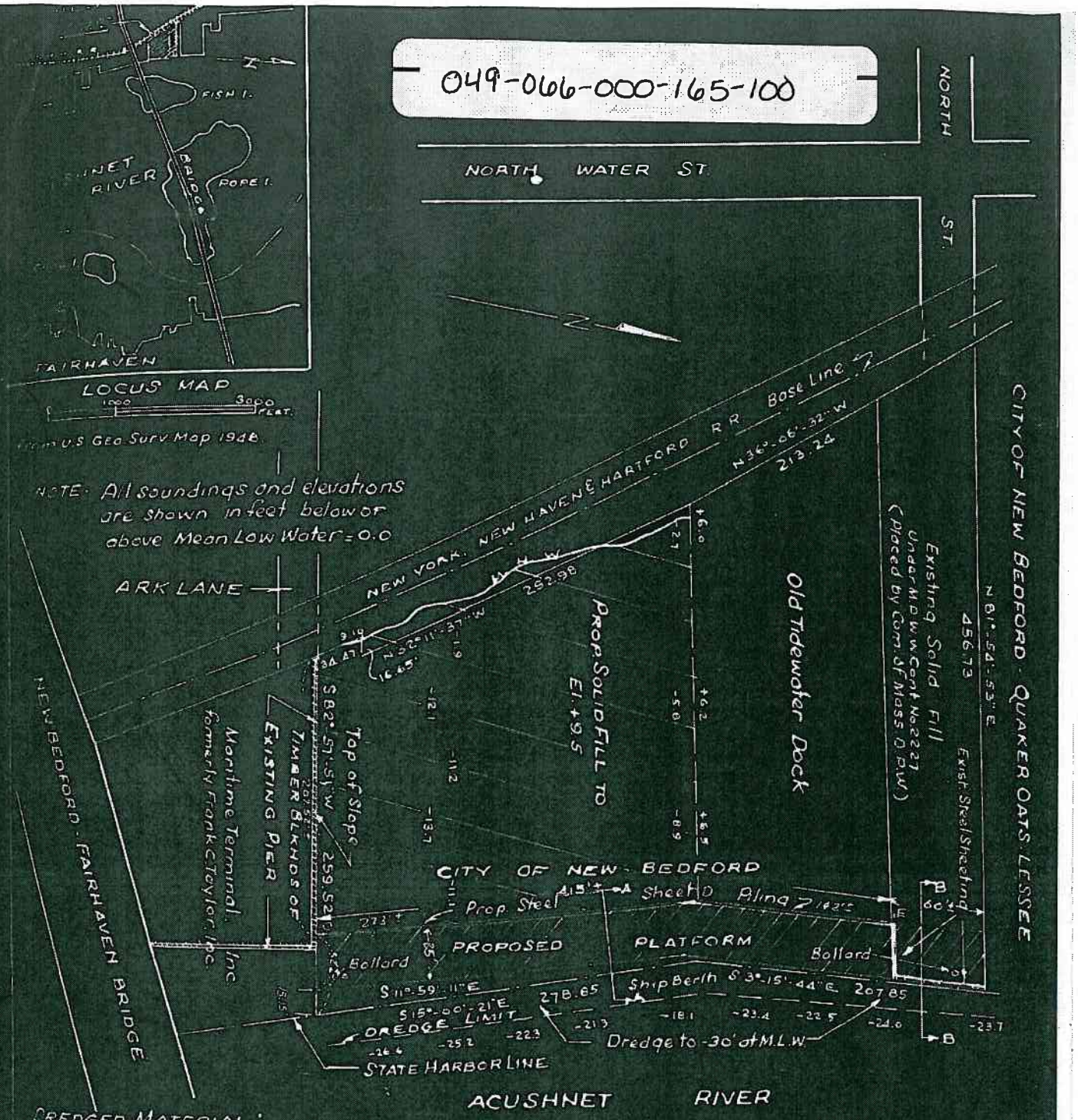
LICENSE PLAN NO. 275

Approved by Department of Environmental Quality Engineering

MARCH 3 1977

SHEET 2 OF 2

049-066-000-165-100




DREDGED MATERIAL:
Silt and mud to be disposed of off the site - Sand and gravel to be disposed on the site.

PLAN

0 25 50 100 200
Scale of feet

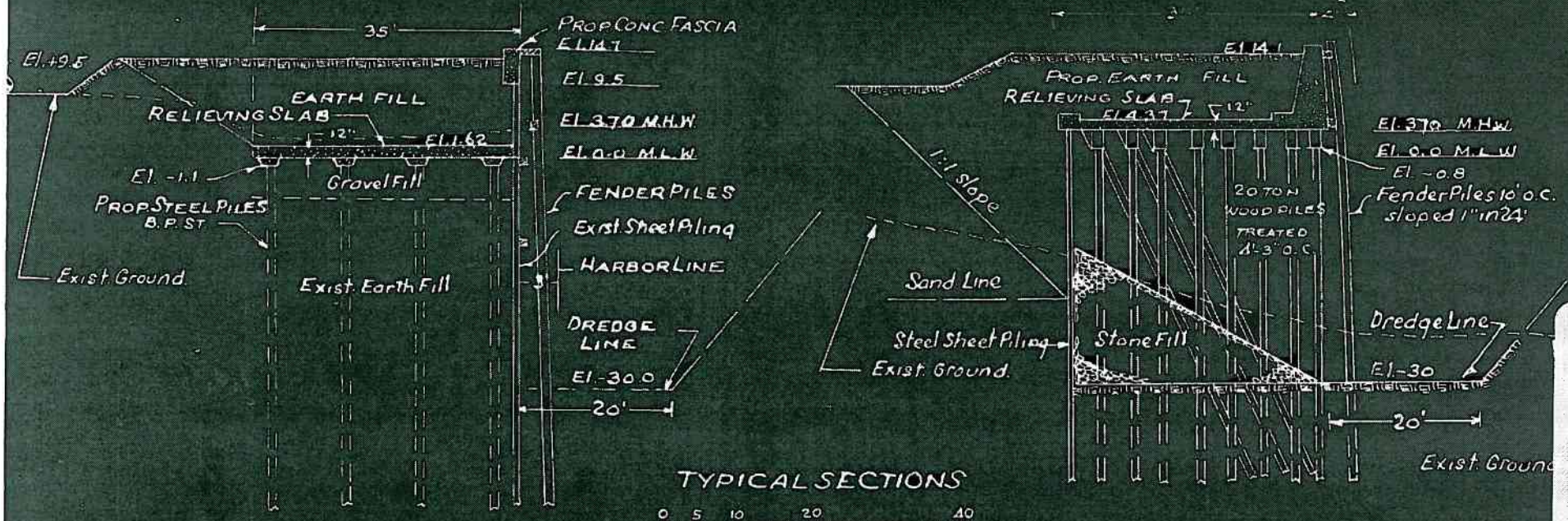
PLAN ACCOMPANYING PETITION OF THE CITY OF NEW BEDFORD TO BUILD A BULKHEAD & CONCRETE WALL ON RELIEVING PLATFORM & TO FILL SOLID AND TO DREDGE IN THE ACUSHNET RIVER AT NEW BEDFORD, MASS.

SHEET 1 OF 2

DATE SEPT. 19, 1962.

LICENSE PLAN NO. 4637
APPROVED BY DEPARTMENT OF PUBLIC WORKS
OCTOBER 23, 1962
COMMISSIONER OF PUBLIC WORKS
ASSOCIATE COMMISSIONERS
ACTING DIRECTOR DIVISION OF WATERWAYS

License No. _____



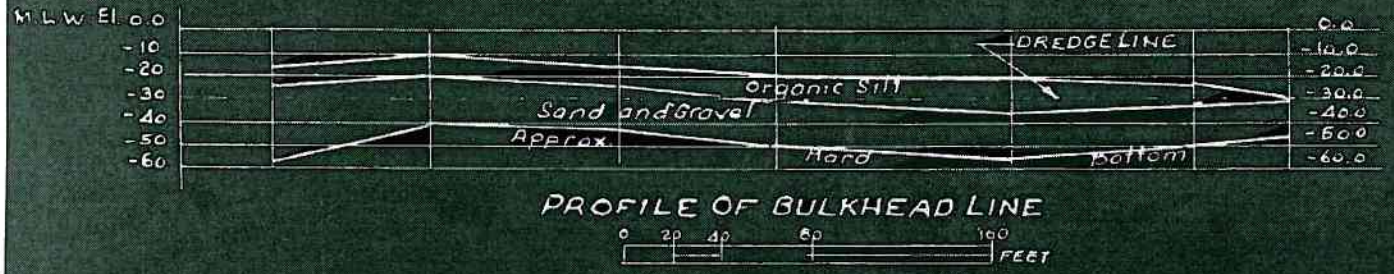

TYPICAL SECTIONS

0 5 10 20 40

Scale of Feet

SECTION B.B

SECTION A-A




PROFILE OF BULKHEAD LINE

0 20 40 80 100 FEET

PLAN ACCOMPANYING PETITION OF
THE CITY OF NEW BEDFORD

TO BUILD A BULKHEAD & CONCRETE WALL
ON RELIEVING PLATFORM AND TO FILL SOLID & TO DREDGE
IN THE ACUSHNET RIVER AT
NEW BEDFORD, MASS.

SHEET 2 OF 2

DATE SEPT. 19, 1962.

LICENSE PLAN NO. 4637
APPROVED OCTOBER 23, 1962

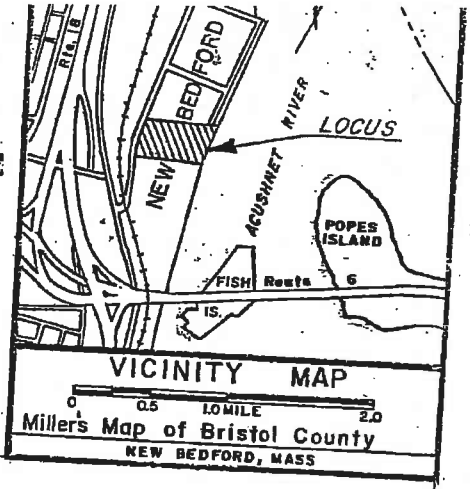
049-066-000-165-100

Soundings are in feet and tenths and refer to Mean Low Water.

Approx. 30,000 C.Y. of river mud is to be dredged, dewatered, mixed with clean fill and used for backfill.

Approx. 34,000 C.Y. of water will be displaced between the exist. river bottom and the plane of Mean High Water by backfill.

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER




VICINITY MAP
0 0.5 1.0 MILE 2.0
Miller's Map of Bristol County
NEW BEDFORD, MASS

NEW BEDFORD HARBOR
ACUSHNET RIVER
EBB
FLOOD
COMBINED PIERHEAD & BULKHEAD LINE
EXIST. RELIEVING PLATFORM
PINA AVENUE
COSTA AVENUE
HERMAN MELVILLE BOULEVARD
PROP. STEEL SHEET PILE BULKHEAD
DREDGE AREA TO -23.0 M.L.W.
EXIST. BULKHEAD
PROP. COAL TAR COATED TIE-RODS
PROP. CONC. DEADMAN
PROP. Sp. M.H.
EXIST. 30" S.D. (TO BE ABANDONED)
PROP. FILL AREA
SLUICE
INV.=-4.0
INV.=-1.1
PROP. 72" R.C.P. S.D.
PROP. 94"-30" R.C.P. S.D.
EXIST. 66" S.D.
EXIST. 30" S.D.
PENN CENTRAL RAILROAD
305'
690'
209'
300'

Assessors Plat 66
Lot 125
City of New Bedford

Assessors
Plat 66
Lot 128
City of New Bedford

LICENSE No. 5129

TEMPORARY MUCK CONTAINMENT AREA (APPROX. 35 ACRES)

Assessors Plat 59
Lot 41
City of New Bedford
Leased to Frionor Kitchens
(Mass. Div. of Waterways)
(Acc. No. 04198)

PLAN
SCALE: 1" = 200'
0 50 100 200 400

PLAN ACCOMPANYING PETITION OF
THE CITY OF NEW BEDFORD

TO CONSTRUCT AND MAINTAIN A STEEL SHEET PILE BULKHEAD, FENDER PILES, STORM DRAINAGE, PLACEMENT OF SOLID FILL AND DREDGING
IN
NEW BEDFORD HARBOR
NEW BEDFORD, MASSACHUSETTS
FEB. 23, 1979

79W-0023

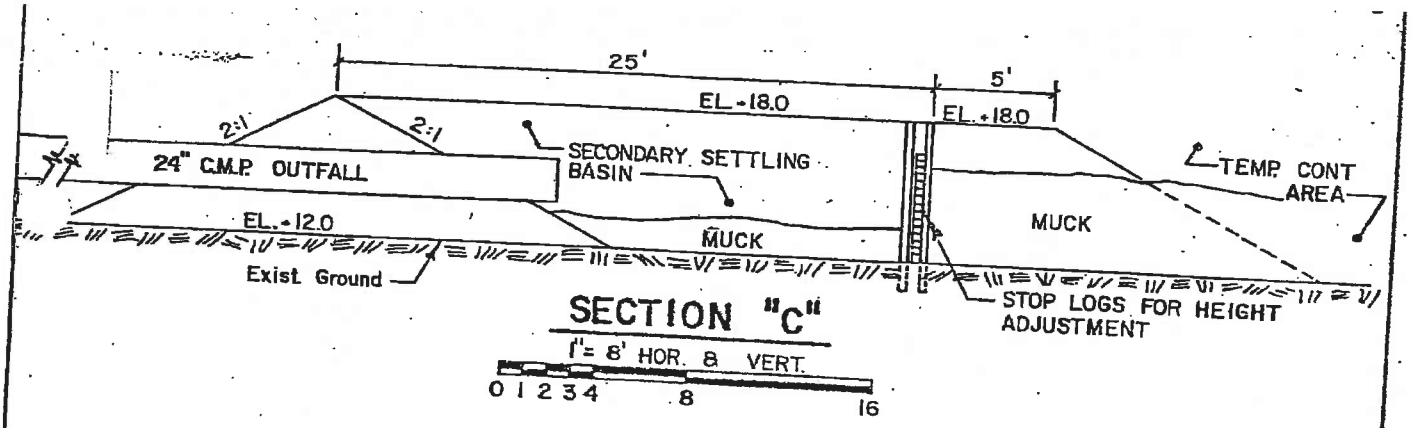
TIBBETTS ENGINEERING CORP. NEW BEDFORD, MA.

LICENSE PLAN NO. 564

Approved by Department of Environmental Quality Engineering of Massachusetts MAY 15, 1979

COMMISSIONER
CHIEF ENGINEER

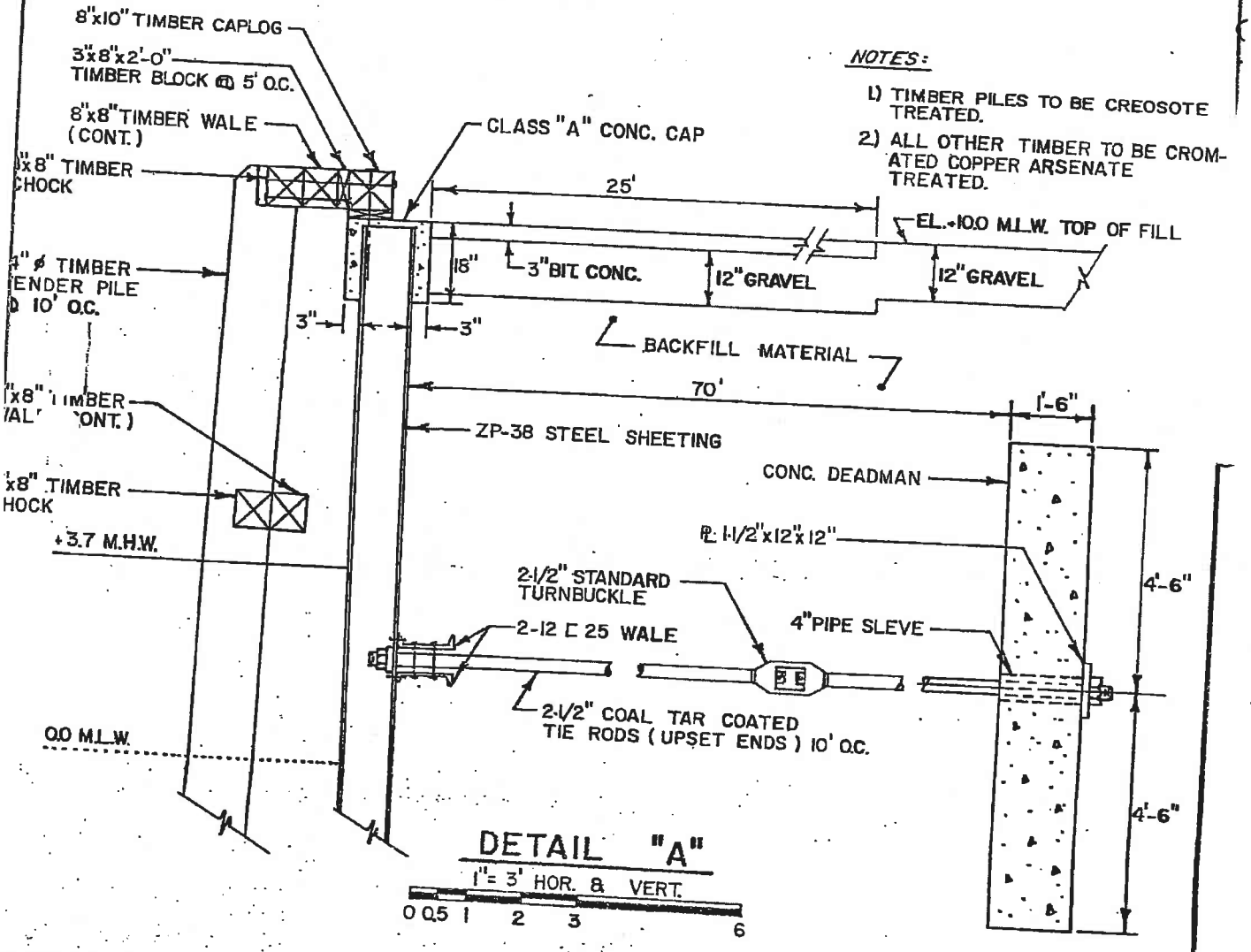
009-S91-000-990-040




## SECTION "C"

1"= 8' HOR. & VERT.

0 1 2 3 4 8 16




NOTES:

1) TIMBER PILES TO BE CREOSOTE TREATED.
2) ALL OTHER TIMBER TO BE CROMATED COPPER ARSENATE TREATED.

## DETAIL "A"

1"= 3' HOR. & VERT.

0 0.5 1 2 3 6

LICENSE PLAN NO. 564

79W-0023

Approved by Department of Environmental Quality Engineering

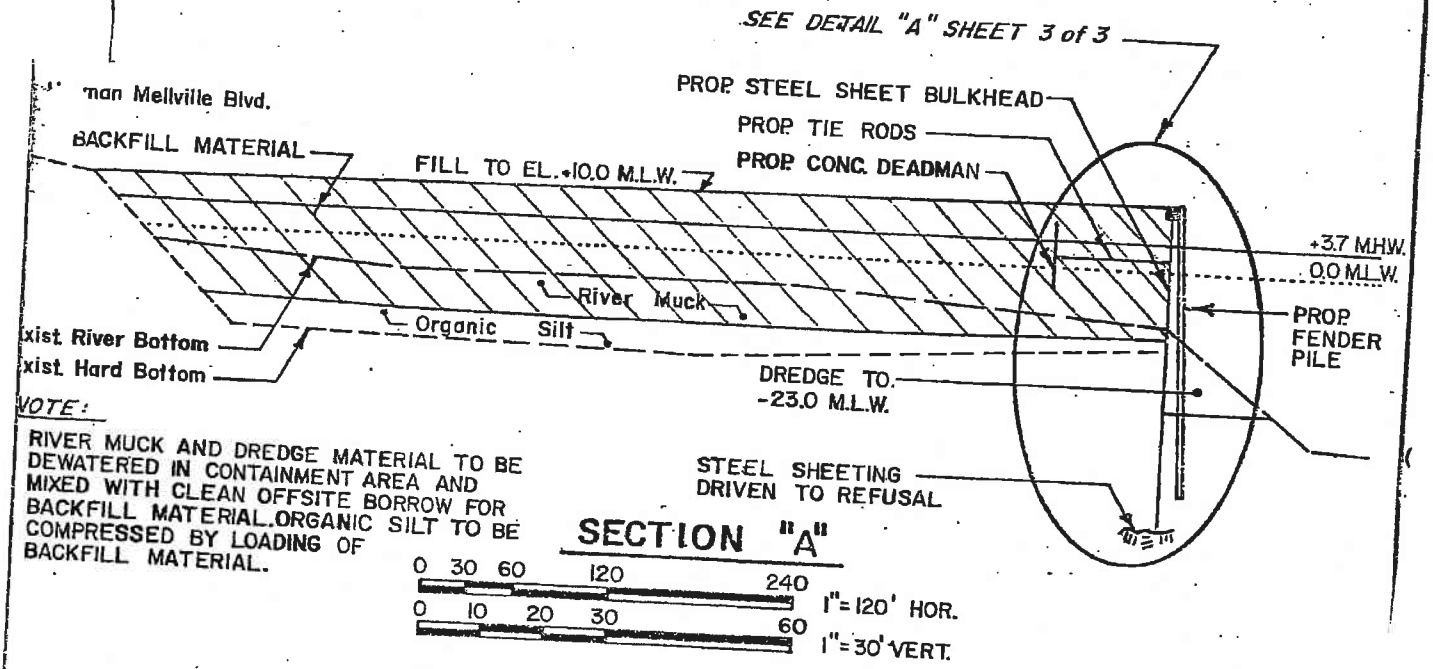
MAY 15, 1979

PLAN ACCOMPANYING PETITION OF
THE CITY OF NEW BEDFORD
FEB. 23, 1979
IBBETTS ENGINEERING CORP. NEW BEDFORD, MA.

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

Richard L. Silviera

002-091-000-990-640



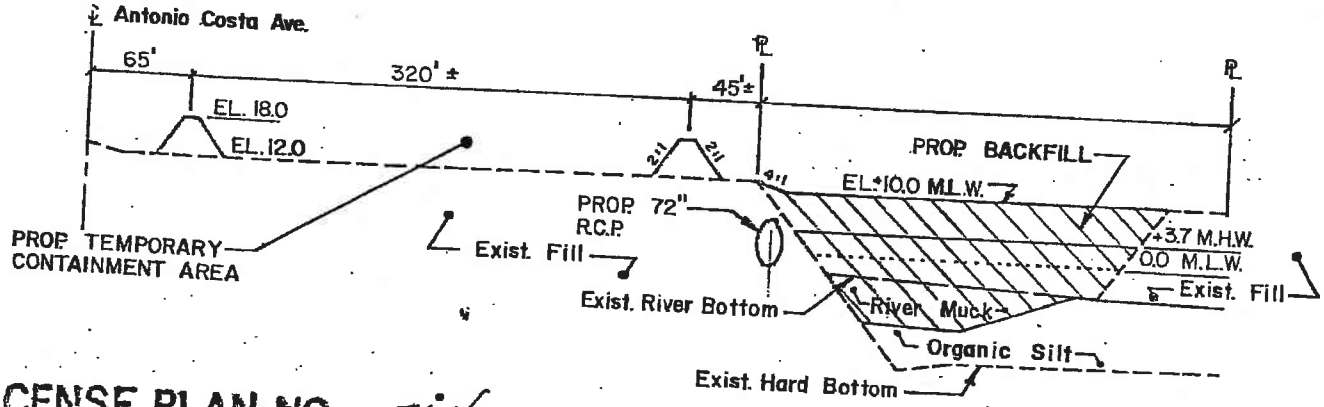

NOTE:

RIVER MUCK AND DREDGE MATERIAL TO BE DEWATERED IN CONTAINMENT AREA AND MIXED WITH CLEAN OFFSITE BORROW FOR BACKFILL MATERIAL. ORGANIC SILT TO BE COMPRESSED BY LOADING OF BACKFILL MATERIAL.

## SECTION "A"

0 30 60 120 240 1"=120' HOR.

0 10 20 30 60 1"=30' VERT.




CENSE PLAN NO. 564

roved by Department of Environmental Quality Engineering

MAY 15, 1979

## SECTION "B"

0 30 60 120 240 1"=120' HOR.

0 10 20 30 60 1"=30' VERT.

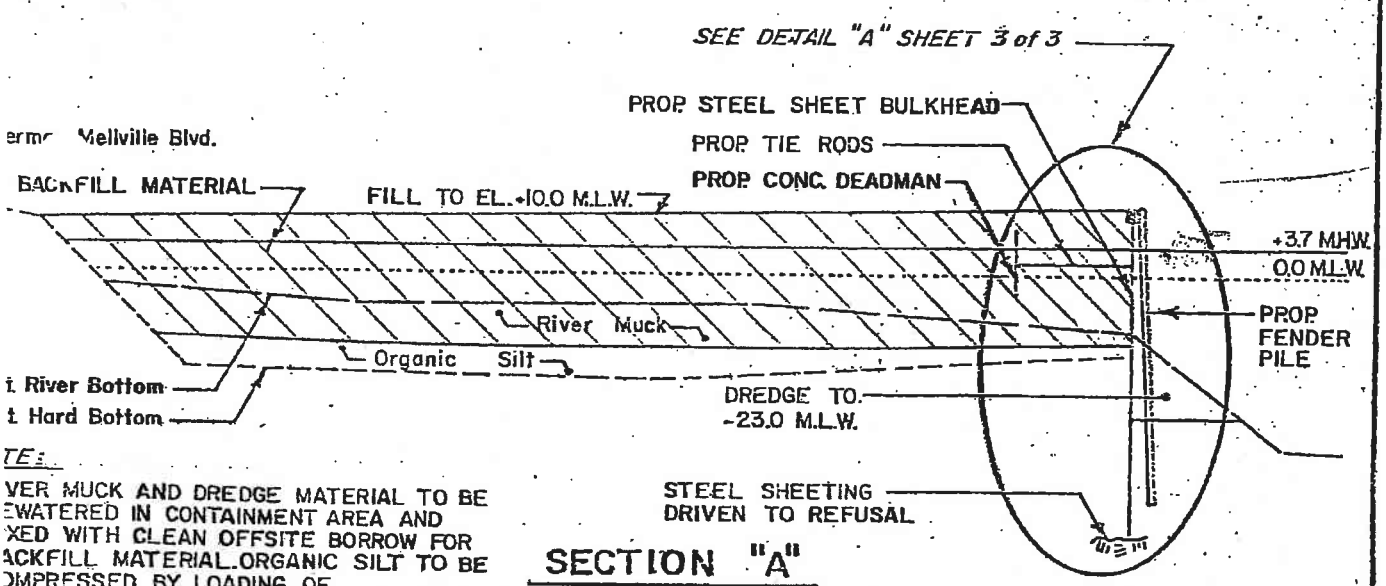
TGW-0023

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVEIRA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

PLAN ACCOMPANYING PETITION OF
THE CITY OF NEW BEDFORD
FEB. 23, 1979

IBBETTS ENGINEERING CORP. NEW BEDFORD, MA.

049-096-000-990-165-200



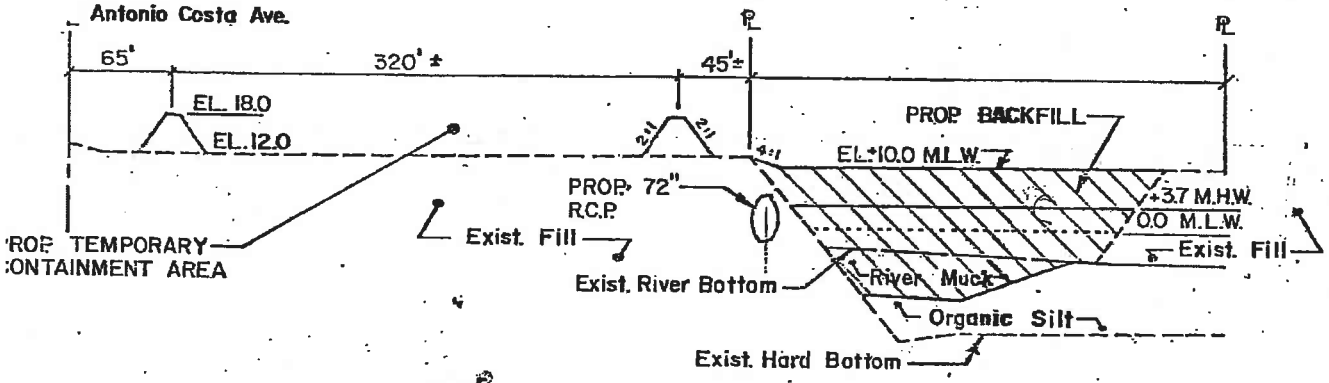

TE:

VER MUCK AND DREDGE MATERIAL TO BE EWATERED IN CONTAINMENT AREA AND XED WITH CLEAN OFFSITE BORROW FOR ACKFILL MATERIAL. ORGANIC SILT TO BE OMPRESSED BY LOADING OF ACKFILL MATERIAL.

## SECTION "A"

0 30 60 120 240 1"=120' HOR.

0 10 20 30 60 1"=30' VERT.




ENSE PLAN NO. 564

ved by Department of Environmental Quality Engineering

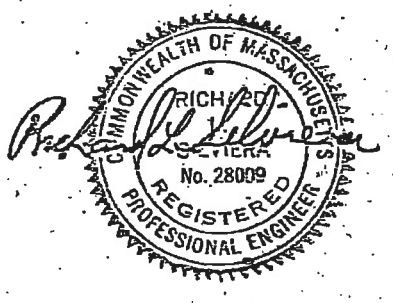
MAY 15, 1979

## SECTION "B"

0 30 60 120 240 1"=120' HOR.

0 10 20 30 60 1"=30' VERT.

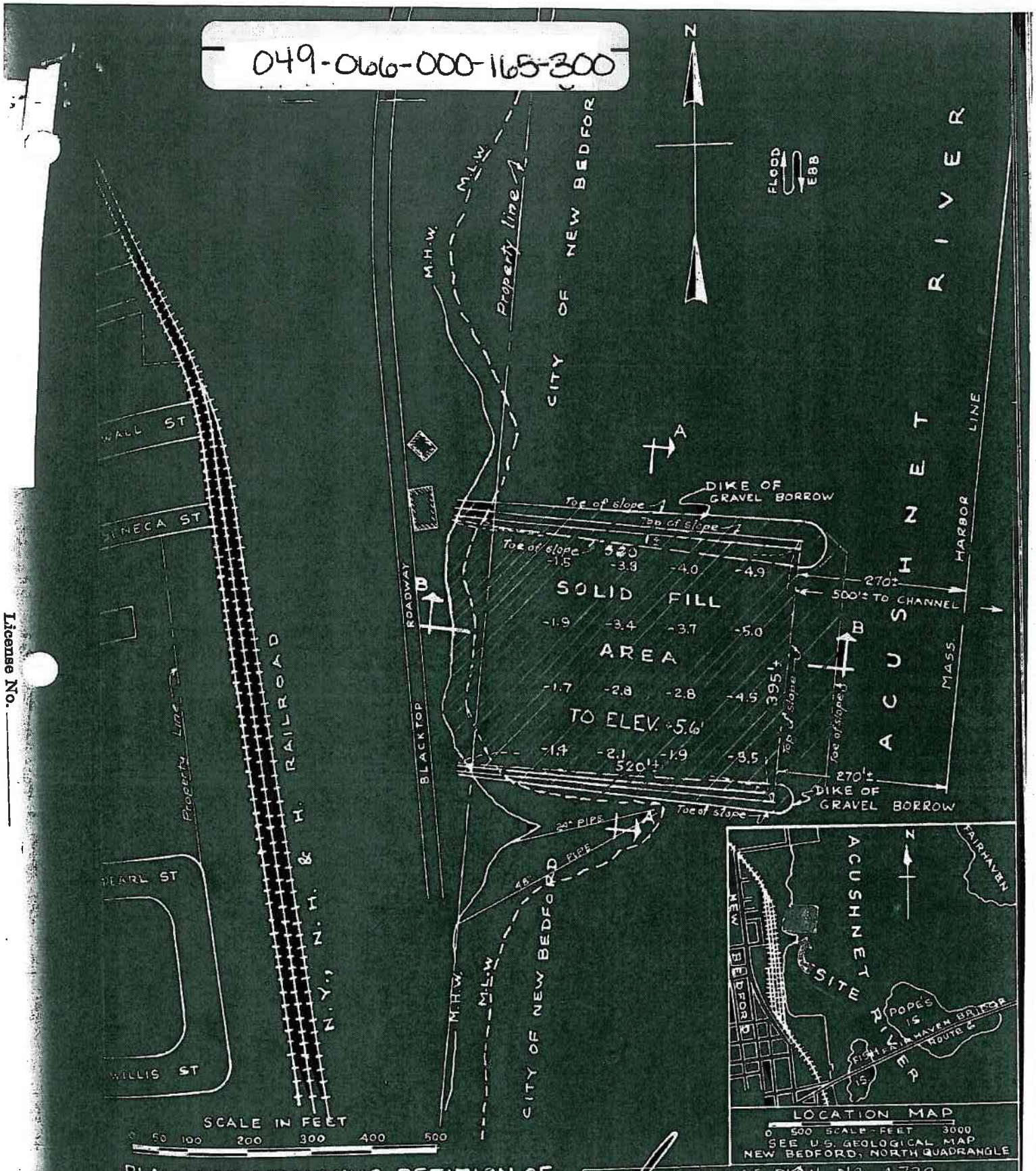
TGW-0023




PLAN ACCOMPANYING PETITION OF
HE CITY OF NEW BEDFORD
FEB. 23, 1979
IBBETTS ENGINEERING CORP. NEW BEDFORD, MA.

049-060-000-165-200

049-066-000-165-300

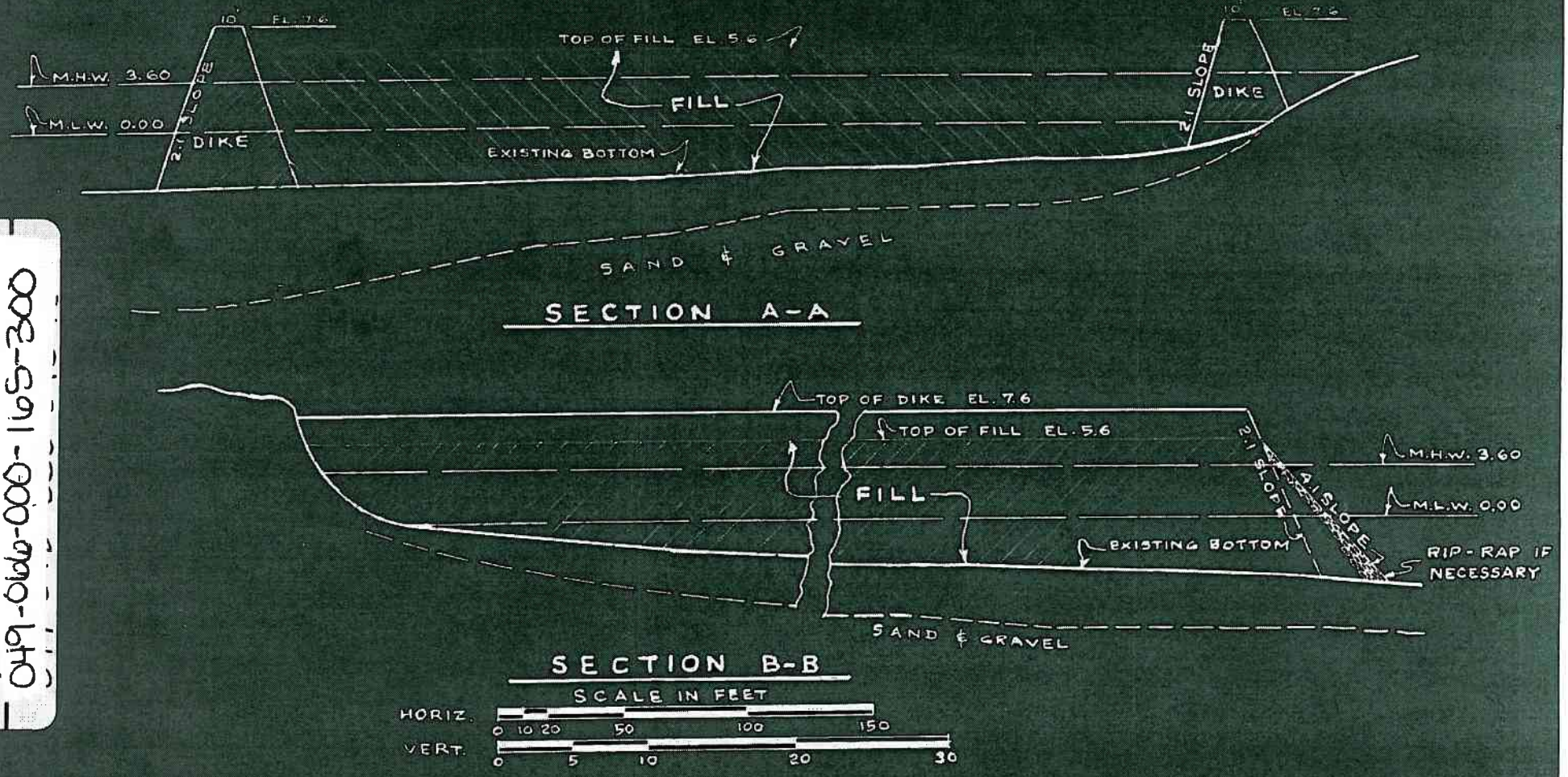



PLAN ACCOMPANYING PETITION OF
THE CITY OF NEW BEDFORD
HARBOR DEVELOPMENT COMMISSION
FOR PLACEMENT OF SOLID FILL
IN THE
ACUSHNET RIVER
NEW BEDFORD, MASS.
JUNE 1963

LICENSE PLAN NO. 4728
APPROVED BY DEPARTMENT OF PUBLIC WORKS
OCTOBER 8, 1963

Jack L. Nicoll — COMMISSIONER OF PUBLIC WORKS
Associate Commissioners
Acting Director - Division of Waterways

License No. _____

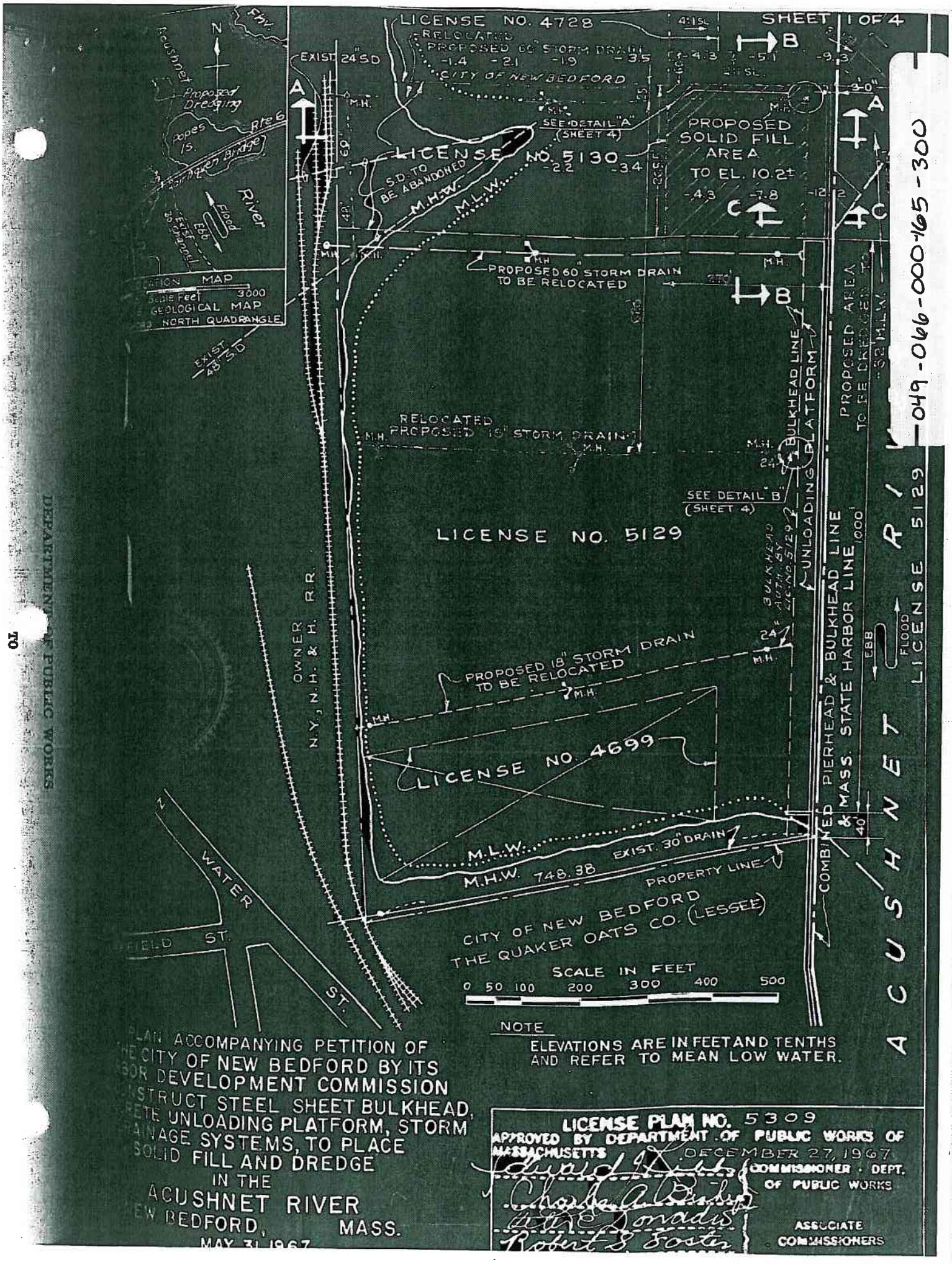



049-0160-000-1605-300

PLAN ACCOMPANYING PETITION OF
THE CITY OF NEW BEDFORD
HARBOR DEVELOPMENT COMMISSION
FOR PLACEMENT OF SOLID FILL
IN THE
ACUSHNET RIVER
NEW BEDFORD, MASS
JUNE 1963

LICENSE PLAN NO. 4728
APPROVED - OCTOBER 8, 1963

SHEET 2 OF 2




NOTE

ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO MEAN LOW WATER.

PLAN ACCOMPANYING PETITION OF THE CITY OF NEW BEDFORD BY ITS HARBOR DEVELOPMENT COMMISSION TO CONSTRUCT STEEL SHEET BULKHEAD, CONCRETE UNLOADING PLATFORM, STORM DRAINAGE SYSTEMS, TO PLACE SOLID FILL AND DREDGE IN THE ACUSHNET RIVER NEW BEDFORD, MASS.

MAY 31, 1967

LICENSE PLAN NO. 5309

APPROVED BY DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS

DECEMBER 27, 1967

COMMISSIONER - DEPT. OF PUBLIC WORKS

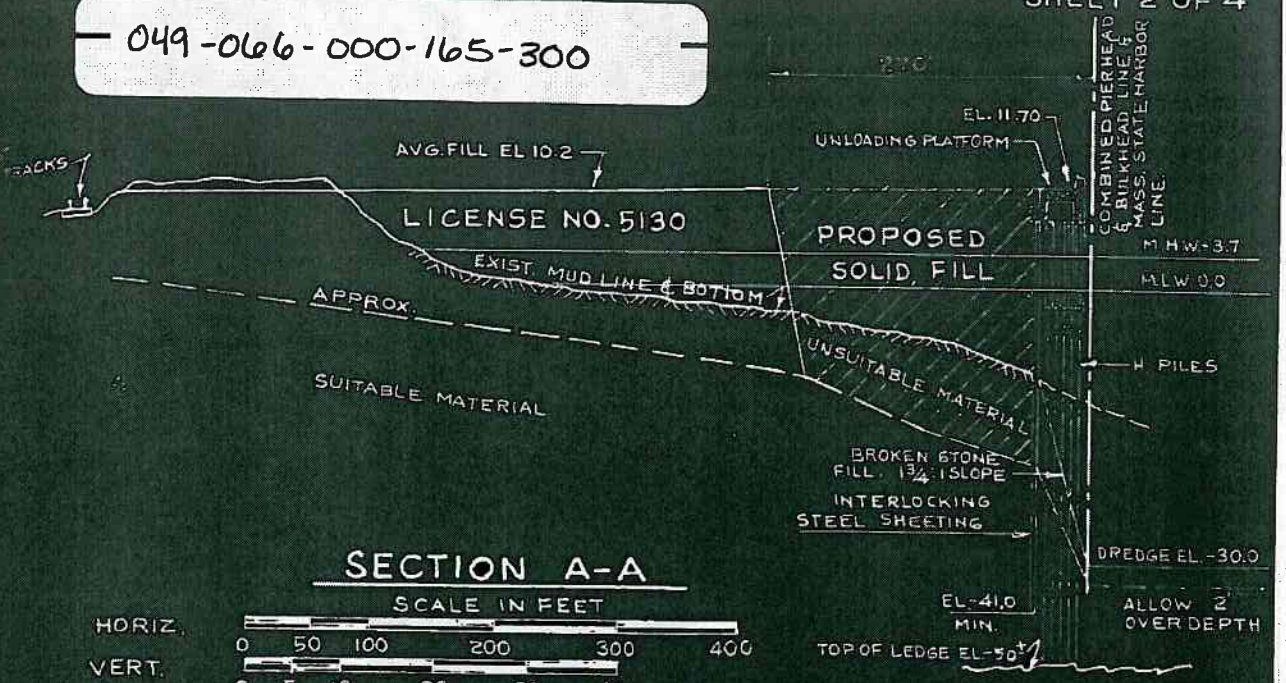
ASSOCIATE COMMISSIONERS

049-066-000-165-300

DEPARTMENT OF PUBLIC WORKS

049-066-000-165-300



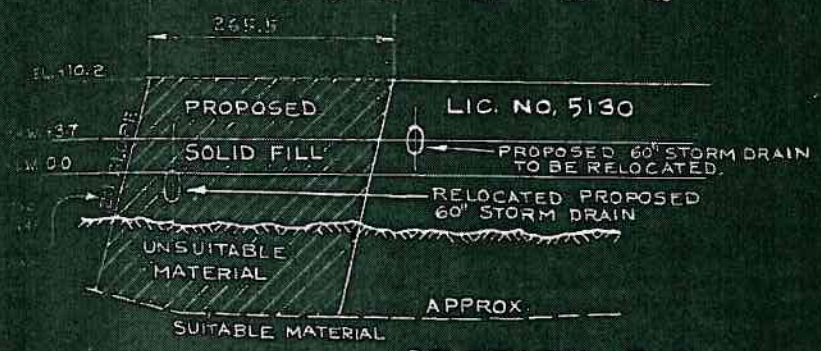



## SECTION A-A

SCALE IN FEET

HORIZ. 0 50 100 200 300 400

VERT. 0 5 10 20 30 40

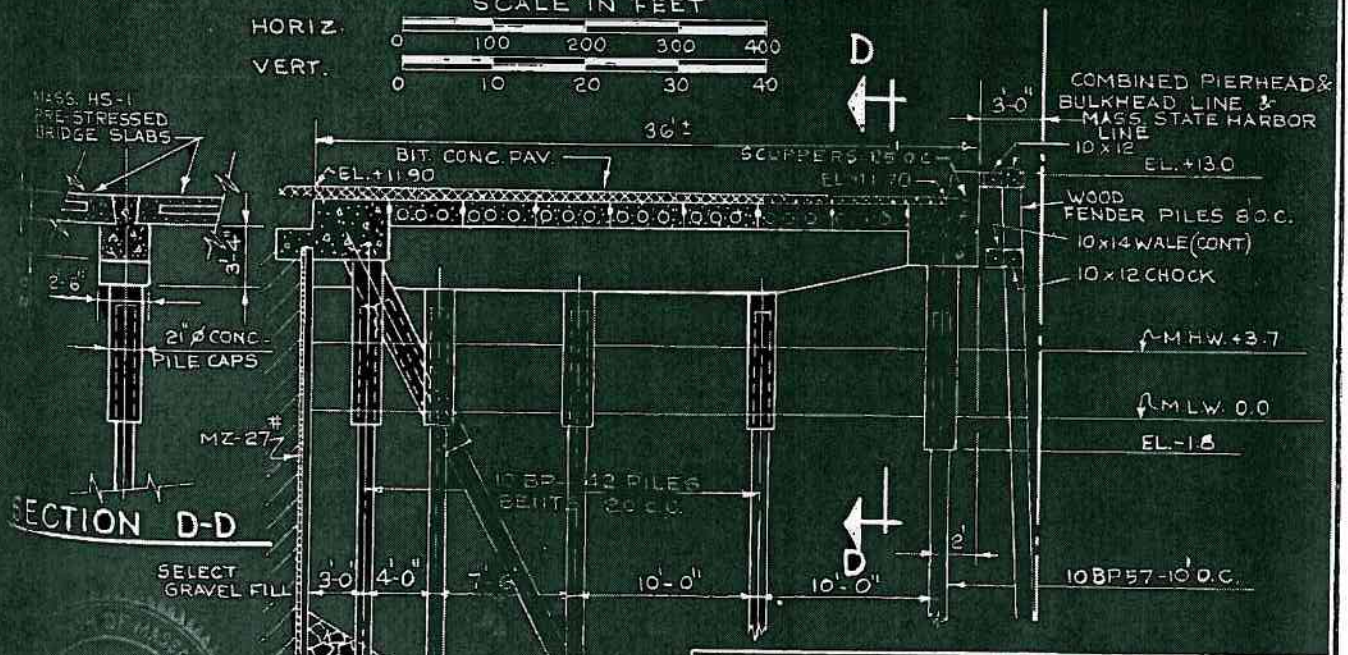



## SECTION B-B

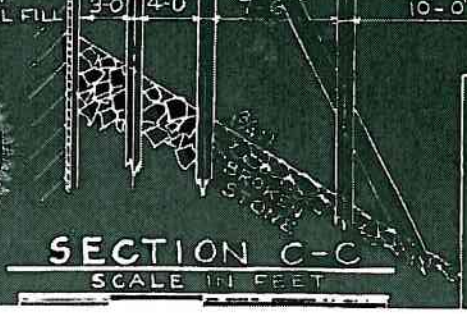
SCALE IN FEET

HORIZ. 0 100 200 300 400

VERT. 0 10 20 30 40




## SECTION D-D




## SECTION C-C

SCALE IN FEET

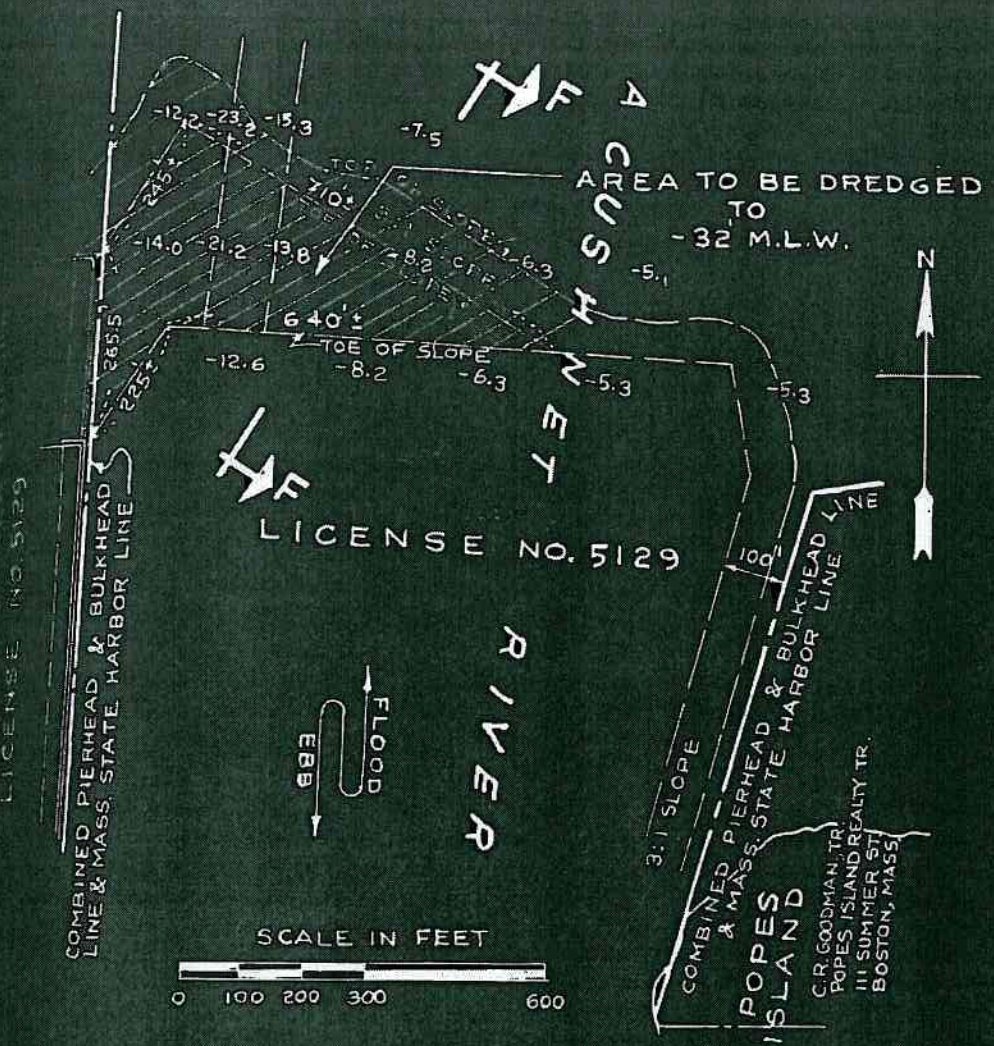
FRED E. PETTS, JR. No. 4010 REGISTERED PROFESSIONAL ENGINEER

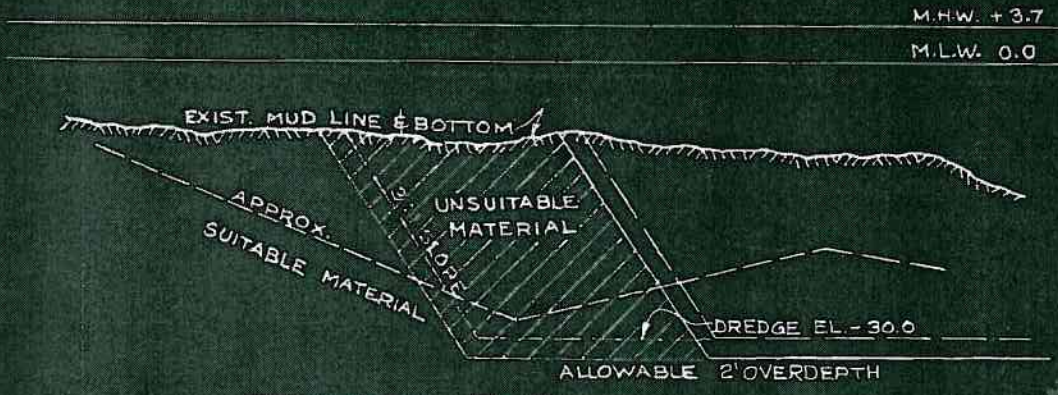
LICENSE PLAN NO. 5309

APPROVED BY DEPARTMENT OF [illegible]

DECEMBER 27, 1967

049-066-000-165-300




SECTION F-F

SCALE IN FEET

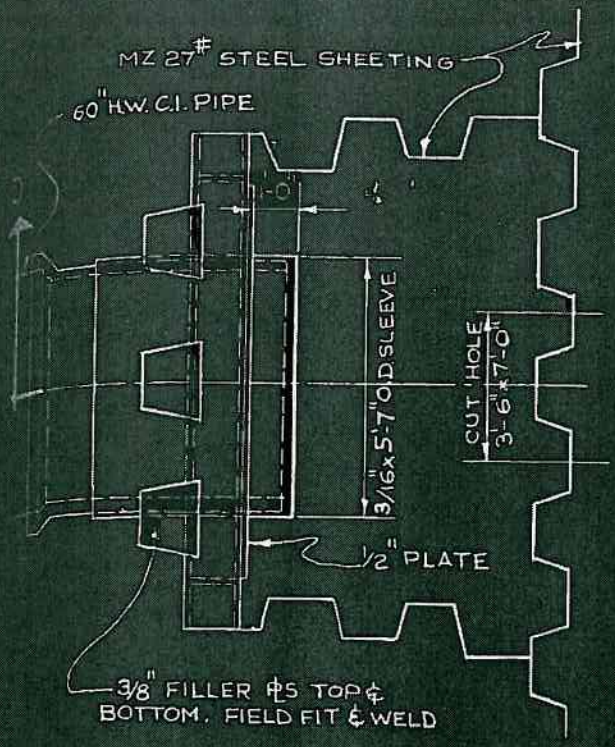
VERT. 0 10 20 30

HORIZ. 0 100 200

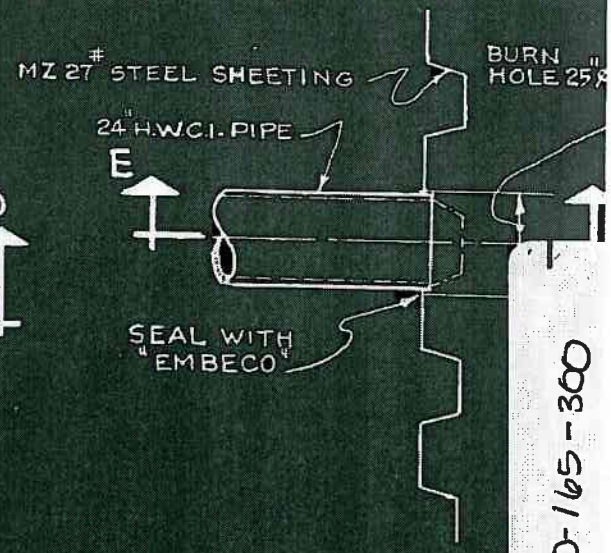
LICENSE PLAN NO. 5309

APPROVED BY DEPARTMENT OF PUBLIC WORKS

DECEMBER 27, 1967




D

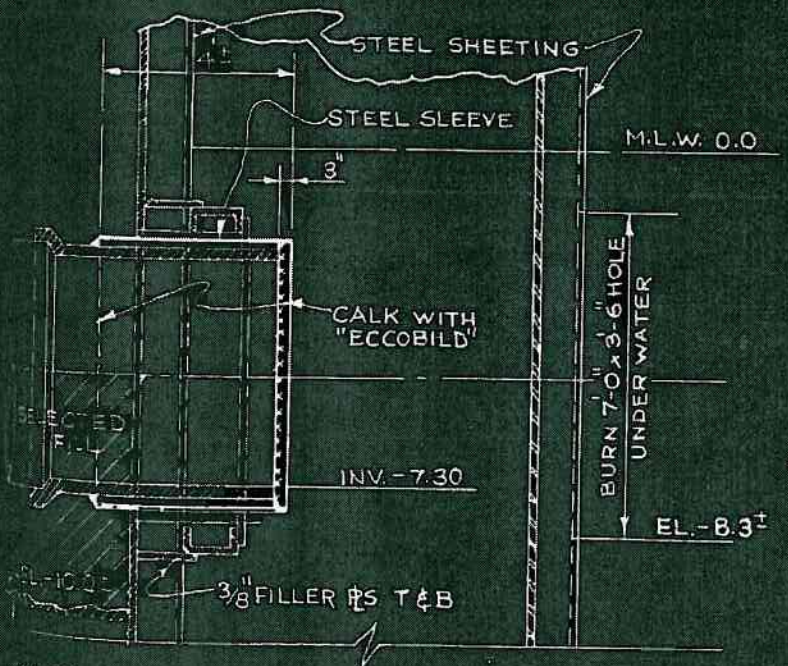



DETAIL "B"

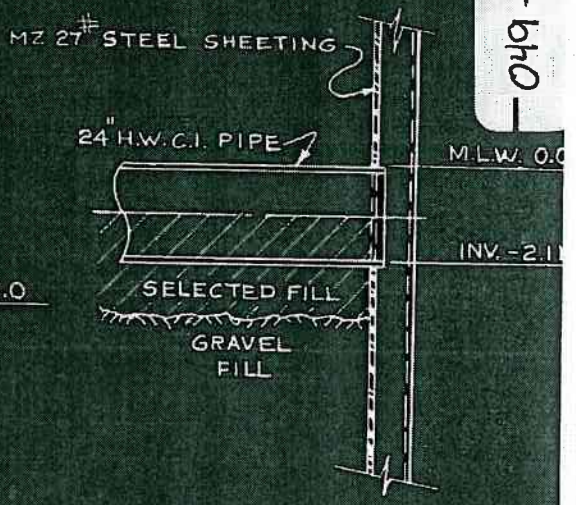
DETAIL "A"

SCALE IN FEET

0 1 2 3 4 8




SECTION D-D



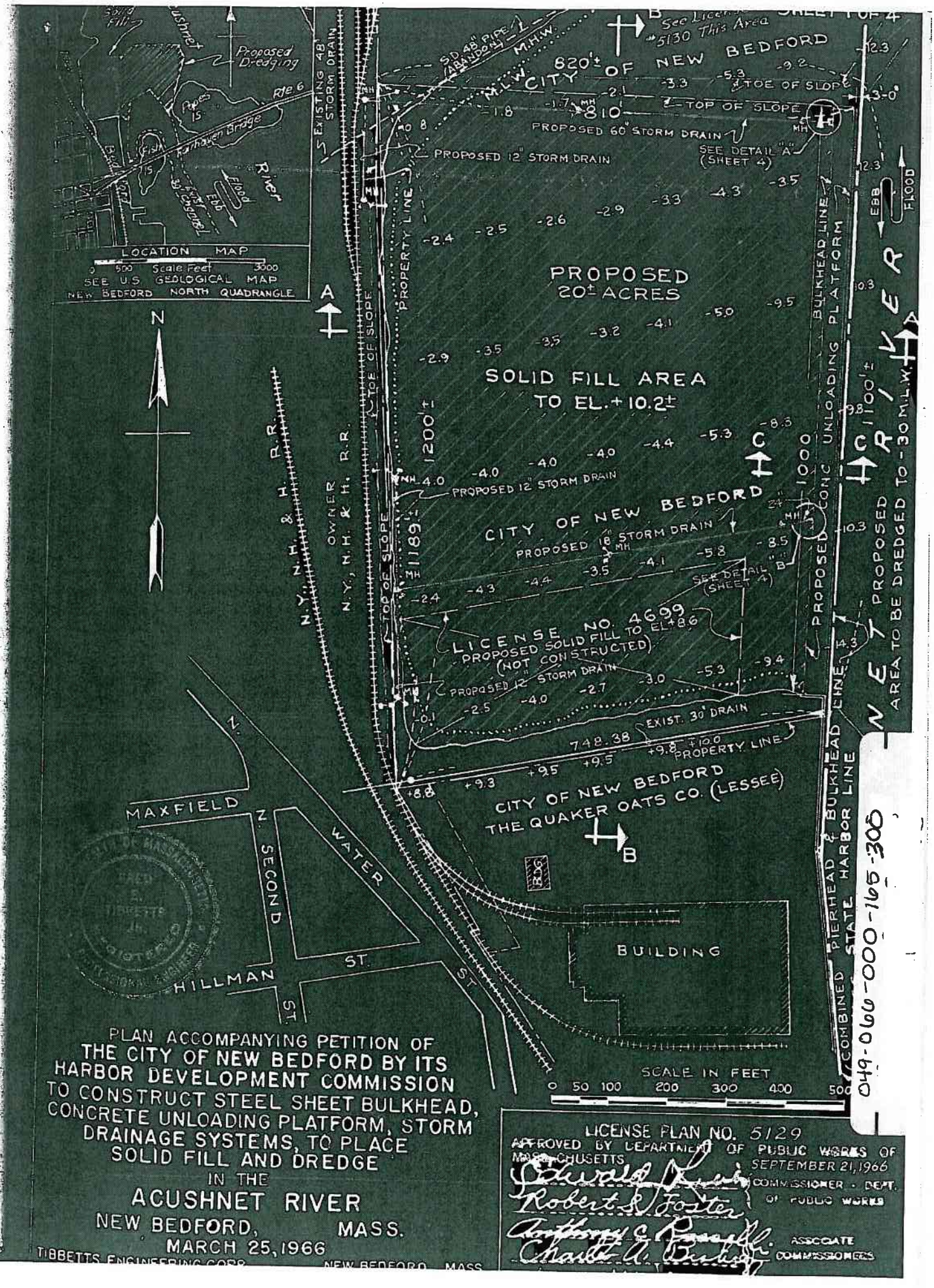

SECTION E-E


LICENSE PLAN NO. 5309

APPROVED BY DEPARTMENT OF PUBLIC WORKS

DECEMBER 27, 1967

049-066-000-165-300




PLAN ACCOMPANYING PETITION OF
THE CITY OF NEW BEDFORD BY ITS
HARBOR DEVELOPMENT COMMISSION
TO CONSTRUCT STEEL SHEET BULKHEAD,
CONCRETE UNLOADING PLATFORM, STORM
DRAINAGE SYSTEMS, TO PLACE
SOLID FILL AND DREDGE
IN THE
ACUSHNET RIVER
NEW BEDFORD, MASS.
MARCH 25, 1966

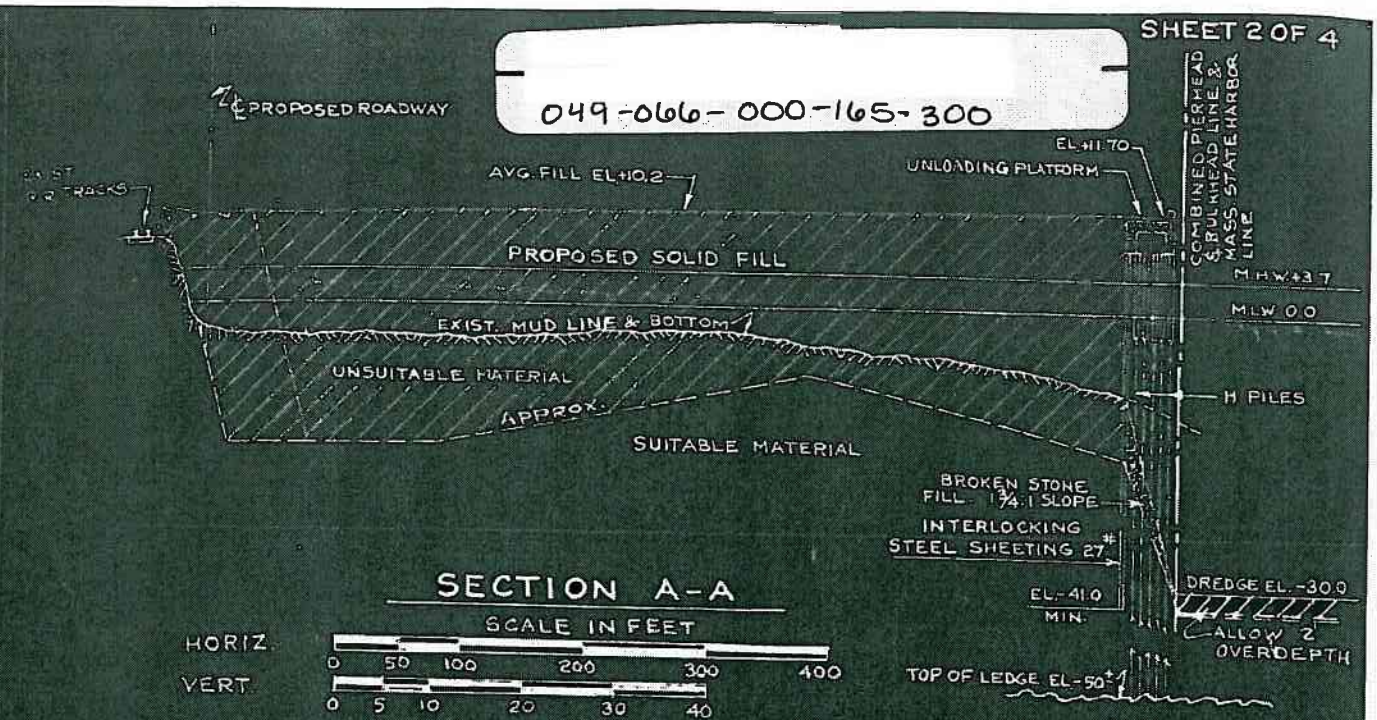
TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

LICENSE PLAN NO. 5129
APPROVED BY DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
SEPTEMBER 21, 1966
Edward Kelly
COMMISSIONER - DEPT. OF PUBLIC WORKS
Robert S. Foster
Anthony C. Braga
Charles A. Burbine
ASSOCIATE COMMISSIONERS

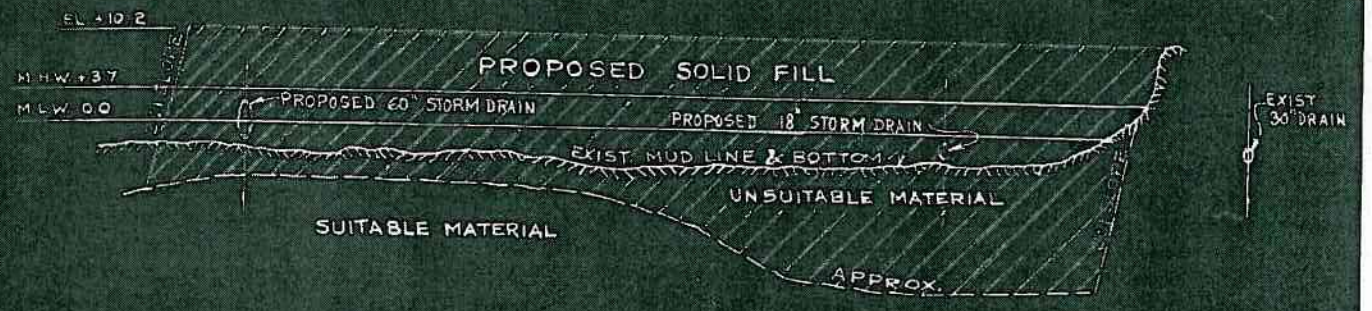
049-000-000-165-305

License No. _____

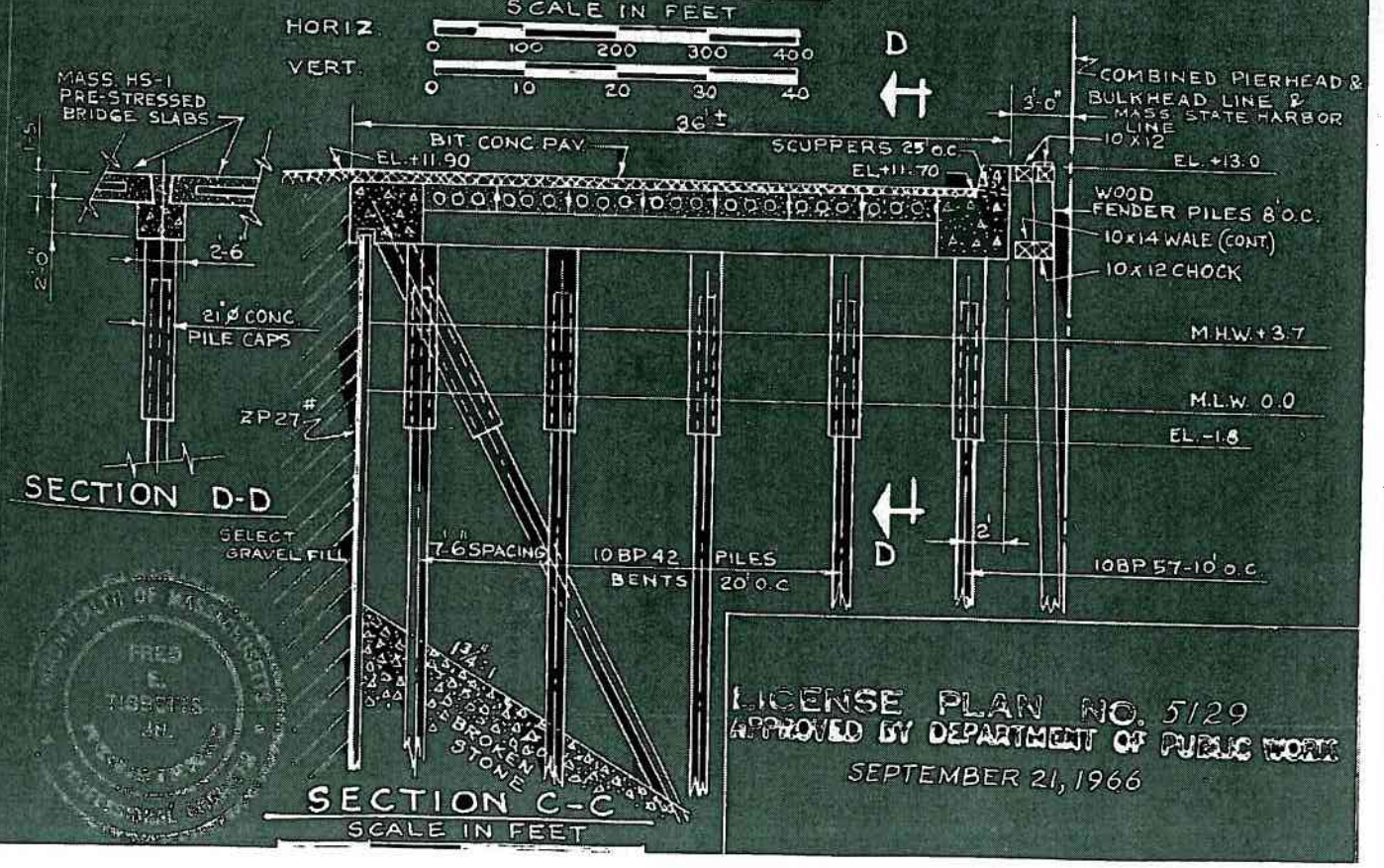
049-066-000-165-300




## SECTION A-A
SCALE IN FEET




## SECTION B-B
SCALE IN FEET

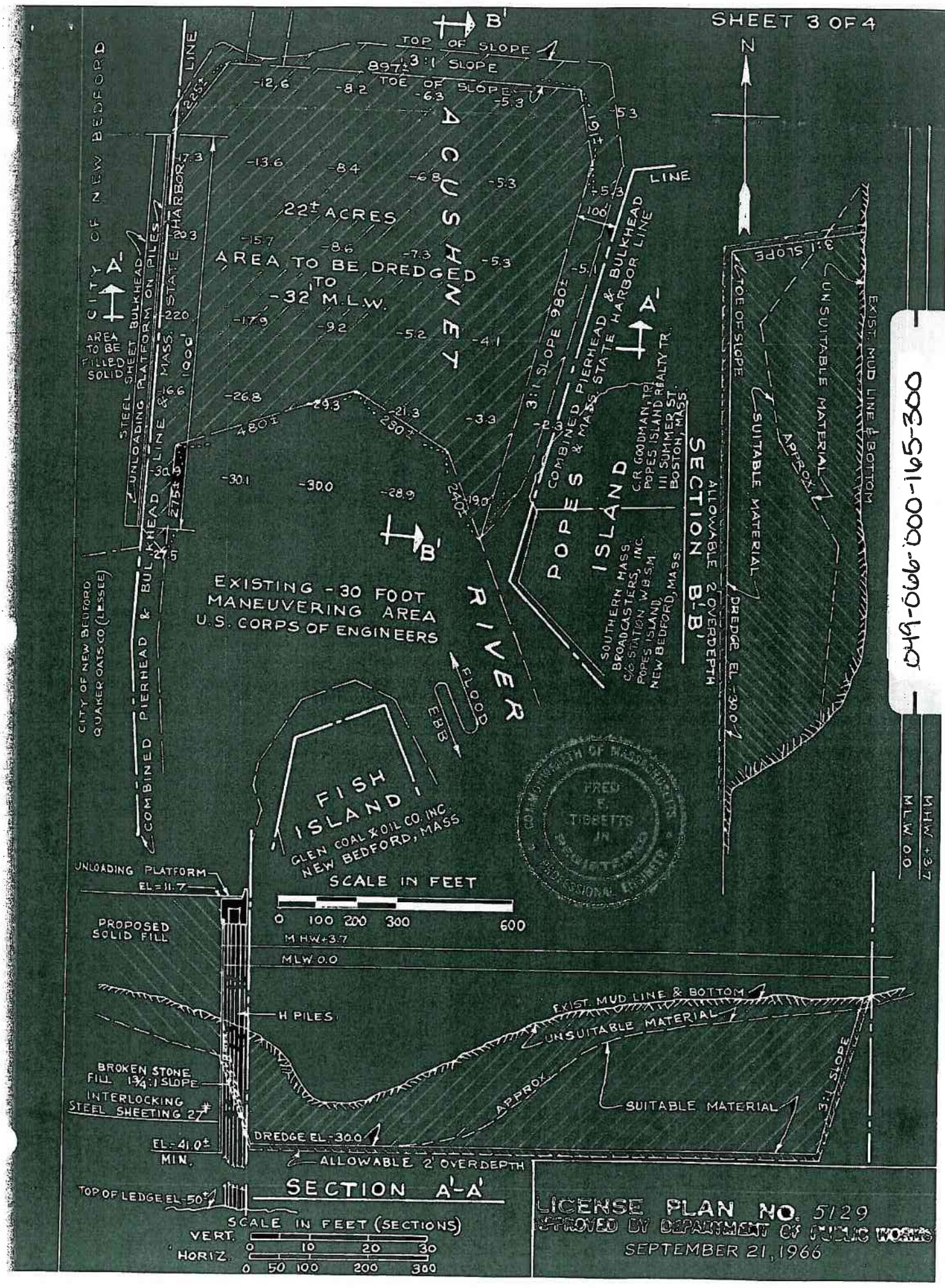


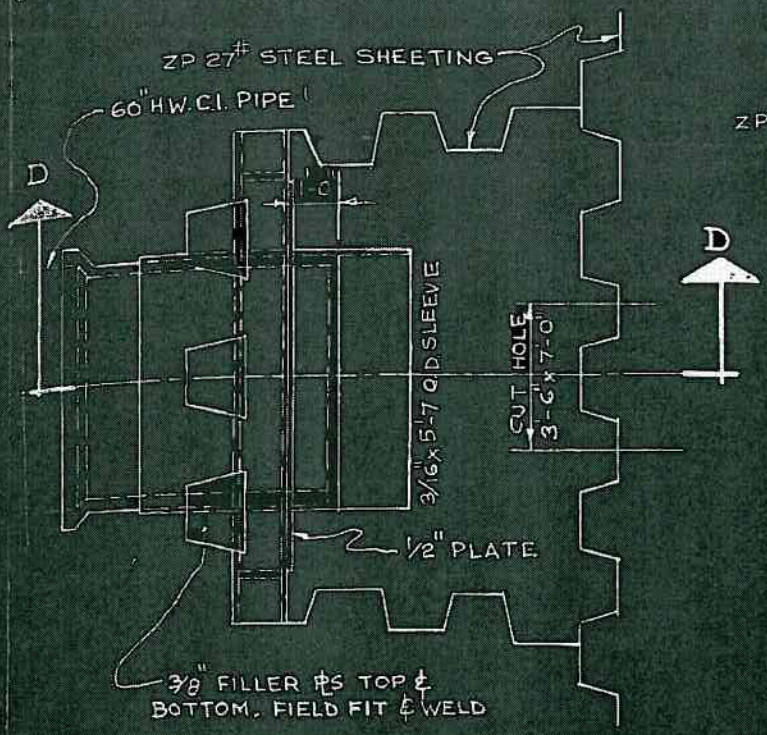

## SECTION D-D

## SECTION C-C
SCALE IN FEET

COMMONWEALTH OF MASSACHUSETTS
FRED E. TIBBETTS JR.
REGISTERED PROFESSIONAL ENGINEER

LICENSE PLAN NO. 5129
APPROVED BY DEPARTMENT OF PUBLIC WORKS
SEPTEMBER 21, 1966

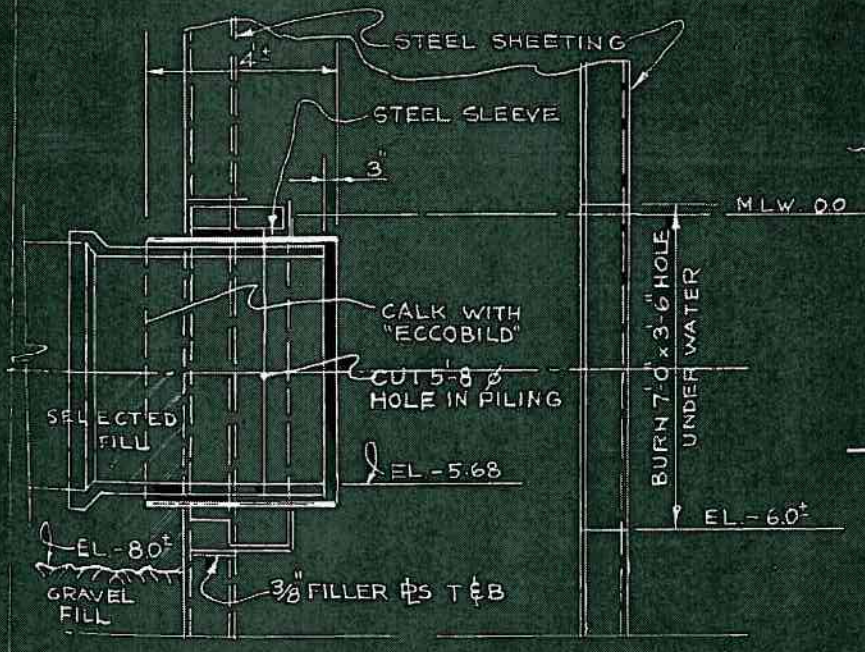

B'
TOP OF SLOPE
3:1 SLOPE
897±
TOE OF SLOPE
-12.6
-8.2
-6.3
-5.3
-5.3
-13.6
-8.4
-6.8
-5.3
22± ACRES
AREA TO BE DREDGED TO -32' M.L.W.
ACUSHNET RIVER
-15.7
-8.6
-7.3
-5.3
-17.9
-9.2
-5.2
-4.1
-26.8
-29.3
-21.3
-3.3
-30.1
-30.0
-28.9
-24.0
-19.0
-2.3
A'
A
CITY OF NEW BEDFORD
STEEL SHEET BULKHEAD
UNLOADING PLATFORM ON PILES
AREA TO BE FILLED SOLID
COMBINED PIERHEAD & BULKHEAD LINE & MASS. STATE HARBOR LINE
3:1 SLOPE 980±
COMBINED PIERHEAD & BULKHEAD LINE
STATE HARBOR LINE
POPES ISLAND
C.R. GOODMAN, TR.
POPES ISLAND REALTY TR.
111 SUMMER ST.
BOSTON, MASS.
SOUTHERN MASS. BROADCASTERS, INC.
C/O STATION WBSM
POPES ISLAND
NEW BEDFORD, MASS.
SECTION B-B'
ALLOWABLE 2' OVERDEPTH
DREDGE EL -30.0
EXIST. MUD LINE & BOTTOM
UNSUITABLE MATERIAL
APPROX.
SUITABLE MATERIAL
3:1 SLOPE
TOE OF SLOPE
EXISTING -30 FOOT MANEUVERING AREA U.S. CORPS OF ENGINEERS
CITY OF NEW BEDFORD
QUAKER OATS CO. (LESSEE)
COMBINED PIERHEAD & BULKHEAD LINE
FLOOD
EBB
FISH ISLAND
GLEN COAL & OIL CO. INC.
NEW BEDFORD, MASS.
COMMONWEALTH OF MASSACHUSETTS
FRED E. TIBBETTS JR.
REGISTERED
PROFESSIONAL ENGINEER
SCALE IN FEET
0 100 200 300 600
UNLOADING PLATFORM EL=11.7
PROPOSED SOLID FILL
MHW+3.7
MLW 0.0
H PILES
EXIST. MUD LINE & BOTTOM
UNSUITABLE MATERIAL
APPROX.
BROKEN STONE FILL 1¾:1 SLOPE
INTERLOCKING STEEL SHEETING 27#
EL -41.0± MIN.
DREDGE EL -30.0
ALLOWABLE 2' OVERDEPTH
SUITABLE MATERIAL
3:1 SLOPE
TOP OF LEDGE EL -50±
SECTION A'-A'
SCALE IN FEET (SECTIONS)
VERT. 0 10 20 30
HORIZ. 0 50 100 200 300
LICENSE PLAN NO. 5129
APPROVED BY DEPARTMENT OF PUBLIC WORKS
SEPTEMBER 21, 1966
049-066-000-165-300
MHW +3.7
MLW 0.0



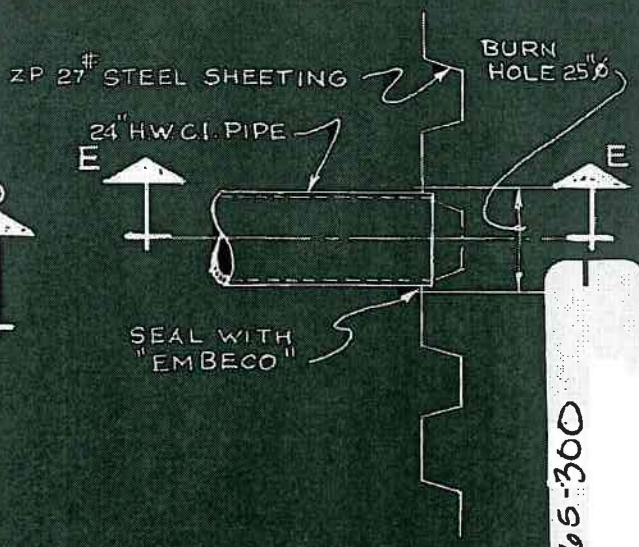

DETAIL " A "

SCALE IN FEET

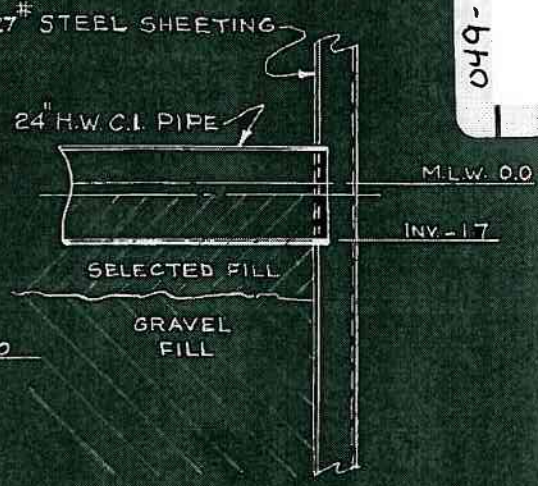
0 1 2 3 4 8




SECTION D-D




DETAIL " B "




SECTION E-E

049-060-600-165-300

LICENSE PLATE NO. 5129
APPROVED BY DEPARTMENT OF PUBLIC WORKS
SEPTEMBER 21, 1966

**TOWN: NEW BEDFORD**
**SOURCE: US ACOE**
**LOCATION: CONCORD, MA**
**DATE OF RESEARCH: AUGUST 2007**

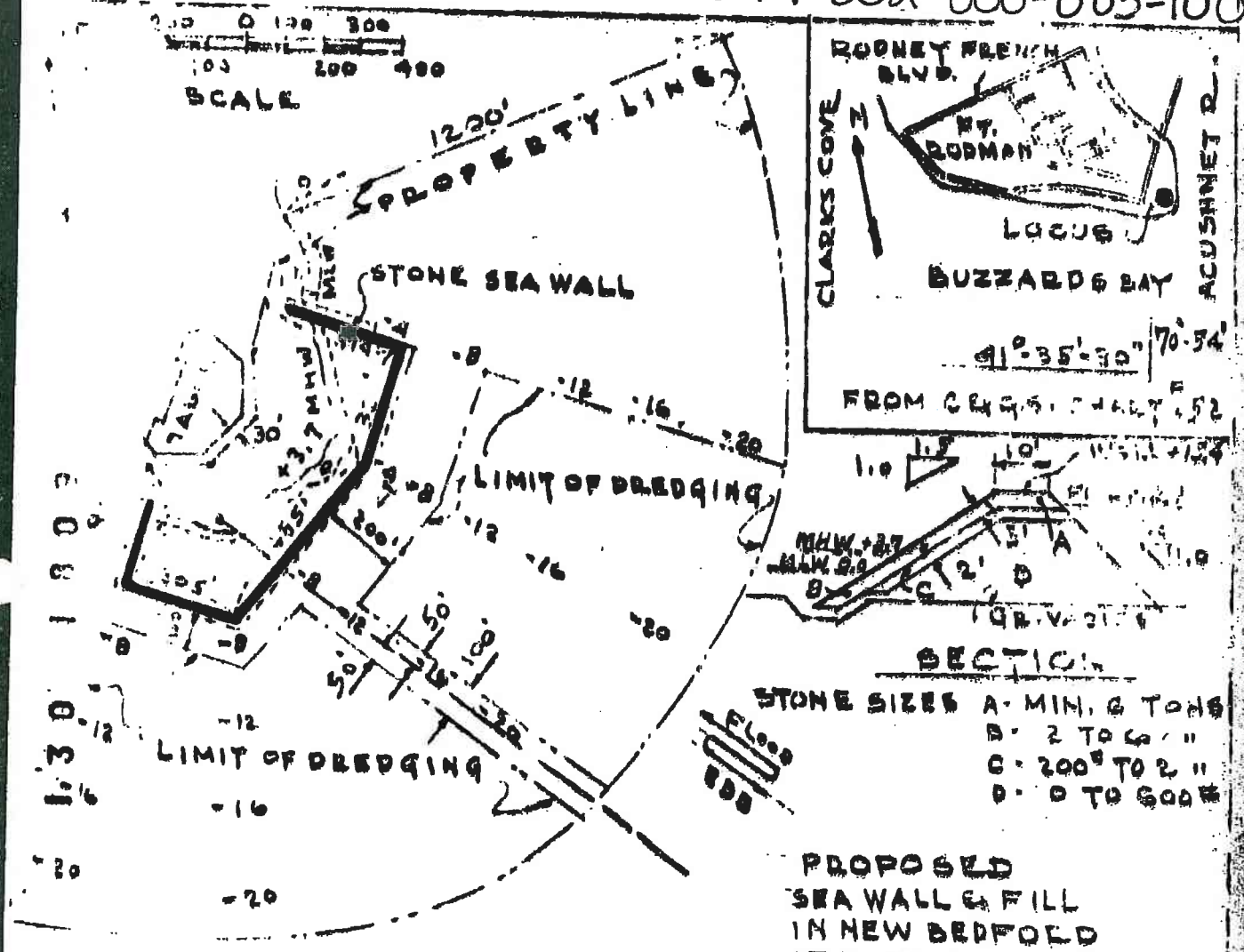
| BCE Structure No | Document No | Contract/ Drawing Number | Entity | Municipality | Date | Title | Sheets | Location | Description |
|---|---|---|---|---|---|---|---|---|---|
| 049-002-000-003-100 | 049-002-000-003-100-COE1A | 70-14 | USACE | New Bedford | May 1969 | Proposed Seawall and Fill in New Bedford at Fort Rodman County of Bristol, State of Massachusetts | 2 | Fort Rodman | Seawall and Fill |
| 049-002-000-004-300 | 049-002-000-004-300-COE3A | 200302385 | USACE | New Bedford | September 2003 | City of New Bedford, Massachusetts - Fort Taber Park - Pier Restoration - ACOE PGP II Permit Application | 8 | Fort Taber Pier | Pier |
| 049-004-000-002-300 | 049-004-000-002-300-COE3A | 59-21 | USACE | New Bedford | October 1958 | Proposed Groin and Sand Fill Rodney French Boulevard (East) Vicinity of South City Pier - New Bedford Harbor, New Bedford, MA - Application by the DPW of Massachusetts Division of Waterways | 1 | City Pier on Rodney French Boulevard | Groin |
| 049-004-000-006-100 | 049-004-000-006-100-COE1A | 66-127 | USACE | New Bedford | March 1966 | Proposed Shore Improvements - Seawall, Sandfill and Groin - Rodney French Boulevard East - New Bedford Harbor, New Bedford - Application by the DPW of Massachusetts - Division of Waterways | 1 | South of City Pier on Rodney French Boulevard East | Groin |
| 049-007-000-112-100 | 049-007-000-112-100-COE1A | 57-303 | USACE | New Bedford | September 1957 | Proposed Boat Ramp - Rodney French Boulevard West - Clark Cove, New Bedford, MA - Application by DPW of Massachusetts - Division of Waterways | 2 | Rodney French Boulevard West | Boat Ramp |
| 049-007-000-112-100 | 049-007-000-112-100-COE1B | 78-326 | USACE | New Bedford | April 1977 | Proposed Shore Protection and Recreational Improvements in Clark's Cove - New Bedford, County of Bristol, State of Massachusetts - Application by the City of New Bedford | 5 | Rodney French Boulevard West | Seawalls and Groins |
| 049-007-000-112-200 | 049-007-000-112-200-COE2A | 57-303 | USACE | New Bedford | September 1957 | Proposed Boat Ramp - Rodney French Boulevard West - Clark Cove, New Bedford, MA - Application by DPW of Massachusetts - Division of Waterways | 2 | Rodney French Boulevard West | Boat Ramp |
| 049-007-000-112-200 | 049-007-000-112-200-COE2B | 78-326 | USACE | New Bedford | April 1977 | Proposed Shore Protection and Recreational Improvements in Clark's Cove - New Bedford, County of Bristol, State of Massachusetts - Application by the City of New Bedford | 5 | Rodney French Boulevard - West | Seawalls and Groins |
| 049-007-000-112-300 | 049-007-000-112-300-COE3A | 57-303 | USACE | New Bedford | September 1957 | Proposed Boat Ramp - Rodney French Boulevard West - Clark Cove, New Bedford, MA - Application by DPW of Massachusetts - Division of Waterways | 2 | Rodney French Boulevard - West | Boat Ramp |
| 049-007-000-112-300 | 049-007-000-112-300-COE3B | 78-326 | USACE | New Bedford | April 1977 | Proposed Shore Protection and Recreational Improvements in Clark's Cove - New Bedford, County of Bristol, State of Massachusetts - Application by the City of New Bedford | 5 | Rodney French Boulevard - West | Seawalls and Groins |
| 049-009-000-286-100 | 049-009-000-286-100-COE1A | 78-326 | USACE | New Bedford | April 1977 | Proposed Shore Protection and Recreational Improvements in Clark's Cove - New Bedford, County of Bristol, State of Massachusetts - Application by the City of New Bedford | 5 | Rodney French Boulevard - West | Seawalls and Groins |
| 049-009-000-286-200 | 049-009-000-286-200-COE2A | 58-258 | USACE | New Bedford | May 1958 | Proposed Sand Fill and Groins - Rodney French Boulevard West - Clark Cove, New Bedford, Massachusetts - Application by the DPW of Massachusetts - Division of Waterways | 4 | Rodney French Boulevard - West | Groins and Sand Fill |
| 049-009-000-286-200 | 049-009-000-286-200-COE2B | 78-326 | USACE | New Bedford | April 1977 | Proposed Shore Protection and Recreational Improvements in Clark's Cove - New Bedford, County of Bristol, State of Massachusetts - Application by the City of New Bedford | 5 | Rodney French Boulevard - West | Seawalls and Groins |
| 049-011-000-030-400 | 049-011-000-030-400-COE4A | 58-258 | USACE | New Bedford | May 1958 | Proposed Sand Fill and Groins - Rodney French Boulevard West - Clark Cove, New Bedford, Massachusetts - Application by the DPW of Massachusetts - Division of Waterways | 4 | Rodney French Boulevard - West | Groins and Sand Fill |
| 049-011-000-030-400 | 049-011-000-030-400-COE4B | 78-326 | USACE | New Bedford | April 1977 | Proposed Shore Protection and Recreational Improvements in Clark's Cove - New Bedford, County of Bristol, State of Massachusetts - Application by the City of New Bedford | 5 | Rodney French Boulevard - West | Seawalls and Groins |
| 049-012-000-247-100 | 049-012-000-247-100-COE1A | 82-095 | USACE | New Bedford | March 1981 | Proposed Timber Pier, Solid Fill and Parking Facilities in New Bedford Outer Harbor at New Bedford, County of Bristol, State of MA, Application by City of New Bedford | 3 | Fredrick Street | Riprap |
| 049-012-000-247-200 | 049-012-000-247-200-COE2A | 82-095 | USACE | New Bedford | March 1981 | Proposed Timber Pier, Solid Fill and Parking Facilities in New Bedford Outer Harbor at New Bedford, County of Bristol, State of MA, Application by City of New Bedford | 3 | Fredrick Street | Riprap |
| 049-013-000-055-200 | 049-013-000-055-200-COE2A | 78-326 | USACE | New Bedford | April 1977 | Proposed Shore Protection and Recreational Improvements in Clark's Cove - New Bedford, County of Bristol, State of Massachusetts - Application by the City of New Bedford | 5 | Rodney French Boulevard - West | Groins and Seawalls |

TOWN: NEW BEDFORD
SOURCE: US ACOE
LOCATION: CONCORD, MA
DATE OF RESEARCH: AUGUST 2007

| BCE Structure No | Document No | Contract/ Drawing Number | Entity | Municipality | Date | Title | Sheets | Location | Description |
|---|---|---|---|---|---|---|---|---|---|
| 049-053-000-120-100 | 049-053-000-120-100-COE1A | 77-212 | USACE | New Bedford | May 1977 | Proposed Bulkhead, Solid Fill, Dredging and Demolition in New Bedford Harbor at New Bedford, County of Bristol, Massachusetts - Application by City of New Bedford | 2 | North of State Pier on Mac Arthur Drive | Fill with Bulkhead |
| 049-066-000-165-100 | 049-066-000-165-100-COE1A | 79-276 | USACE | New Bedford | July 1979 | Proposed Steel Sheet Pile Bulkhead, Fender Piles, Storm Drainage, Placement of Solid Fill and Dredging in New Bedford Harbor | 3 | Costa Avenue | Proposed Fill with Bulkhead |

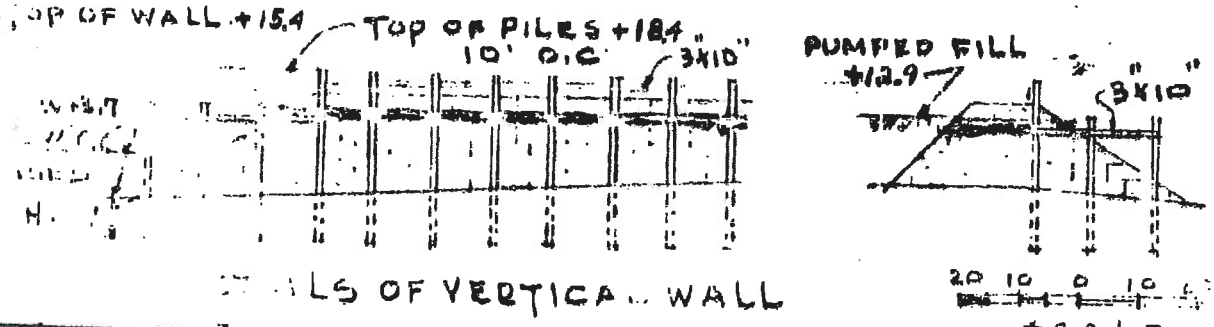
053 1176

049-002-000-003-100

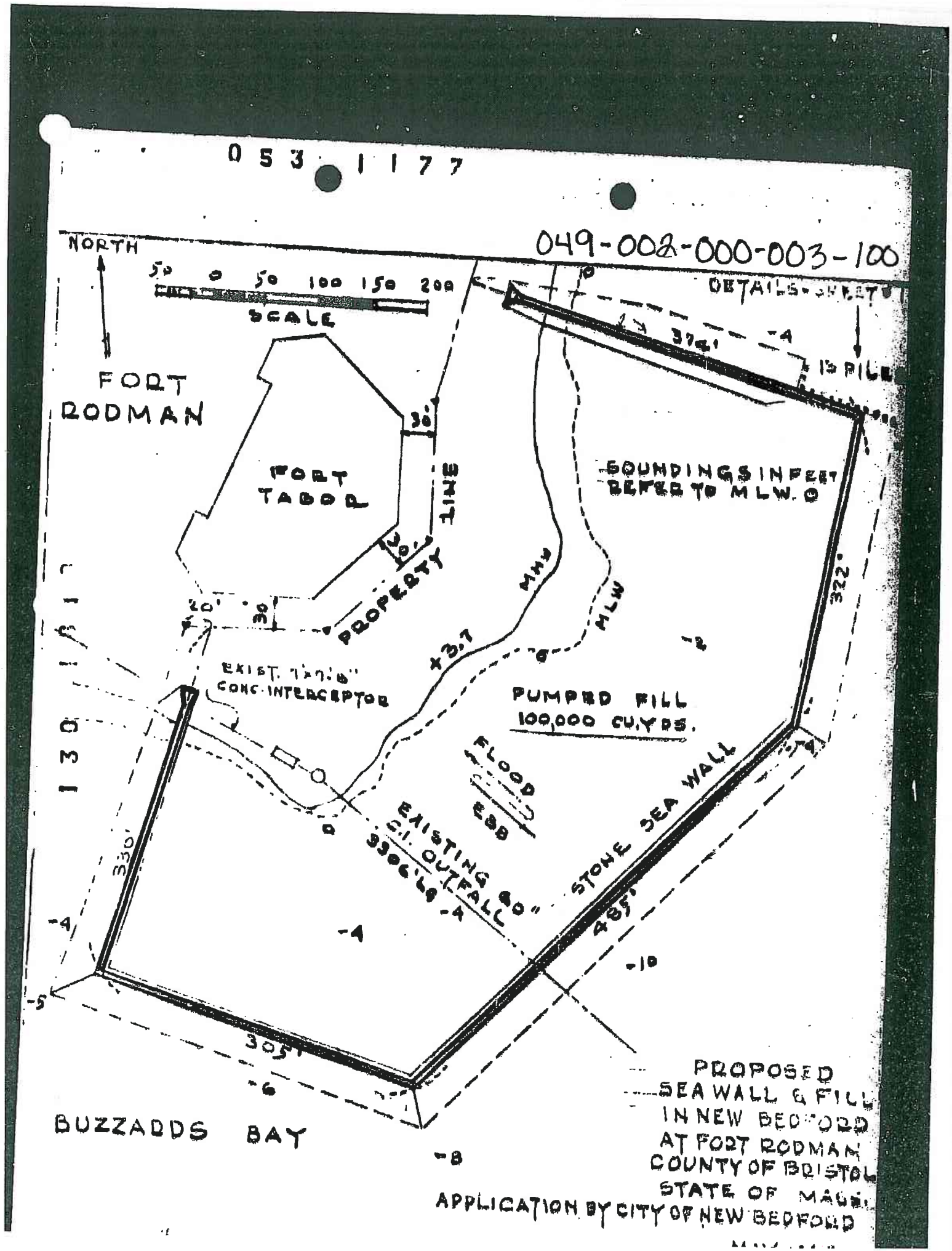



PROPOSED
SEA WALL & FILL
IN NEW BEDFORD
AT FORT RODMAN
COUNTY OF BRISTOL
STATE OF MASS.
APPLICATION BY CITY OF NEW BEDFORD
MAY 1969

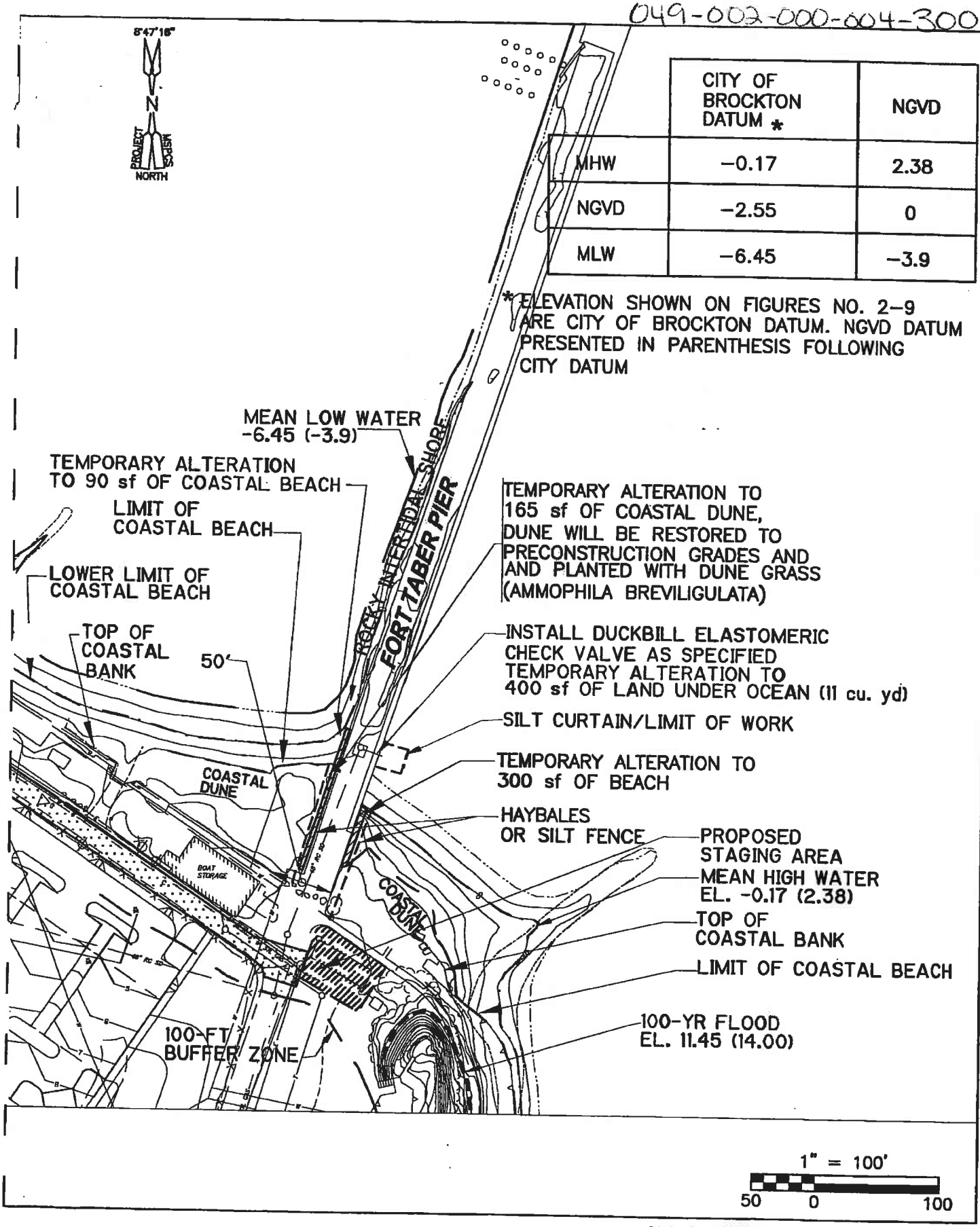
SOUNDINGS & ELEV. IN
FEET REFER TO MLW = 0.0




DETAILS OF VERTICAL WALL


053 1177
049-002-000-003-100
NORTH
50 0 50 100 150 200
SCALE
FORT RODMAN
FORT TABOR
PROPERTY LINE
SOUNDINGS IN FEET REFER TO M.L.W.D.
DETAILS SHEET
EXIST. 72"ø CONC. INTERCEPTOR
PUMPED FILL 100,000 CU.YDS.
FLOOD
EBB
EXISTING 60" C.I. OUTFALL
STONE SEA WALL
MHW
MLW
+3.7
330'
305'
485'
322'
130'
BUZZARDS BAY
PROPOSED SEA WALL & FILL IN NEW BEDFORD AT FORT RODMAN COUNTY OF BRISTOL STATE OF MASS.
APPLICATION BY CITY OF NEW BEDFORD

049-002-000-004-300




| | CITY OF BROCKTON DATUM * | NGVD |
|---|---|---|
| MHW | −0.17 | 2.38 |
| NGVD | −2.55 | 0 |
| MLW | −6.45 | −3.9 |

* ELEVATION SHOWN ON FIGURES NO. 2–9 ARE CITY OF BROCKTON DATUM. NGVD DATUM PRESENTED IN PARENTHESIS FOLLOWING CITY DATUM

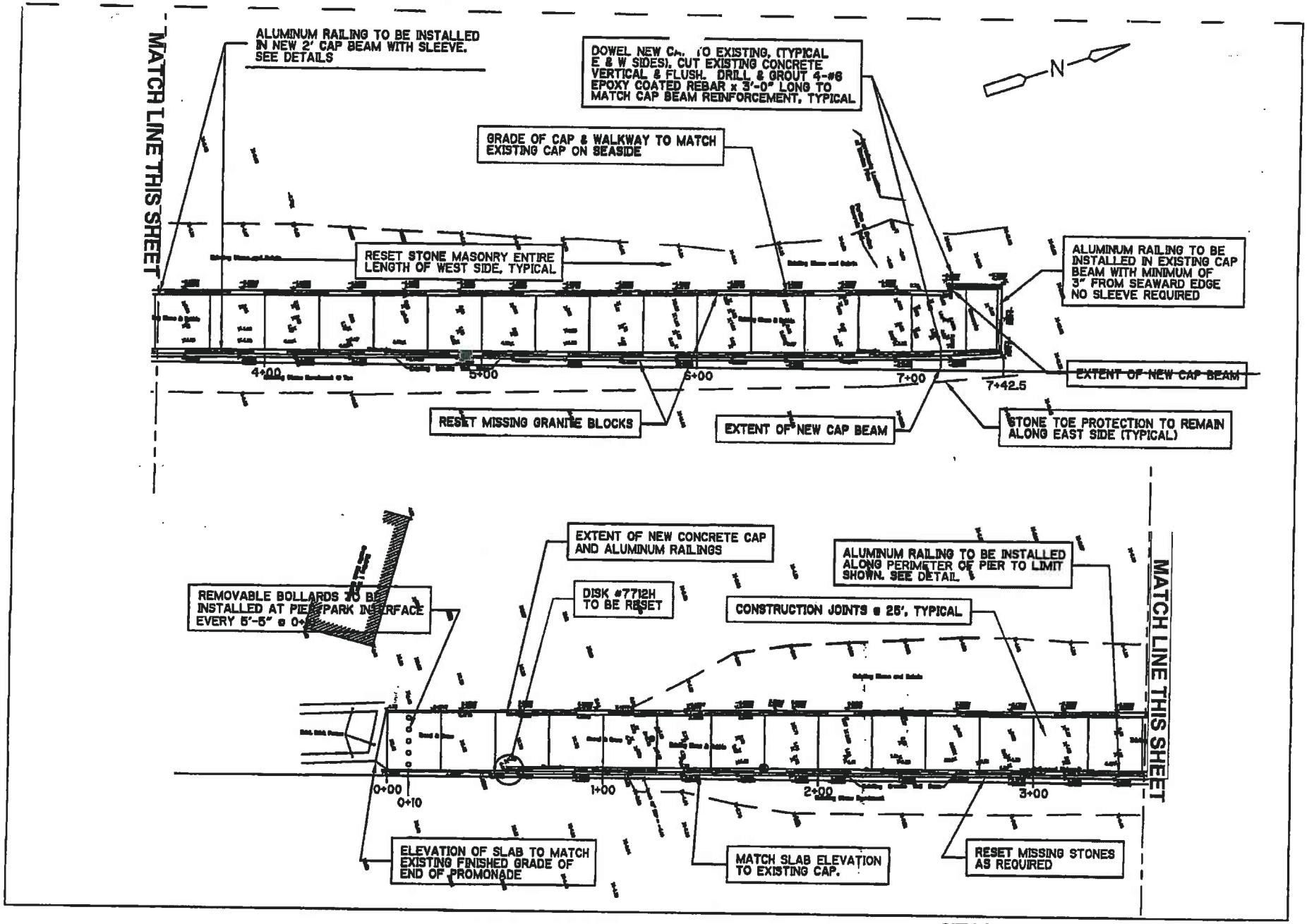
CDM

CITY OF NEW BEDFORD, MASSACHUSETTS
FORT TABER PARK - PIER RESTORATION

# ACOE PGP II PERMIT APPLICATION SITE PLAN

SEPTEMBER 2003

Figure No. 2




P:\0309-10280\PIER\CIVIL\estpl002

CITY OF NEW BEDFORD, MASSACHUSETTS
FORT TABER PARK - PIER RESTORATION

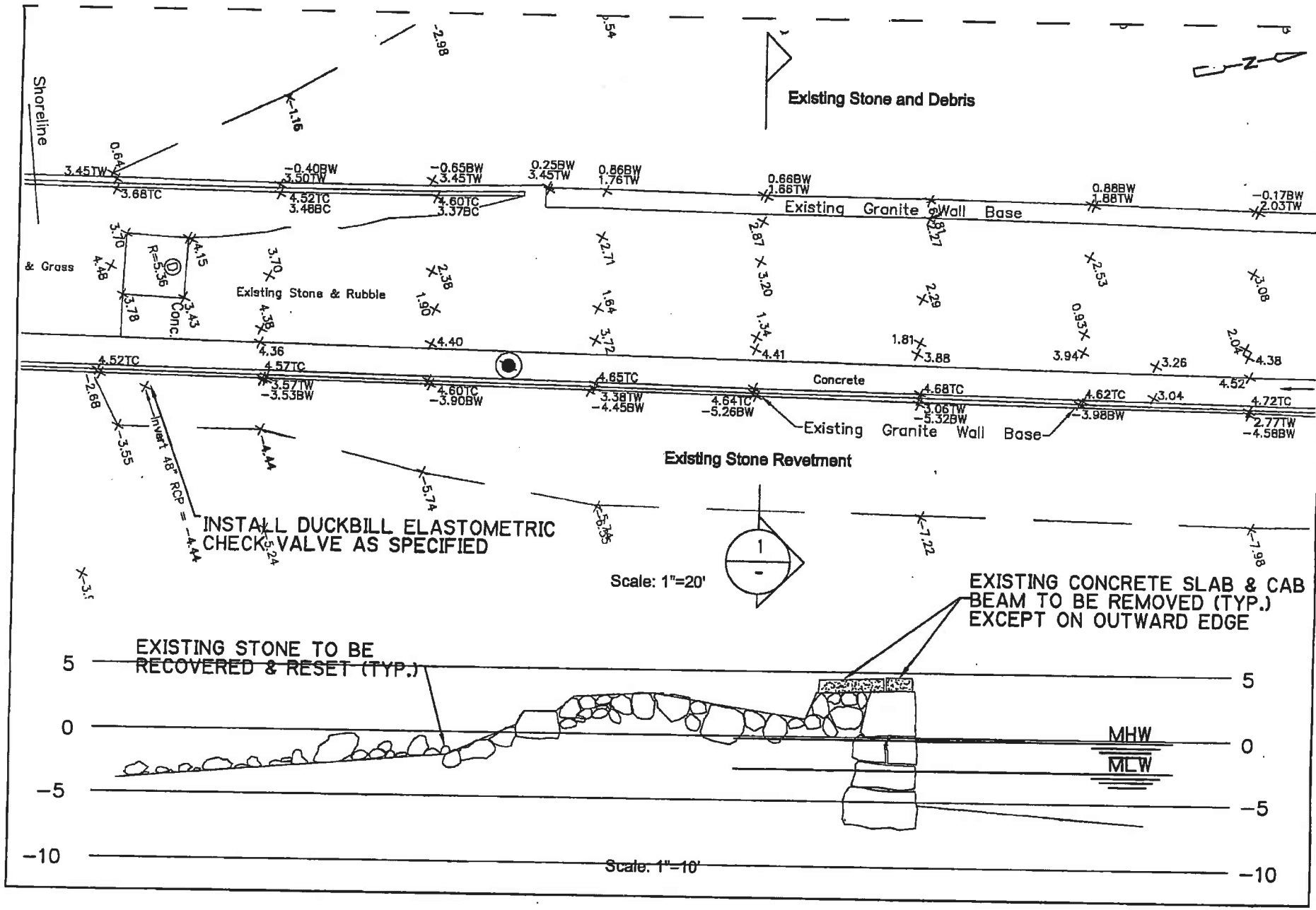
# ACOE PGP II PERMIT APPLICATION

## PIER PLAN

SEPTEMBER 2003
Figure No. 3

CDM

049-002-000-004-300




P:\CAM_CIVL\0309\PIER\8654PIER

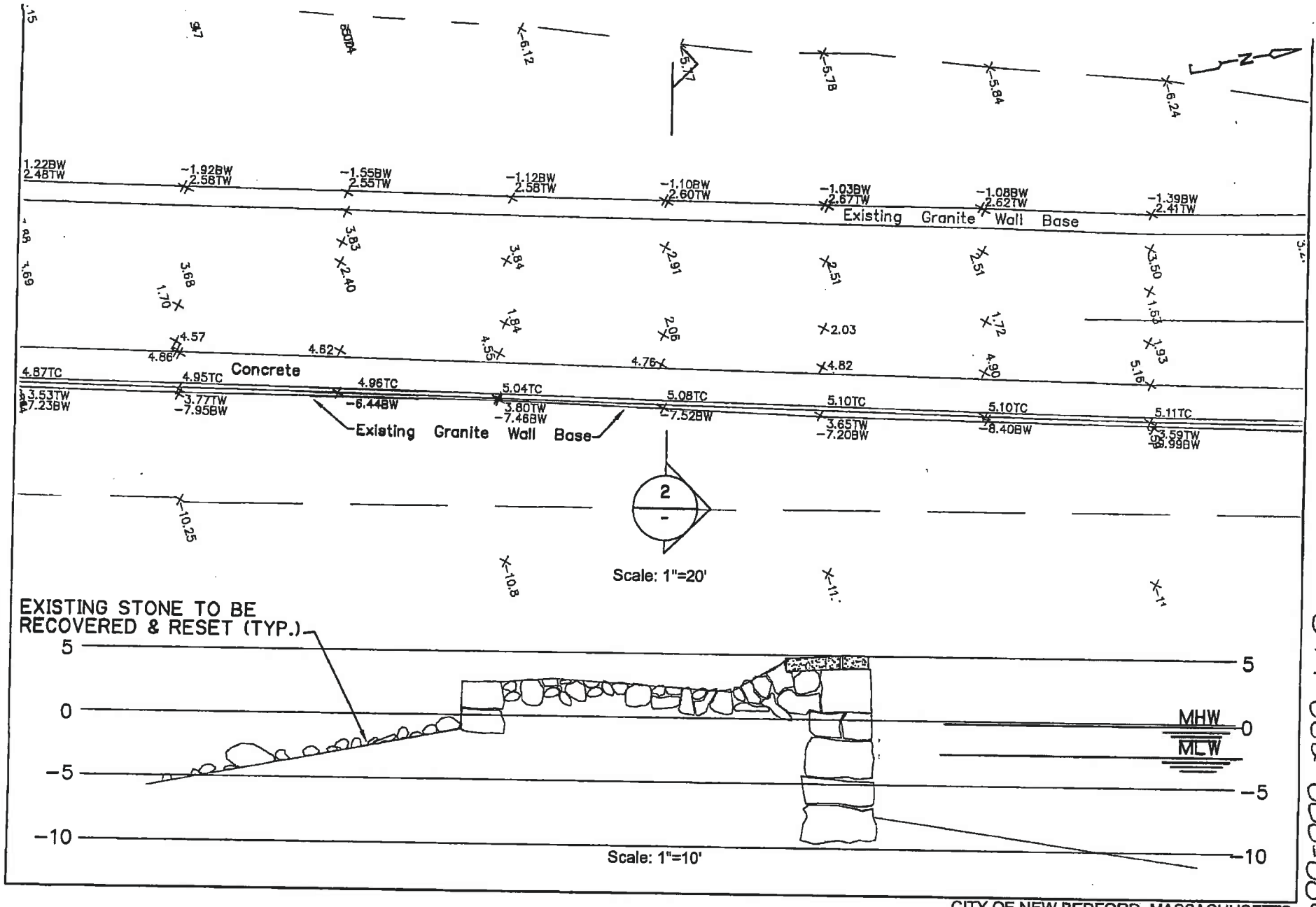
CITY OF NEW BEDFORD, MASSACHUSETTS
FORT TABER PARK - PIER RESTORATION

# ACOE PGP II PERMIT APPLICATION PLAN AND SECTION 1

CDM

SEPTEMBER 2003
Figure No. 4

049-002-000-004-300




P:\CAM_CIVIL\0309\PIER\9854PIER

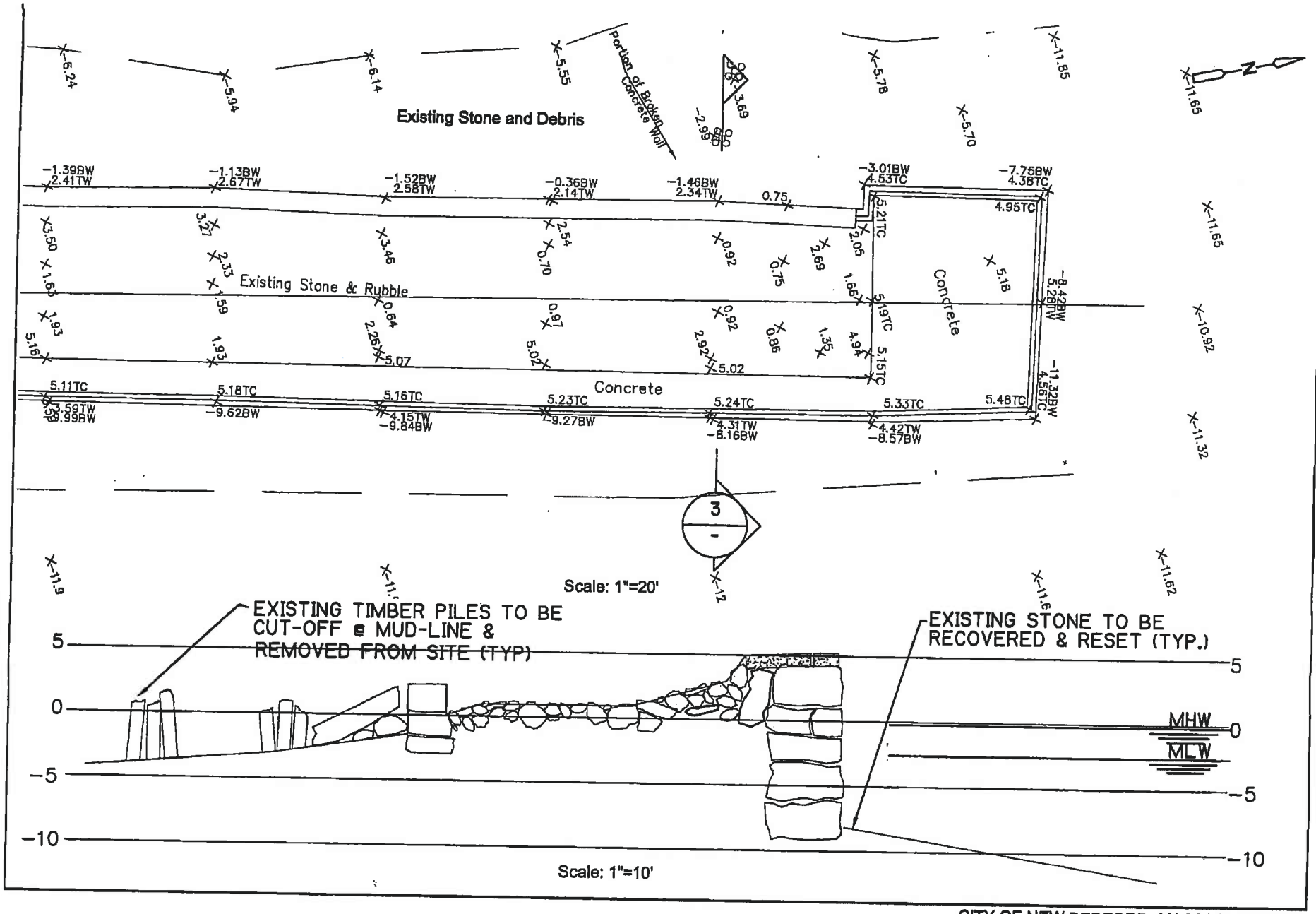
CITY OF NEW BEDFORD, MASSACHUSETTS
FORT TABER PARK - PIER RESTORATION

# ACOE PGP II PERMIT APPLICATION
# PLAN AND SECTION 2

CDM

SEPTEMBER 2003
Figure No. 5

049-002-000-004-300




P:\CAM_CIVL\0309\PIER\8654PIER

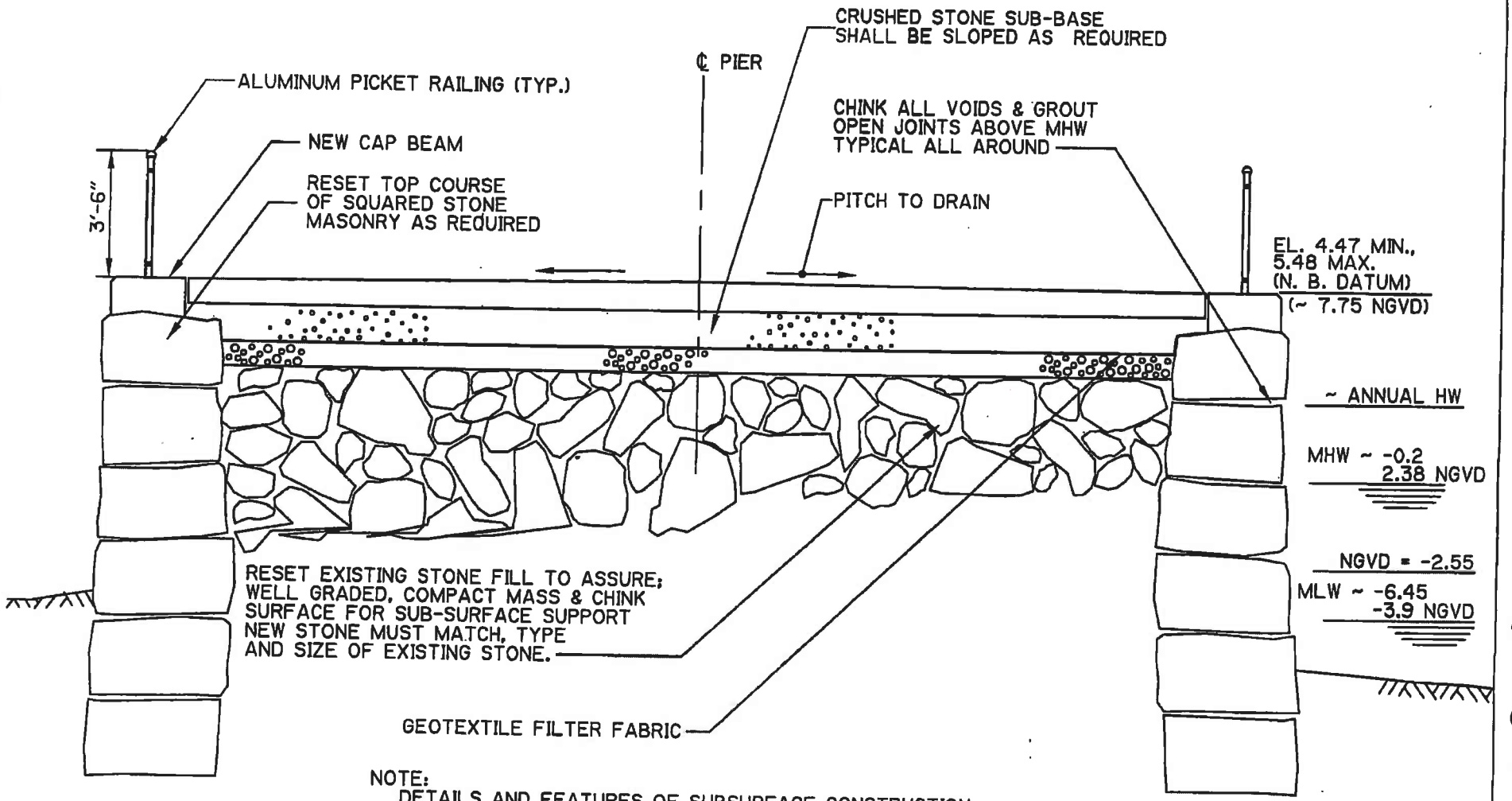
CITY OF NEW BEDFORD, MASSACHUSETTS
FORT TABER PARK - PIER RESTORATION

## ACOE PGP II PERMIT APPLICATION
## PLAN AND SECTION 3

CDM

SEPTEMBER 2003
Figure No. 6

049-002-000-004-200




NOTE:
DETAILS AND FEATURES OF SUBSURFACE CONSTRUCTION ARE UNKNOWN.

# TYPICAL SECTION
# LOOKING OFFSHORE

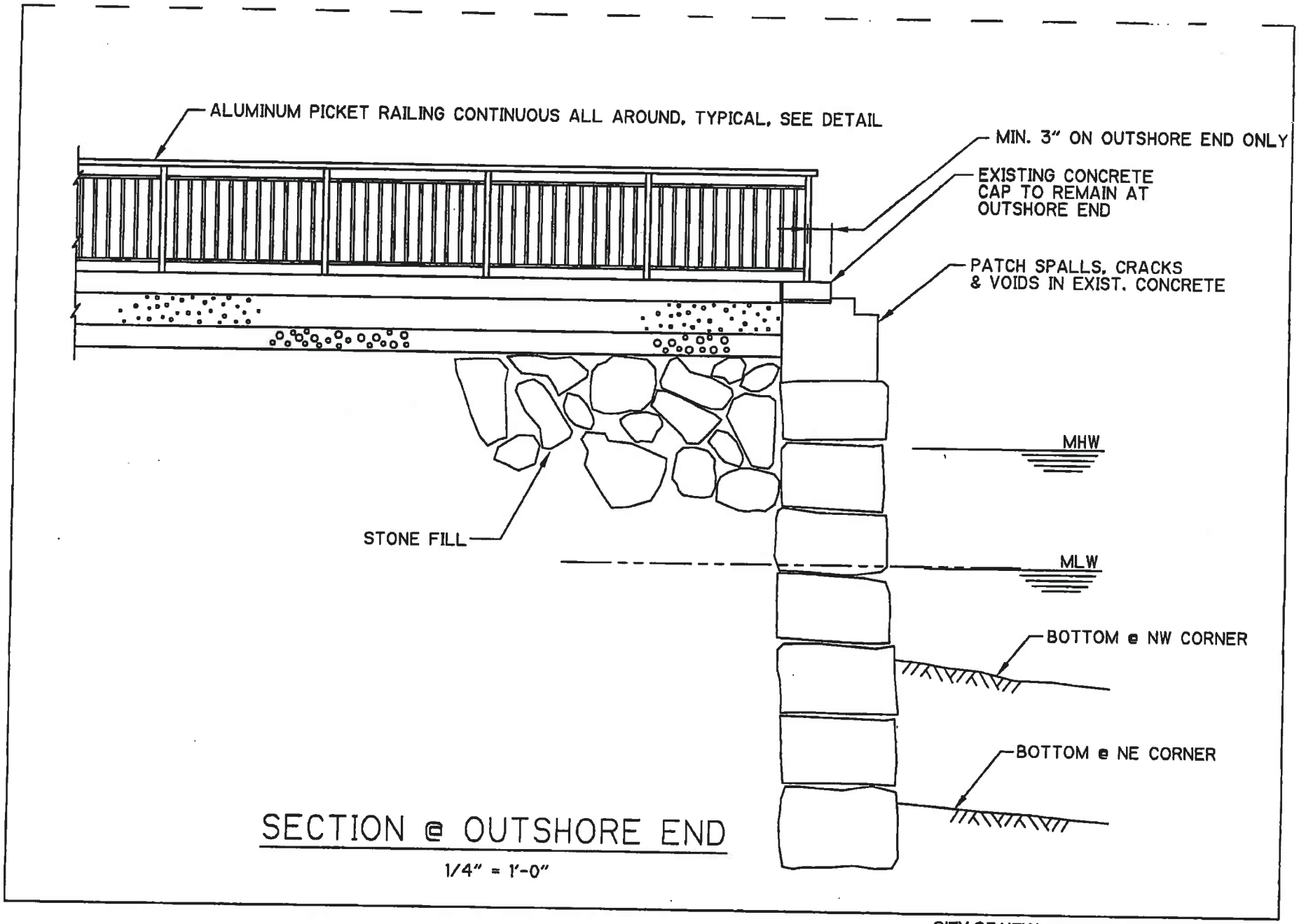
1/4" = 1'-0"

P:\CAM_GWL\0309\PIER\CSTPL002

049-002-000-004-300

CITY OF NEW BEDFORD, MASSACHUSETTS
FORT TABER PARK - PIER RESTORATION
**ACOE PGP II PERMIT APPLICATION**
**PIER SECTION 2**
SEPTEMBER 2003
Figure No. 7

CDM




## SECTION @ OUTSHORE END

1/4" = 1'-0"

p:\0309-10280\PIER\CIVIL\cstpl002

CITY OF NEW BEDFORD, MASSACHUSETTS
FORT TABER PARK - PIER RESTORATION

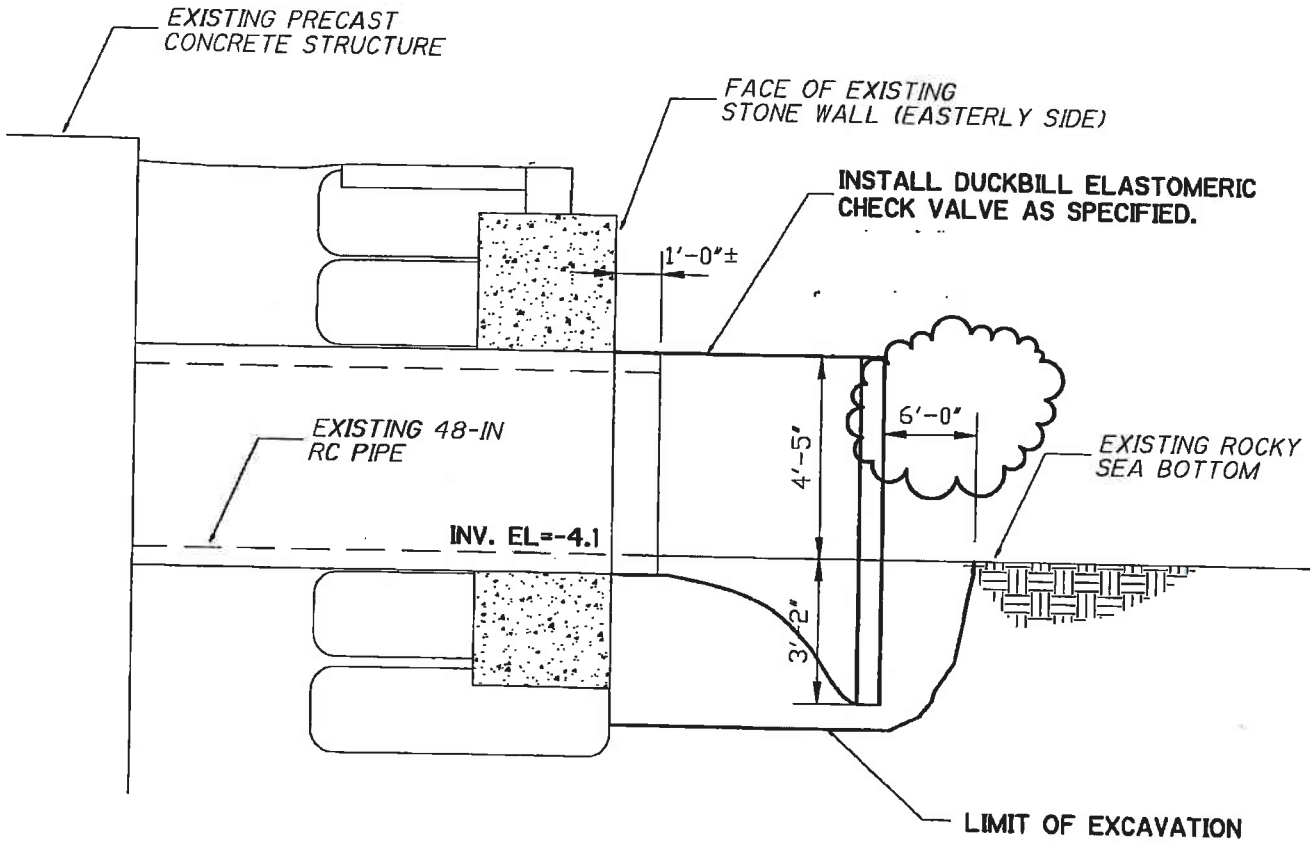
**ACOE PGP II PERMIT APPLICATION**
**PIER SECTION 2**

SEPTEMBER 2003
Figure No. 8

CDM

049-002-000-001-300

049-002-000-004-300




# 48–IN DUCKBILL ELASTOMERIC CHECK VALVE INSTALLATION

N.T.S

CDM

CITY OF NEW BEDFORD, MASSACHUSETTS
FORT TABER PARK - PIER RESTORATION

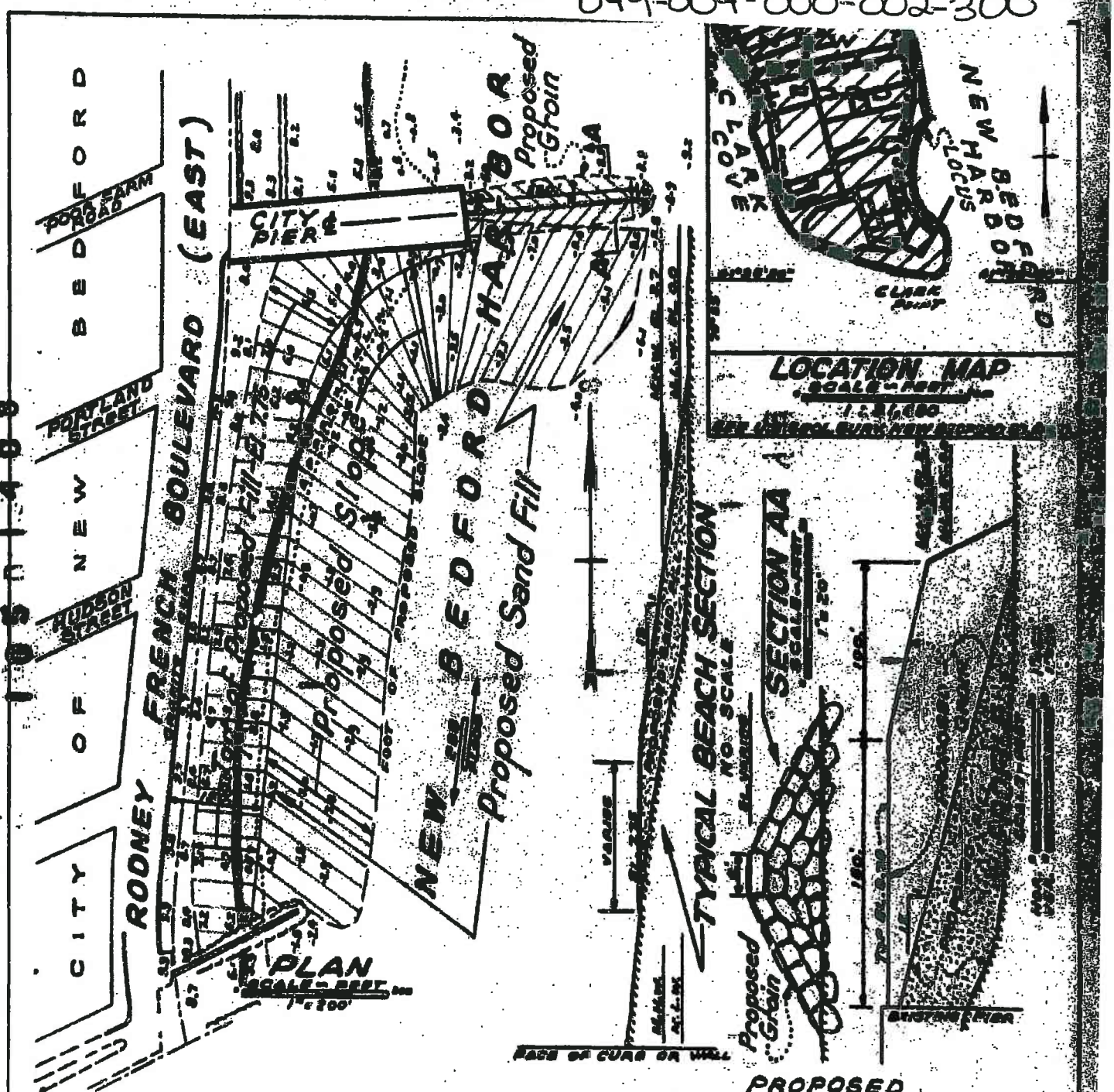
**DUCKBILL CHECK VALVE**

SEPTEMBER 2003

Figure No. 9

083 0377

049-004-000-002-300

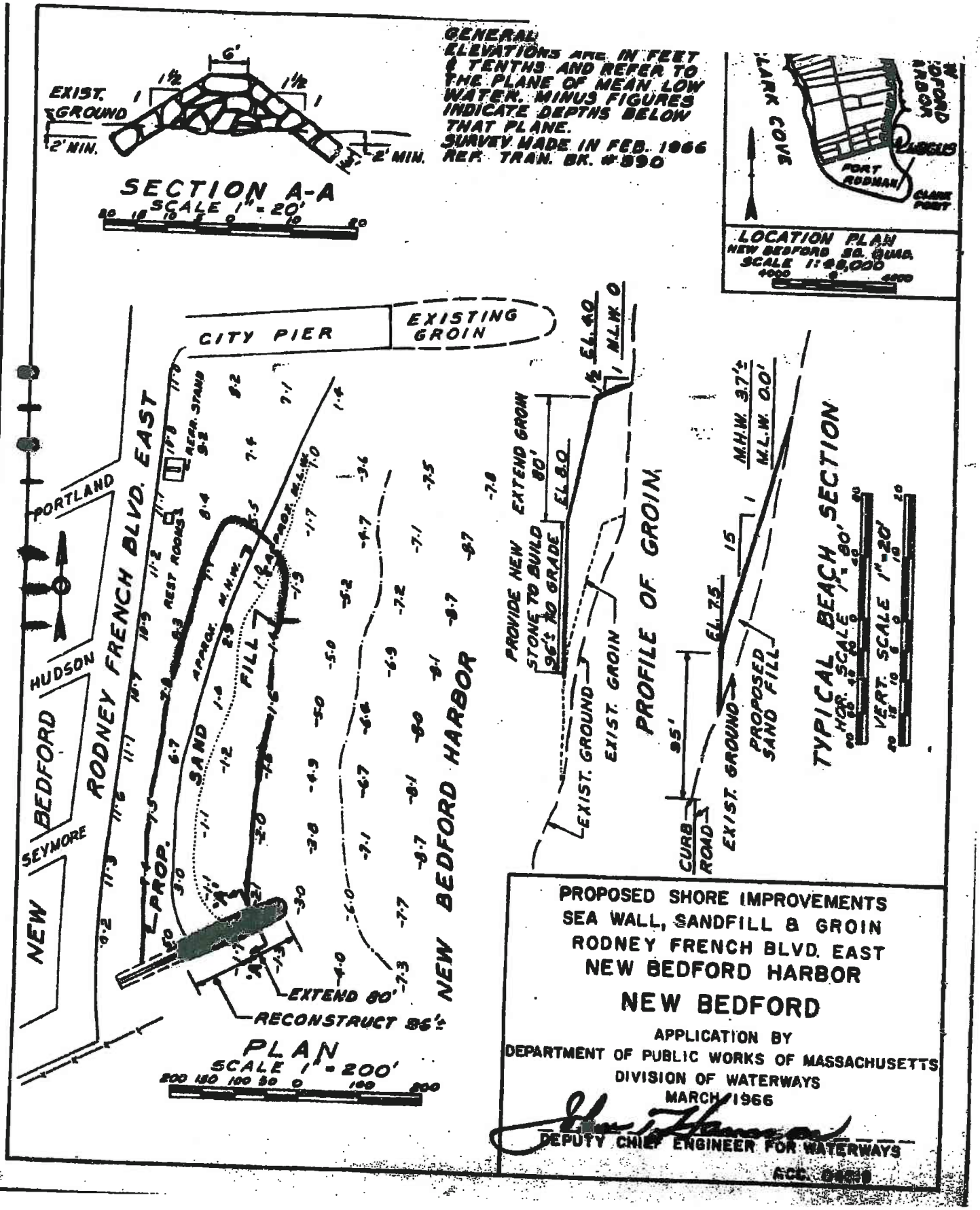



**NOTE**

ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO PLANE OF MEAN LOW WATER. MINUS FIGURES SHOW DEPTHS BELOW THE SAME PLANE.
APPROX. EXISTING GROUND SHOWN THUS
SIDE AND END SLOPES FOR GROIN ARE 2:1
LOCATION OF PROPOSED WORK IS SHOWN IN RED.

PROPOSED
GROIN AND SAND FILL
RODNEY FRENCH BLVD (EAST)
VICINITY SOUTH OF CITY PIER
NEW BEDFORD HARB.
NEW BEDFORD — MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
OCTOBER 1958

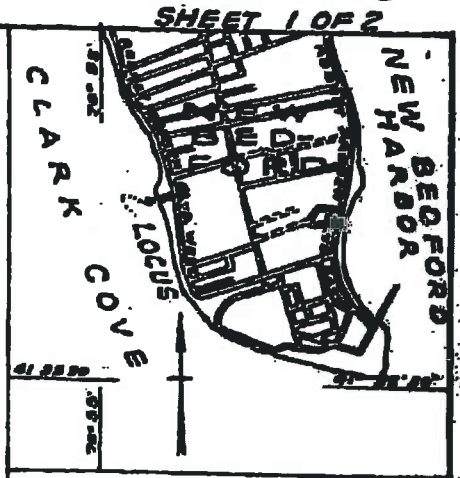
069 0751 049-004-000-006-100



088 0275

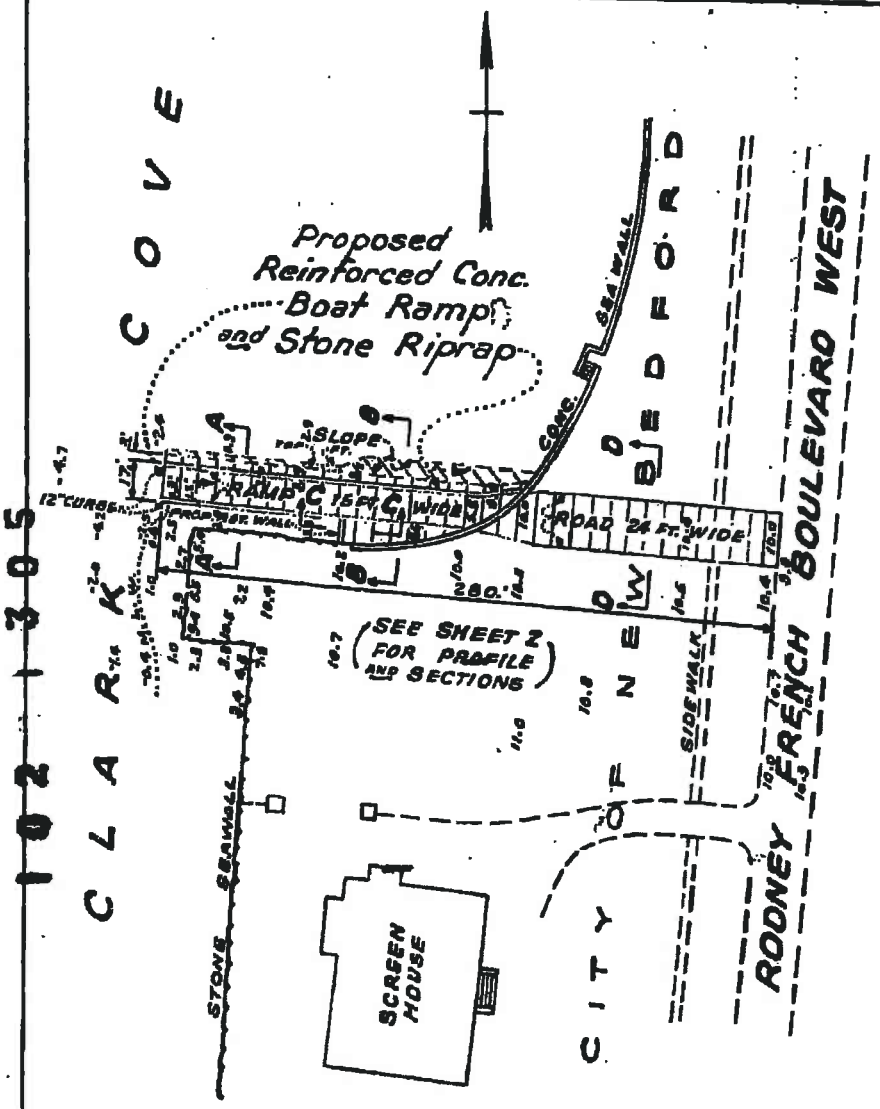
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

SHEET 1 OF 2




**LOCATION MAP**
SCALE — FEET
1:31,680
SEE U.S.G.S. NEW BEDFORD SO. QUAD.

102-305




**PLAN**
SCALE — FEET
1" = 80'

## NOTE

ELEVATIONS ARE IN FEET AND TENTHS AND SHOW HEIGHTS ABOVE PLANE OF MEAN LOW WATER. MINUS FIGURES SHOW DEPTHS BELOW THE SAME PLANE.
DESIGN FOR STEEL REINFORCING AND FOR CONCRETE KEYWAYS, EXPANSION JOINTS, ETC. TO BE OF ACCEPTED STANDARDS.
PAVING FOR ENTRANCE ROADWAY TO BE OF SUITABLE BITUMINOUS CONCRETE, APPLIED IN TWO 1½ INCH LAYERS.
LOCATION OF PROPOSED WORK IS SHOWN IN RED.

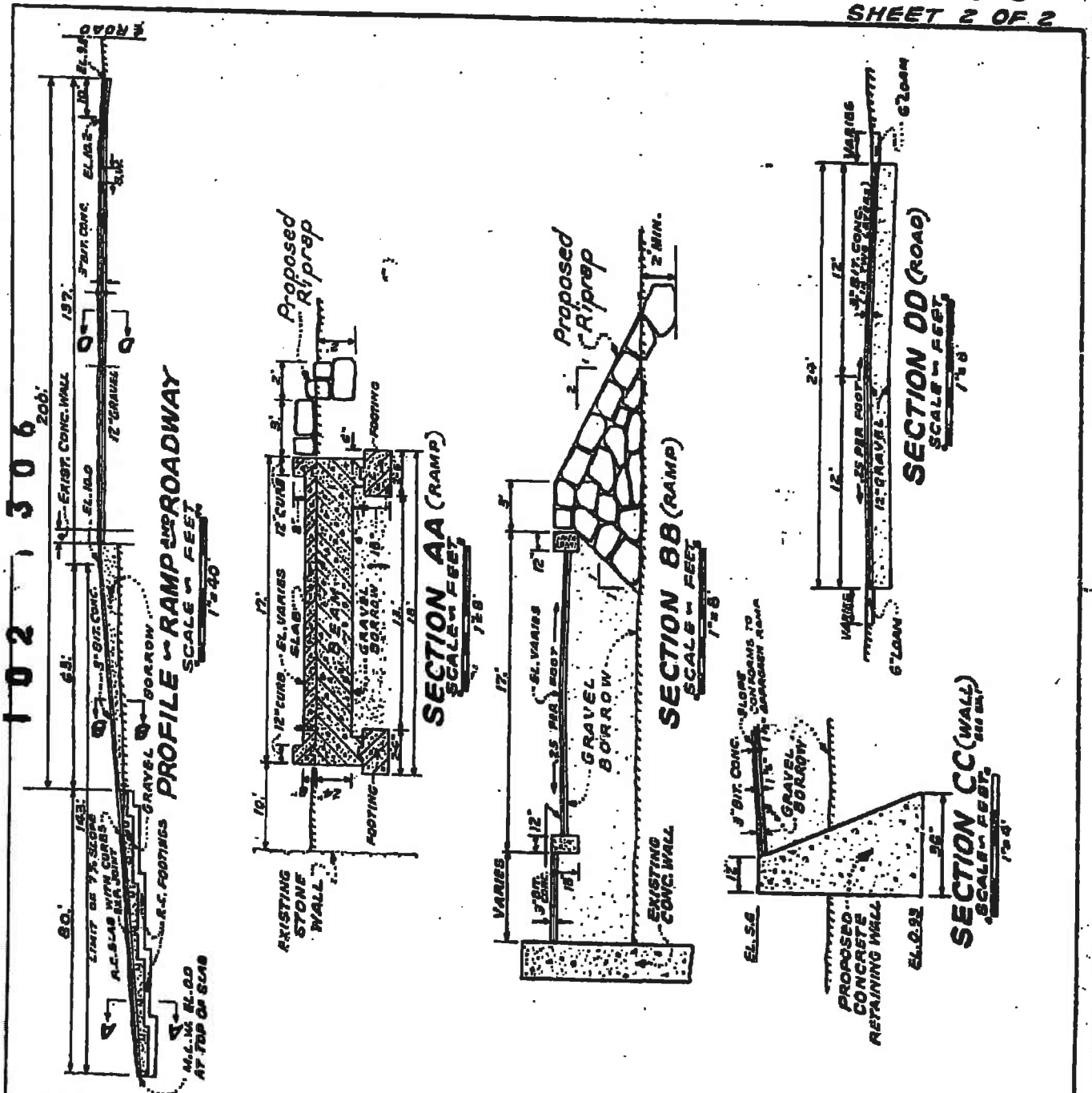
PROPOSED BOAT RAMP
RODNEY FRENCH BLVD. — WEST
# CLARK COVE
NEW BEDFORD — MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
SEPTEMBER 1957
Robert B. MacKenzie
CHIEF WATERWAYS ENGINEER

088 0276

049-007-000-112-100
049-007-000-112-200.
049-007-000-112-300

SHEET 2 OF 2

102 306




## NOTE

APPROX. SURFACE OF EXISTING GROUND IS SHOWN THUS, ~~~~~.

DESIGN FOR STEEL REINFORCING AND FOR CONCRETE KEY WAYS, EXPANSION JOINTS, ETC. TO BE OF ACCEPTED, APPROVED STANDARDS.

PAVING FOR ENTRANCE ROADWAY AND APPROACH SLOPE TO BE OF SUITABLE BITUMINOUS CONCRETE IN TWO 1½ INCH LAYERS, A TOTAL OF 3 INCHES.

# PROPOSED BOAT RAMP
# RODNEY FRENCH BLVD. — WEST
# CLARK COVE
## NEW BEDFORD — MASS.

APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
SEPTEMBER 1957

Robert B. Markuson
CHIEF WATERWAYS ENGINEER

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

## CONTRACT QUANTITIES:

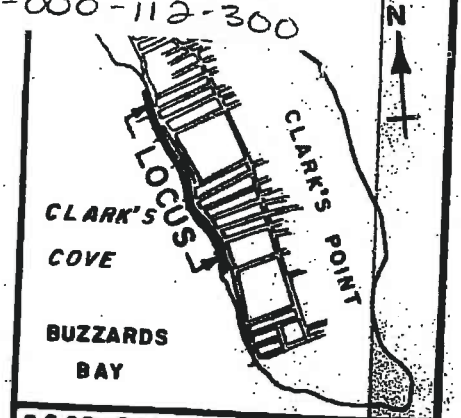
SAND FILL: 64,500 C.Y.
RIP-RAP REMOVED & RESET: 2,140 TONS
RIP-RAP (NEW): 3,580 TONS
BEDDING STONE: 1,720 TONS
FILTER STONE: 1180 TONS
STONE FOR GROIN EXTENSIONS: 10,950 TONS
STONE MOUND AND SOLID FILL: 2,500 C.Y.
FOR ADDITIONAL QUANTITIES SEE FORM 4345.

SHEE

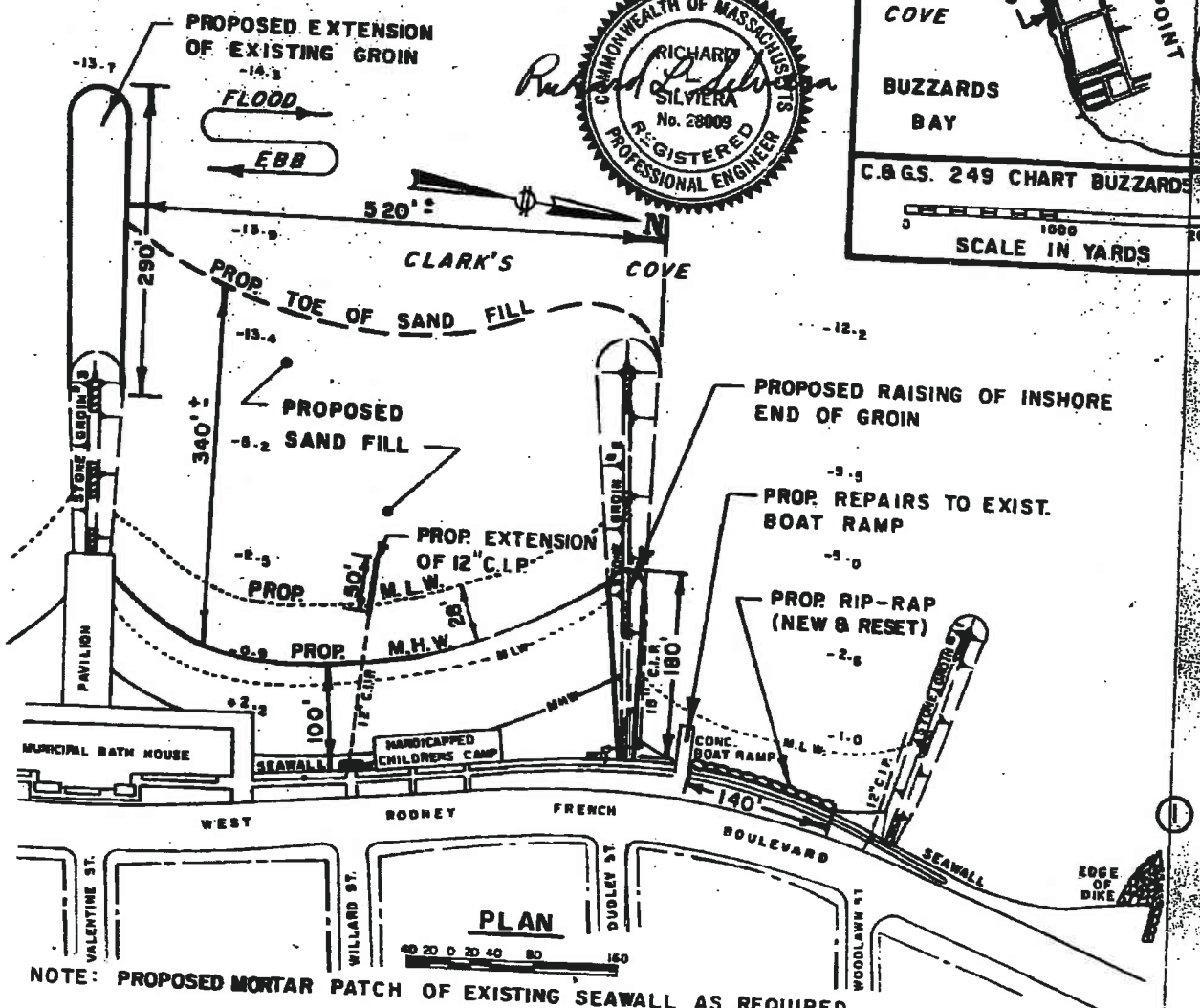
## ADJACENT PROPERTY OWNERS:

1. U.S. ARMY CORPS OF ENGINEER HURRICANE BARRIER
2. FORT RODMAN U.S. GOVERNMENT MILITARY RESERVATION

COMMONWEALTH OF MASSACHUSETTS
RICHARD P. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER




C.&G.S. 249 CHART BUZZARDS BAY
0 1000 2000
SCALE IN YARDS




NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.

**PURPOSE:** SHORE PROTECTION AND PUBLIC RECREATIONAL FACILITIES.

**DATUM:** MEAN LOW WATER

# PROPOSED SHORE PROTECTION AND RECREATIONAL IMPROVEMENTS IN CLARK'S COVE

NEW BEDFORD
COUNTY OF: BRISTOL STATE: MASS.
APPLICATION BY: CITY OF NEW BEDFORD
APRIL 15, 1977

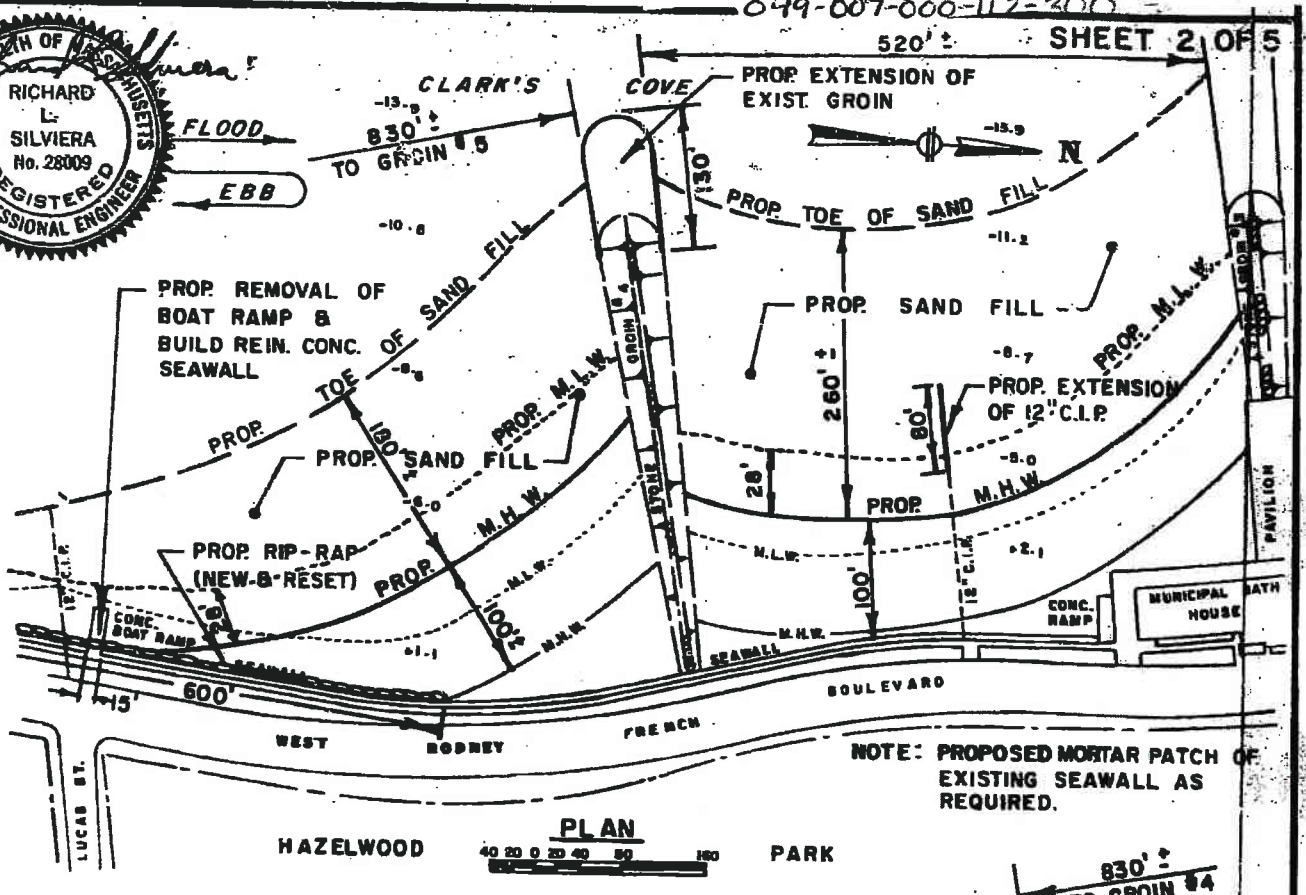
PREPARED BY TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

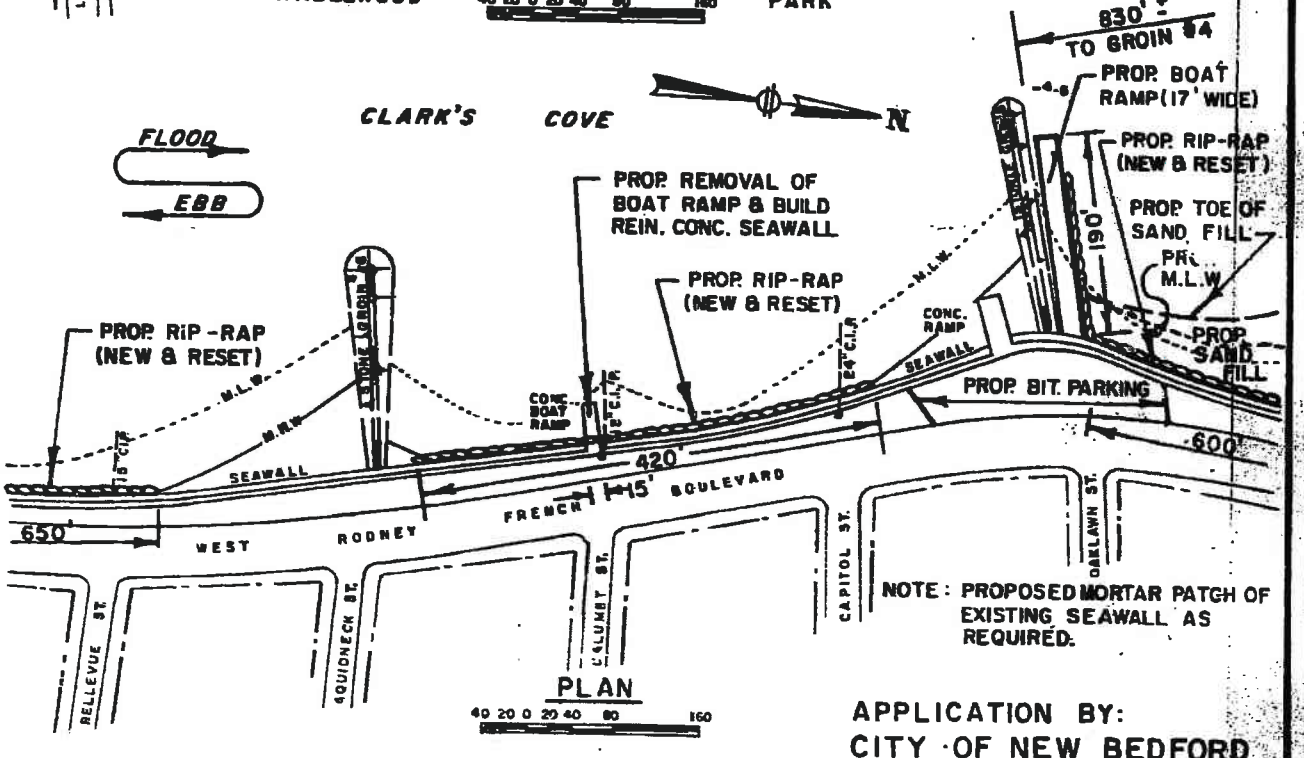
21-014

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300







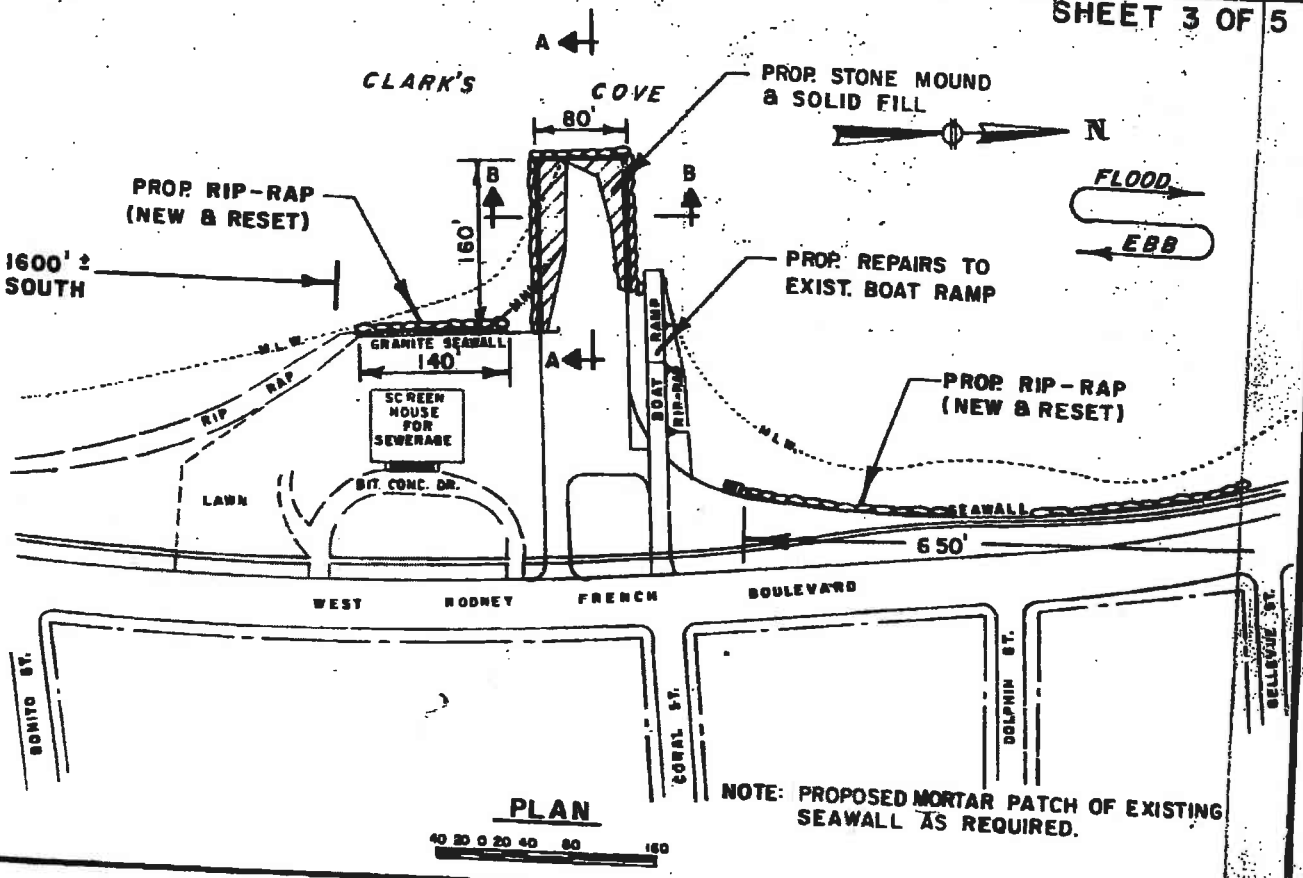




APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-100
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

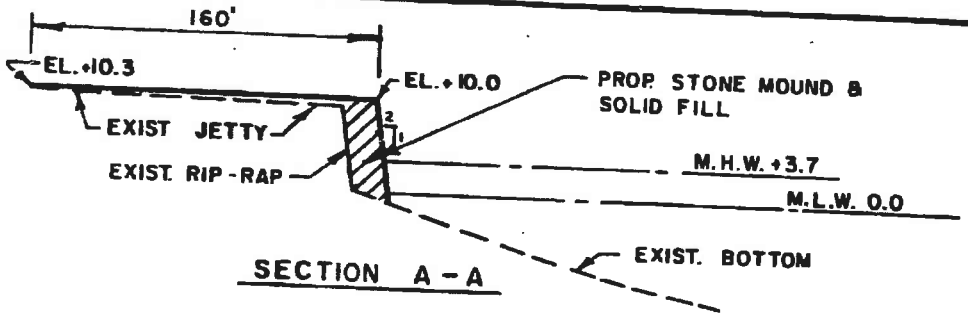
SHEET 3 OF 5



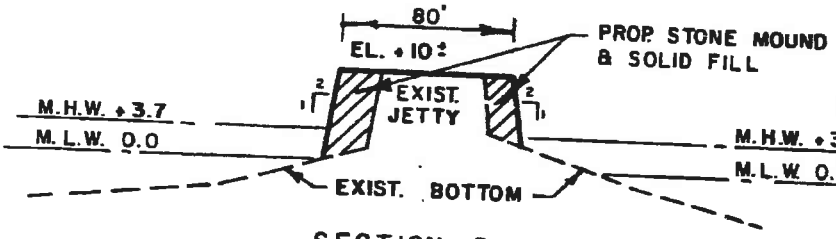

PLAN

40 20 0 20 40 80 160

NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.




SECTION A-A




SECTION B-B

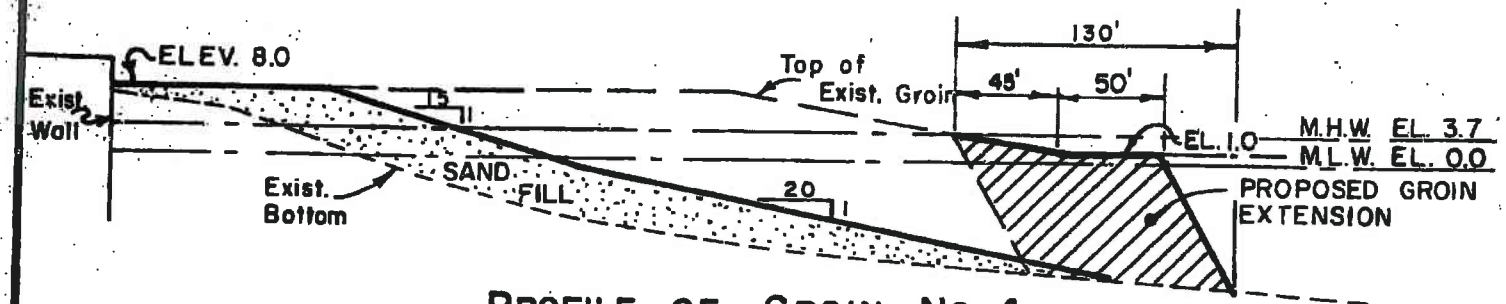
HORIZ. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 26009
REGISTERED PROFESSIONAL ENGINEER

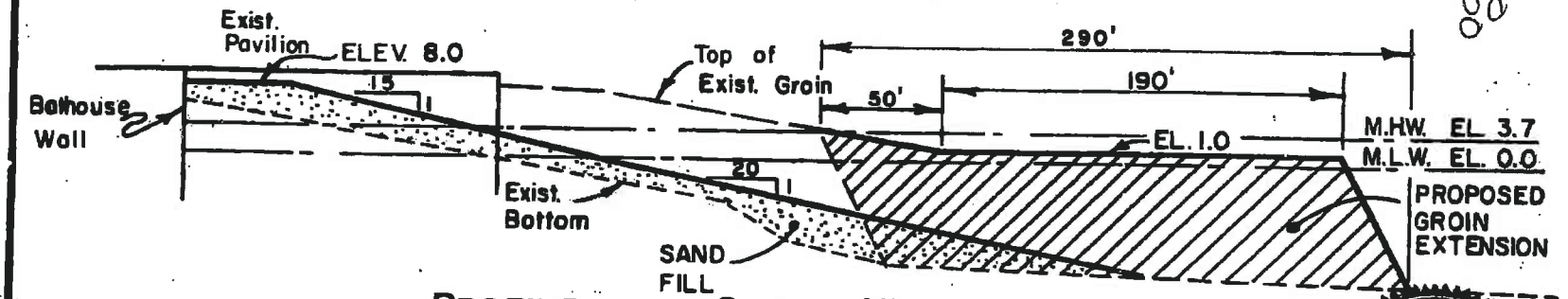
APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

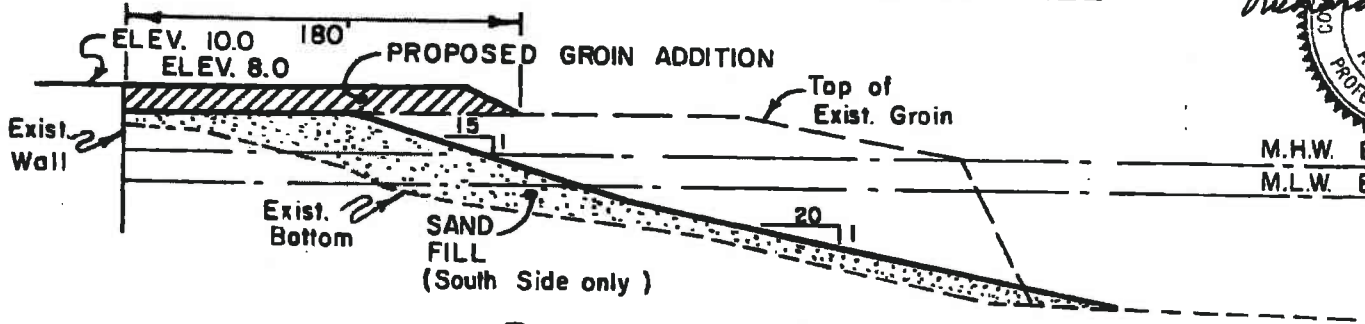
049-013-000-055-200
049-011-000-030-406
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300




PROFILE OF GROIN NO. 4
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 3
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 2
PROPOSED SAND FILL ON SOUTH SIDE OF GROIN

HOR. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

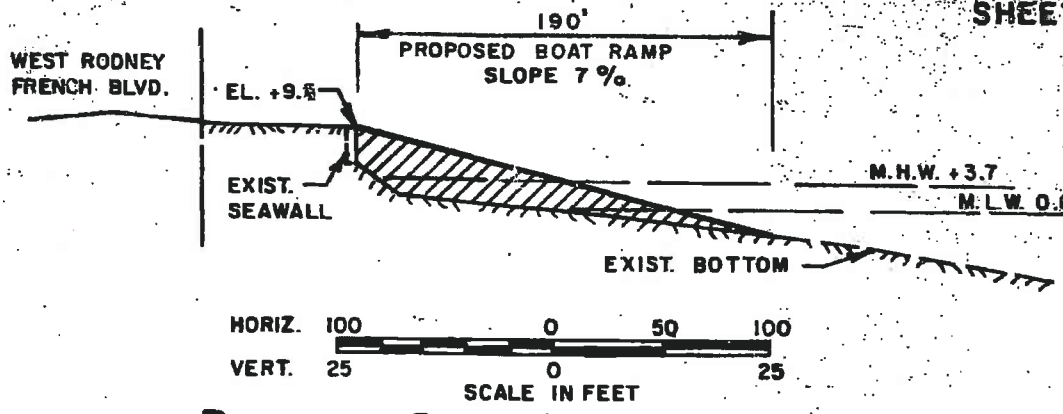
COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

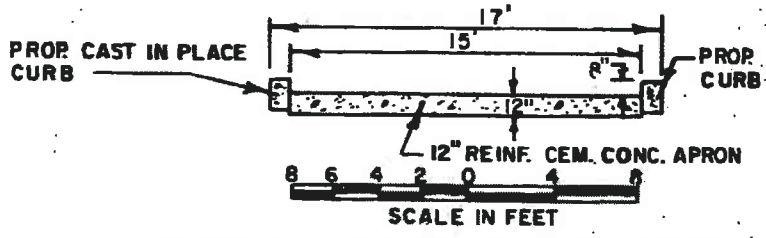
PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

SHEET 4 OF 5

214 0141

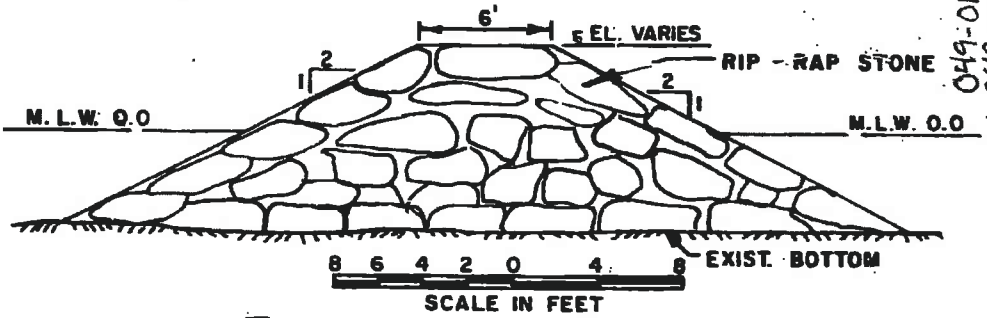



## PROPOSED BOAT RAMP PROFILE

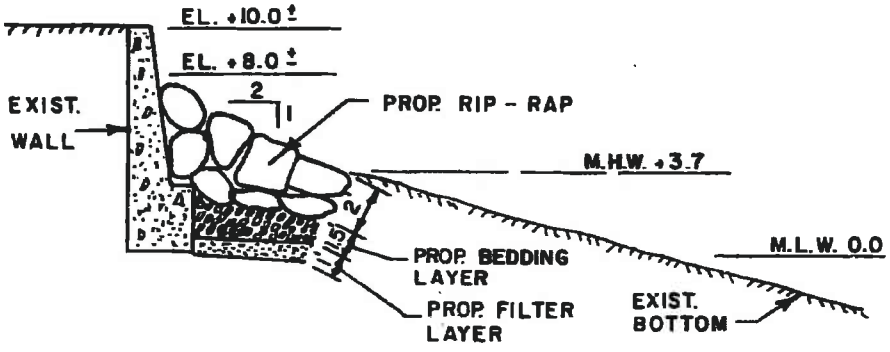



## TYPICAL BOAT RAMP SECTION

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300




## TYPICAL GROIN SECTION




## TYPICAL RIP-RAP SECTION

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 26009
REGISTERED
PROFESSIONAL ENGINEER

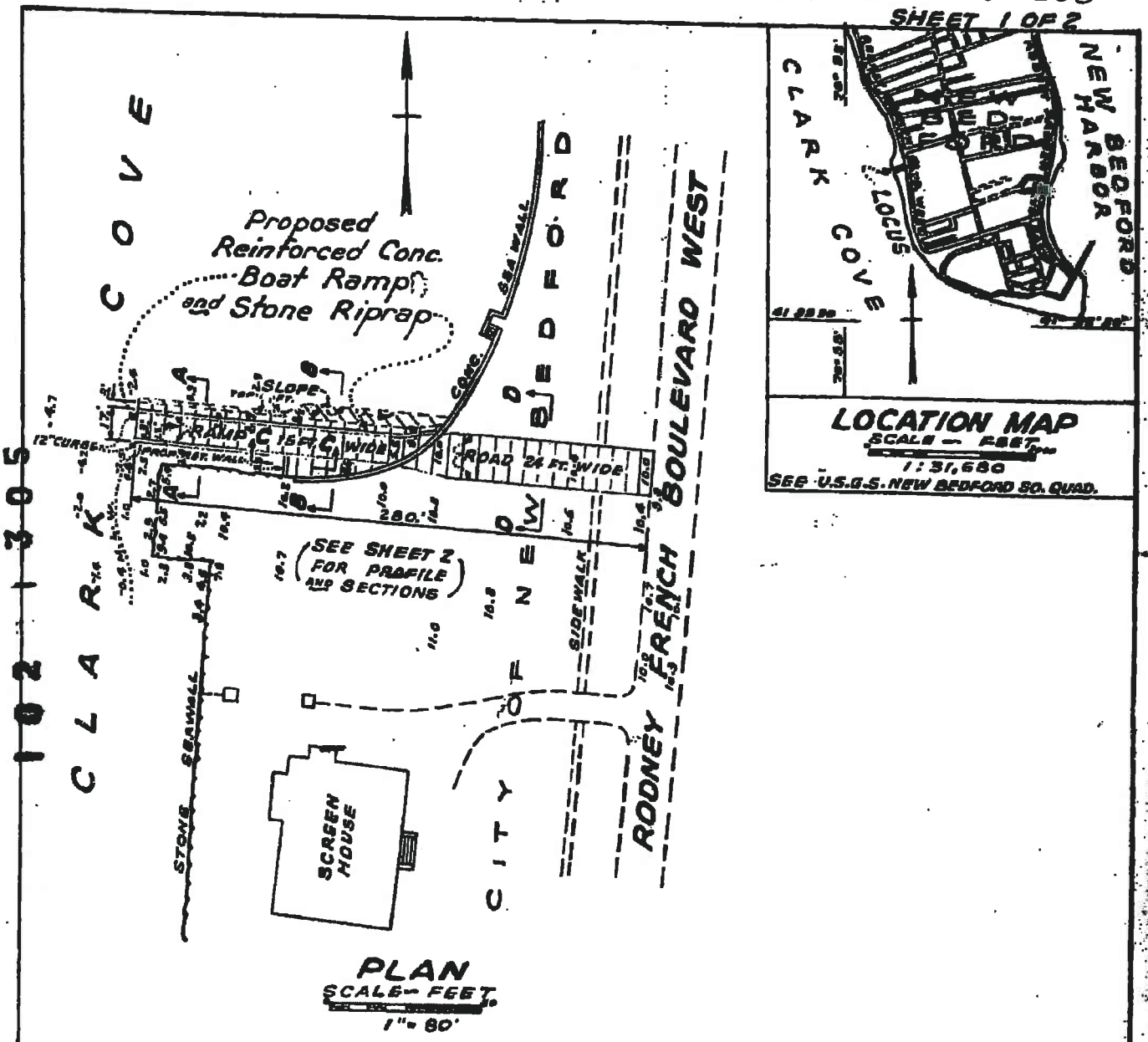
APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

088 0275

049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

SHEET 1 OF 2




PLAN
SCALE — FEET
1" = 80'

102 - 305

## NOTE

ELEVATIONS ARE IN FEET AND TENTHS AND SHOW HEIGHTS ABOVE PLANE OF MEAN LOW WATER. MINUS FIGURES SHOW DEPTHS BELOW THE SAME PLANE.
DESIGN FOR STEEL REINFORCING AND FOR CONCRETE KEYWAYS, EXPANSION JOINTS, ETC. TO BE OF ACCEPTED STANDARDS.
PAVING FOR ENTRANCE ROADWAY TO BE OF SUITABLE BITUMINOUS CONCRETE, APPLIED IN TWO 1½ INCH LAYERS.
LOCATION OF PROPOSED WORK IS SHOWN IN RED.

PROPOSED BOAT RAMP
RODNEY FRENCH BLVD. — WEST
# CLARK COVE
NEW BEDFORD — MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
SEPTEMBER 1957

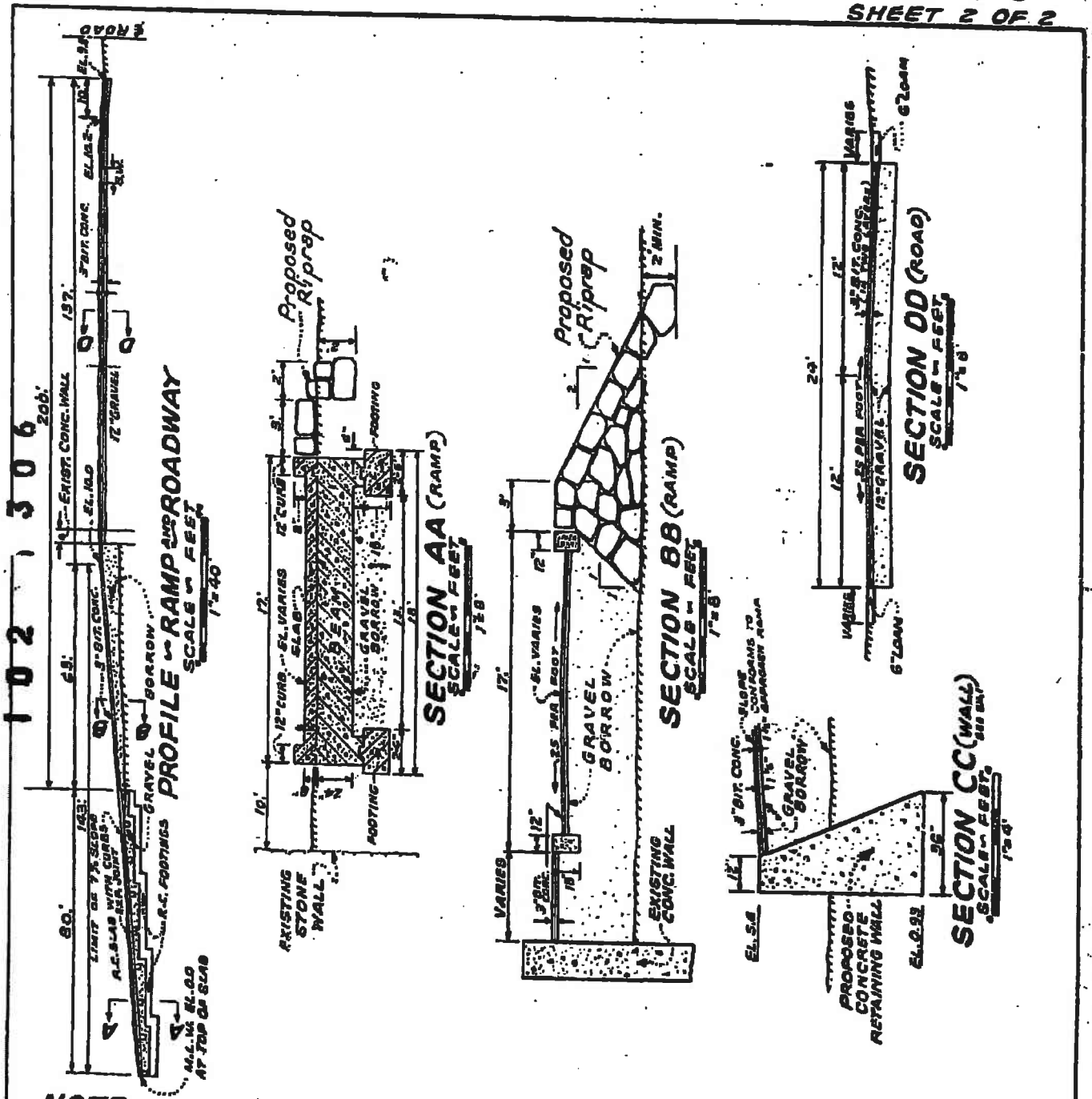
Robert B. Mackenzie
CHIEF WATERWAYS ENGINEER

088 0276

049-007-000-112-100
049-007-000-112-700.
049-007-000-112-300

SHEET 2 OF 2

102 306




## NOTE

APPROX. SURFACE OF EXISTING GROUND IS SHOWN THUS, ~~~~~~~~~~

DESIGN FOR STEEL REINFORCING AND FOR CONCRETE KEY WAYS, EXPANSION JOINTS, ETC. TO BE OF ACCEPTED, APPROVED STANDARDS.

PAVING FOR ENTRANCE ROADWAY AND APPROACH SLOPE TO BE OF SUITABLE BITUMINOUS CONCRETE IN TWO 1½ INCH LAYERS, A TOTAL OF 3 INCHES.

PROPOSED BOAT RAMP
RODNEY FRENCH BLVD. - WEST
# CLARK COVE
NEW BEDFORD - MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
SEPTEMBER 1957

Robert B. Marston
CHIEF WATERWAYS ENGINEER

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

**CONTRACT QUANTITIES:**

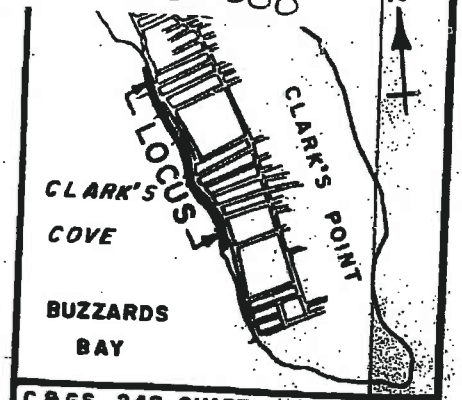
SAND FILL: 64,500 C.Y.
RIP-RAP REMOVED & RESET: 2,140 TONS
RIP-RAP (NEW): 3,680 TONS
BEDDING STONE: 1,720 TONS
FILTER STONE: 1180 TONS
STONE FOR GROIN EXTENSIONS: 10,950 TONS
STONE MOUND AND SOLID FILL: 2,500 C.Y.
FOR ADDITIONAL QUANTITIES SEE FORM 4345.

SHEE

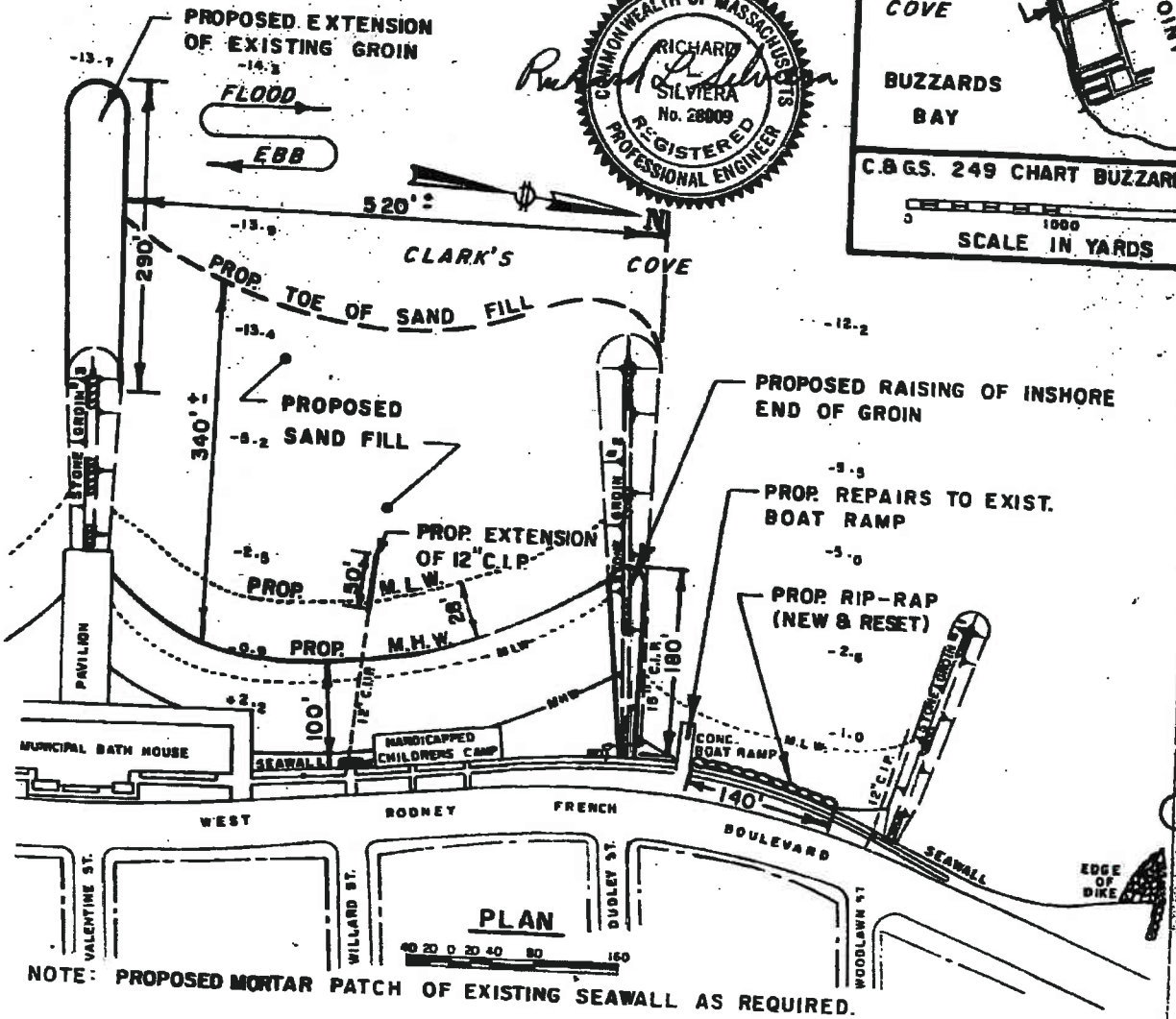
**ADJACENT PROPERTY OWNERS:**

1. U.S. ARMY CORPS OF ENGINEER HURRICANE BARRIER
2. FORT RODMAN U.S. GOVERNMENT MILITARY RESERVATION

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28909
REGISTERED PROFESSIONAL ENGINEER




C.&G.S. 249 CHART BUZZARDS BAY
0 1000 2000
SCALE IN YARDS




NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.

**PURPOSE:** SHORE PROTECTION AND PUBLIC RECREATIONAL FACILITIES.

**DATUM:** MEAN LOW WATER

# PROPOSED SHORE PROTECTION AND RECREATIONAL IMPROVEMENTS IN CLARK'S COVE

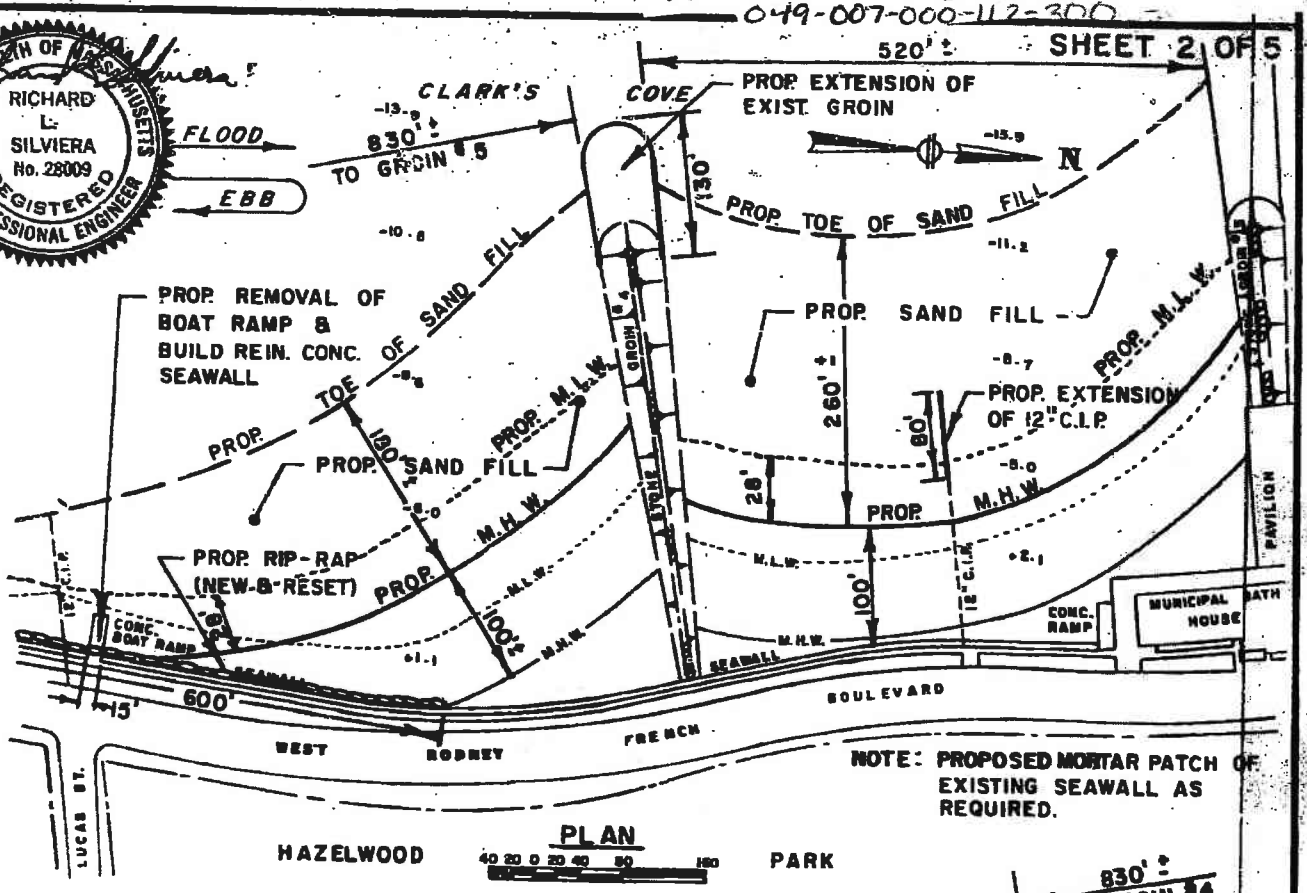
NEW BEDFORD
COUNTY OF: BRISTOL STATE: MASS.
APPLICATION BY: CITY OF NEW BEDFORD
APRIL 15, 1977

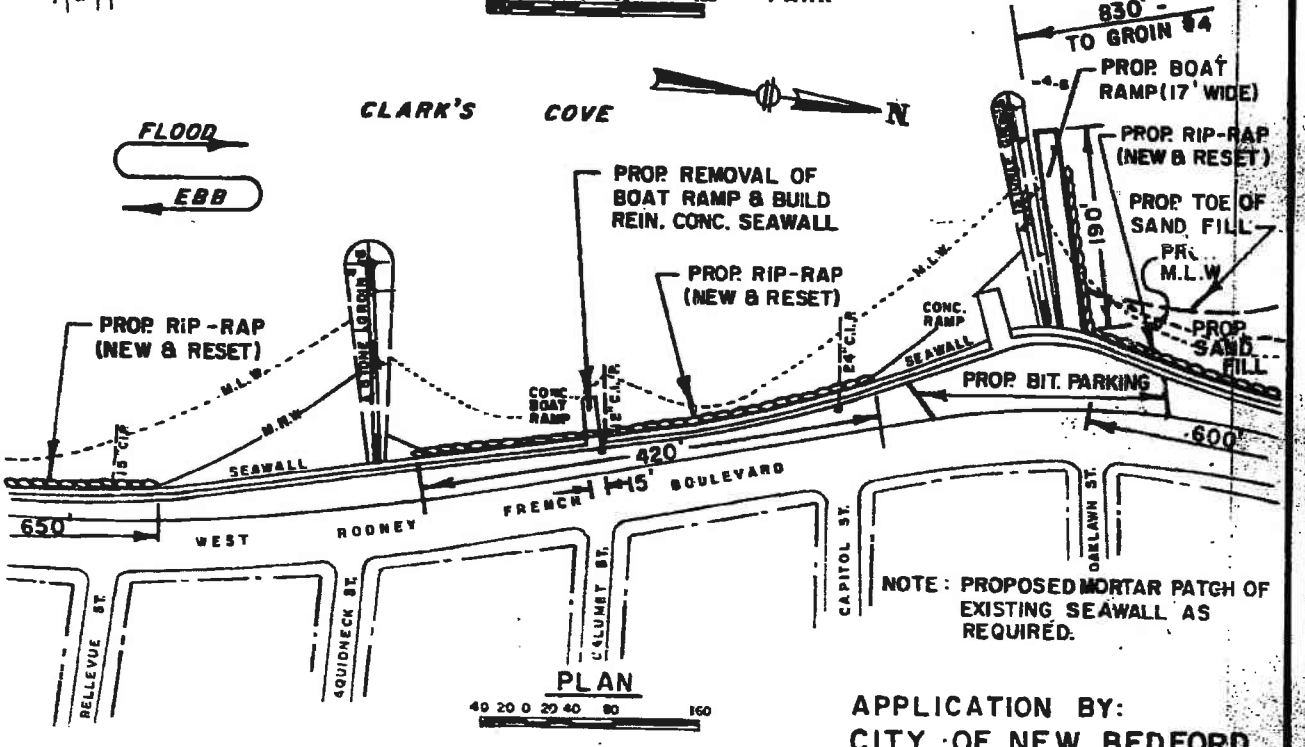
PREPARED BY TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300



COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER



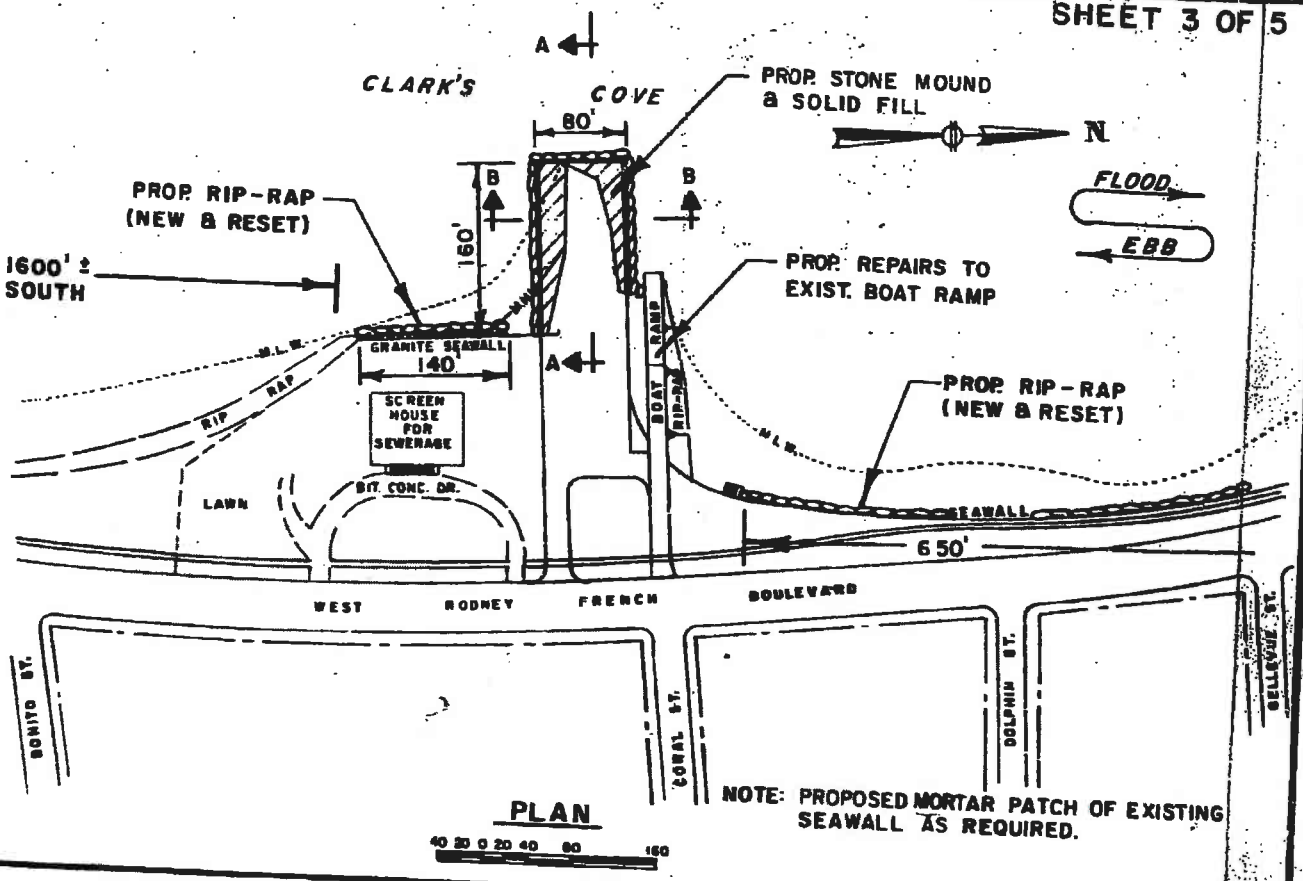




APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-100
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

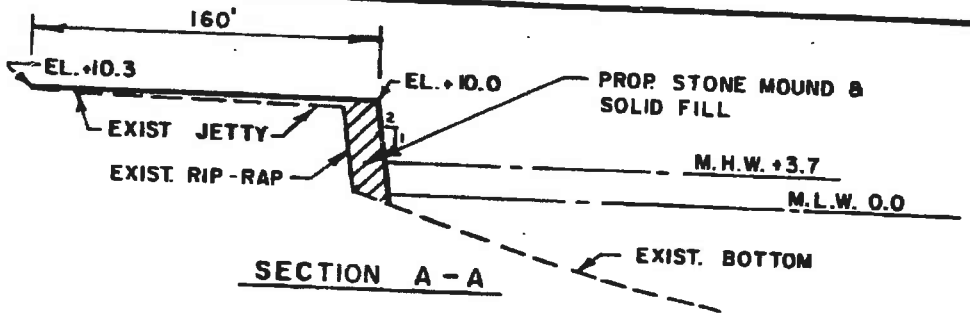
SHEET 3 OF 5



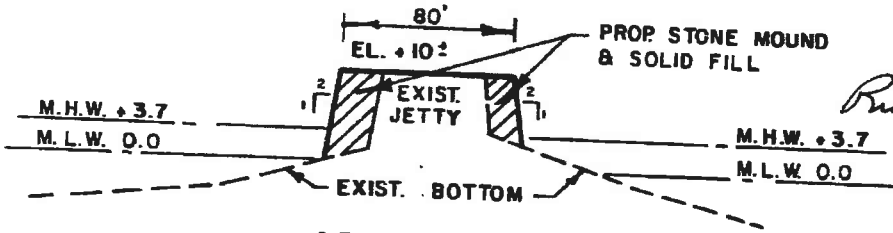

PLAN

40 20 0 20 40 60 100

NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.




SECTION A-A




SECTION B-B

HORIZ. 100 0 50 100

VERT. 25 0 25

SCALE IN FEET

COMMONWEALTH OF MASS. RICHARD L. SILVIERA No. 28009 REGISTERED PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-200
049-011-000-030-406
049-009-000-284-100
049-009-000-286-200
049-067-000-112-100
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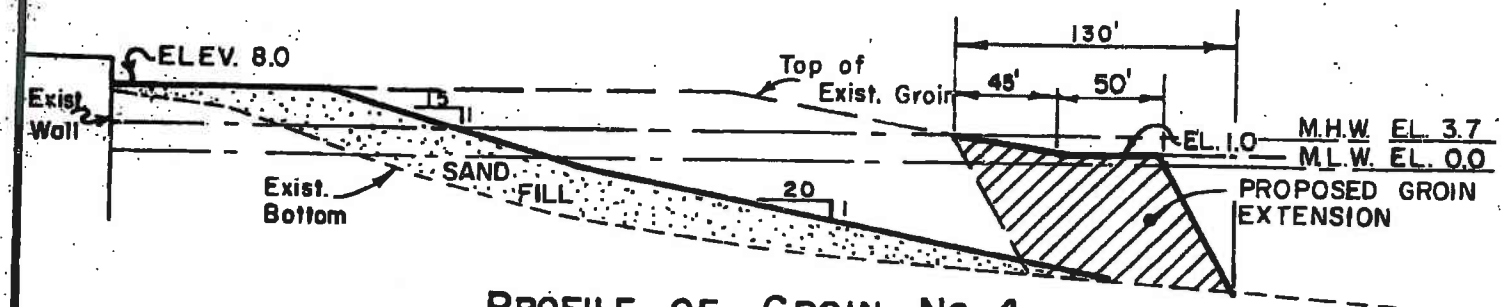
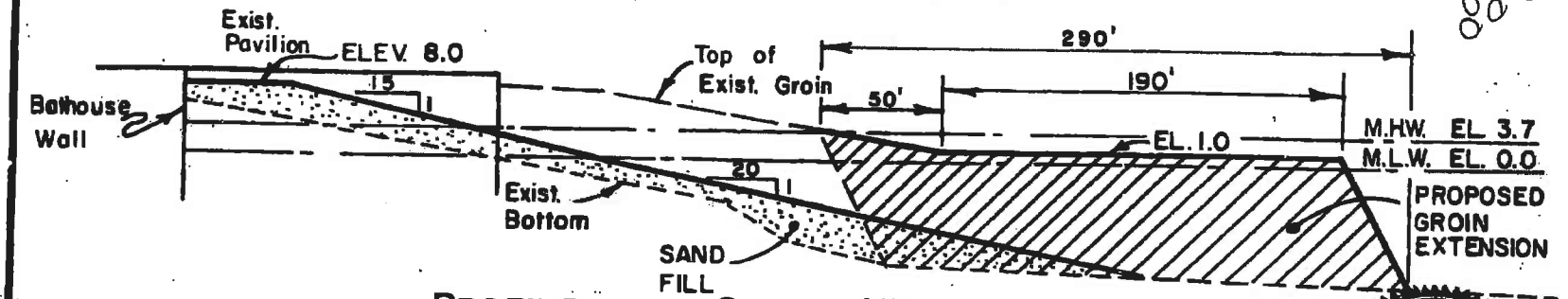
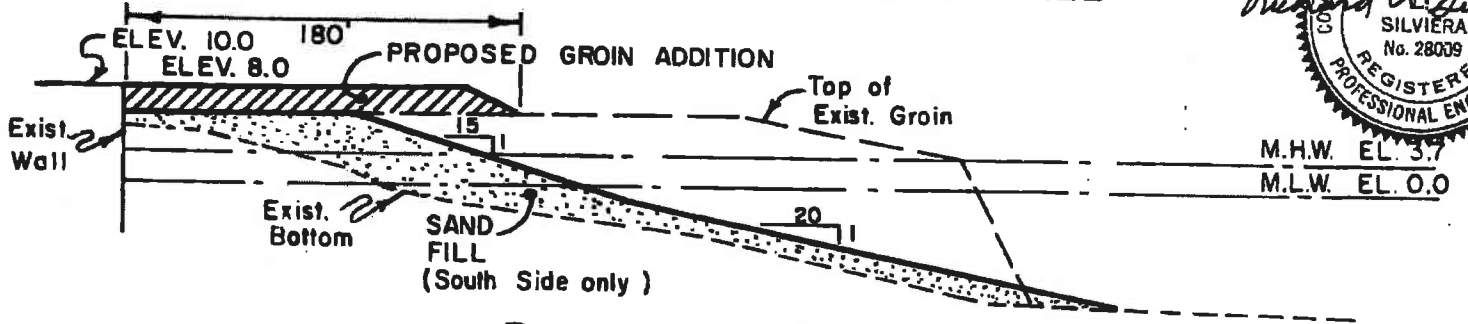
049-007-000-112-300




PROFILE OF GROIN NO. 4
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 3
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 2
PROPOSED SAND FILL ON SOUTH SIDE OF GROIN

HOR. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

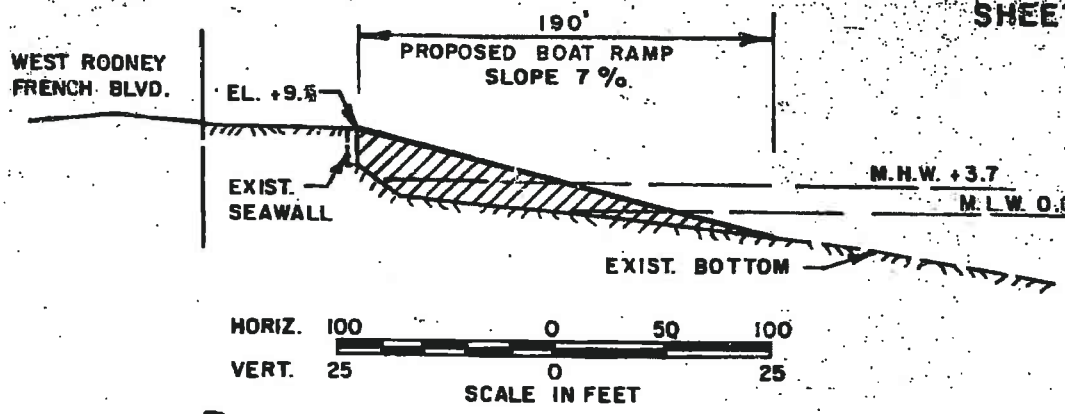
COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

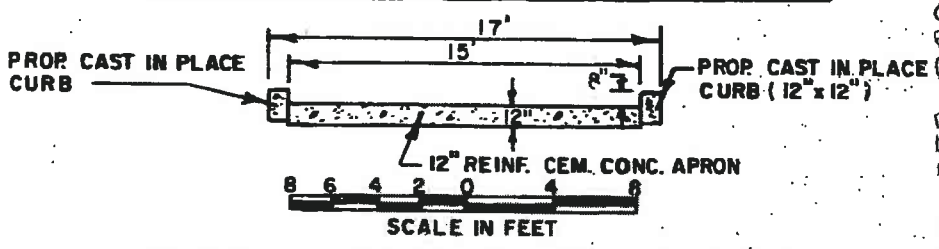
PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

SHEET 4 OF 5

214 0141

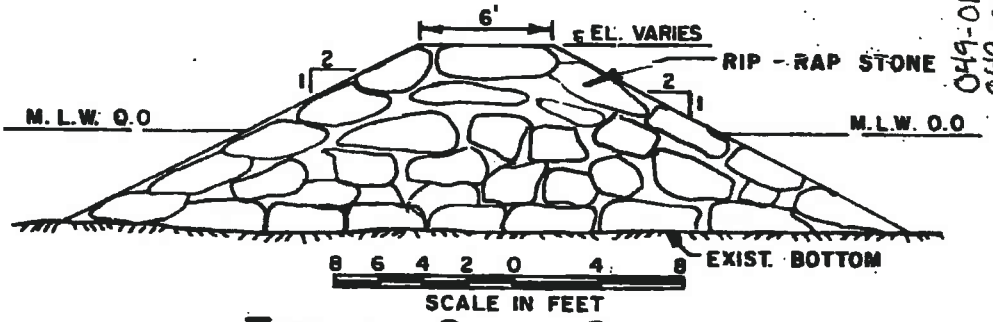



## PROPOSED BOAT RAMP PROFILE

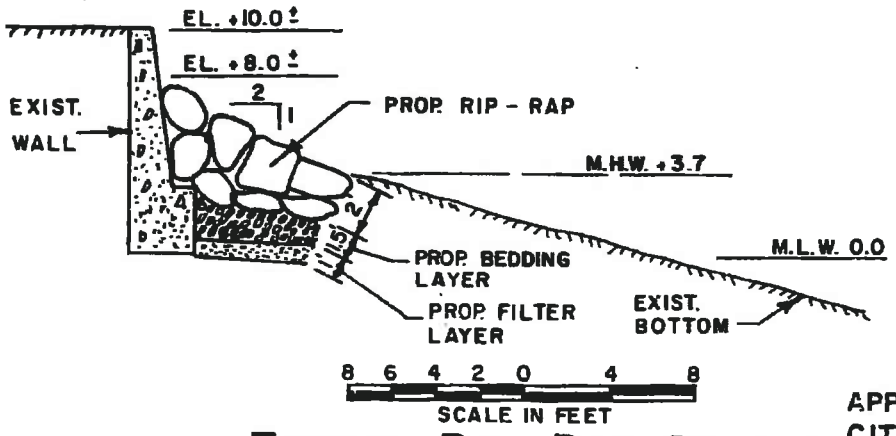



## TYPICAL BOAT RAMP SECTION

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300




## TYPICAL GROIN SECTION




## TYPICAL RIP-RAP SECTION

COMMONWEALTH OF MASSACHUSETTS
RICHARD A. SILVIERA
No. 26099
REGISTERED
PROFESSIONAL ENGINEER

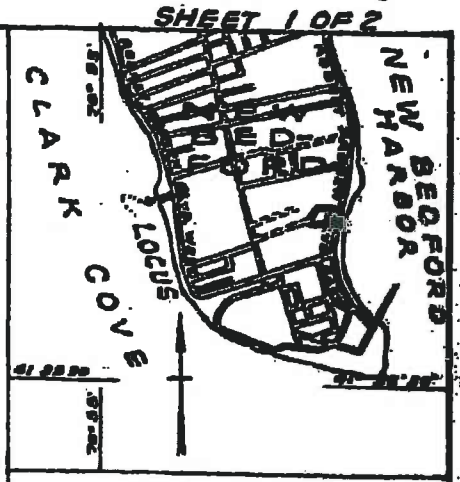
APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

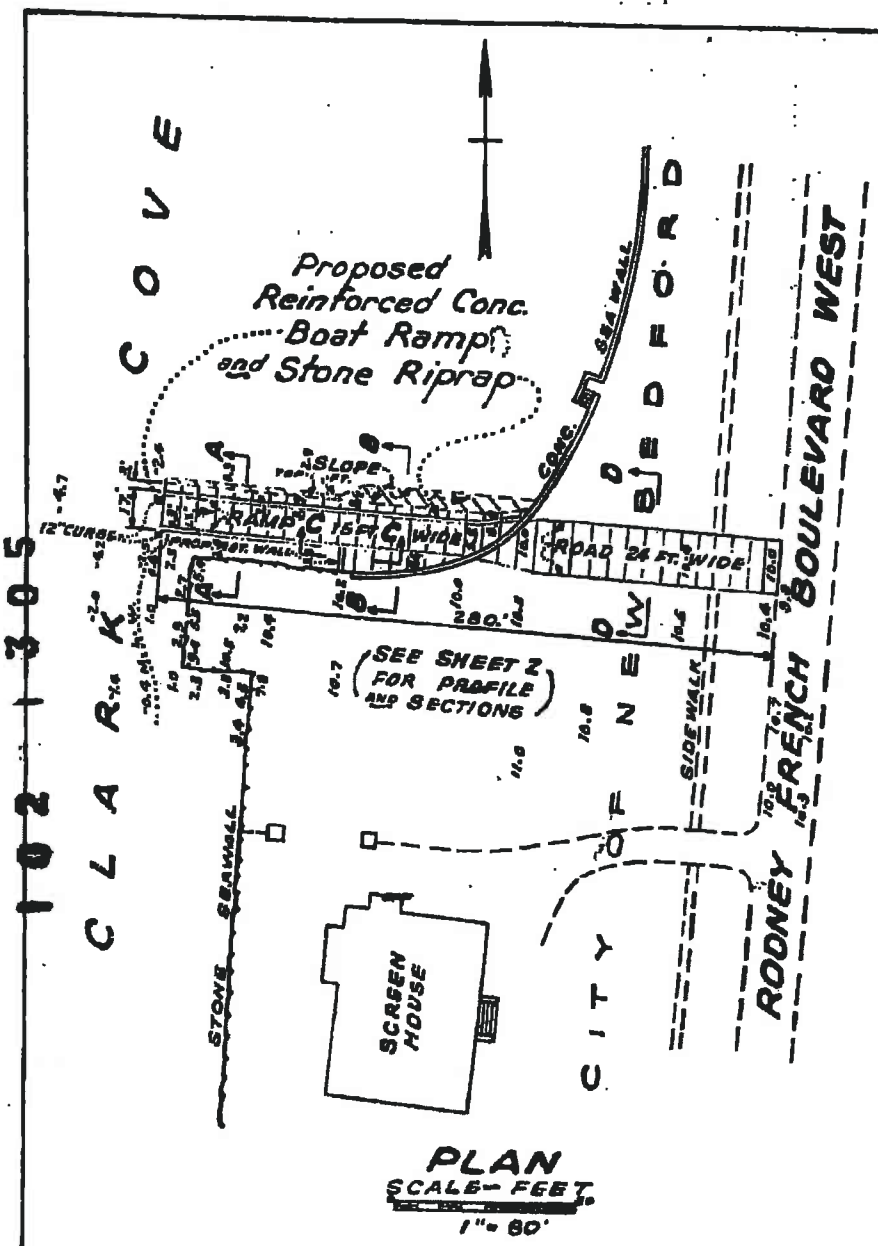
088 0275

049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

SHEET 1 OF 2




LOCATION MAP
SCALE — FEET
1:31,680
SEE U.S.G.S. NEW BEDFORD SO. QUAD.




PLAN
SCALE — FEET
1" = 80'

NOTE

ELEVATIONS ARE IN FEET AND TENTHS AND SHOW HEIGHTS ABOVE PLANE OF MEAN LOW WATER. MINUS FIGURES SHOW DEPTHS BELOW THE SAME PLANE.
DESIGN FOR STEEL REINFORCING AND FOR CONCRETE KEYWAYS, EXPANSION JOINTS, ETC. TO BE OF ACCEPTED STANDARDS.
PAVING FOR ENTRANCE ROADWAY TO BE OF SUITABLE BITUMINOUS CONCRETE, APPLIED IN TWO 1½ INCH LAYERS.
LOCATION OF PROPOSED WORK IS SHOWN IN RED.

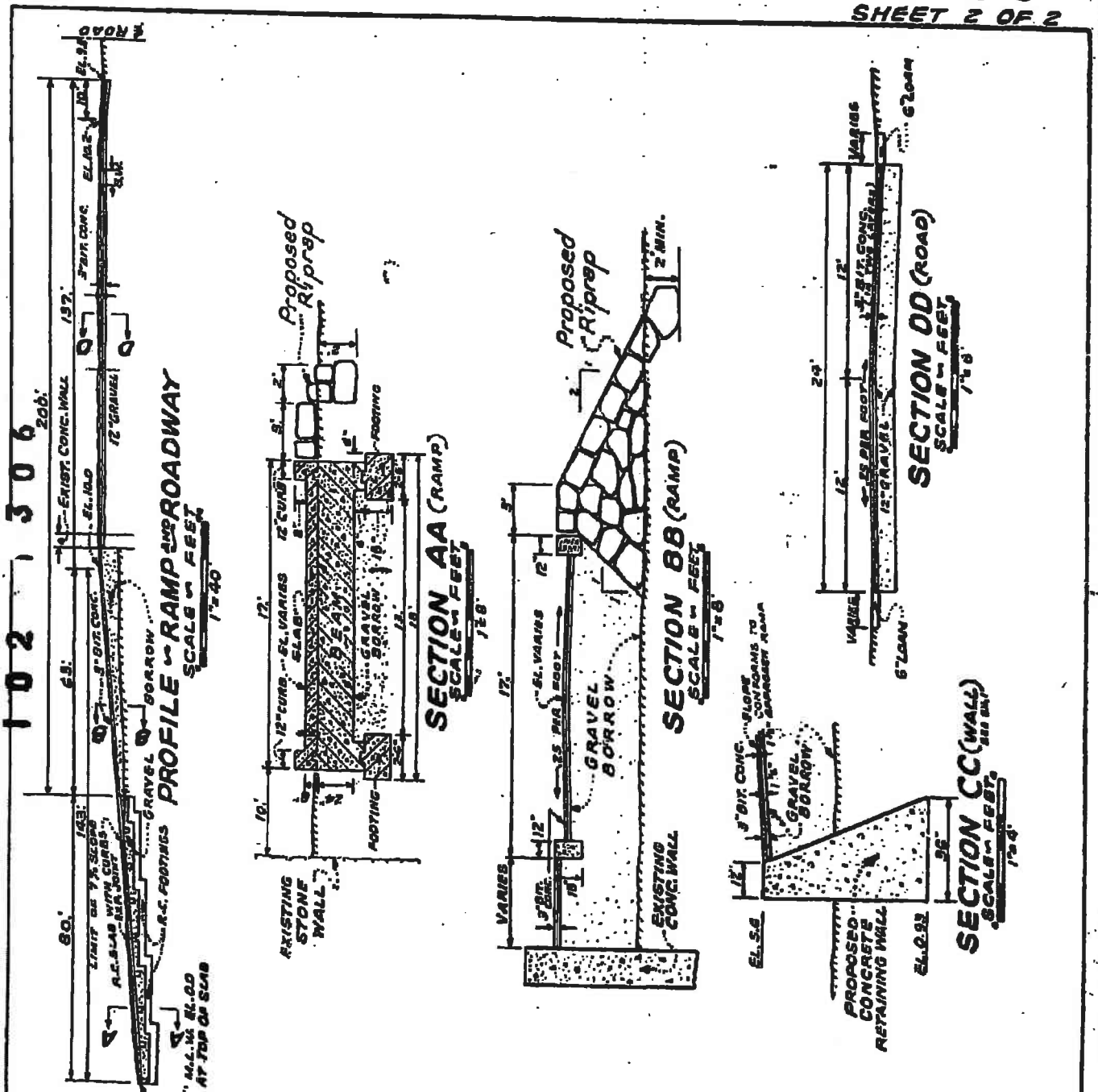
PROPOSED BOAT RAMP
RODNEY FRENCH BLVD. — WEST
CLARK COVE
NEW BEDFORD — MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
SEPTEMBER 1957
Robert B. MacKenzie
CHIEF WATERWAYS ENGINEER

088 0276

049-007-000-112-100
049-007-000-112-200.
049-007-000-112-300

SHEET 2 OF 2

102 306




## NOTE

APPROX. SURFACE OF EXISTING GROUND IS SHOWN THUS, ~~~~~~~~~~.

DESIGN FOR STEEL REINFORCING AND FOR CONCRETE KEY WAYS, EXPANSION JOINTS, ETC. TO BE OF ACCEPTED, APPROVED STANDARDS.

PAVING FOR ENTRANCE ROADWAY AND APPROACH SLOPE TO BE OF SUITABLE BITUMINOUS CONCRETE IN TWO 1½ INCH LAYERS, A TOTAL OF 3 INCHES.

PROPOSED BOAT RAMP
RODNEY FRENCH BLVD. — WEST
# CLARK COVE
NEW BEDFORD — MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
SEPTEMBER 1957

Robert B. Markuson
CHIEF WATERWAYS ENGINEER

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

**CONTRACT QUANTITIES:**

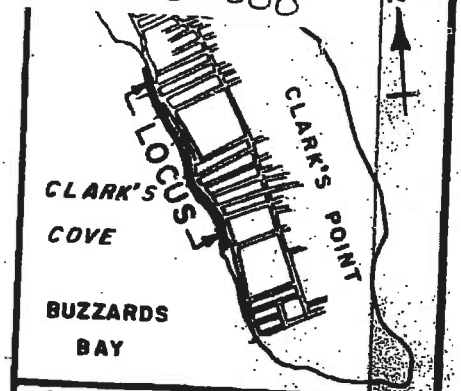
SAND FILL: 64,500 C.Y.
RIP-RAP REMOVED & RESET: 2,140 TONS
RIP-RAP (NEW): 3,680 TONS
BEDDING STONE: 1,720 TONS
FILTER STONE: 1180 TONS
STONE FOR GROIN EXTENSIONS: 10,950 TONS
STONE MOUND AND SOLID FILL: 2,500 C.Y.
FOR ADDITIONAL QUANTITIES SEE FORM 4345.

SHEE

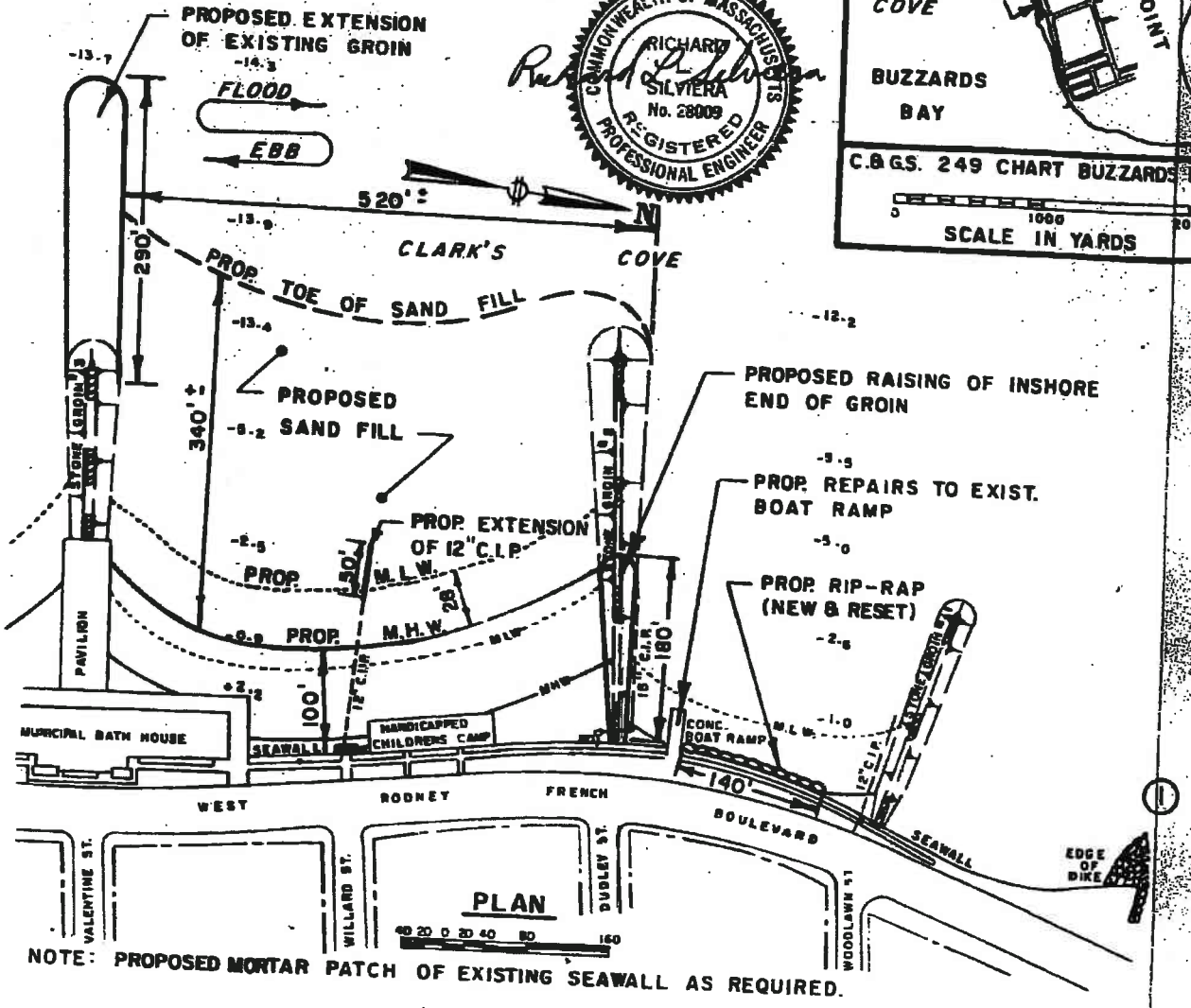
**ADJACENT PROPERTY OWNERS:**

1. U.S. ARMY CORPS OF ENGINEER HURRICANE BARRIER
2. FORT RODMAN U.S. GOVERNMENT MILITARY RESERVATION

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER




C.&G.S. 249 CHART BUZZARDS BAY
0 1000 2000
SCALE IN YARDS




NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.

**PURPOSE:** SHORE PROTECTION AND PUBLIC RECREATIONAL FACILITIES.

**DATUM:** MEAN LOW WATER

# PROPOSED SHORE PROTECTION AND RECREATIONAL IMPROVEMENTS IN CLARK'S COVE

NEW BEDFORD
COUNTY OF: BRISTOL STATE: MASS.
APPLICATION BY: CITY OF NEW BEDFORD
APRIL 15, 1977

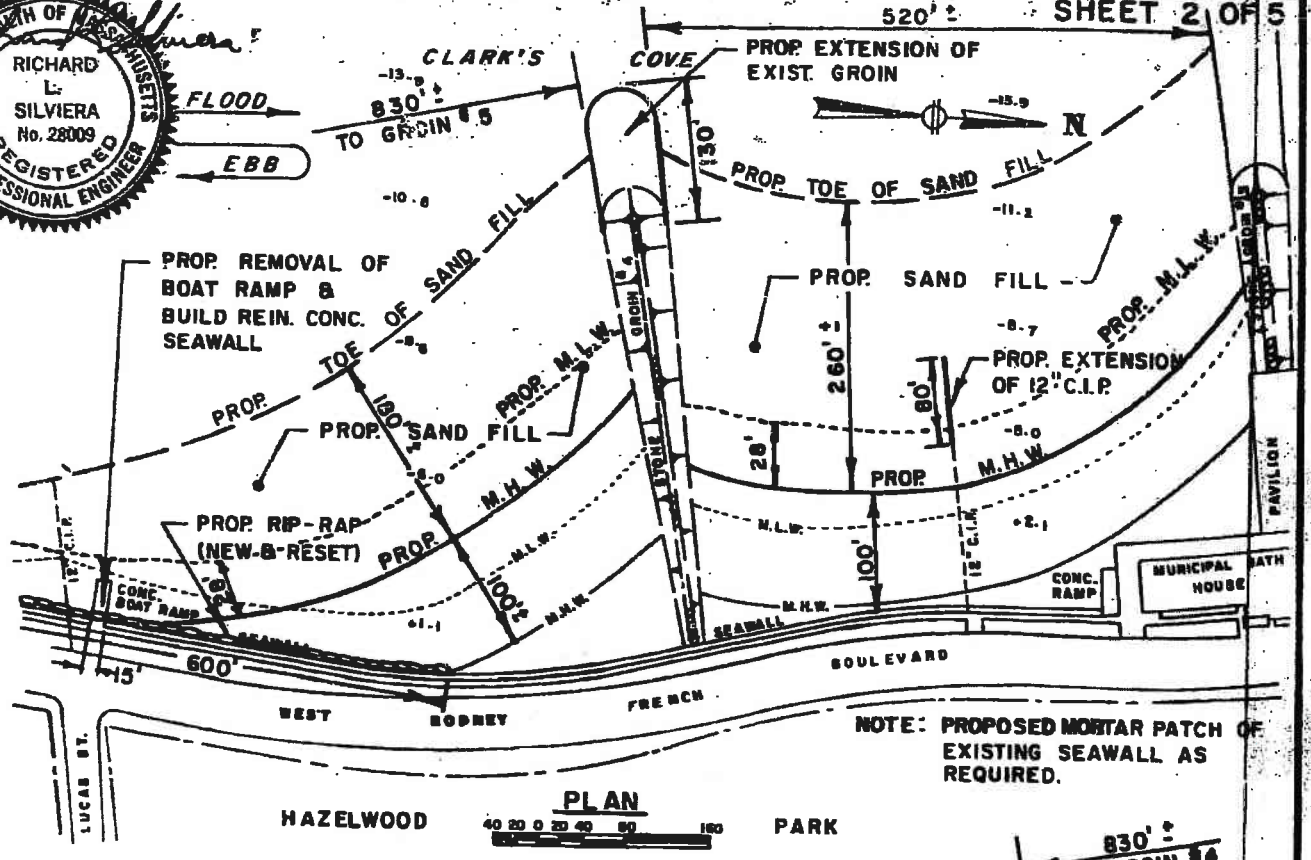
PREPARED BY TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

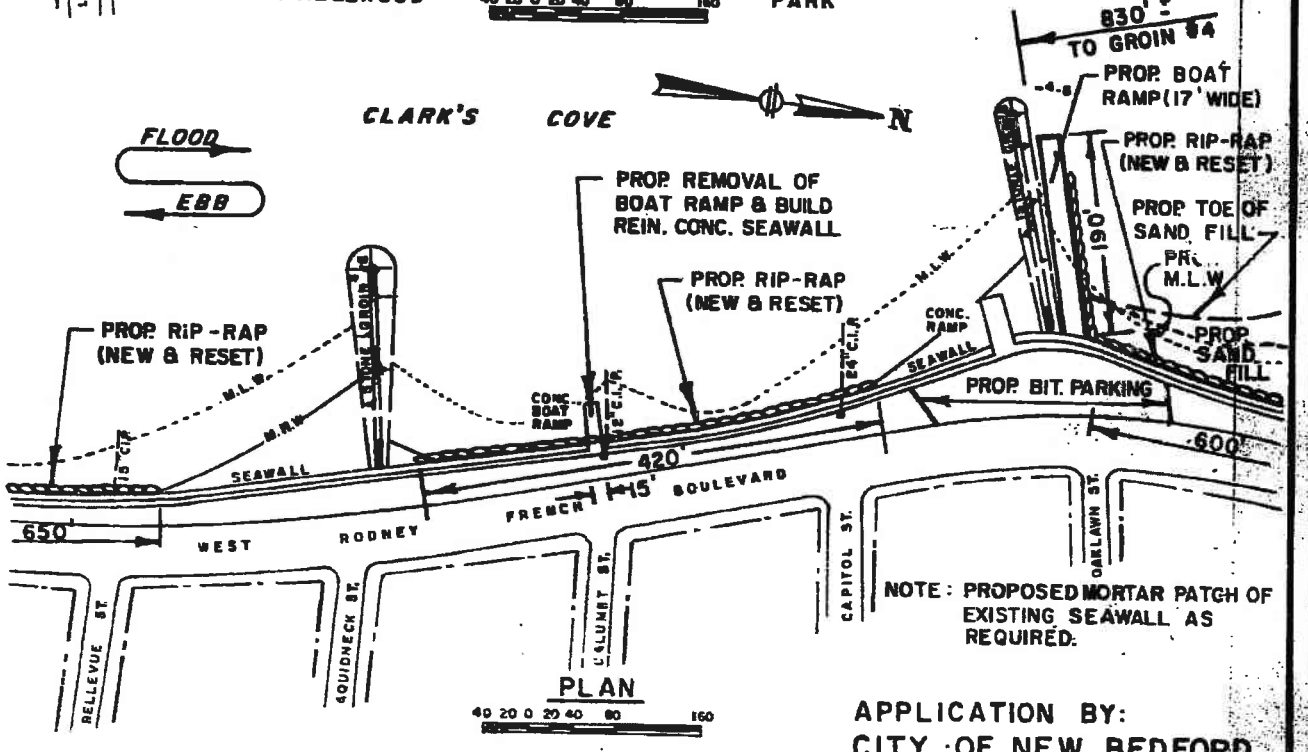
21-014

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300



COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER



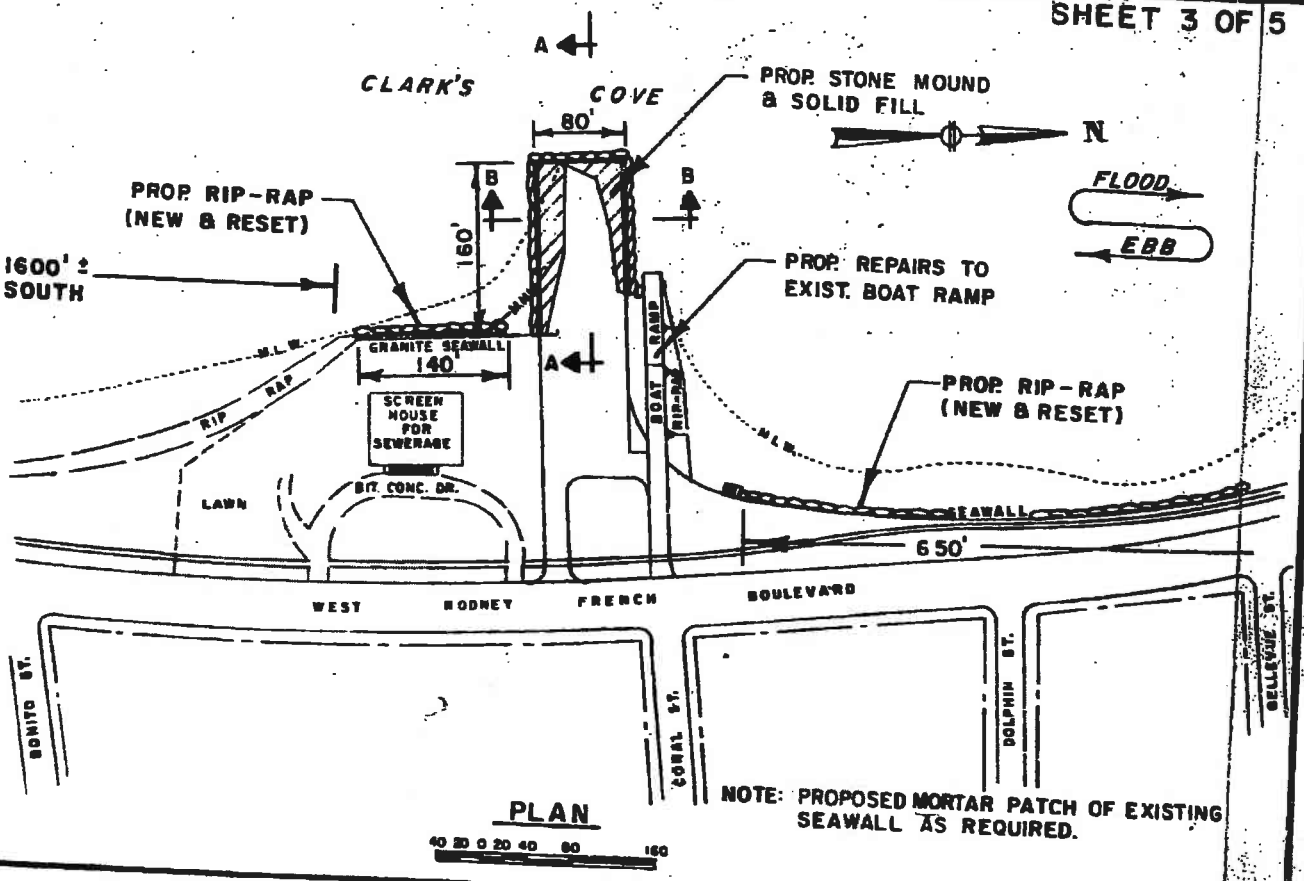




APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-100
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

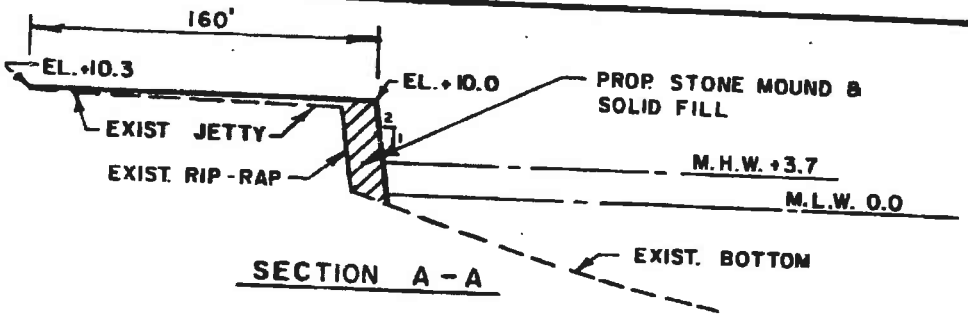
SHEET 3 OF 5



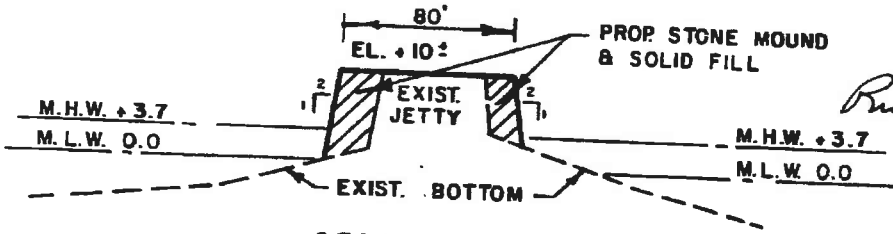

PLAN

40 20 0 20 40 80 160

NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.




SECTION A-A




SECTION B-B

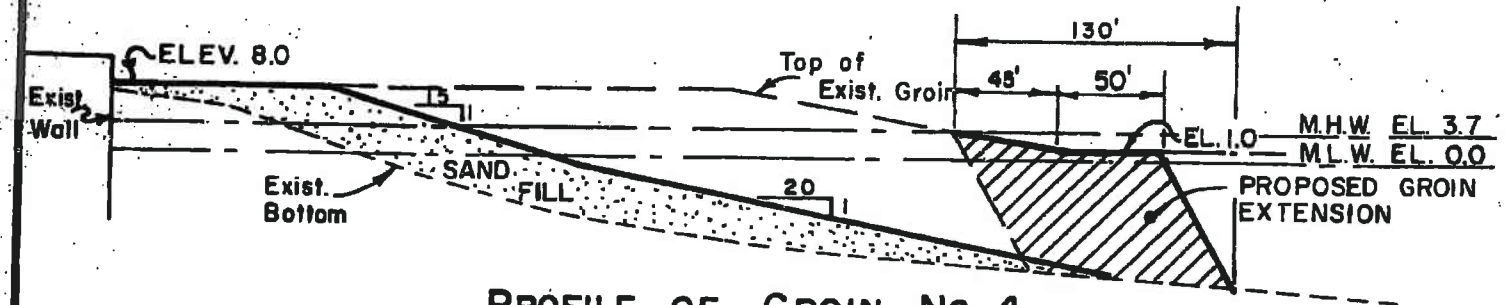
HORIZ. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

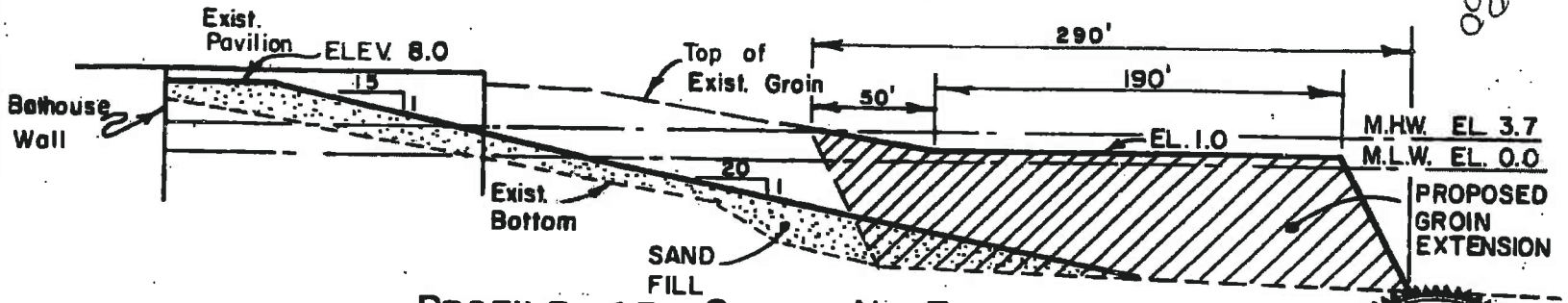
APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

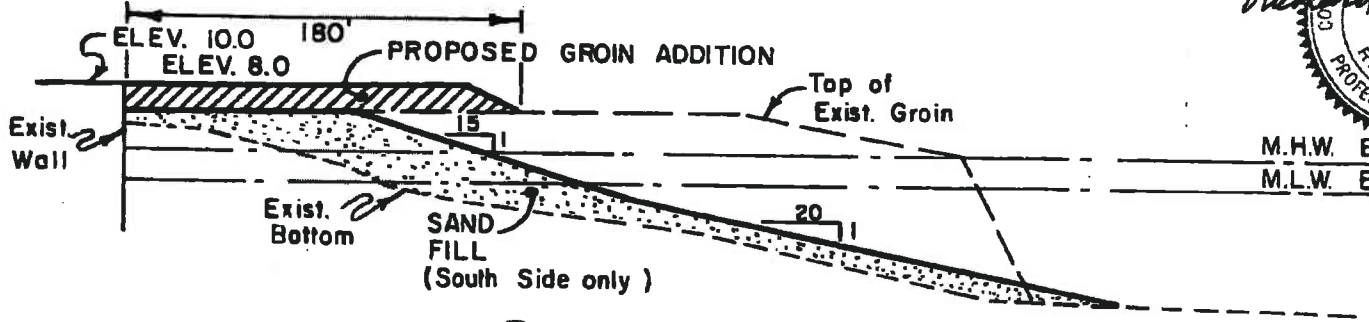
049-013-000-055-200
049-011-000-030-406
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300




PROFILE OF GROIN NO. 4
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 3
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 2
PROPOSED SAND FILL ON SOUTH SIDE OF GROIN

HOR. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

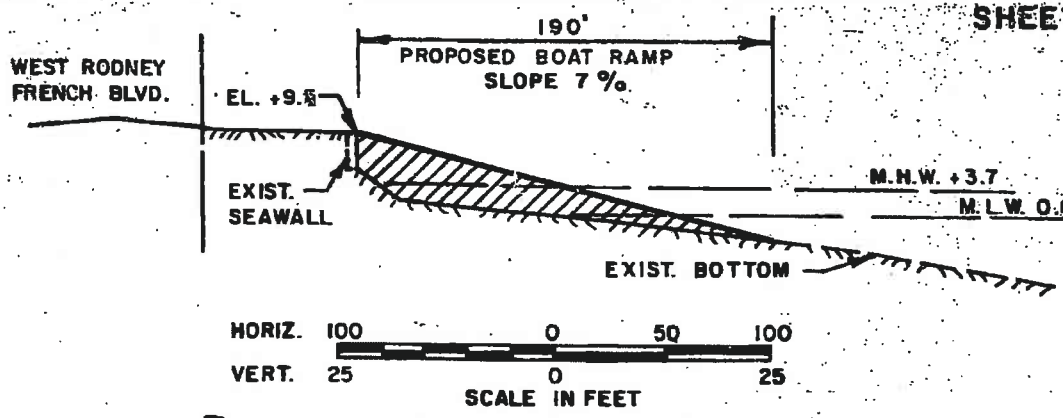
COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

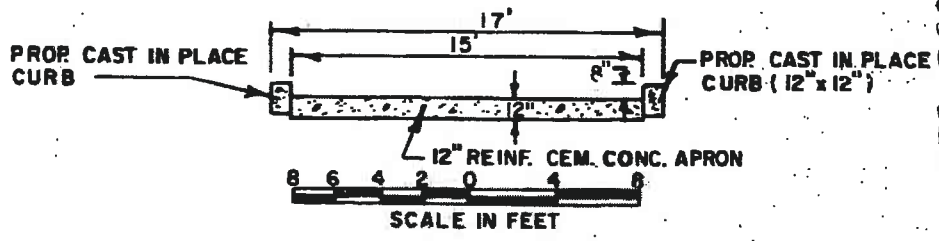
PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

214 0141

SHEET 4 OF 5

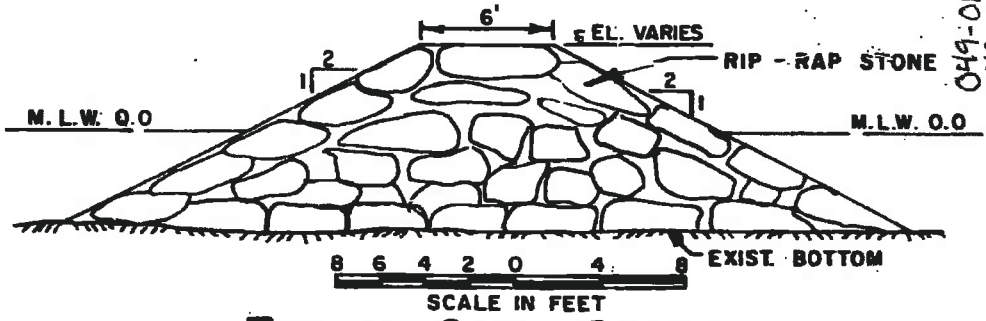



## PROPOSED BOAT RAMP PROFILE

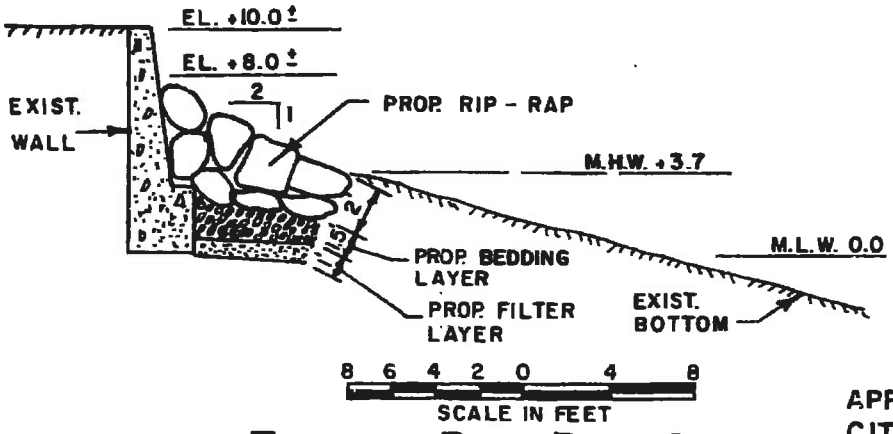



## TYPICAL BOAT RAMP SECTION

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300




## TYPICAL GROIN SECTION




## TYPICAL RIP-RAP SECTION

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 26009
REGISTERED PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-300

## CONTRACT QUANTITIES:

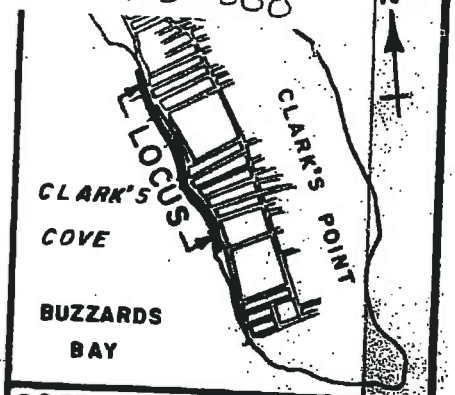
SAND FILL: 64,500 C.Y.
RIP-RAP REMOVED & RESET: 2,140 TONS
RIP-RAP (NEW): 3,680 TONS
BEDDING STONE: 1,720 TONS
FILTER STONE: 1180 TONS
STONE FOR GROIN EXTENSIONS: 10,950 TONS
STONE MOUND AND SOLID FILL: 2,500 C.Y.
FOR ADDITIONAL QUANTITIES SEE FORM 4345.

SHEE

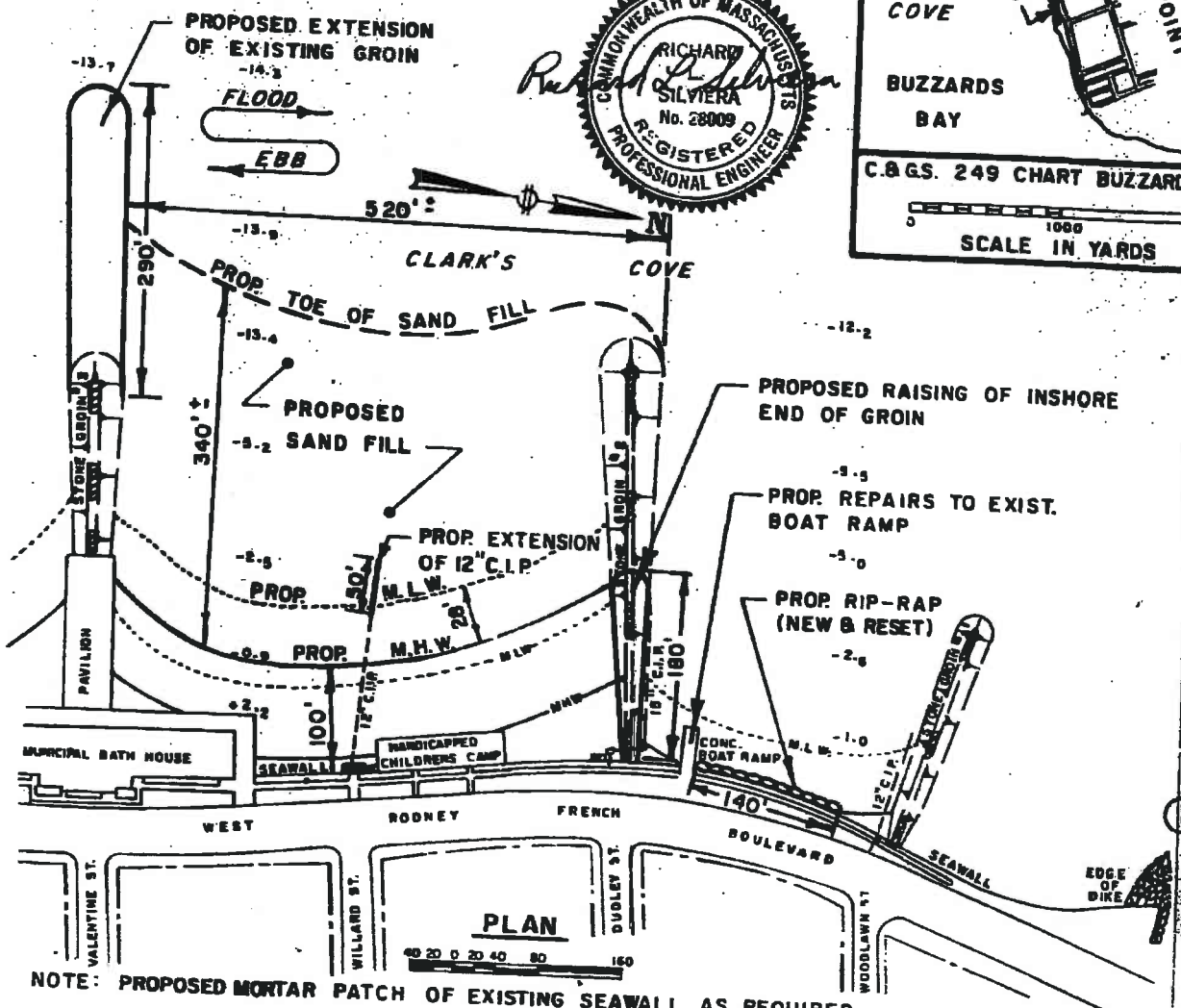
## ADJACENT PROPERTY OWNERS:

1. U.S. ARMY CORPS OF ENGINEER HURRICANE BARRIER
2. FORT RODMAN U.S. GOVERNMENT MILITARY RESERVATION

COMMONWEALTH OF MASSACHUSETTS
RICHARD SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER




C.&G.S. 249 CHART BUZZARDS BAY
0 1000 2000
SCALE IN YARDS




NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.

**PURPOSE:** SHORE PROTECTION AND PUBLIC RECREATIONAL FACILITIES.

**DATUM:** MEAN LOW WATER

# PROPOSED SHORE PROTECTION AND RECREATIONAL IMPROVEMENTS IN CLARK'S COVE

NEW BEDFORD
COUNTY OF: BRISTOL STATE: MASS.
APPLICATION BY: CITY OF NEW BEDFORD
APRIL 15, 1977

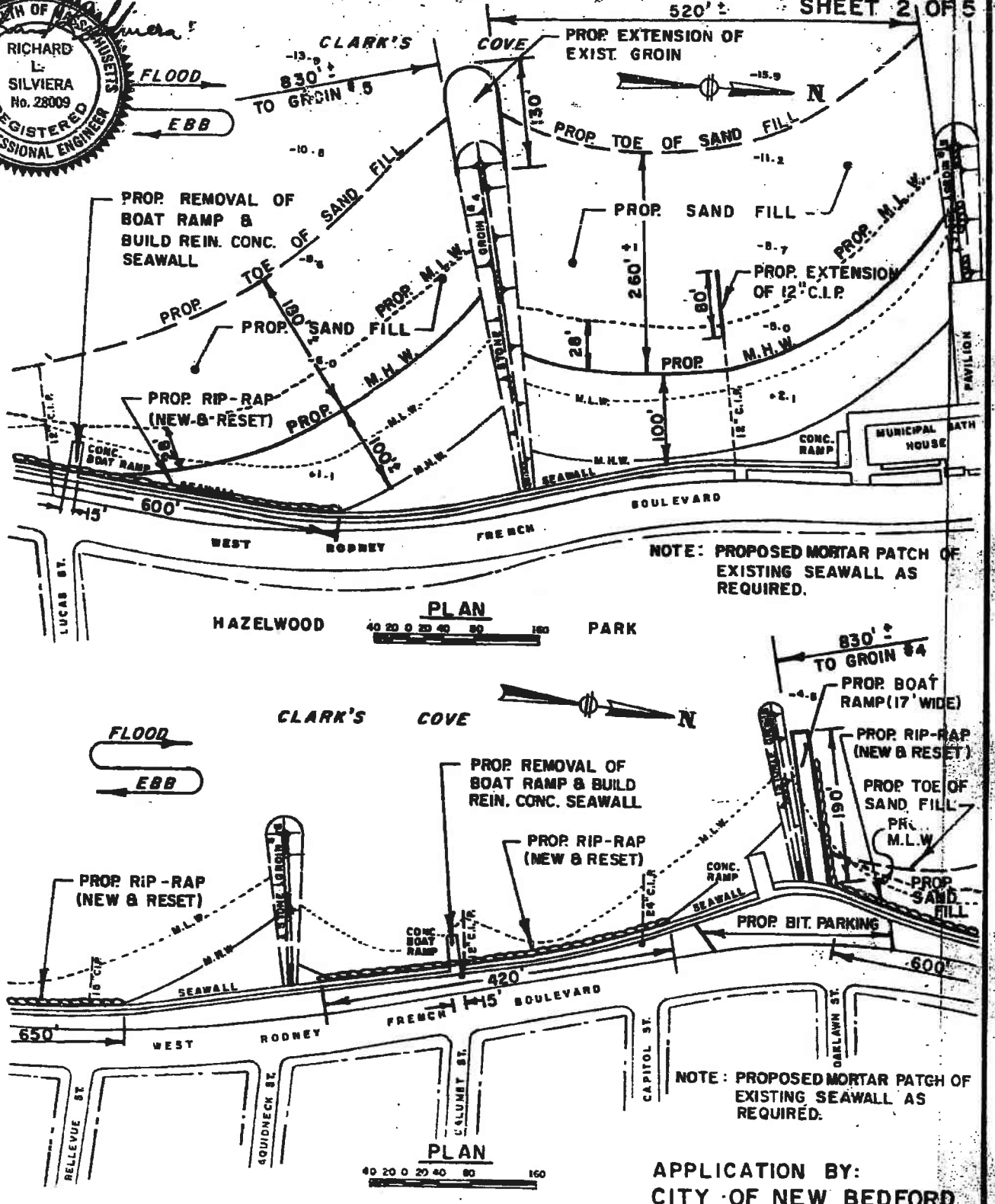
PREPARED BY TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

21-014

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300





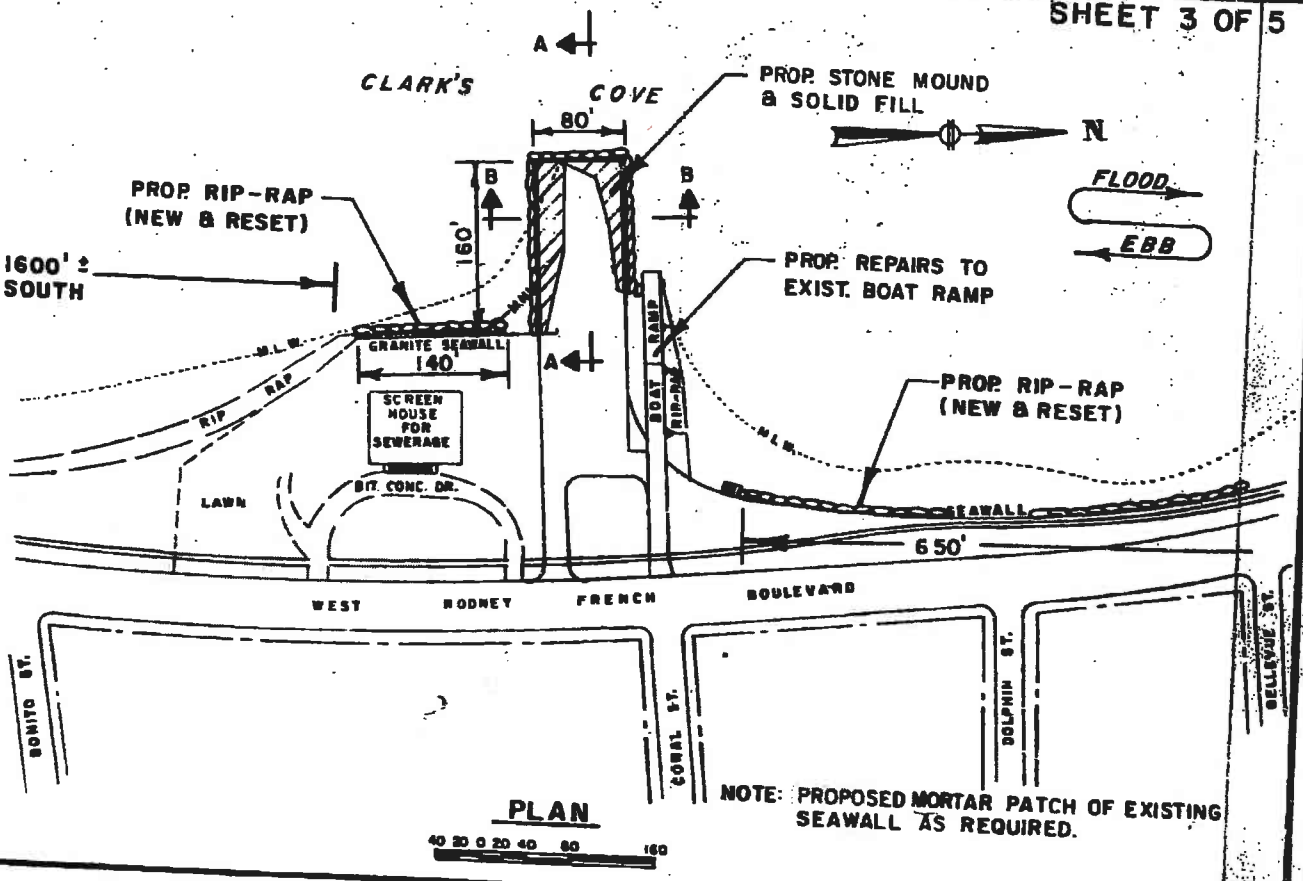



APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-100
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

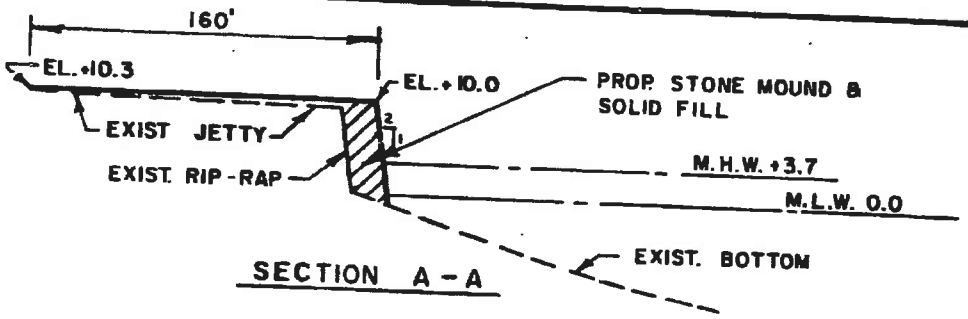




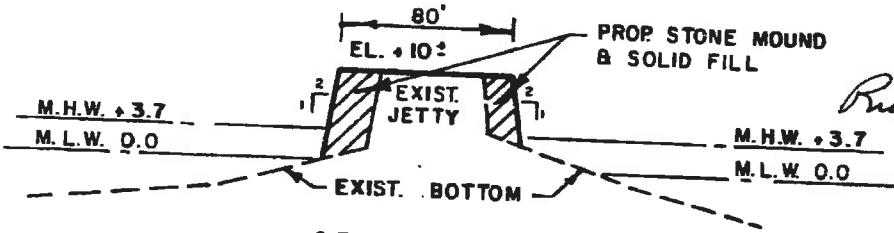

PLAN

40 20 0 20 40 60 160

NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.




SECTION A-A




SECTION B-B

HORIZ. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

COMMONWEALTH OF MASSACHUSETTS RICHARD L. SILVIERA No. 28009 REGISTERED PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-200
049-011-000-030-406
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049-009-000-286-200
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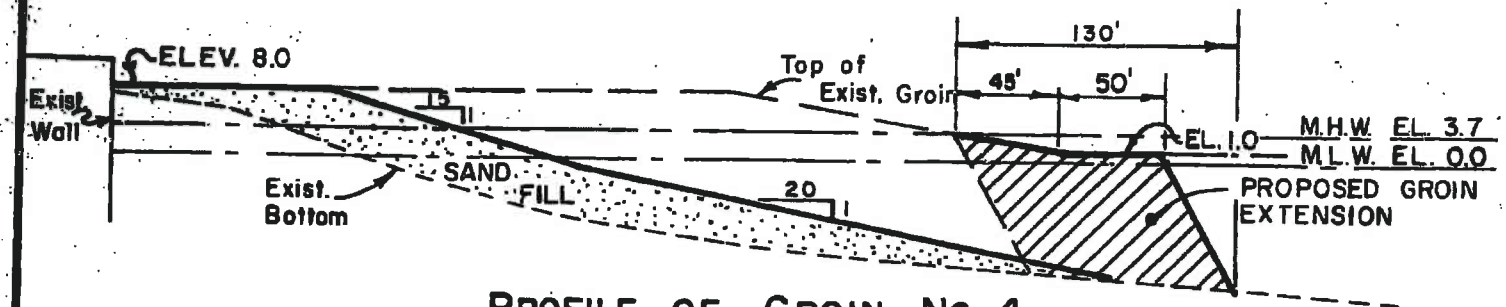
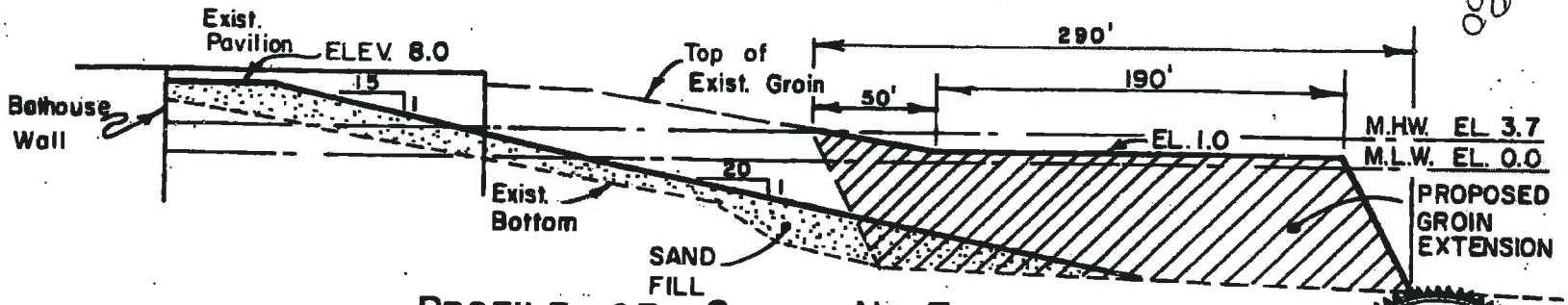
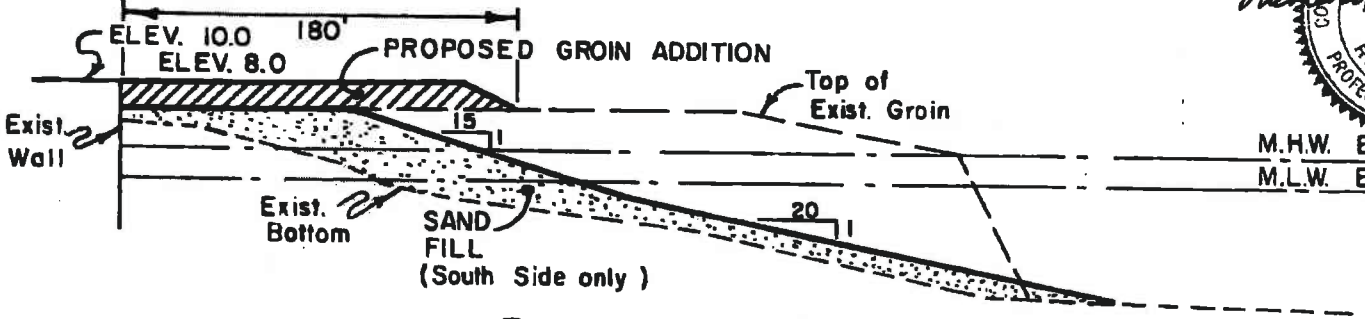
049-007-000-112-300




PROFILE OF GROIN NO. 4
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 3
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 2
PROPOSED SAND FILL ON SOUTH SIDE OF GROIN

HOR. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

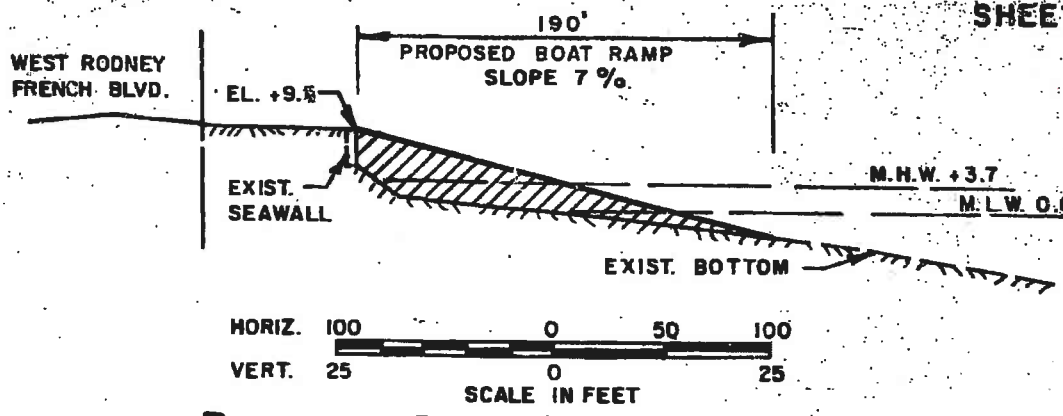
COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

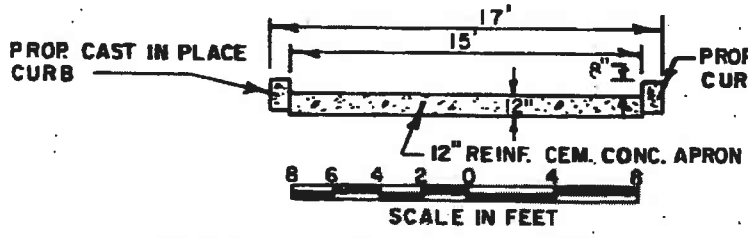
PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

2 1 4 0 1 4 1

SHEET 4 OF 5




## PROPOSED BOAT RAMP PROFILE




## TYPICAL BOAT RAMP SECTION

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
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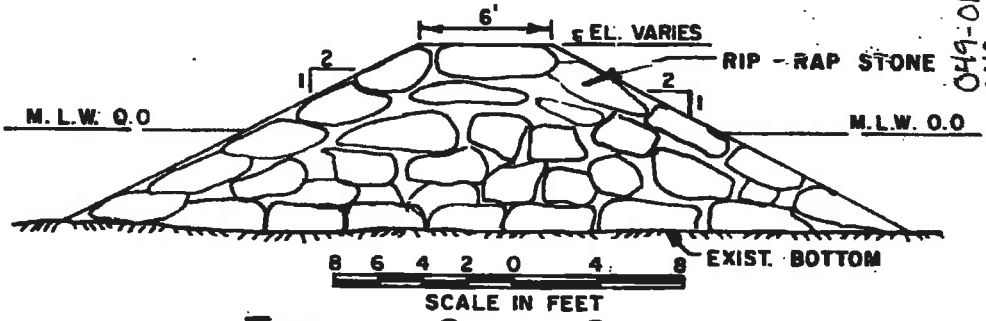
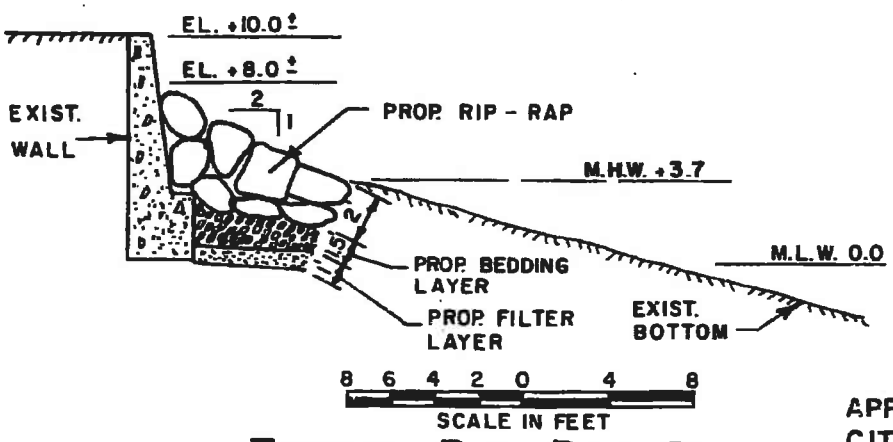
049-007-000-112-200
049-007-000-112-300




## TYPICAL GROIN SECTION




## TYPICAL RIP-RAP SECTION

COMMONWEALTH OF MASSACHUSETTS
RICHARD A. SILVIERA
No. 26009
REGISTERED
PROFESSIONAL ENGINEER

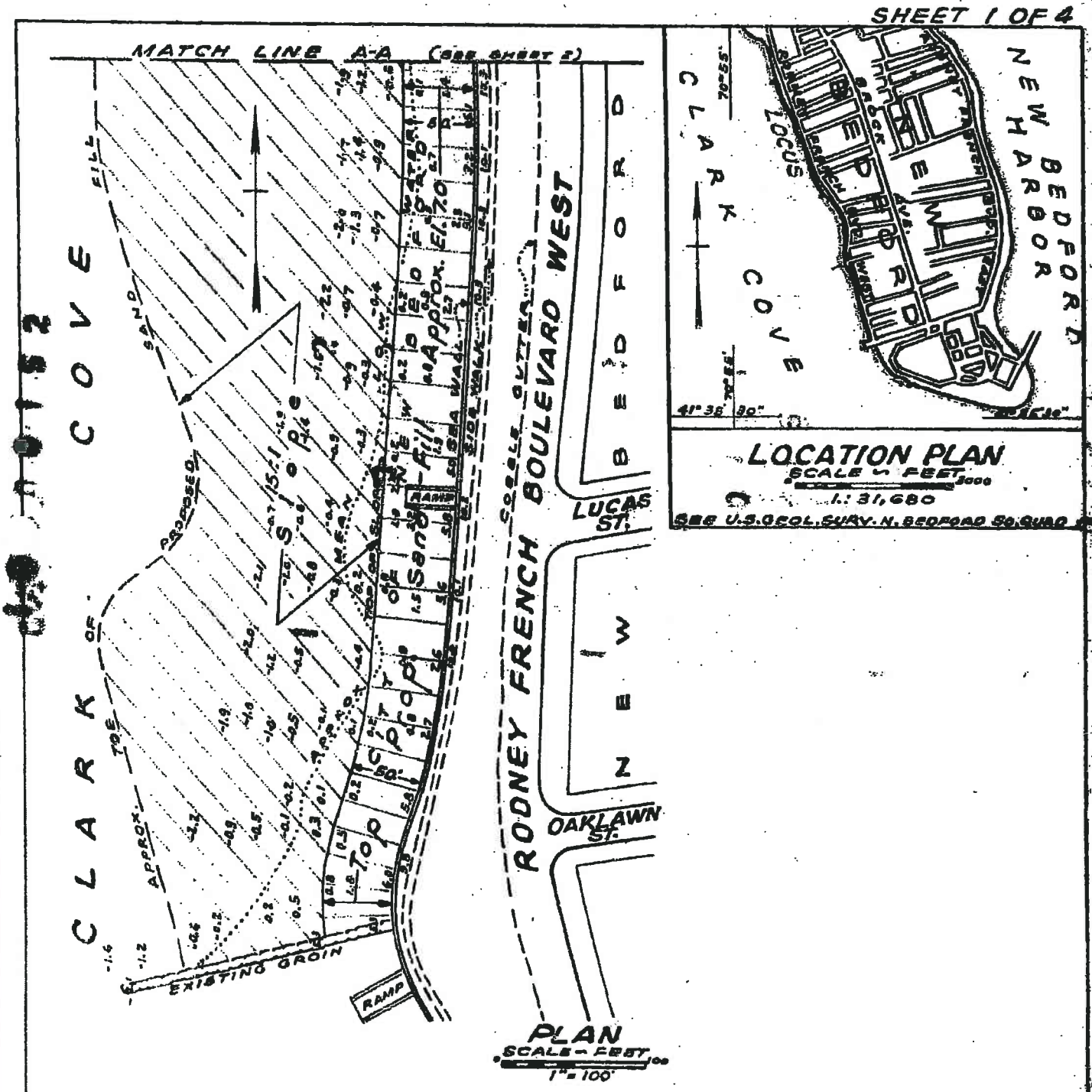
APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

0852 1168

049-011-000-030-400
049-009-000-286-200

SHEET 1 OF 4




## NOTE

ELEVATIONS ARE IN FEET AND TENTHS AND SHOW HEIGHTS ABOVE PLANE OF MEAN LOW WATER. MINUS FIGURES SHOW DEPTHS BELOW SAME PLANE. SEE SHEET 4 FOR SAND FILL SECTIONS. LOCATION OF PROPOSED WORK SHOWN IN RED.

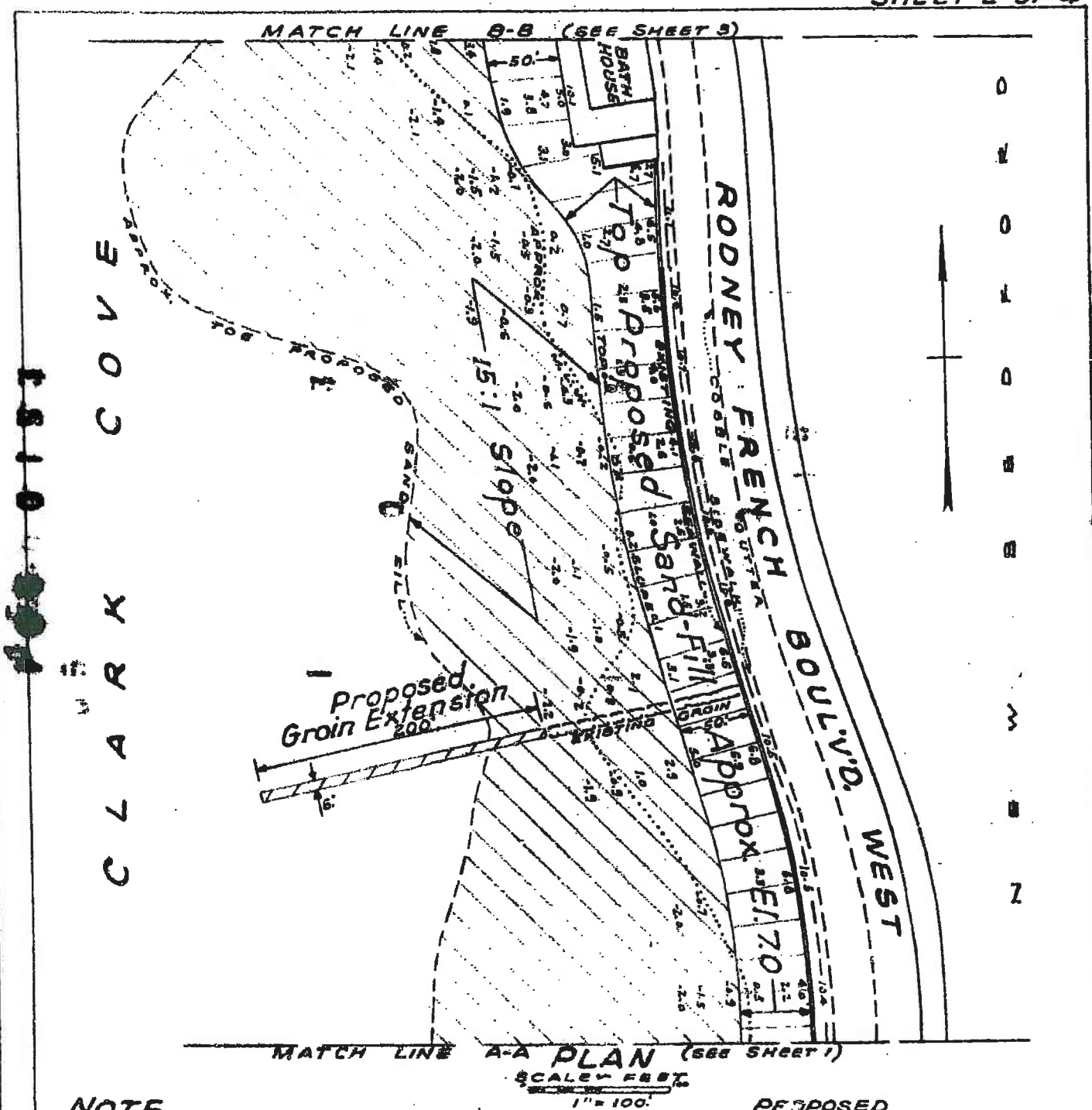
PROPOSED
SAND FILL AND GROINS
RODNEY FRENCH BLVD. — WEST
CLARK COVE
NEW BEDFORD — MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
MAY — 1958

R.B. MacKinnon
CHIEF WATERWAYS ENGINEER

085 - 1169

049-011-000-030-400
049-009-000-286-200

SHEET 2 OF 4



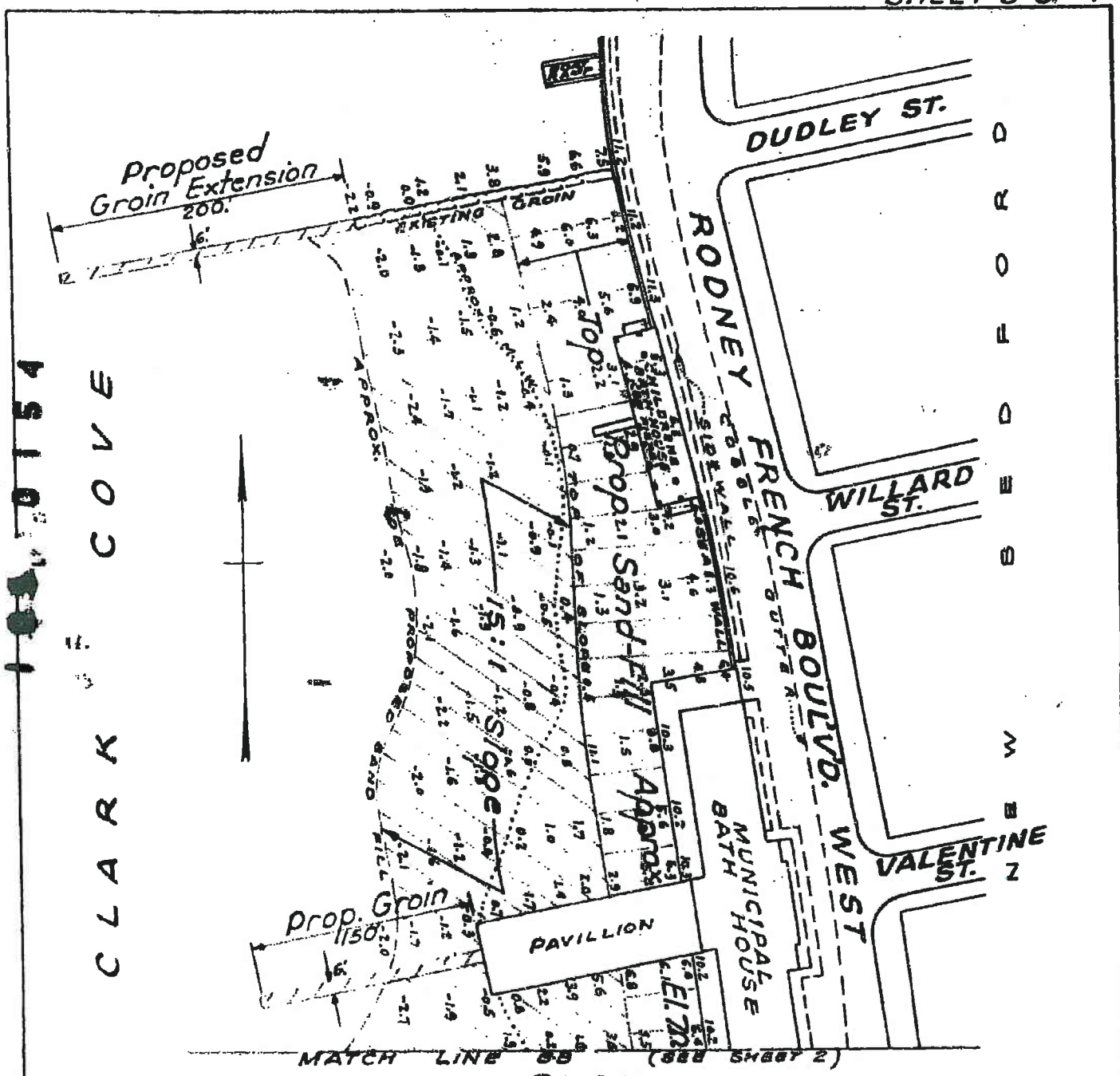

**NOTE**
ELEVATIONS ARE IN FEET AND TENTHS AND SHOW HEIGHTS ABOVE PLANE OF MEAN LOW WATER. MINUS FIGURES SHOW DEPTHS BELOW THE SAME PLANE. SEE SHEET 4 FOR PROFILE-SECTIONS. LOCATION OF PROPOSED WORK SHOWN IN RED.

PROPOSED
SAND FILL AND GROINS
RODNEY FRENCH BLVD.—WEST
CLARK COVE
NEW BEDFORD, MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
MAY — 1958

GBMacKinnon
CHIEF WATERWAYS ENGINEER

085 1170 049-011-000-030-400
049-009-000-286-200

SHEET 3 OF 4




PLAN
SCALE - FEET
1" = 100'

**NOTE**
ELEVATIONS ARE IN FEET AND TENTHS AND SHOW HEIGHT ABOVE PLANE OF MEAN LOW WATER. MINUS FIGURES SHOW DEPTHS BELOW SAME PLANE. SEE SHEET 4 FOR PROFILE-SECTIONS. LOCATION OF PROPOSED WORK SHOWN IN RED.

PROPOSED
SAND FILL AND GROINS
RODNEY FRENCH BLVD. - WEST
CLARK COVE
NEW BEDFORD - MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
MAY - 1958

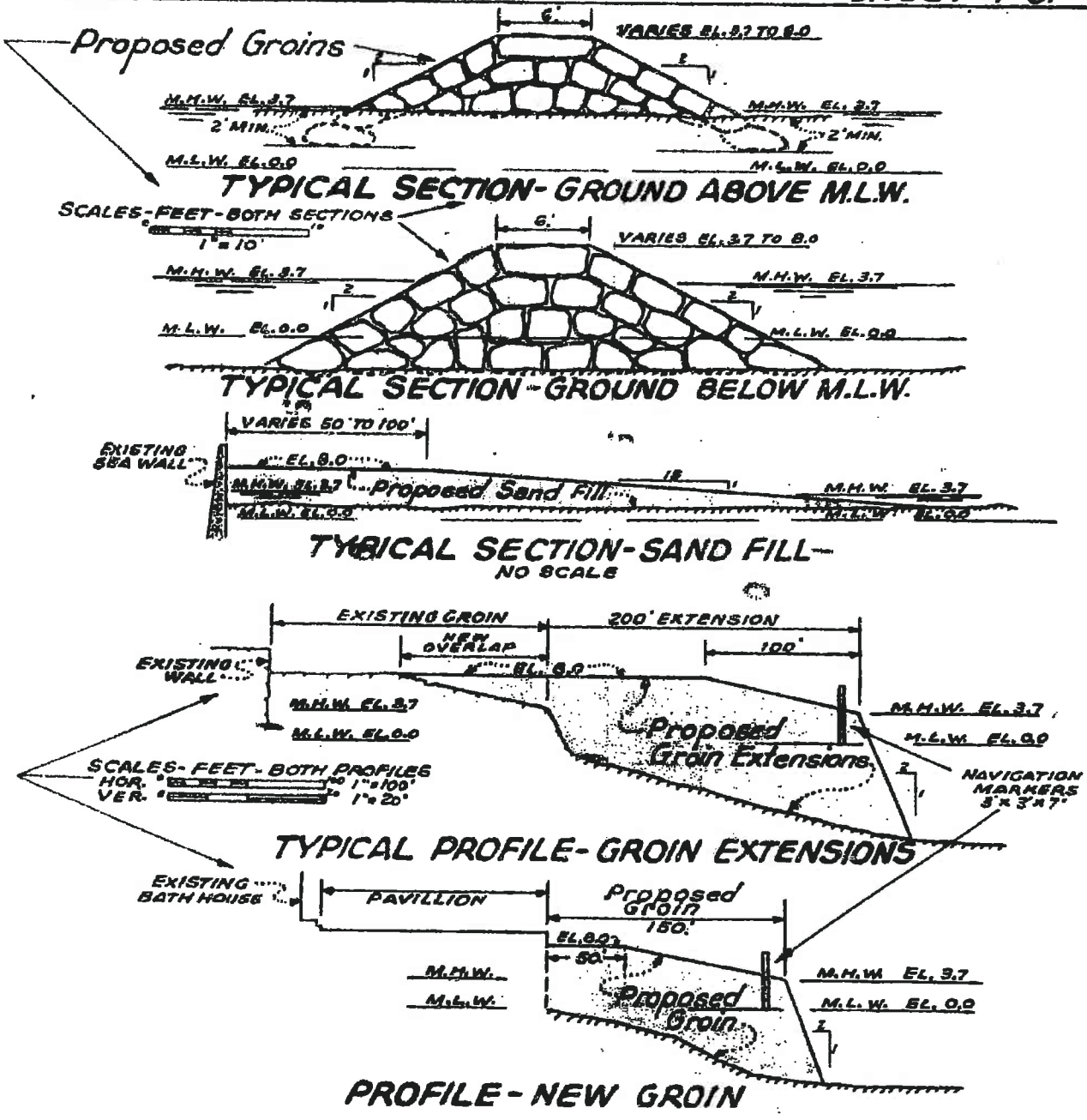
R B MacKinnon
CHIEF WATERWAYS ENGINEER

ACC 03856-C

0.8 5 | 1 7 1

049-011-000-030-400
049-009-000-286-200

SHEET 4 OF 4




## NOTE

ELEVATIONS IN FEET AND TENTHS REFER TO PLANE OF MEAN LOW WATER.
APPROX. EXISTING GROUND THUS
SEE SHEETS 1, 2, AND 3 FOR PLAN VIEWS.
OUTER LIMITS OF WORK TO BE DONE ARE SHOWN IN RED.

PROPOSED
SAND FILL AND GROINS
RODNEY FRENCH BLVD. - WEST
CLARK COVE
NEW BEDFORD - MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
MAY - 1958

R B Mac Kinnon

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

## CONTRACT QUANTITIES:

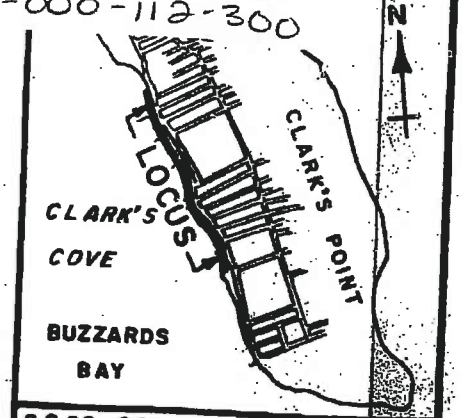
SAND FILL: 64,500 C.Y.
RIP-RAP REMOVED & RESET: 2,140 TONS
RIP-RAP (NEW): 3,680 TONS
BEDDING STONE: 1,720 TONS
FILTER STONE: 1180 TONS
STONE FOR GROIN EXTENSIONS: 10,950 TONS
STONE MOUND AND SOLID FILL: 2,500 C.Y.
FOR ADDITIONAL QUANTITIES SEE FORM 4345.

SHEE

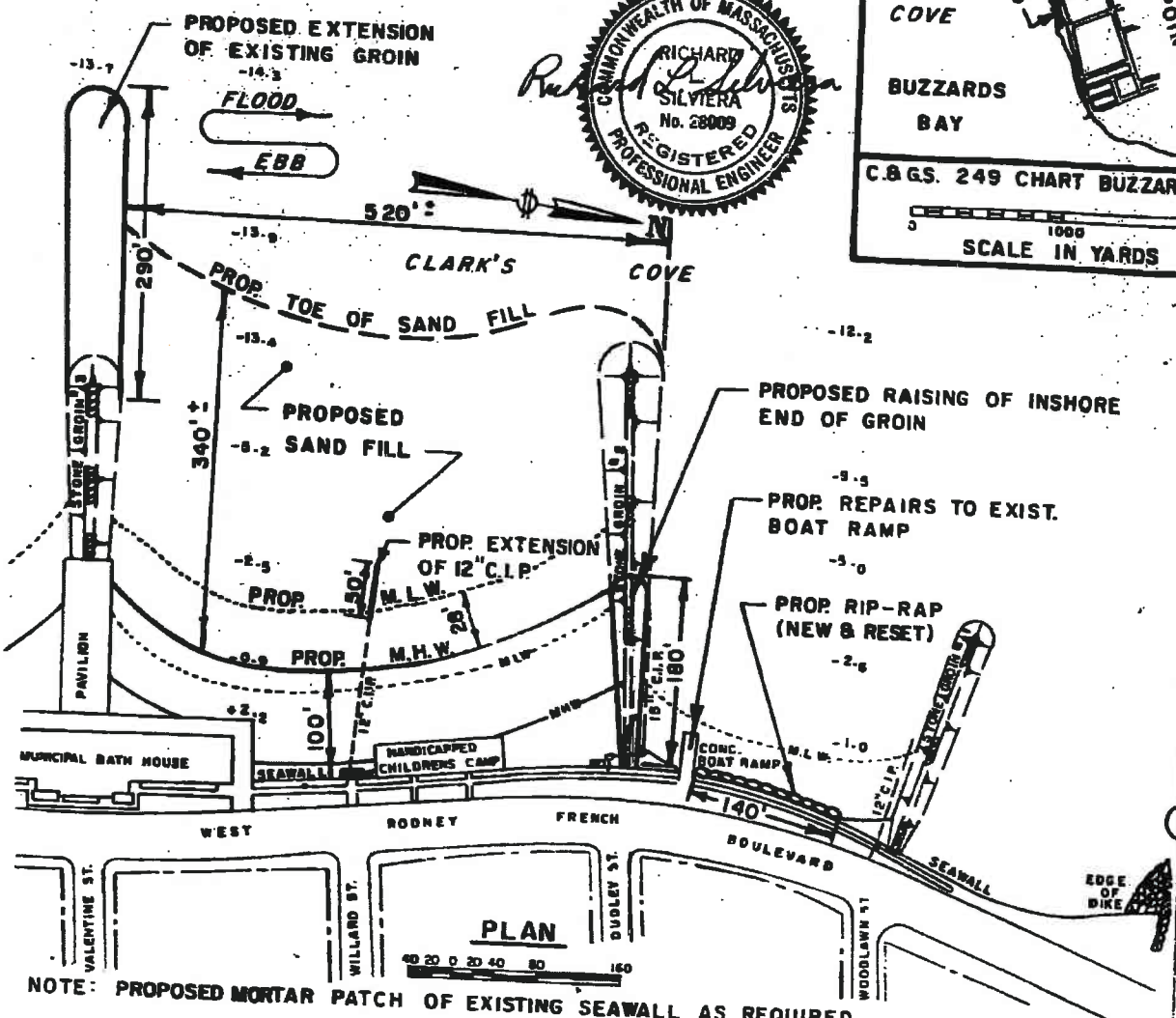
## ADJACENT PROPERTY OWNERS:

1. U.S. ARMY CORPS OF ENGINEER HURRICANE BARRIER
2. FORT RODMAN U.S. GOVERNMENT MILITARY RESERVATION

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER




C.&G.S. 249 CHART BUZZARDS BAY
0 1000 2000
SCALE IN YARDS




NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.

**PURPOSE:** SHORE PROTECTION AND PUBLIC RECREATIONAL FACILITIES.

**DATUM:** MEAN LOW WATER

# PROPOSED SHORE PROTECTION AND RECREATIONAL IMPROVEMENTS IN CLARK'S COVE

NEW BEDFORD
COUNTY OF: BRISTOL STATE: MASS.
APPLICATION BY: CITY OF NEW BEDFORD
APRIL 15, 1977

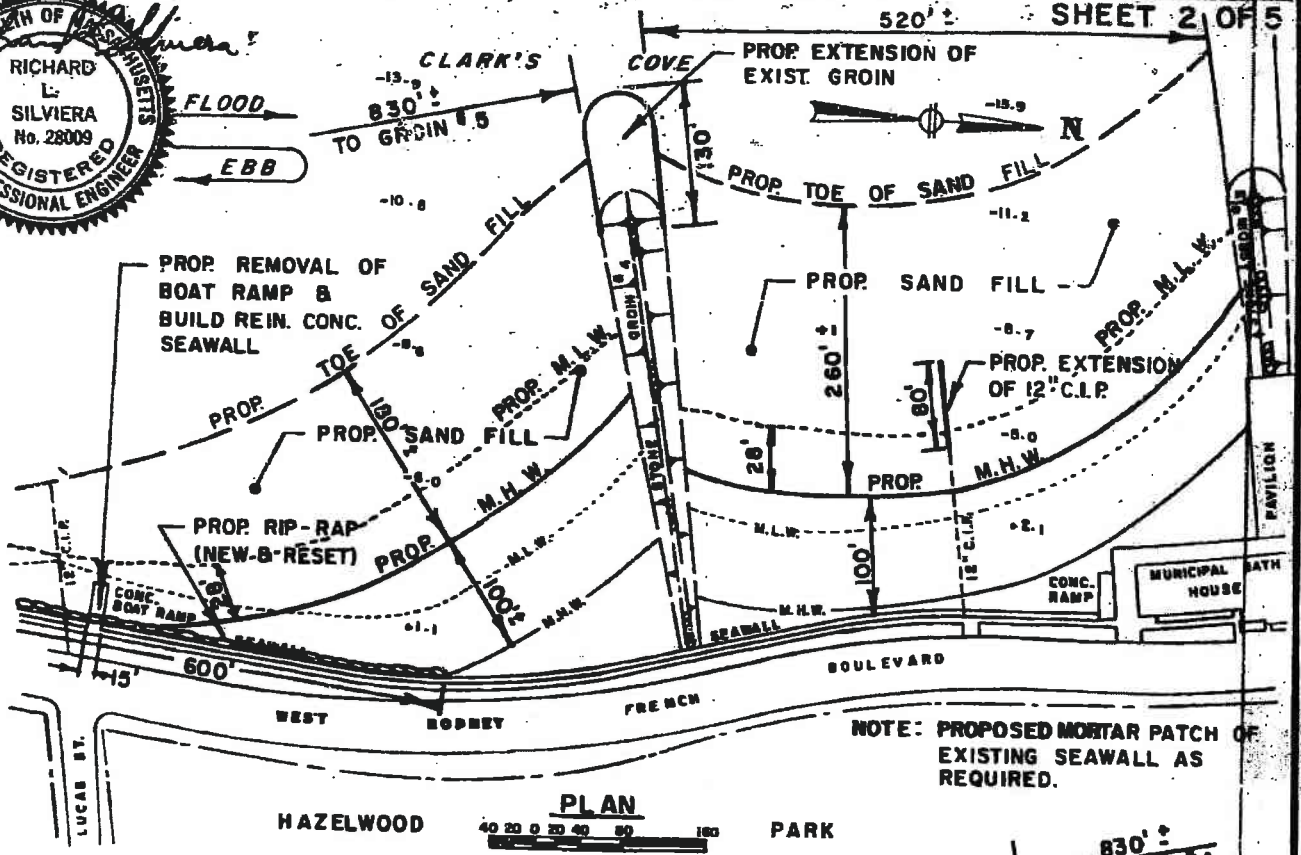
PREPARED BY TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

21 + 014

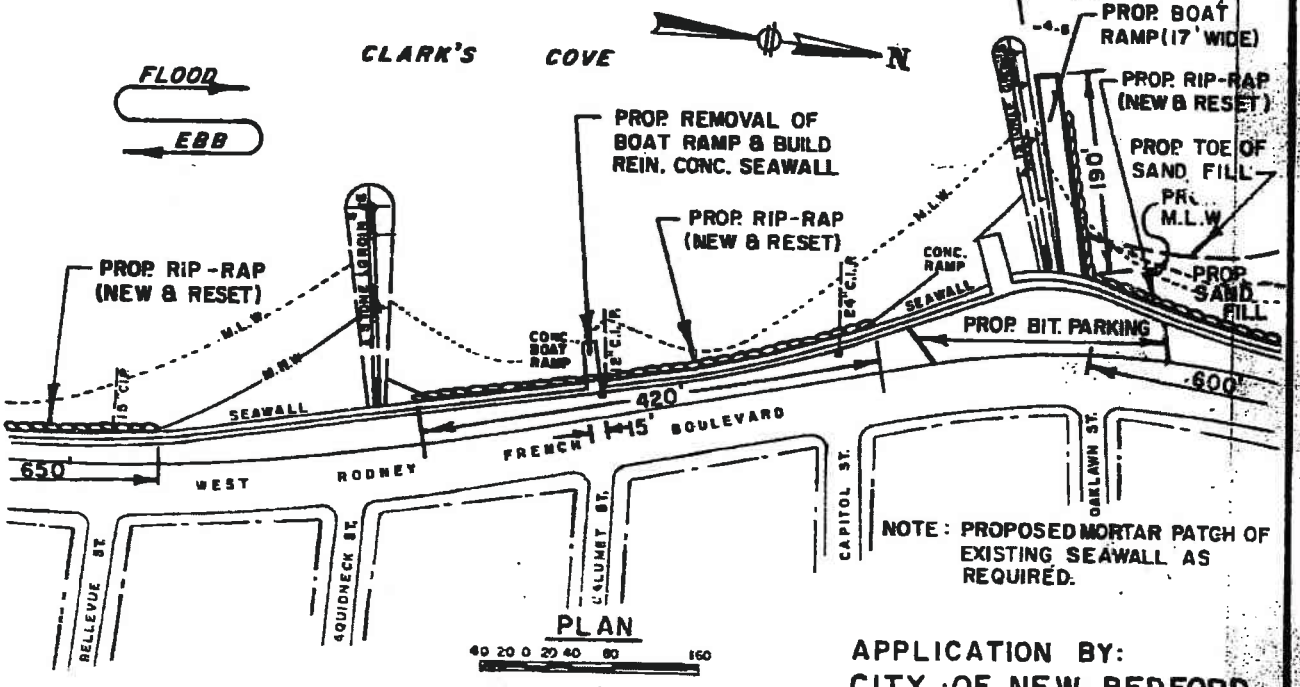
049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300



COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER




PLAN



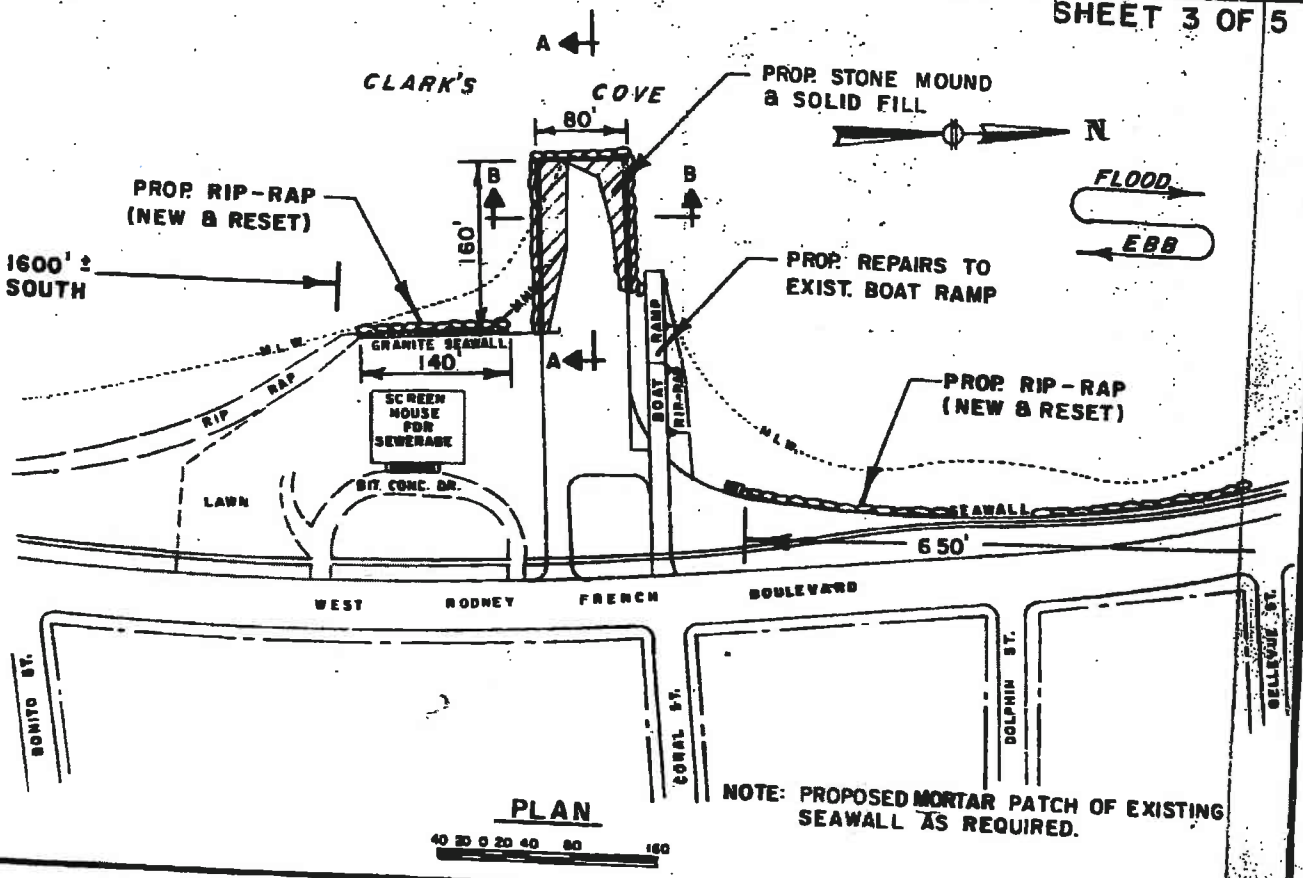

PLAN

APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-100
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

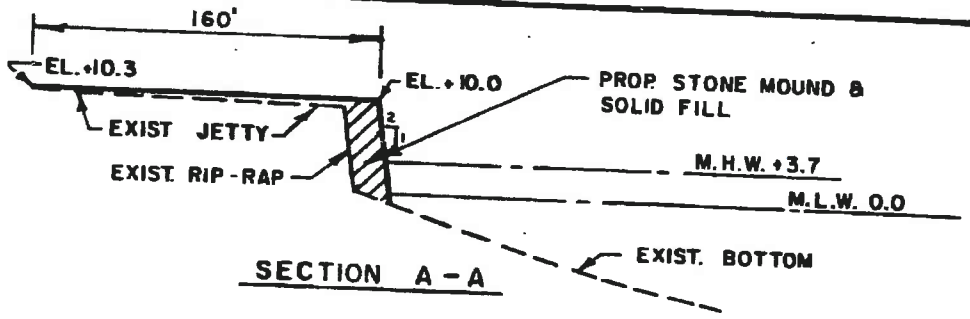




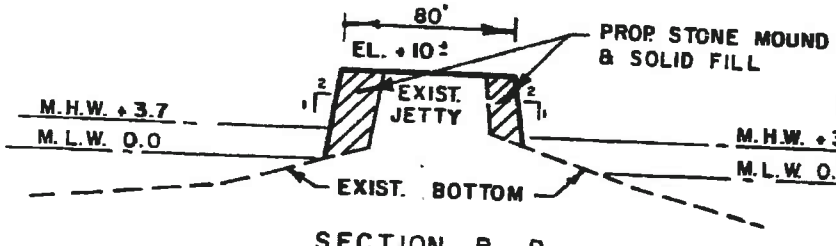

PLAN

40 20 0 20 40 80 160

NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.




SECTION A-A




SECTION B-B

HORIZ. 100 0 50 100

VERT. 25 0 25

SCALE IN FEET

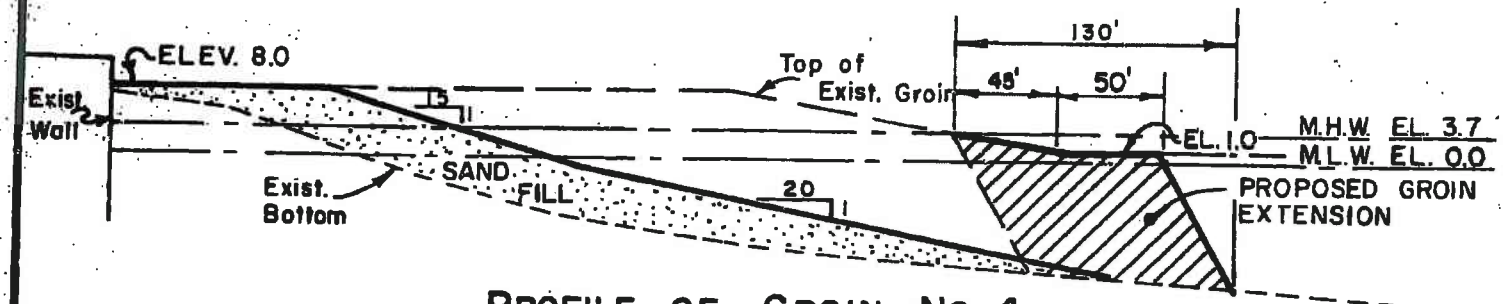
COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

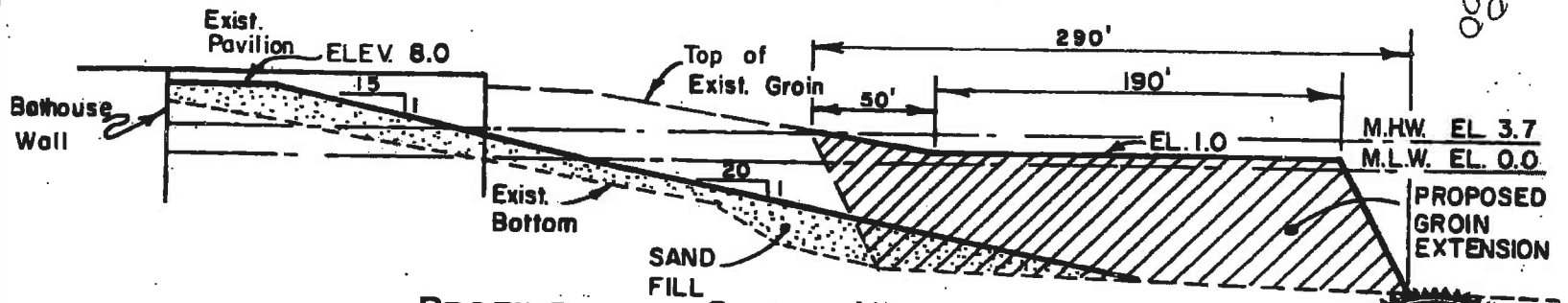
PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

214 . 1 4 2

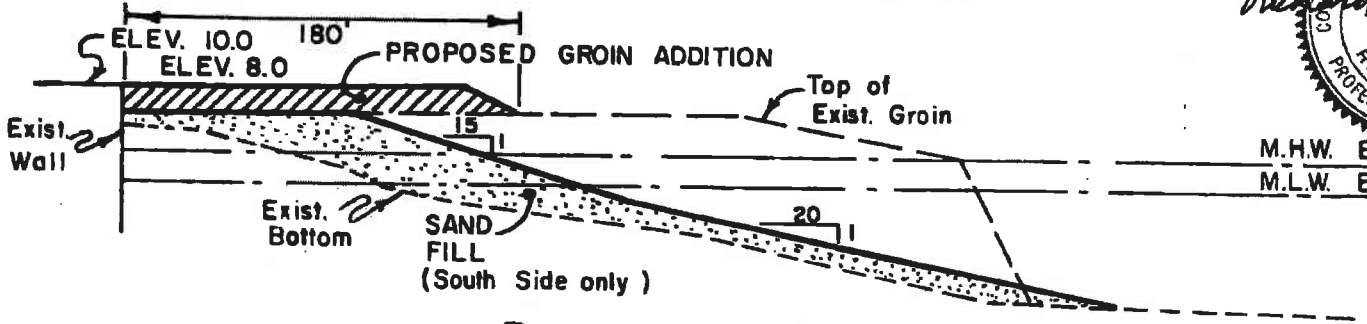
049-013-000-055-200
049-011-000-030-406
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300




PROFILE OF GROIN NO. 4
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 3
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 2
PROPOSED SAND FILL ON SOUTH SIDE OF GROIN

HOR. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

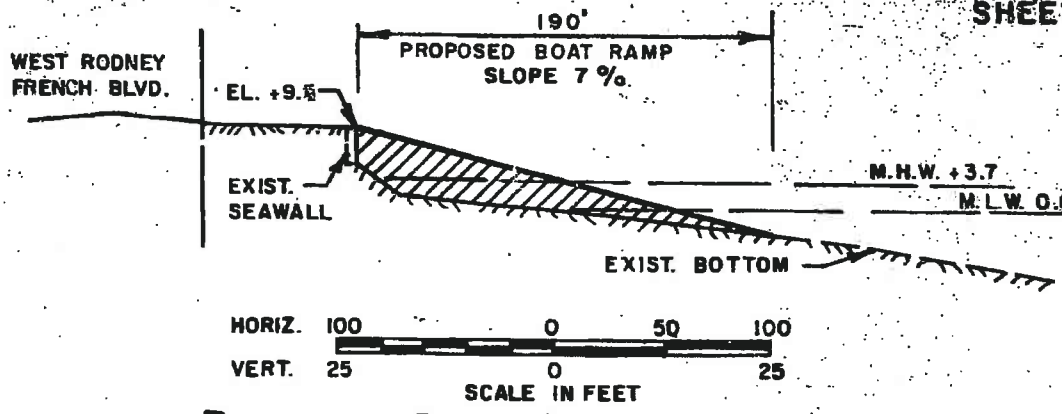
APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

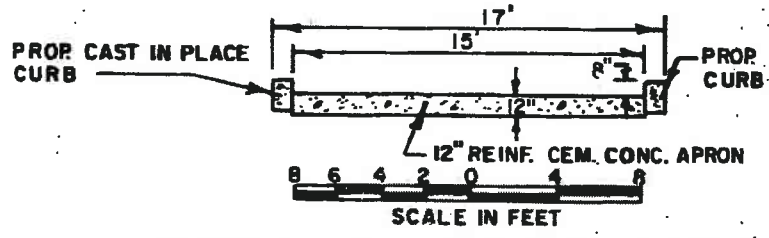
COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

214 0141

SHEET 4 OF 5




## PROPOSED BOAT RAMP PROFILE




## TYPICAL BOAT RAMP SECTION

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
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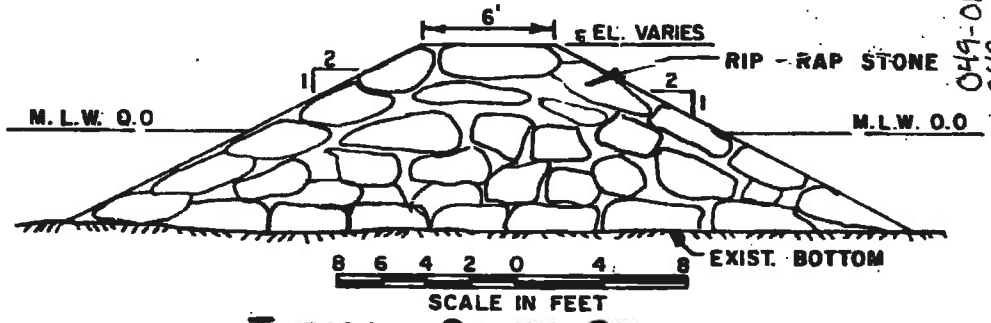
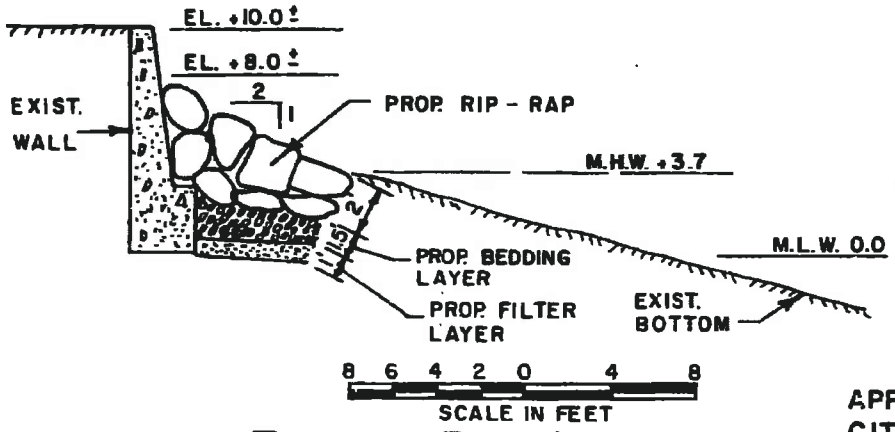
049-007-000-112-300




## TYPICAL GROIN SECTION




## TYPICAL RIP-RAP SECTION

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 26099
REGISTERED
PROFESSIONAL ENGINEER

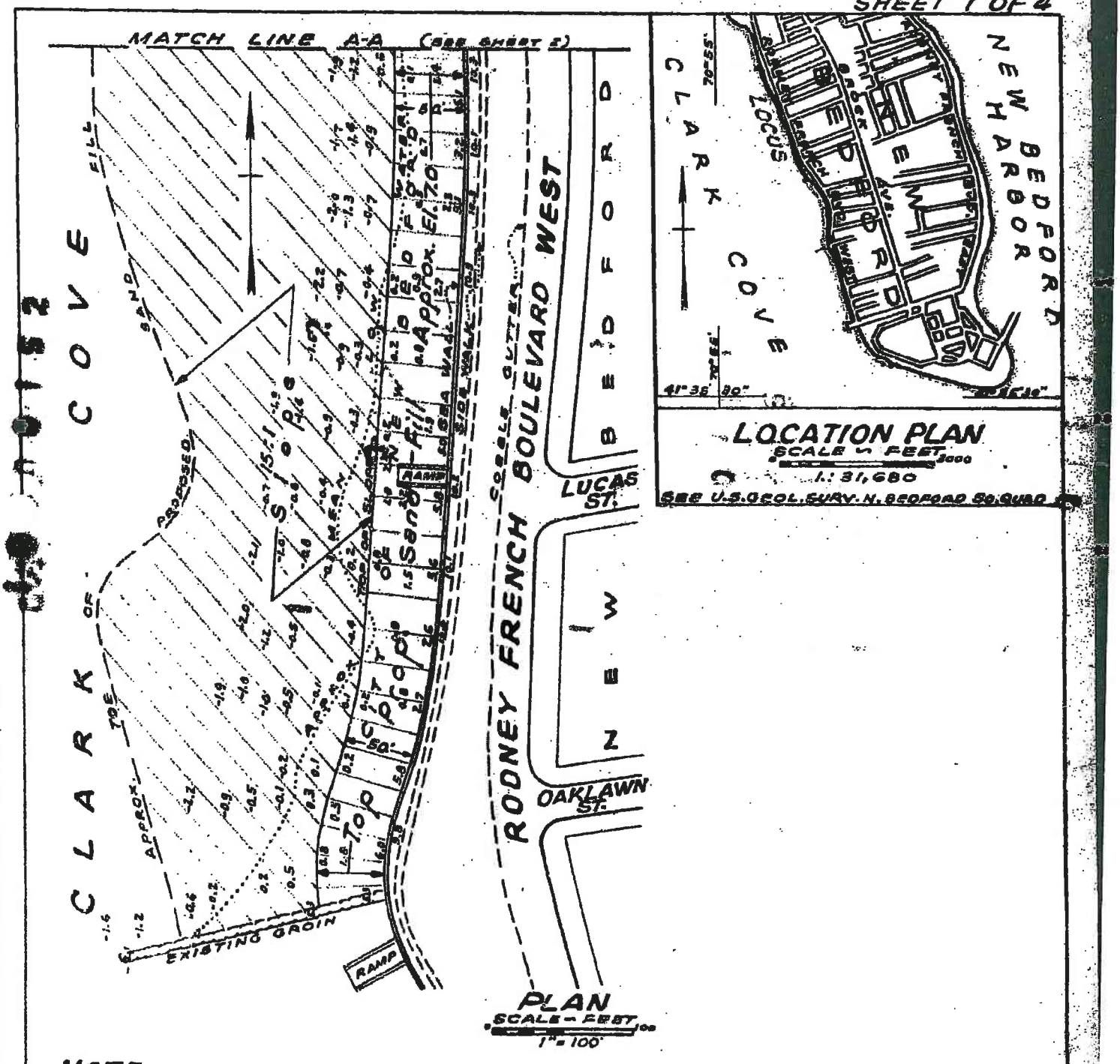
APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

0 8 5 - 1 1 6 8

049-011-000-030-400
049-009-000-286-200

SHEET 1 OF 4




## NOTE

ELEVATIONS ARE IN FEET AND TENTHS AND SHOW HEIGHTS ABOVE PLANE OF MEAN LOW WATER. MINUS FIGURES SHOW DEPTHS BELOW SAME PLANE. SEE SHEET 4 FOR SAND FILL SECTIONS. LOCATION OF PROPOSED WORK SHOWN IN RED.

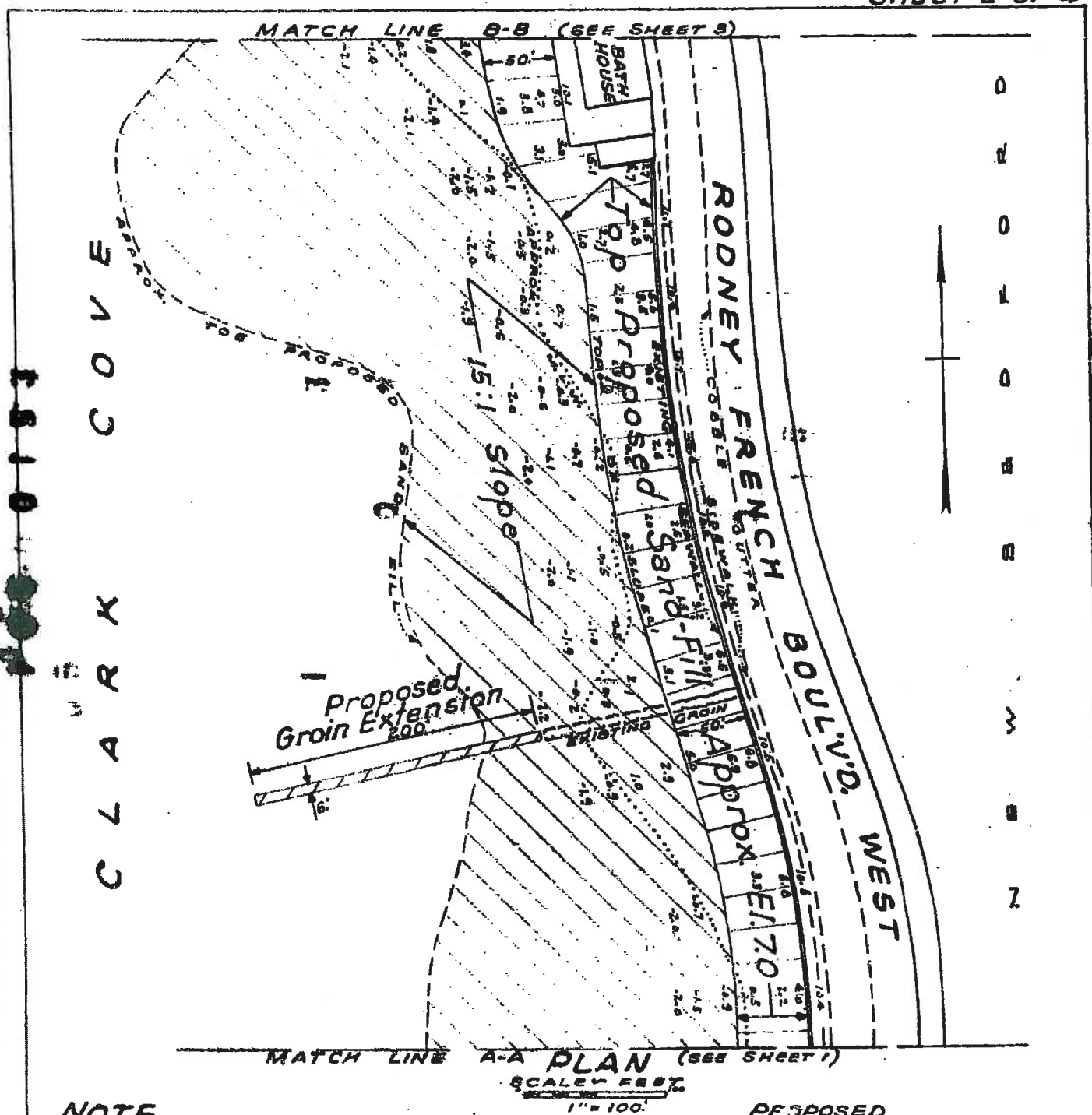
PROPOSED
SAND FILL AND GROINS
RODNEY FRENCH BLVD. - WEST
# CLARK COVE
NEW BEDFORD - MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
MAY - 1958

R. B. MacKinnon
CHIEF WATERWAYS ENGINEER

Q 8 5 1 1 6 9

049-011-000-030-400
049-009-000-286-200

SHEET 2 OF 4



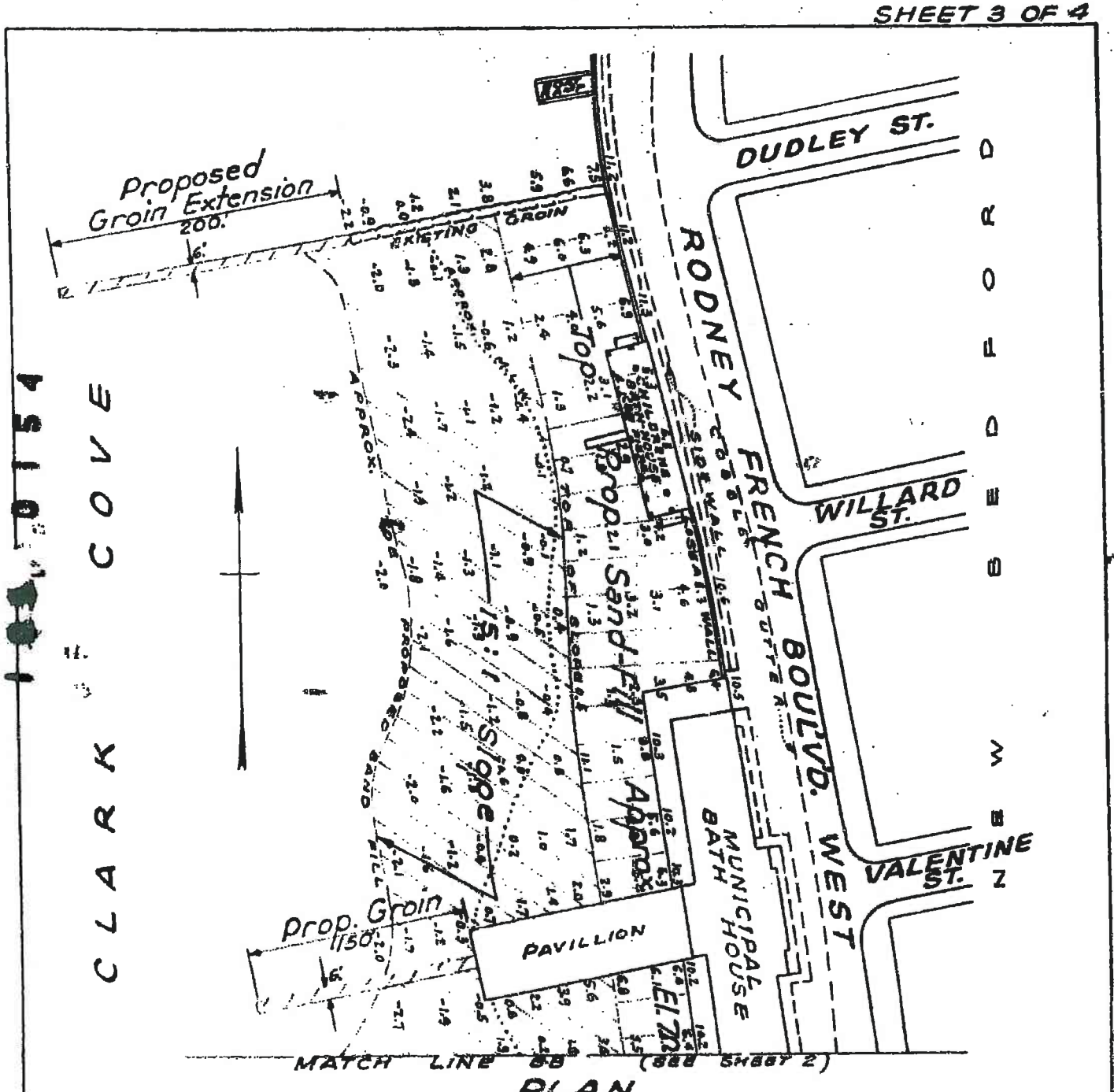

**NOTE**
ELEVATIONS ARE IN FEET AND TENTHS AND SHOW HEIGHTS ABOVE PLANE OF MEAN LOW WATER. MINUS FIGURES SHOW DEPTHS BELOW THE SAME PLANE. SEE SHEET 4 FOR PROFILE-SECTIONS. LOCATION OF PROPOSED WORK SHOWN IN RED.

PROPOSED
SAND FILL AND GROINS
RODNEY FRENCH BL'V'D. — WEST
CLARK COVE
NEW BEDFORD, MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
MAY — 1958

G B MacKinnon
CHIEF WATERWAYS ENGINEER

085 1170 049-011-000-030-400
049-009-000-286-200

SHEET 3 OF 4




PLAN
SCALE - FEET
1" = 100'

**NOTE**
ELEVATIONS ARE IN FEET AND TENTHS AND SHOW HEIGHT ABOVE PLANE OF MEAN LOW WATER. MINUS FIGURES SHOW DEPTHS BELOW SAME PLANE. SEE SHEET 4 FOR PROFILE-SECTIONS. LOCATION OF PROPOSED WORK SHOWN IN RED.

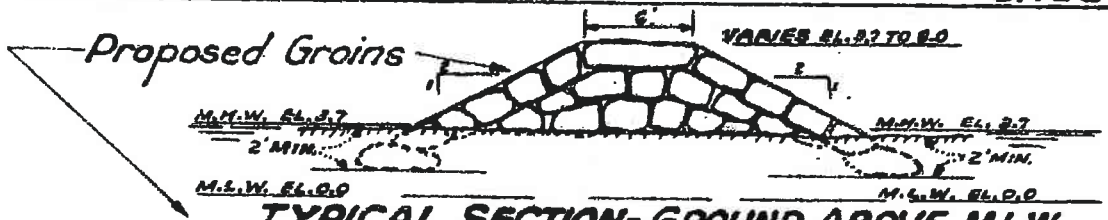
PROPOSED
SAND FILL AND GROINS
RODNEY FRENCH BLVD. - WEST
CLARK COVE
NEW BEDFORD - MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
MAY - 1958

R B MacKinnon
CHIEF WATERWAYS ENGINEER

ACC 03856-C

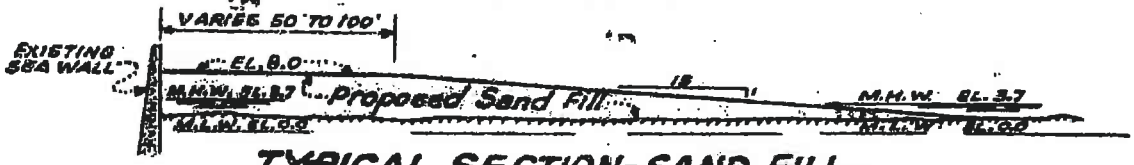
0.8 5 | 1 7 1 049-011-000-030-400
049-009-000-286-200

SHEET 4 OF 4

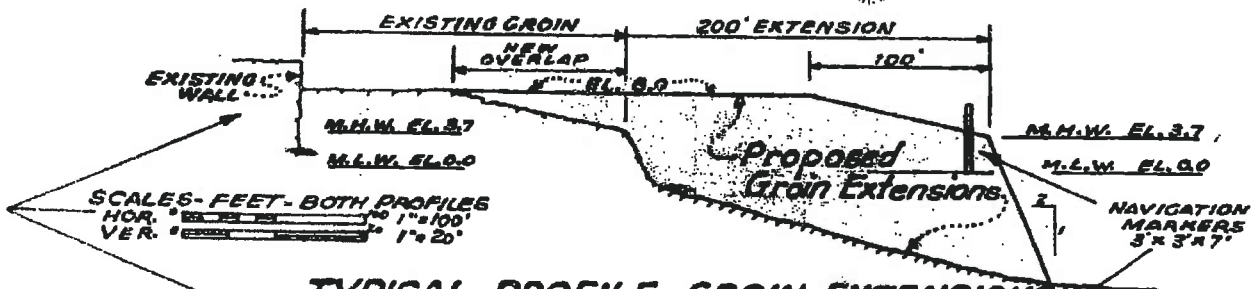



TYPICAL SECTION - GROUND ABOVE M.L.W.

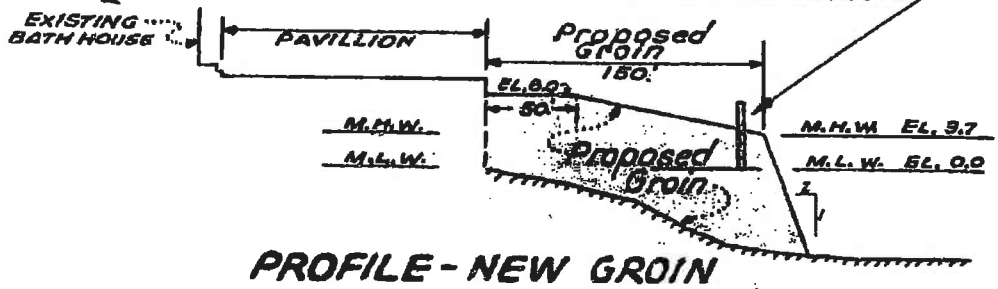

TYPICAL SECTION - GROUND BELOW M.L.W.




TYPICAL SECTION - SAND FILL -
NO SCALE




TYPICAL PROFILE - GROIN EXTENSIONS




PROFILE - NEW GROIN

**NOTE**

ELEVATIONS IN FEET AND TENTHS REFER TO PLANE OF MEAN LOW WATER. APPROX. EXISTING GROUND THUS ..... SEE SHEETS 1, 2, AND 3 FOR PLAN VIEWS. OUTER LIMITS OF WORK TO BE DONE ARE SHOWN IN RED.

PROPOSED
SAND FILL AND GROINS
RODNEY FRENCH BL'VD. - WEST
CLARK COVE
NEW BEDFORD - MASS.
APPLICATION BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
MAY - 1958

R B MacKinnon

0.8 5 | 1 6 5

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

## CONTRACT QUANTITIES:

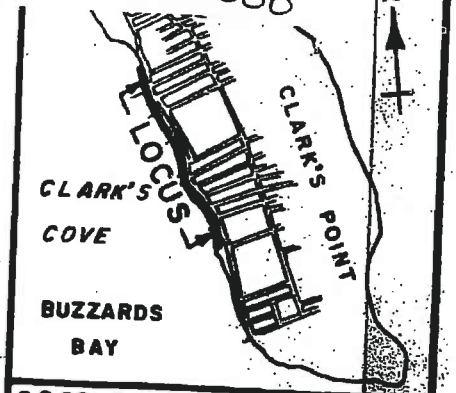
SAND FILL: 64,500 C.Y.
RIP-RAP REMOVED & RESET: 2,140 TONS
RIP-RAP (NEW): 3,680 TONS
BEDDING STONE: 1,720 TONS
FILTER STONE: 1180 TONS
STONE FOR GROIN EXTENSIONS: 10,950 TONS
STONE MOUND AND SOLID FILL: 2,500 C.Y.
FOR ADDITIONAL QUANTITIES SEE FORM 4345.

SHEE

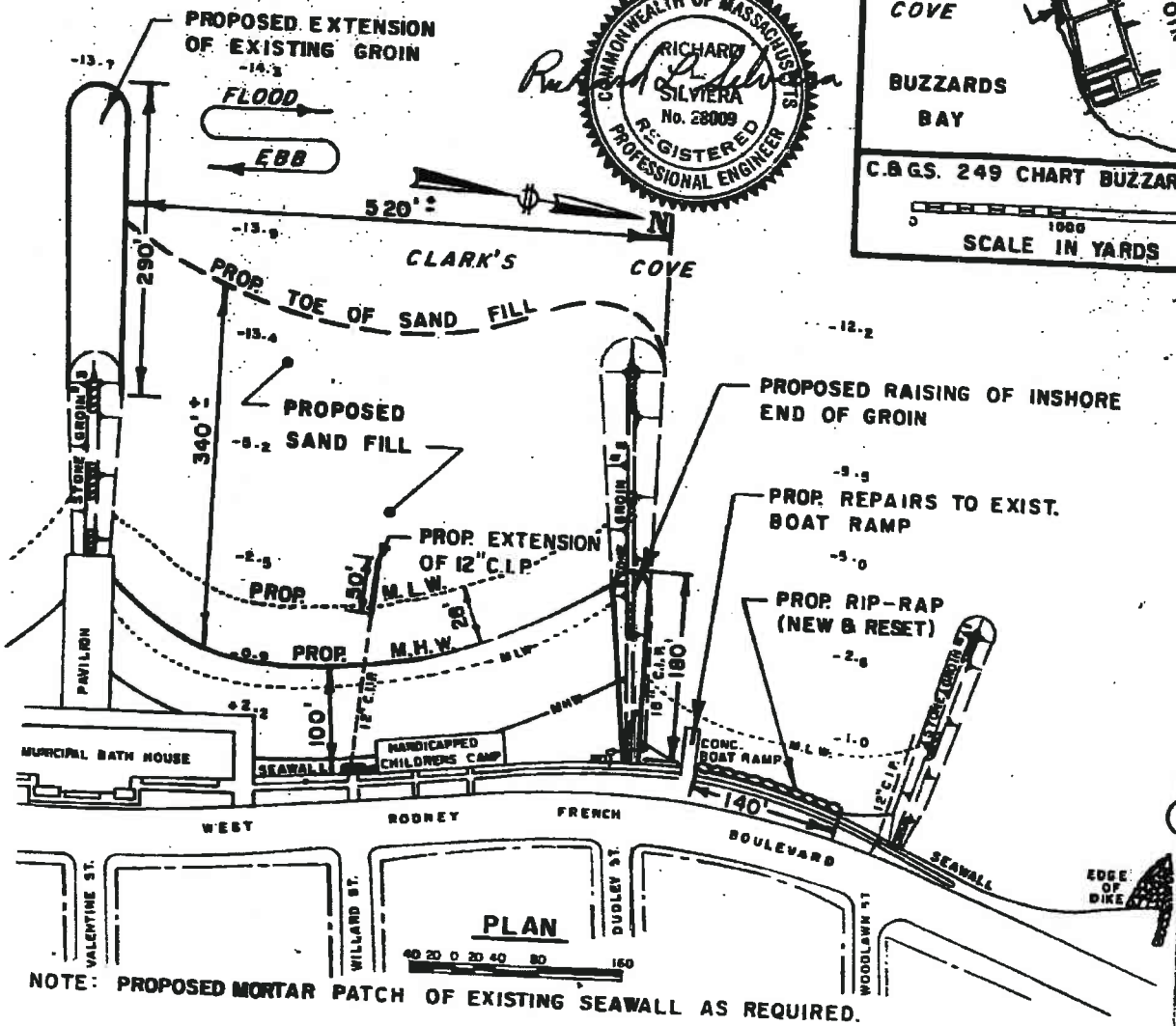
## ADJACENT PROPERTY OWNERS:

1. U.S. ARMY CORPS OF ENGINEER HURRICANE BARRIER
2. FORT RODMAN U.S. GOVERNMENT MILITARY RESERVATION

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER




C.&G.S. 249 CHART BUZZARDS BAY
0 1000 2000
SCALE IN YARDS




NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.

**PURPOSE:** SHORE PROTECTION AND PUBLIC RECREATIONAL FACILITIES.

**DATUM:** MEAN LOW WATER

# PROPOSED SHORE PROTECTION AND RECREATIONAL IMPROVEMENTS IN CLARK'S COVE

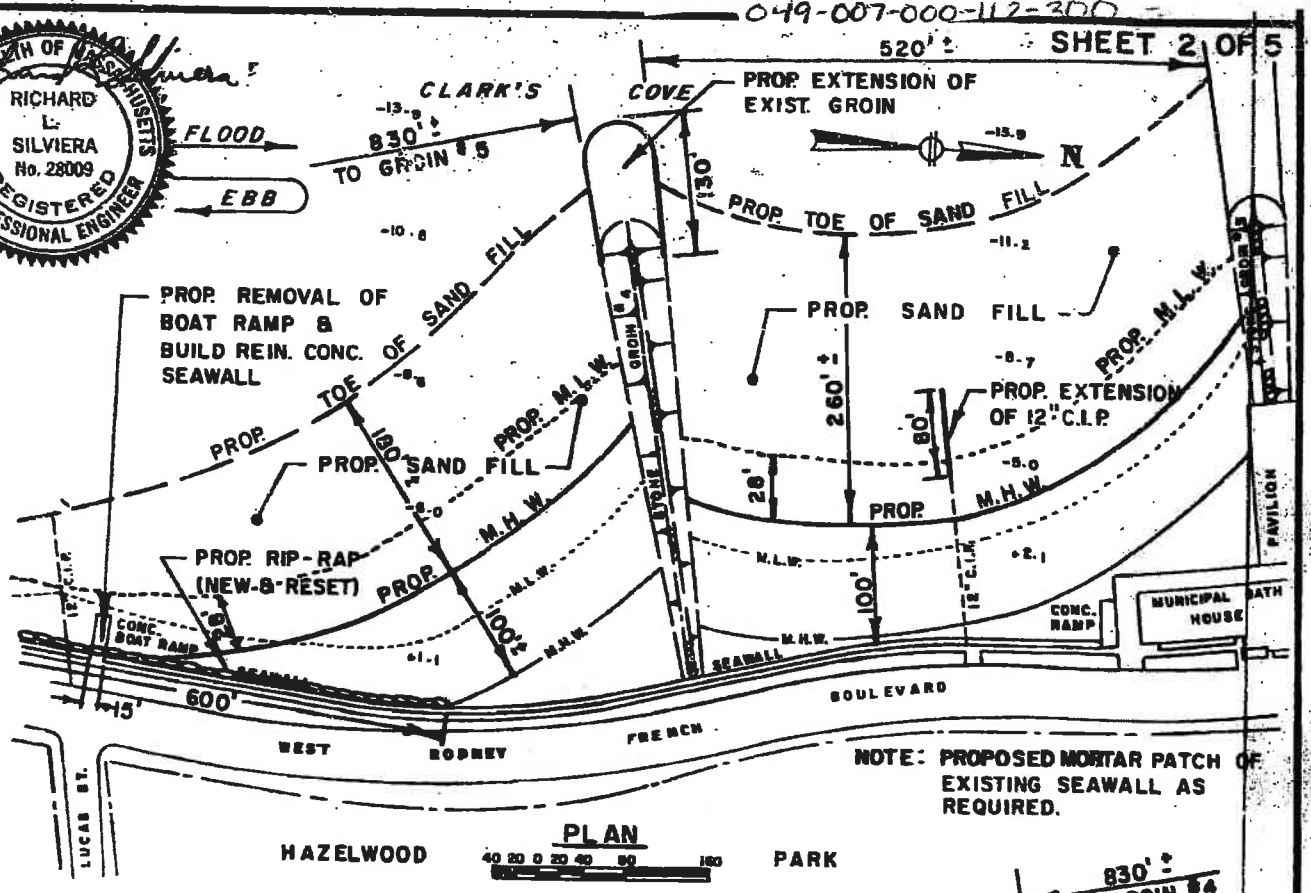
NEW BEDFORD
COUNTY OF: BRISTOL STATE: MASS.
APPLICATION BY: CITY OF NEW BEDFORD
APRIL 15, 1977

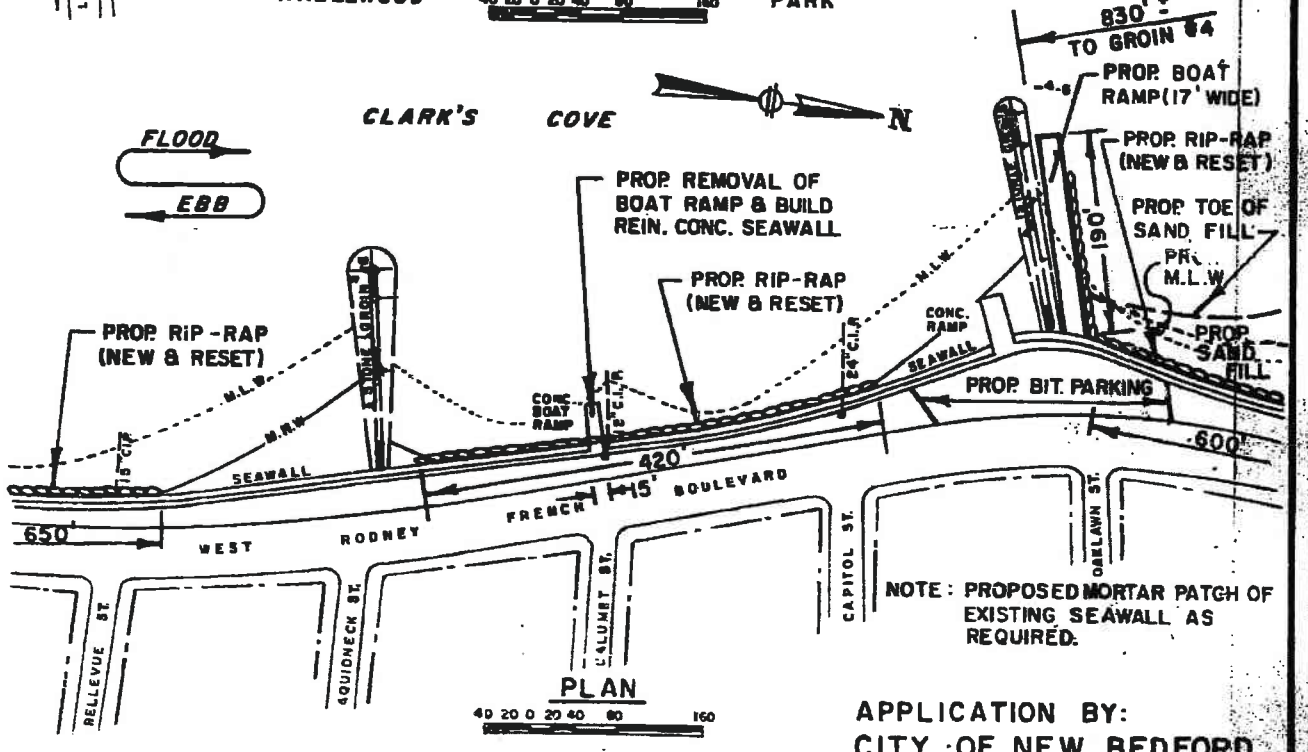
PREPARED BY TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300



COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER



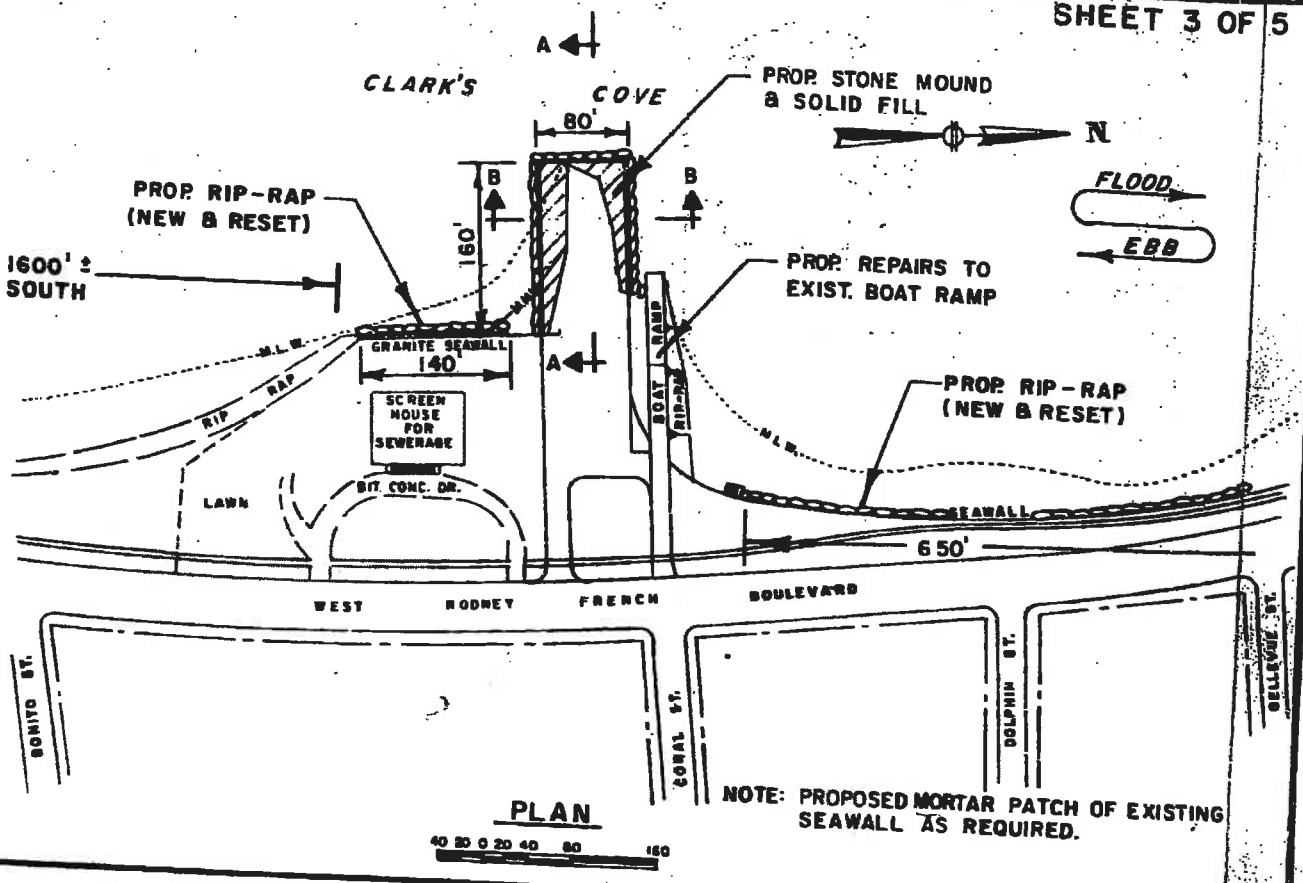




APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-100
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

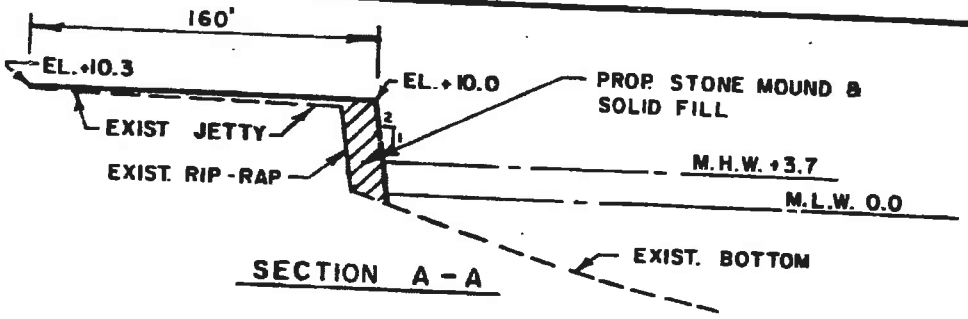




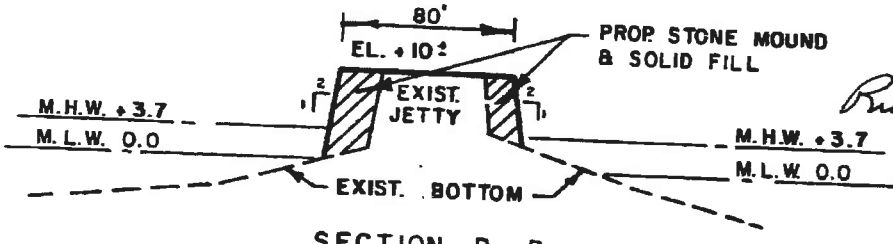

PLAN

40 20 0 20 40 80 160

NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.




SECTION A-A




SECTION B-B

HORIZ. 100 0 50 100

VERT. 25 0 25

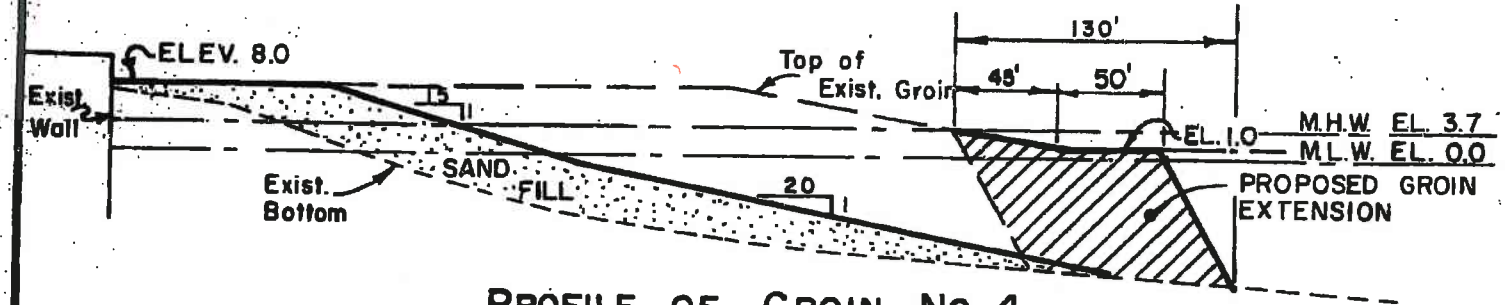
SCALE IN FEET

COMMONWEALTH OF MASS. RICHARD L. SILVIERA No. 28009 REGISTERED PROFESSIONAL ENGINEER

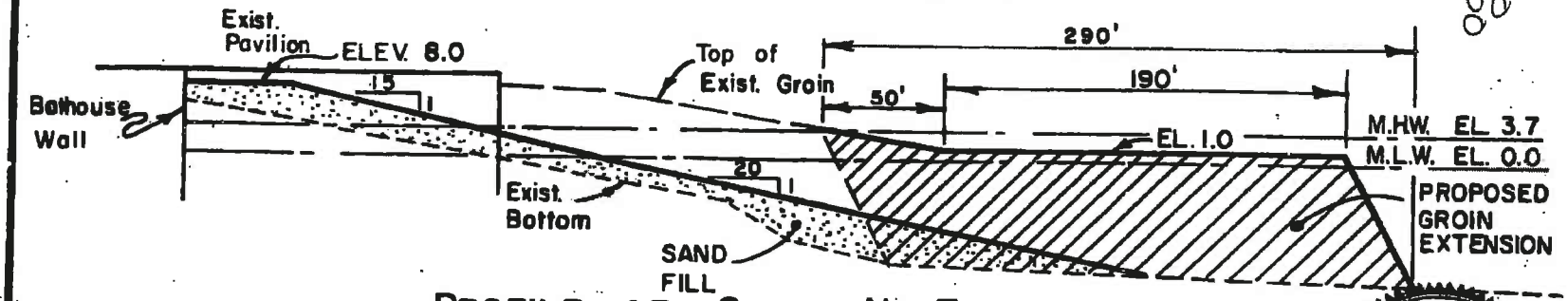
APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

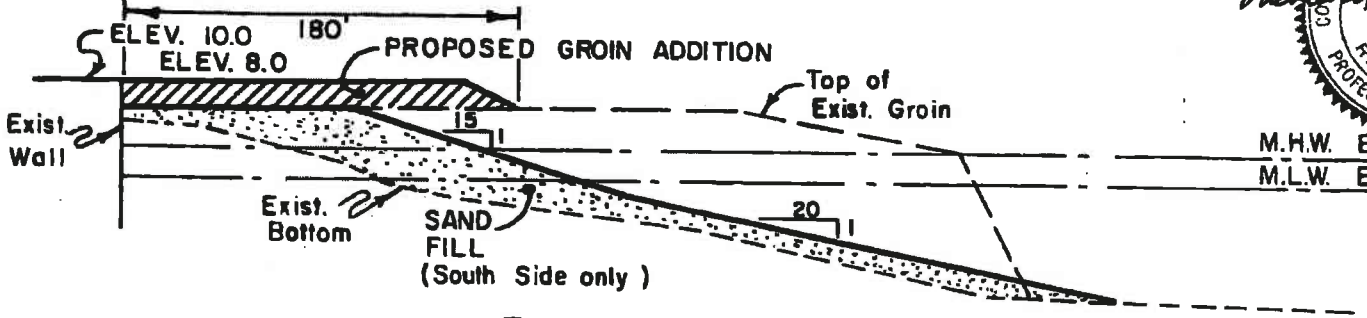
049-013-000-055-200
049-011-000-030-406
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300




PROFILE OF GROIN NO. 4
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 3
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 2
PROPOSED SAND FILL ON SOUTH SIDE OF GROIN

HOR. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

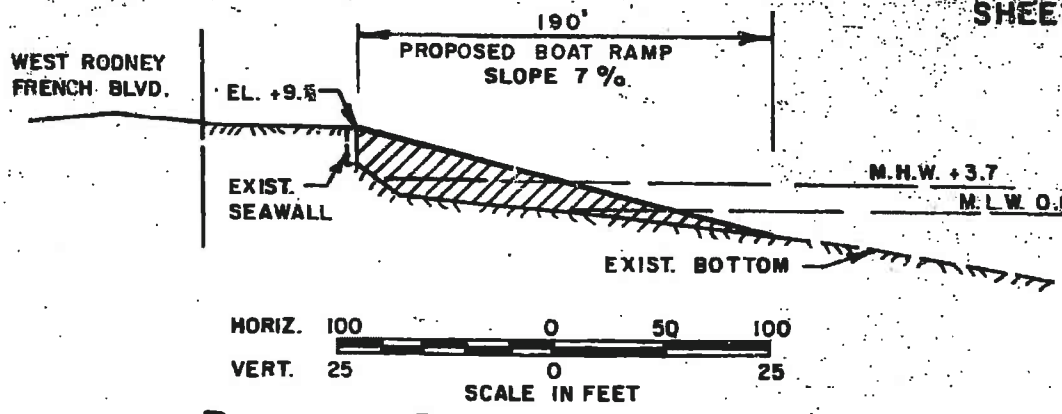
COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

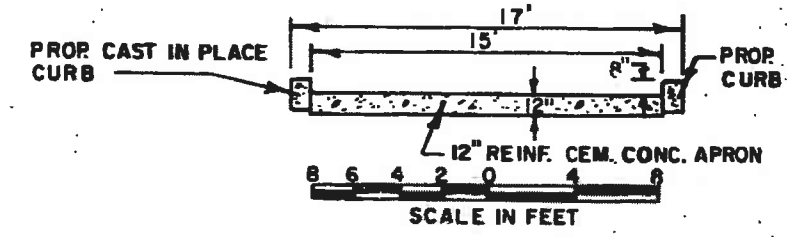
PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

SHEET 4 OF 5

214 0141

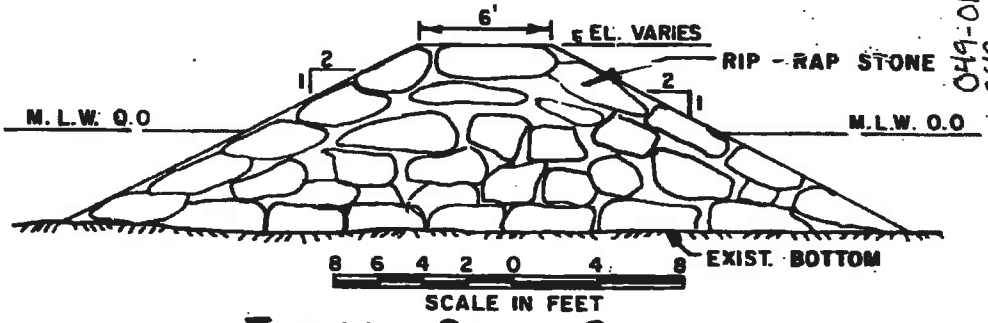



## PROPOSED BOAT RAMP PROFILE

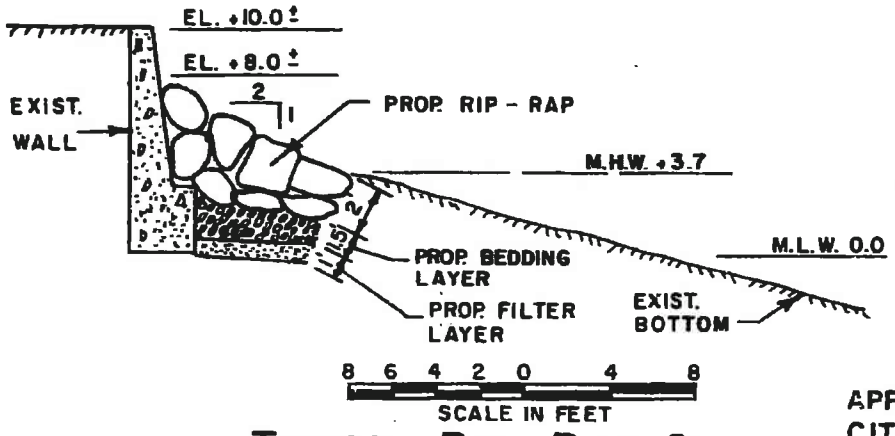



## TYPICAL BOAT RAMP SECTION

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300




## TYPICAL GROIN SECTION



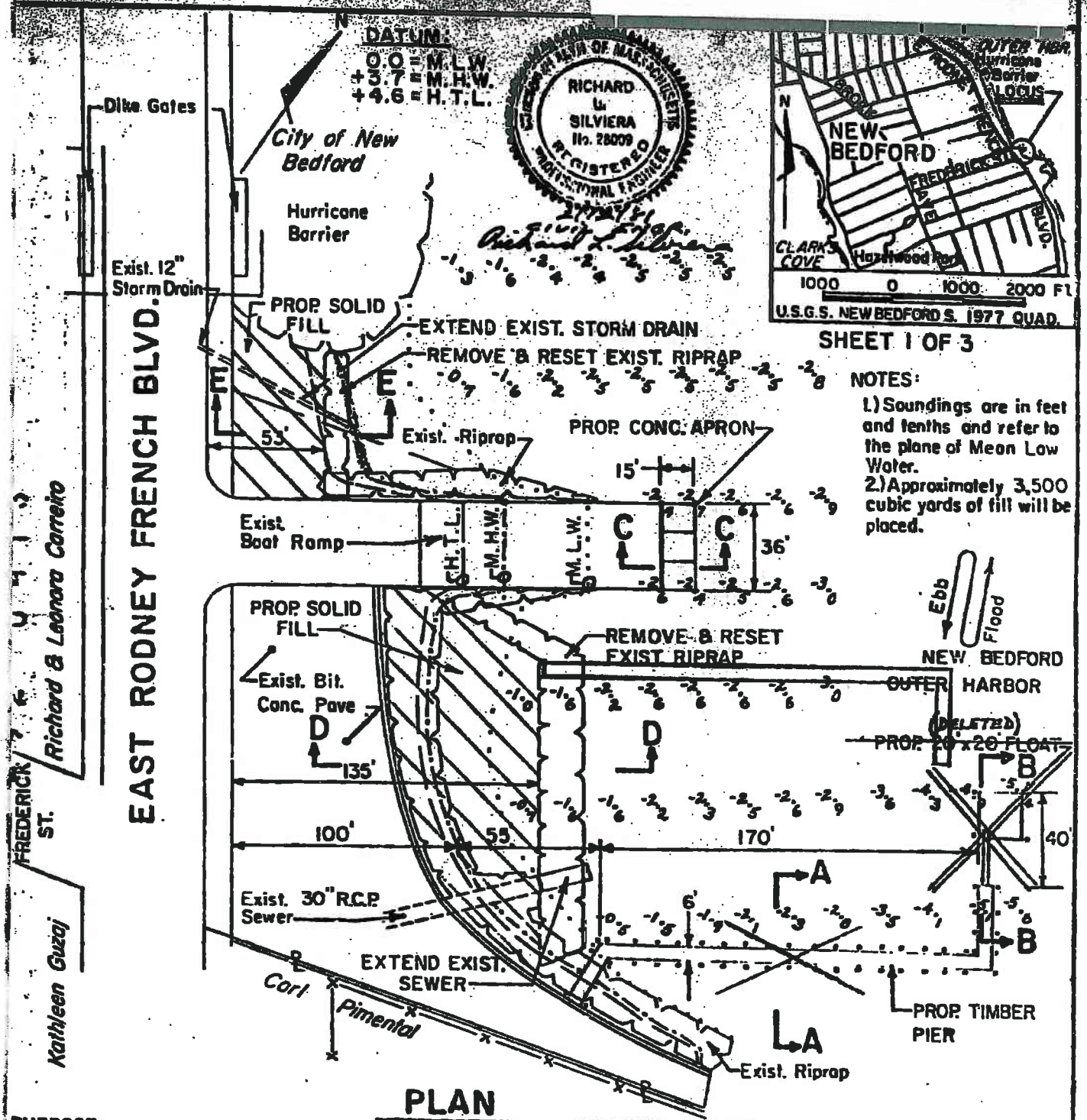

## TYPICAL RIP-RAP SECTION

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 26099
REGISTERED PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-012-000-247-100
049-012-000-247-200




SHEET 1 OF 3

NOTES:

1.) Soundings are in feet and tenths and refer to the plane of Mean Low Water.

2.) Approximately 3,500 cubic yards of fill will be placed.

## PLAN

SCALE: 1" = 60'

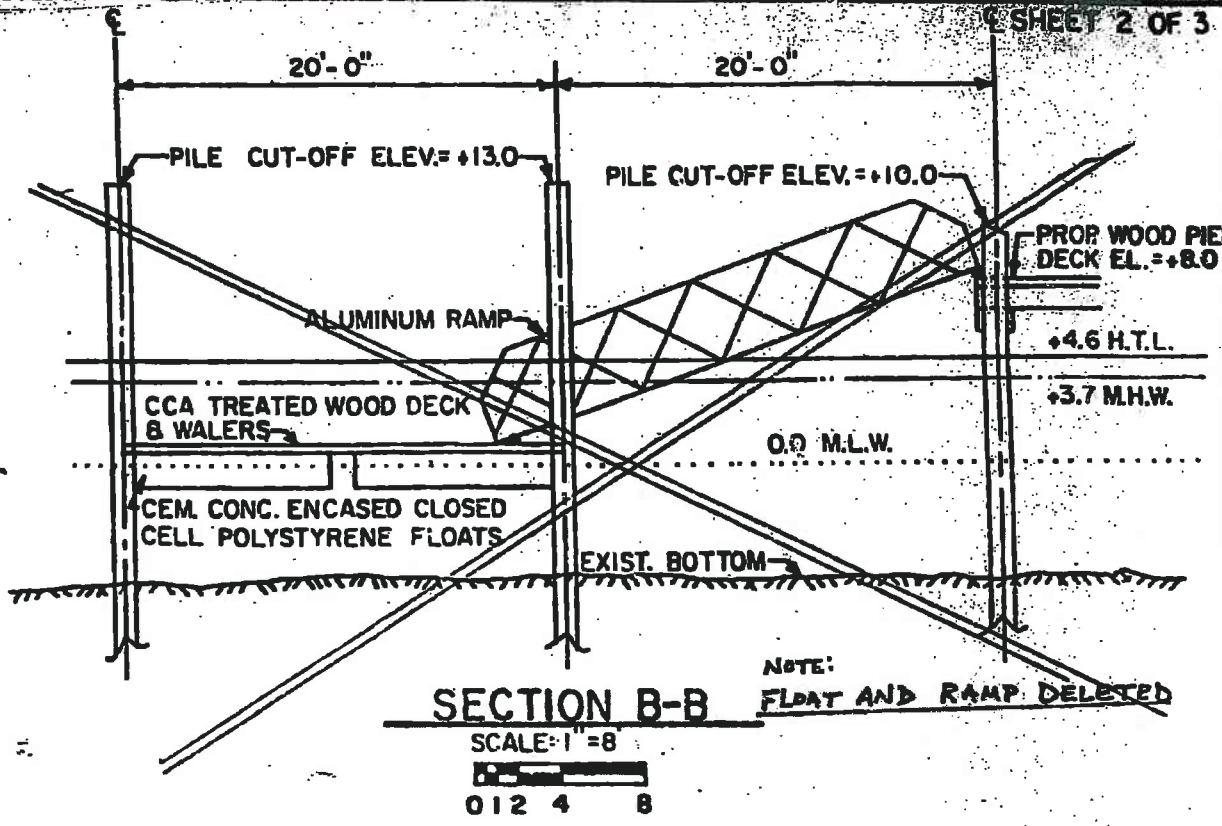
105 0 20 60

PURPOSE:
DEVELOP AND IMPROVE RECREATIONAL BOATING FACILITY

PROPOSED TIMBER PIER, S, SOLID FILL, AND PARKING FACILITIES
IN NEW BEDFORD OUTER HARBOR
AT NEW BEDFORD
COUNTY OF BRISTOL STATE OF MA.
APPLICATION BY: CITY OF NEW BEDFORD

DATE:
JAN. 30, 1981
REVISED:
MAR. 10, 1981

TIBBETTS ENGINEERING CORP.
NEW BEDFORD, MA.

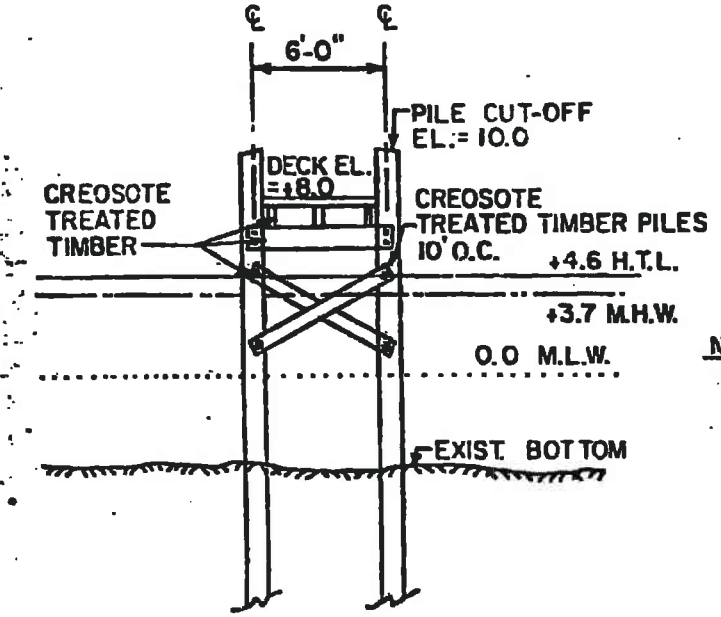



NOTE:
FLOAT AND RAMP DELETED

## SECTION B-B

SCALE: 1"=8'

0 1 2 4 8




NOTE:
Deck to be CCA treated

## SECTION A-A

SCALE: 1"=8'

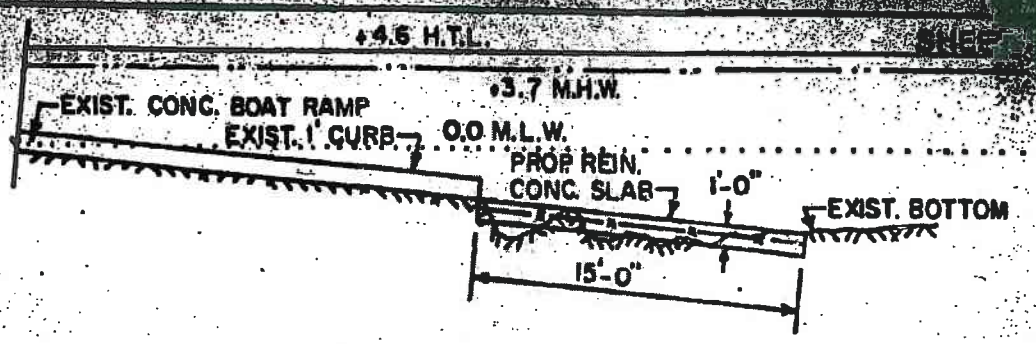
0 1 2 4 8

TIBBETTS ENGINEERING CORP.
NEW BEDFORD, MA.

PROPOSED TIMBER PIER, SOLID FILL, AND PARKING FACILITIES
IN NEW BEDFORD, MA.
JAN. 30, 1981
REVISED MAR. 10, 1981

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVEIRA
No. 7803
REGISTERED PROFESSIONAL ENGINEER

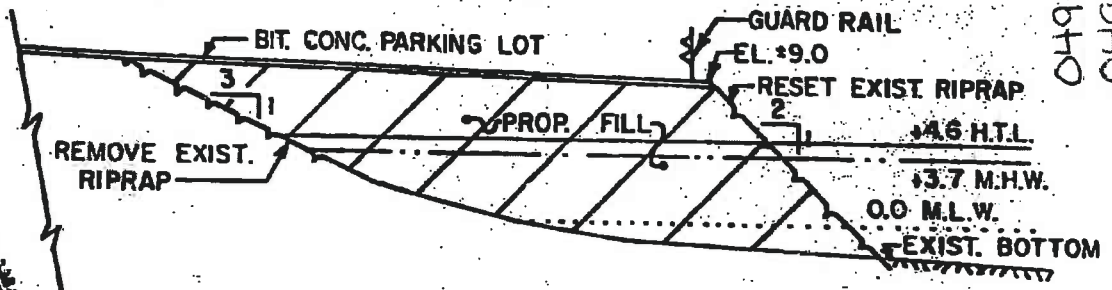
2/12/81
CIVIL ENGR.
Richard L. Silveira




## SECTION C-C

SCALE: 1"=8'-0"

0 1 2 4 8



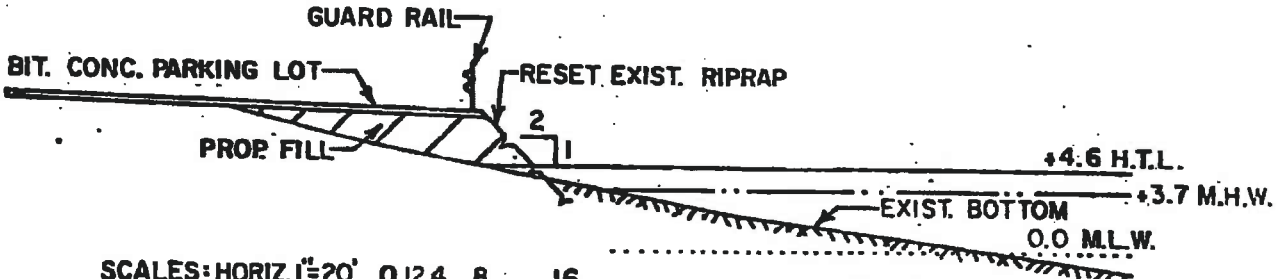

## SECTION D-D

SCALES: HORIZ. 1"=20' 0 1 2 4 8 16

VERT. 1"=10' 0 1 2 4 8

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

2/12/81
CIVIL ENGR.
Richard L. Silviera




SCALES: HORIZ. 1"=20' 0 1 2 4 8 16

VERT. 1"=10' 0 1 2 4 8

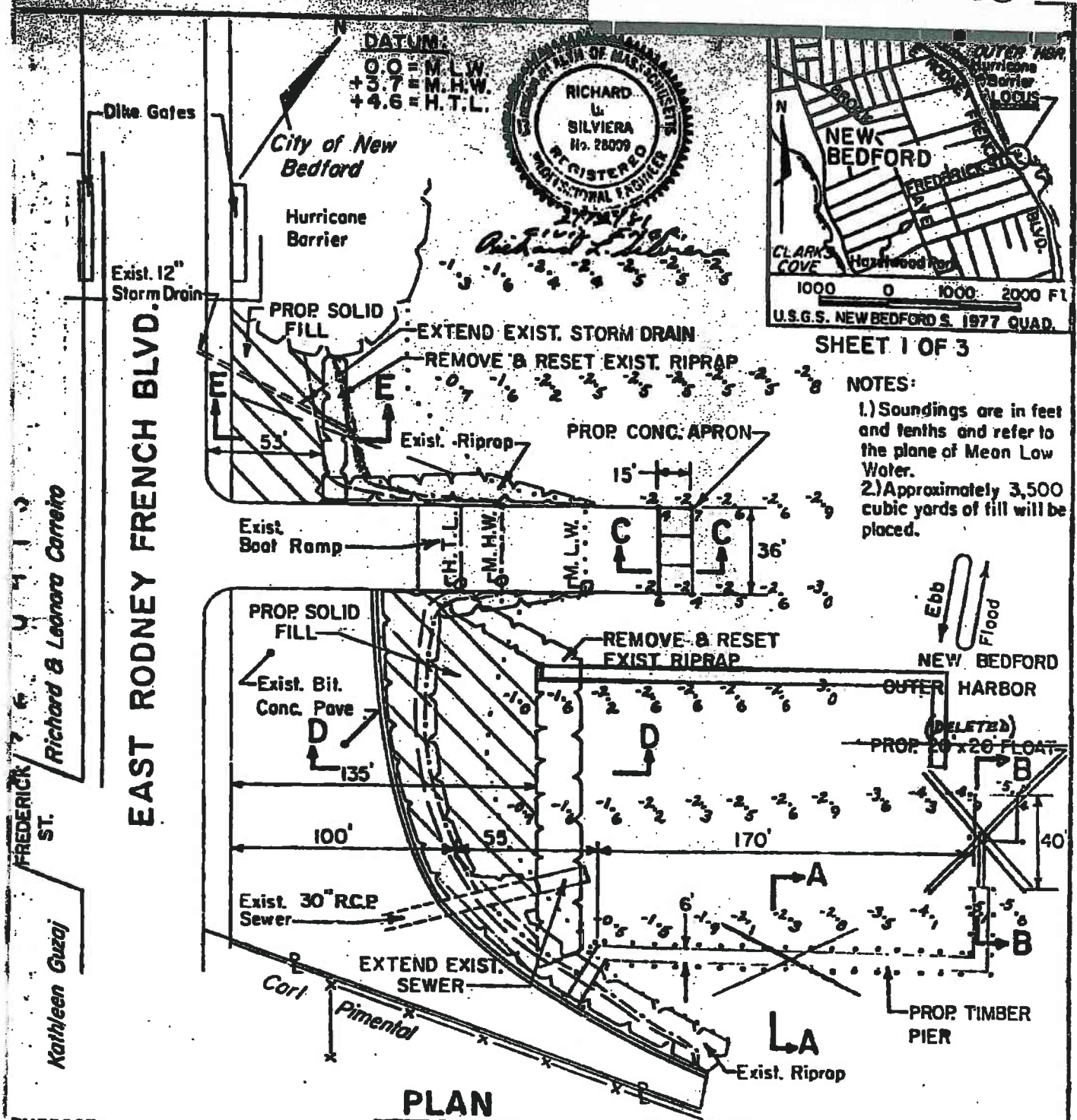
## SECTION E-E

PROPOSED TIMBER PIER, ; SOLID FILL, AND PARKING FACILITIES
IN NEW BEDFORD, MA.
JAN. 30, 1981
REVISED MAR. 10, 1981

TIBBETTS ENGINEERING CORP.
NEW BEDFORD, MA.

049-010-000-240-001

049-012-000-247-100
049-012-000-247-200




SHEET 1 OF 3

NOTES:

1.) Soundings are in feet and tenths and refer to the plane of Mean Low Water.

2.) Approximately 3,500 cubic yards of fill will be placed.

## PLAN

SCALE: 1" = 60'

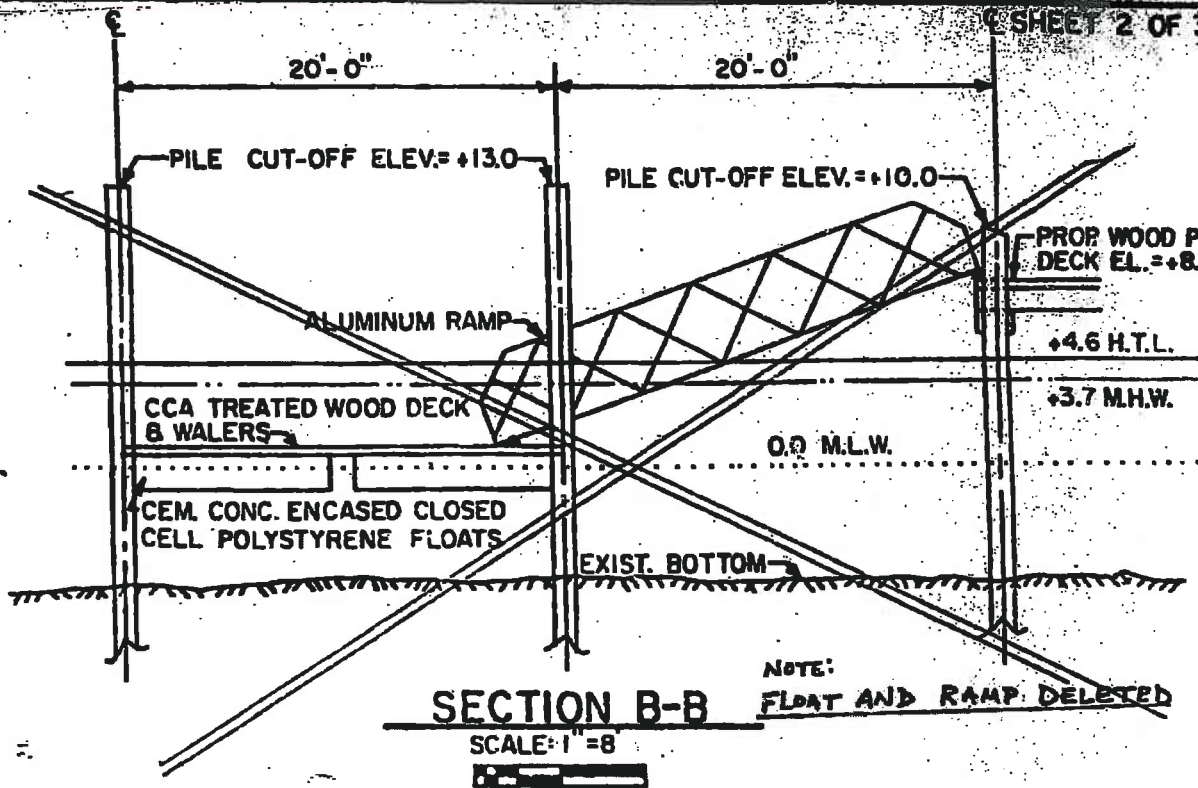
10 5 0 20 60

PURPOSE:
DEVELOP AND IMPROVE RECREATIONAL BOATING FACILITY

PROPOSED TIMBER PIER, [illegible], SOLID FILL, AND PARKING FACILITIES
IN NEW BEDFORD OUTER HARBOR
AT NEW BEDFORD
COUNTY OF BRISTOL STATE OF MA.
APPLICATION BY: CITY OF NEW BEDFORD

DATE:
JAN. 30, 1981
REVISED:
MAR. 10, 1981

TIBBETTS ENGINEERING CORP.
NEW BEDFORD, MA.

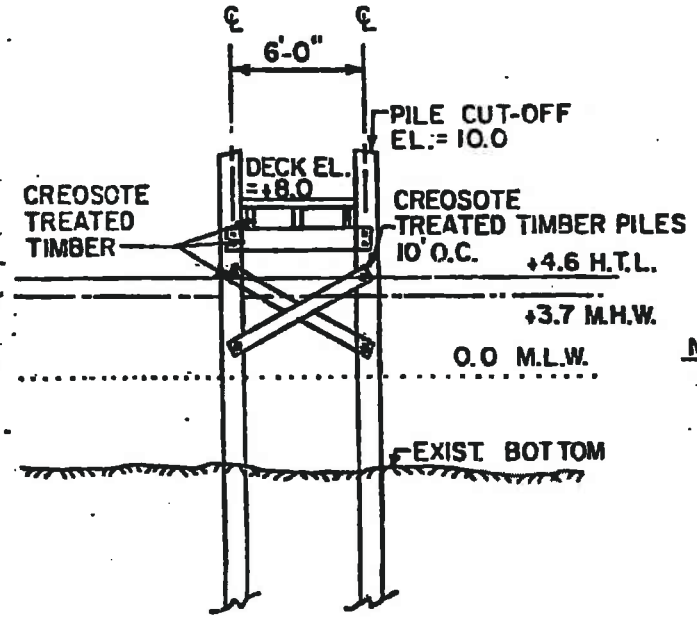



NOTE:
FLOAT AND RAMP DELETED

## SECTION B-B

SCALE: 1" = 8'

0 1 2 4 8




NOTE:
Deck to be CCA treated

## SECTION A-A

SCALE: 1" = 8'

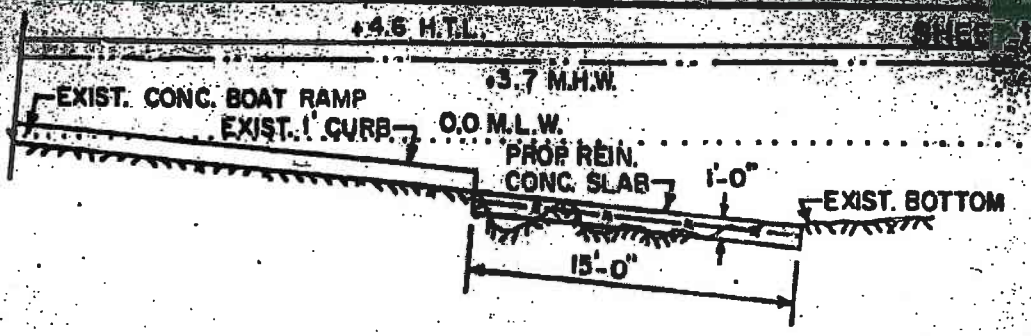
0 1 2 4 8

RICHARD L. SILVEIRA No. 28009 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

2/12/81
CIVIL ENGR.
Richard L. Silveira

TIBBETTS ENGINEERING CORP.
NEW BEDFORD, MA.

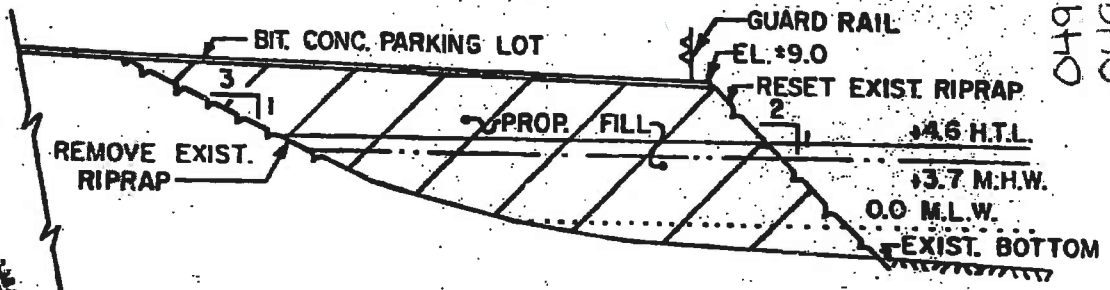
PROPOSED TIMBER PIER, SOLID FILL, AND PARKING FACILITIES
IN NEW BEDFORD, MA.
JAN. 30, 1981
REVISED MAR. 10, 1981




## SECTION C-C

SCALE: 1"=8'-0"

0 1 2 4 8



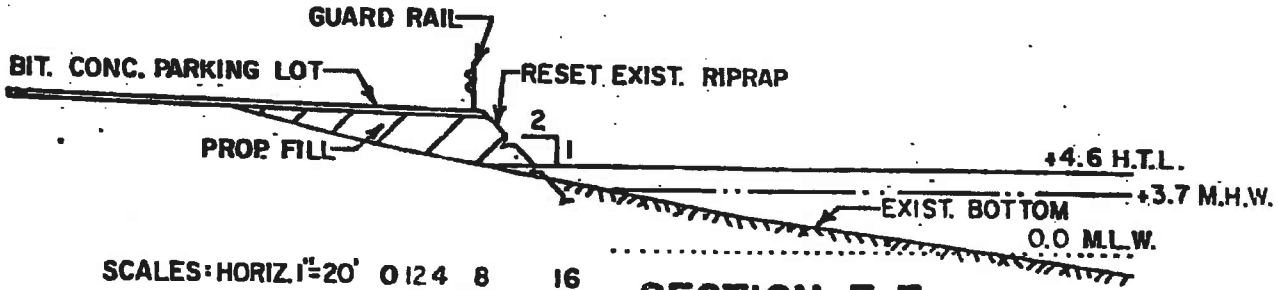

## SECTION D-D

SCALES: HORIZ. 1"=20' 0 1 2 4 8 16

VERT. 1"=10' 0 1 2 4 8

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED
PROFESSIONAL ENGINEER

2/12/81
Civil Engr.
Richard L. Silviera




SCALES: HORIZ. 1"=20' 0 1 2 4 8 16

VERT. 1"=10' 0 1 2 4 8

## SECTION E-E

PROPOSED TIMBER PIER, , SOLID FILL, AND PARKING FACILITIES IN NEW BEDFORD, MA.
JAN. 30, 1981
REVISED MAR. 10, 1981

TIBBETTS ENGINEERING CORP.
NEW BEDFORD, MA.

049-012-000-247-100
049-012-000-247-200

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

## CONTRACT QUANTITIES:

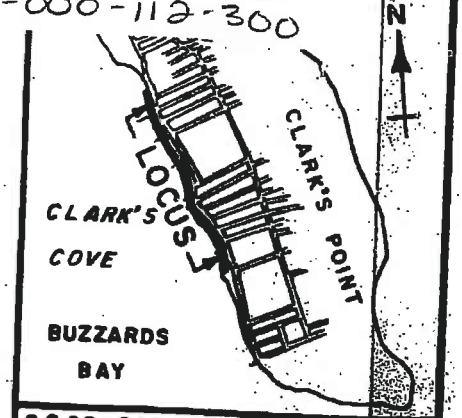
SAND FILL: 64,500 C.Y.
RIP-RAP REMOVED & RESET: 2,140 TONS
RIP-RAP (NEW): 3,680 TONS
BEDDING STONE: 1,720 TONS
FILTER STONE: 1180 TONS
STONE FOR GROIN EXTENSIONS: 10,950 TONS
STONE MOUND AND SOLID FILL: 2,500 C.Y.
FOR ADDITIONAL QUANTITIES SEE FORM 4345.

SHEE

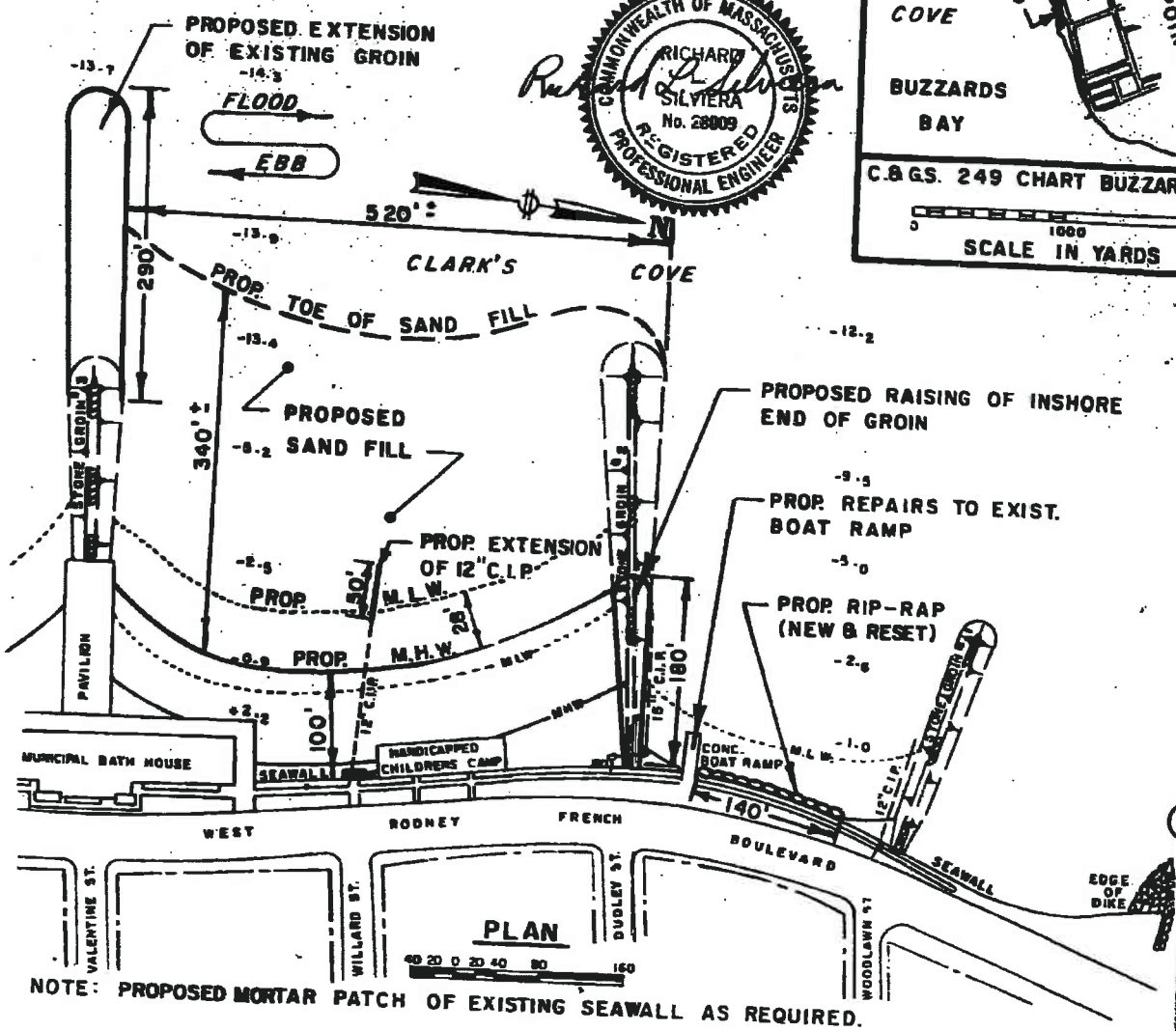
## ADJACENT PROPERTY OWNERS:

1. U.S. ARMY CORPS OF ENGINEER HURRICANE BARRIER
2. FORT RODMAN U.S. GOVERNMENT MILITARY RESERVATION

COMMONWEALTH OF MASSACHUSETTS
RICHARD SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER




C.&G.S. 249 CHART BUZZARDS BAY
0 1000 2000
SCALE IN YARDS




NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.

**PURPOSE:** SHORE PROTECTION AND PUBLIC RECREATIONAL FACILITIES.

**DATUM:** MEAN LOW WATER

# PROPOSED SHORE PROTECTION AND RECREATIONAL IMPROVEMENTS IN CLARK'S COVE

NEW BEDFORD

COUNTY OF: BRISTOL STATE: MASS.

APPLICATION BY: CITY OF NEW BEDFORD

APRIL 15, 1977

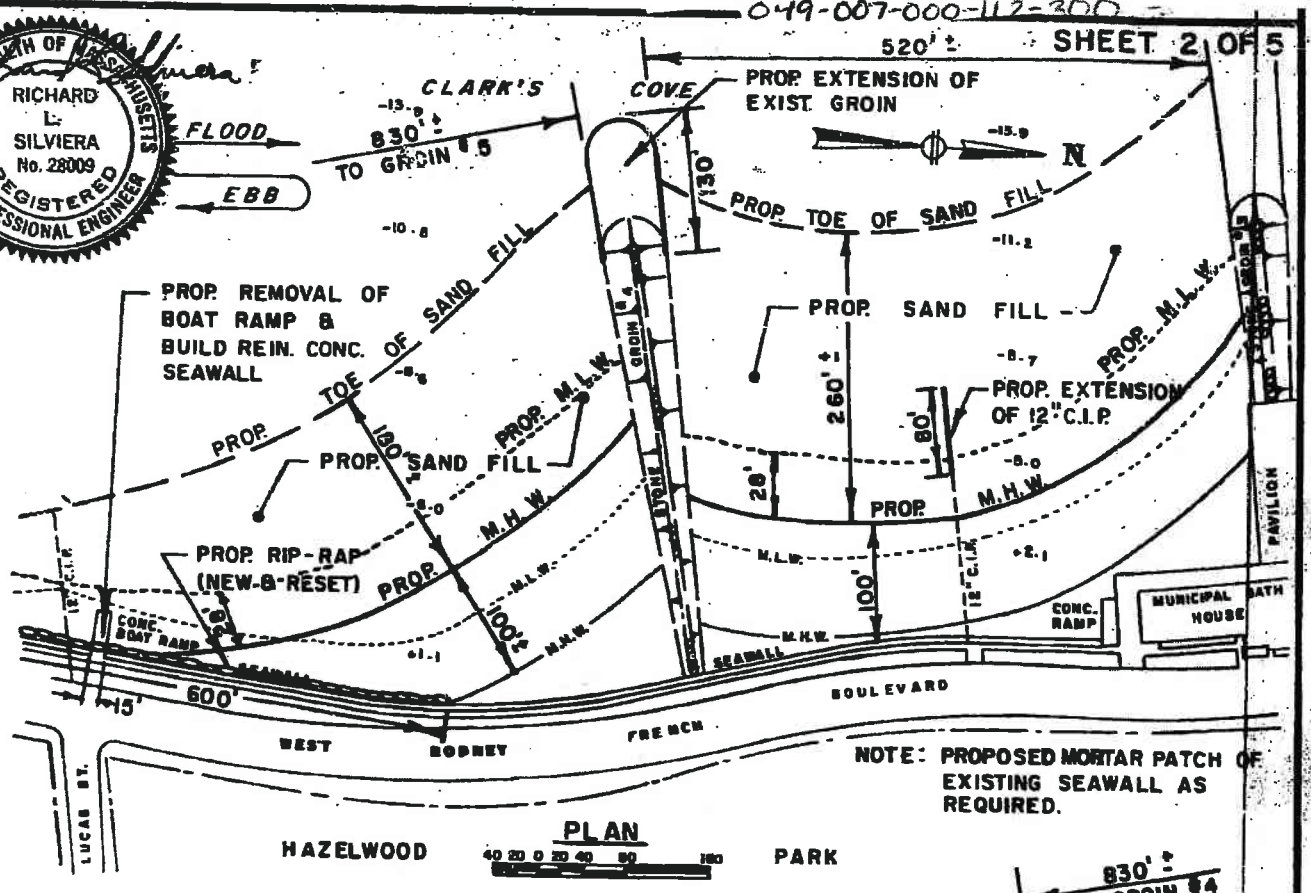
PREPARED BY TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

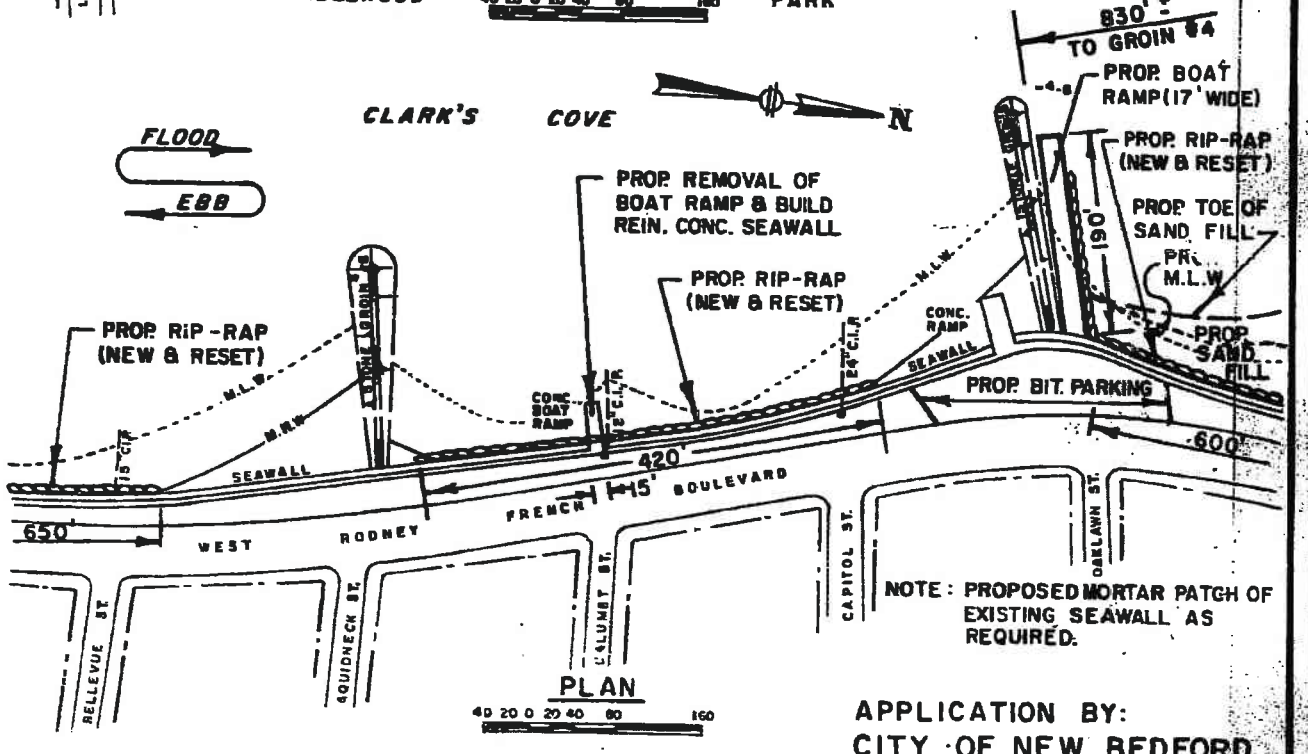
21 of 24

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300



COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER



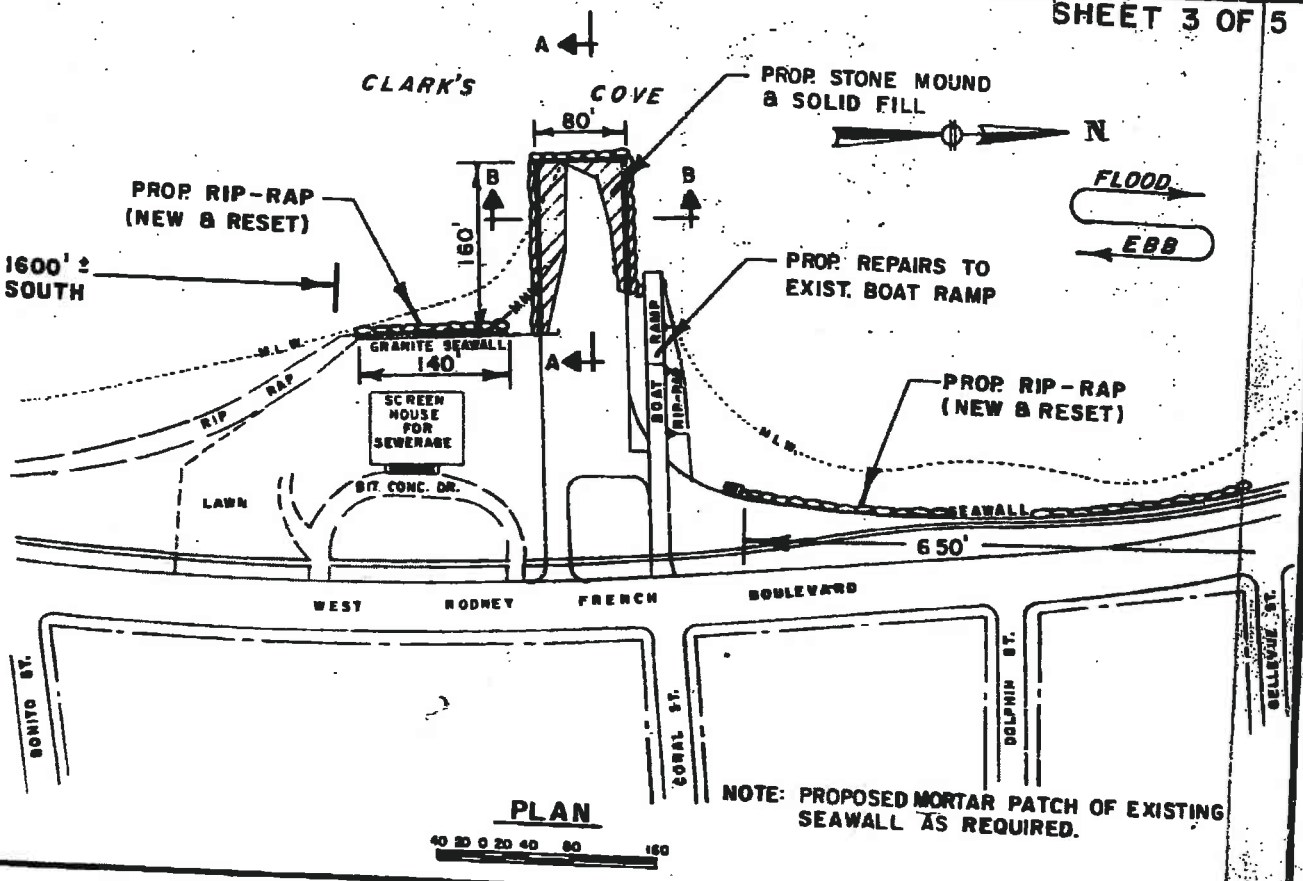




APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-013-000-055-100
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300

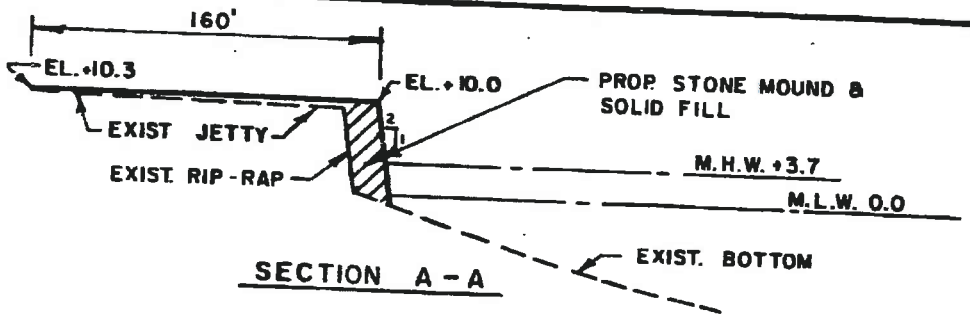
SHEET 3 OF 5



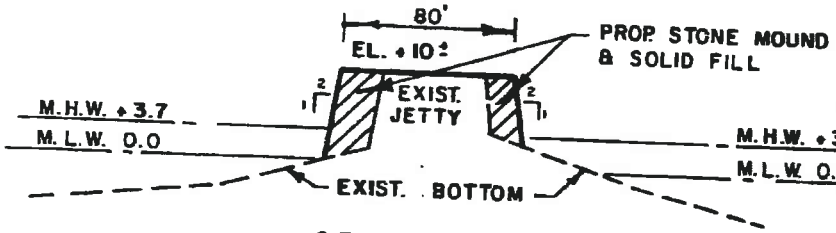

PLAN

40 20 0 20 40 80 160

NOTE: PROPOSED MORTAR PATCH OF EXISTING SEAWALL AS REQUIRED.




SECTION A-A




SECTION B-B

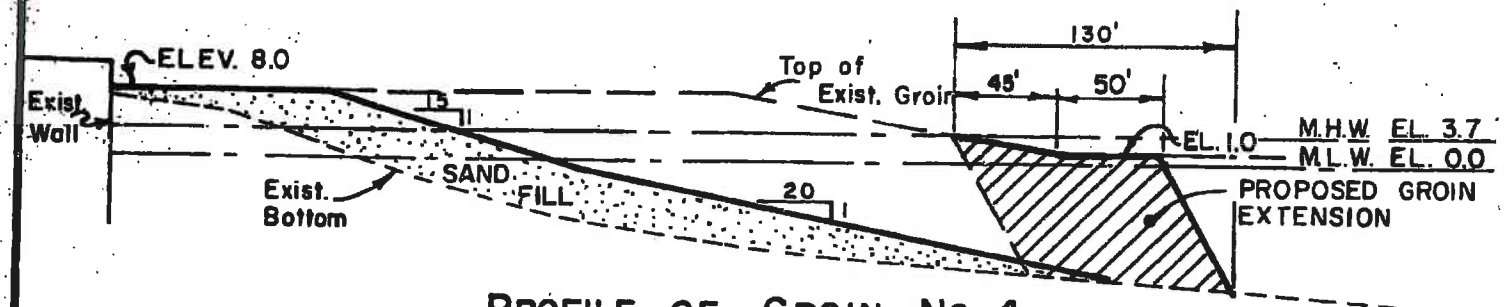
HORIZ. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

COMMONWEALTH OF MASS. RICHARD L. SILVIERA No. 28009 REGISTERED PROFESSIONAL ENGINEER

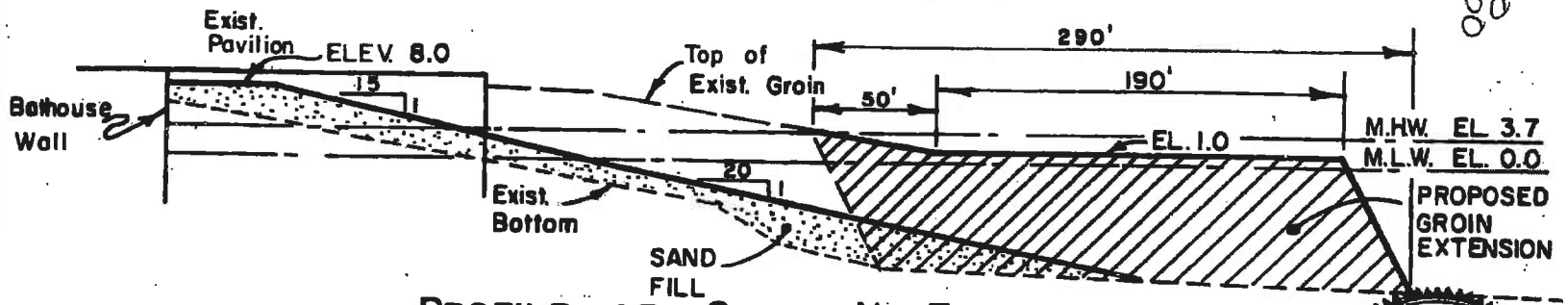
APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

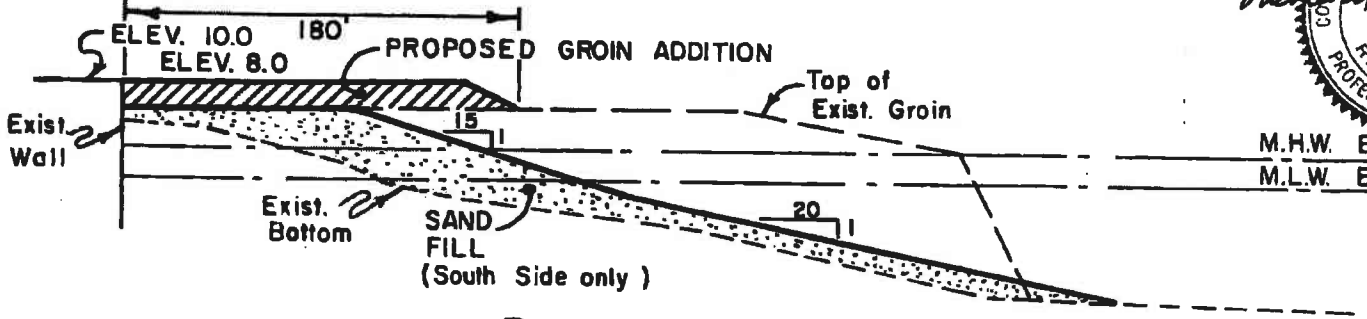
049-013-000-055-200
049-011-000-030-406
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300




PROFILE OF GROIN NO. 4
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 3
PROPOSED GROIN EXTENSION AND SAND FILL




PROFILE OF GROIN NO. 2
PROPOSED SAND FILL ON SOUTH SIDE OF GROIN

HOR. 100 0 50 100
VERT. 25 0 25
SCALE IN FEET

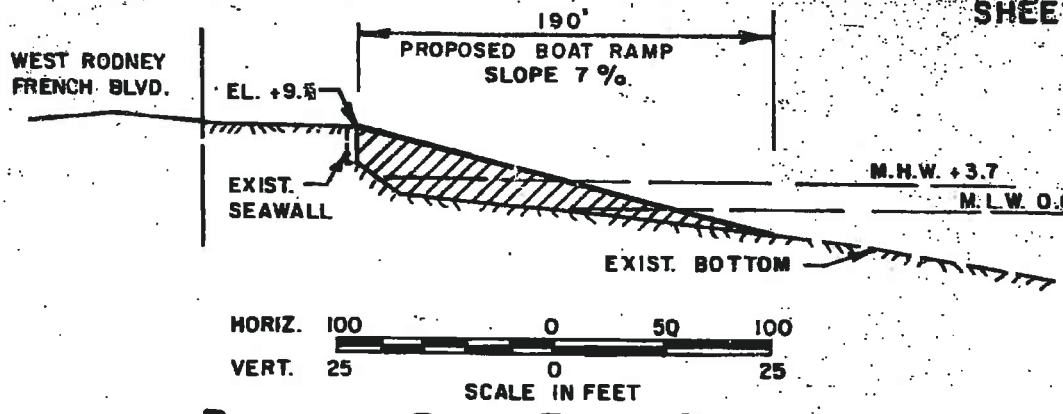
APPLICATION BY:
CITY OF NEW BEDFORD

PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

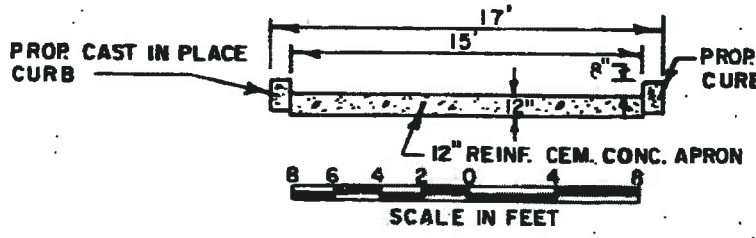
COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

214 0141

SHEET 4 OF 5

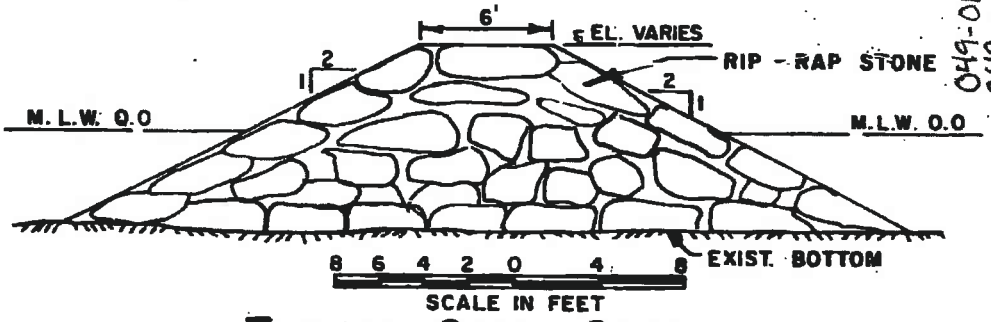



## PROPOSED BOAT RAMP PROFILE

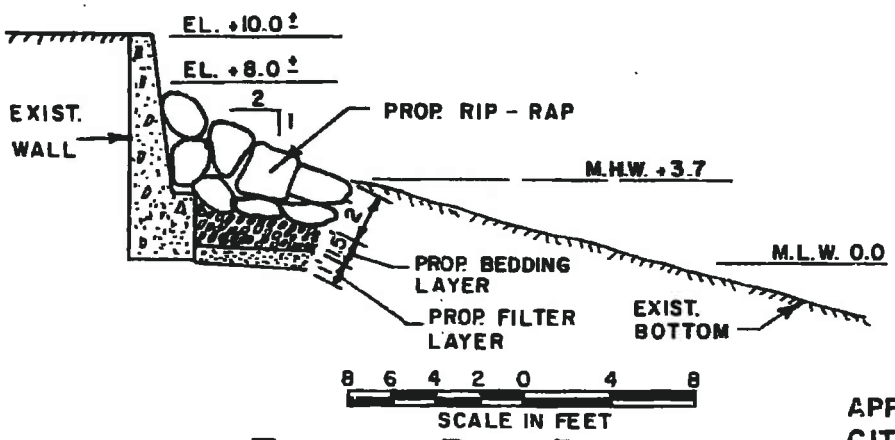



## TYPICAL BOAT RAMP SECTION

049-013-000-055-200
049-011-000-030-400
049-009-000-286-100
049-009-000-286-200
049-007-000-112-100
049-007-000-112-200
049-007-000-112-300




## TYPICAL GROIN SECTION



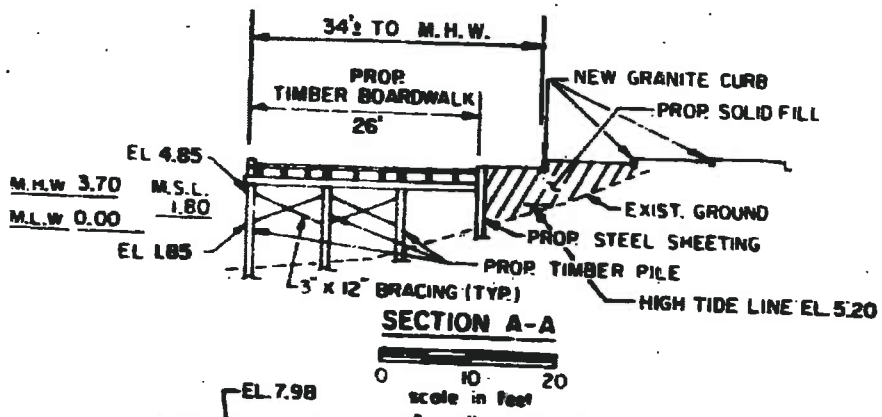

## TYPICAL RIP-RAP SECTION

COMMONWEALTH OF MASSACHUSETTS
RICHARD L. SILVIERA
No. 26099
REGISTERED
PROFESSIONAL ENGINEER

APPLICATION BY:
CITY OF NEW BEDFORD

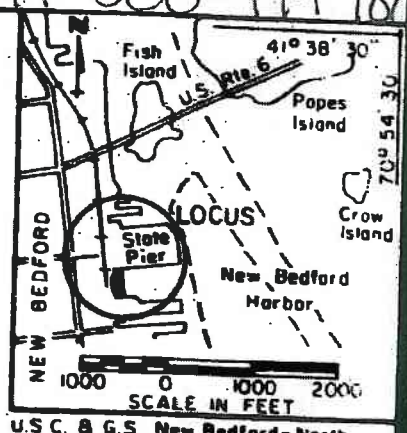
PREPARED BY: TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS.

049-047-000-179-167

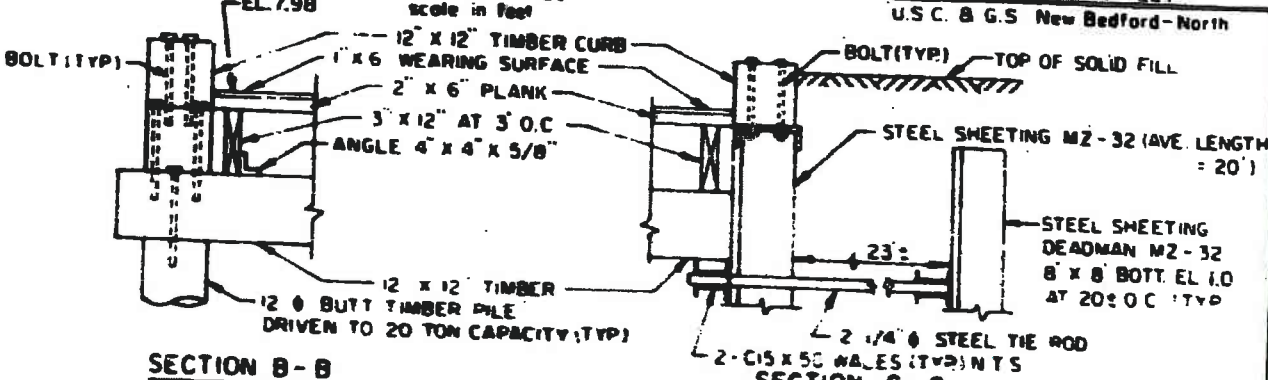



SECTION A-A

0 10 20
scale in feet




U.S.C. & G.S New Bedford - North

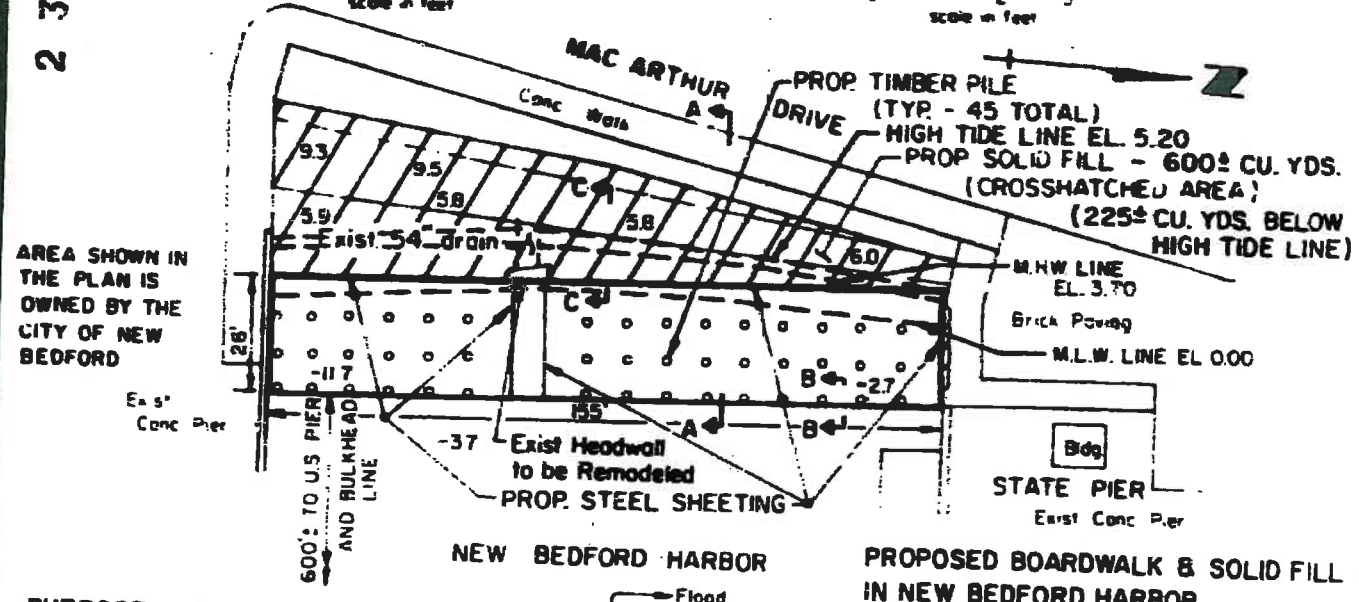



SECTION B-B

0 1 2 3
scale in feet

SECTION C-C

0 2 3
scale in feet




NEW BEDFORD HARBOR

Flood
Ebb
PLAN

0 20 40
scale in feet

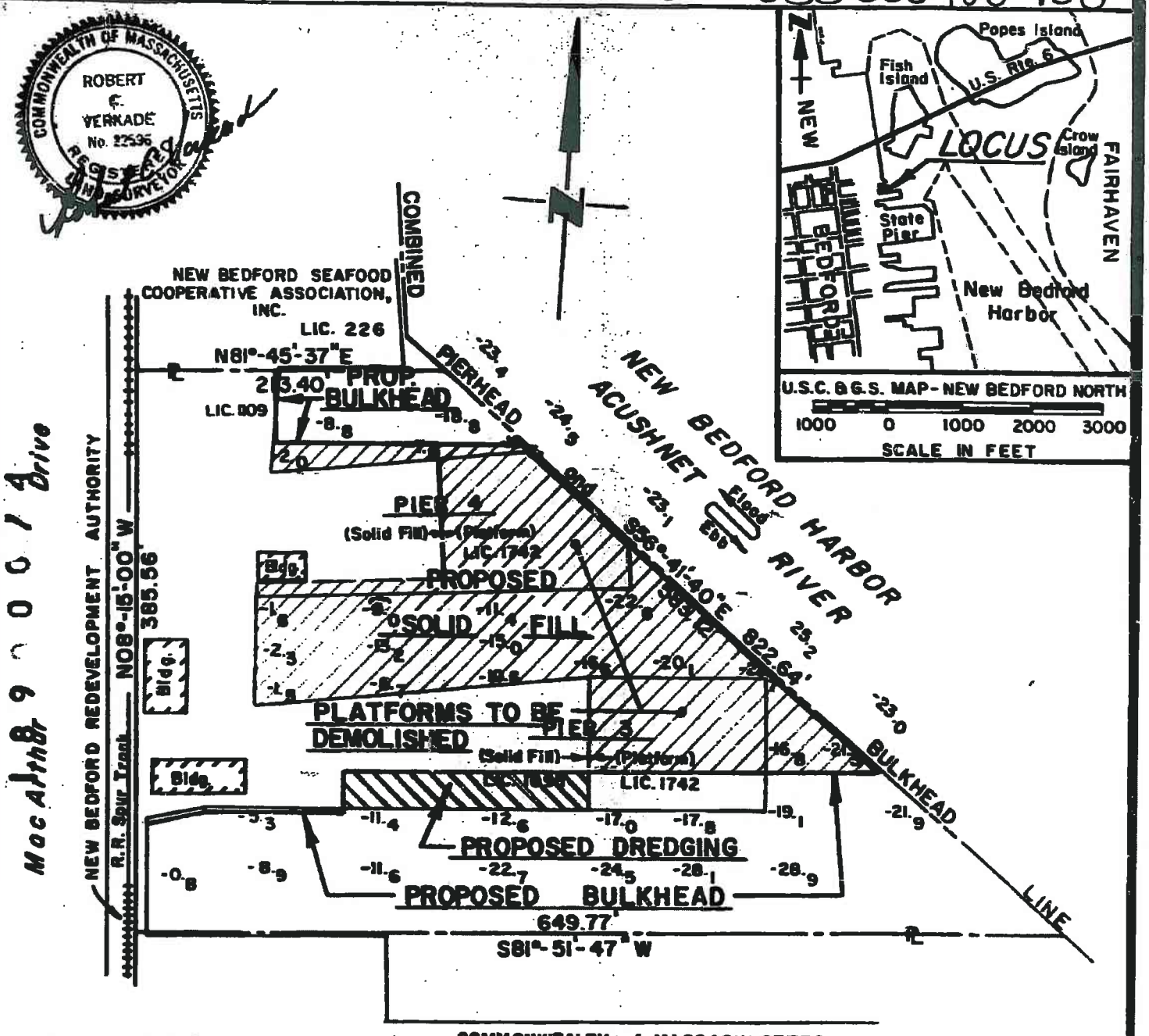
PURPOSE: PUBLIC BOARDWALK
DATUM: U.S.C. & G.S. M.L.W. = EL. 0.00

HENRY J. BISHOP & SON - NEW BEDFORD, MASS.

PROPOSED BOARDWALK & SOLID FILL IN NEW BEDFORD HARBOR AT NEW BEDFORD
COUNTY OF BRISTOL STATE OF MASS.
APPLICATION BY: CITY OF NEW BEDFORD
SHEET 1 OF 1
DATE: 4 /79

238 1 C 1 C

049-053-000-120-100




NOTE: MATERIAL TO BE DREDGED, 2500 C.Y.
DREDGED MATERIAL TO BE DISPOSED ON LAND AT CITY LANDFILL SITE

COMMONWEALTH of MASSACHUSETTS
(STATE PIER)

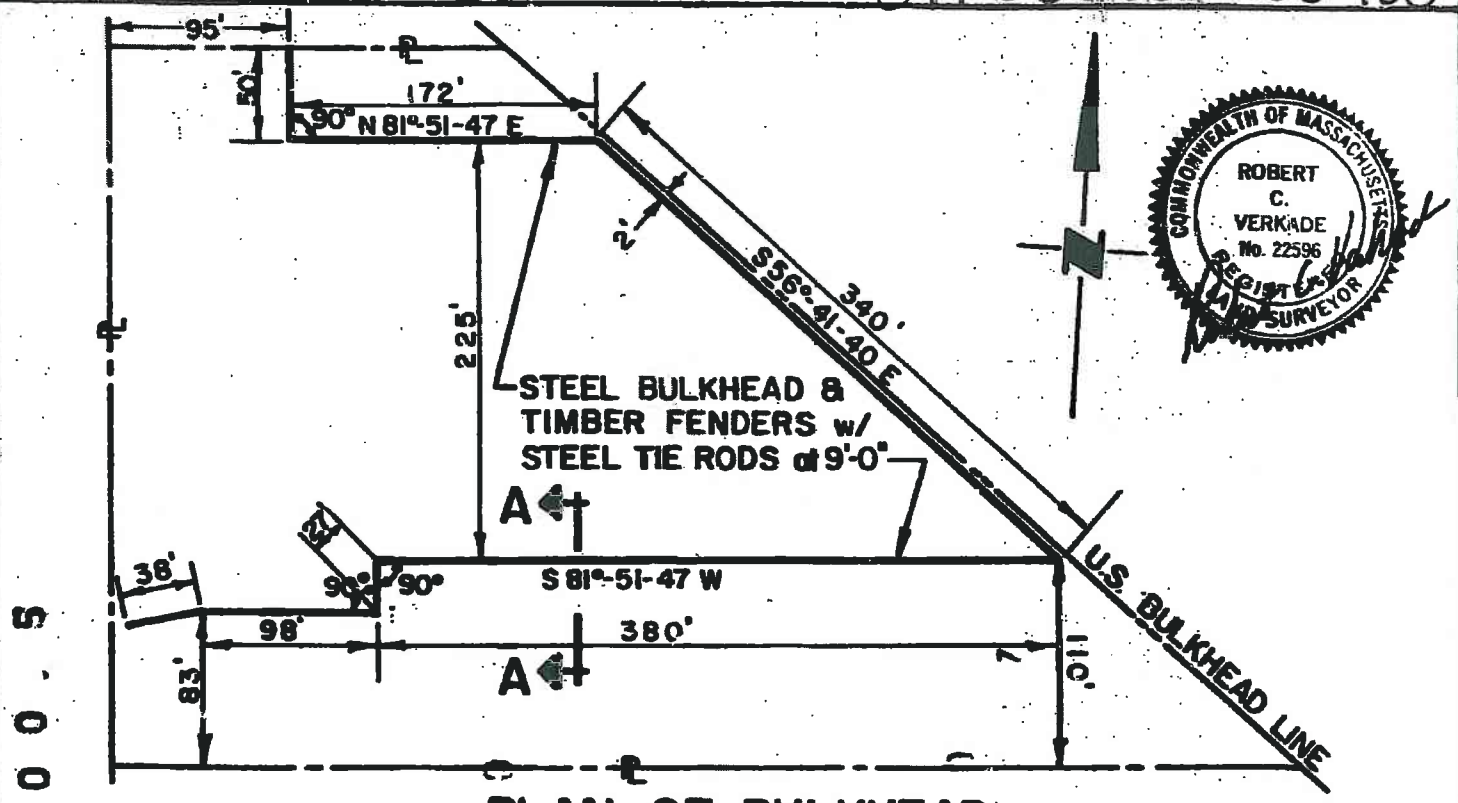
# PLAN VIEW

100 0 100 200
SCALE IN FEET

PROPOSED BULKHEAD, SOLID FILL, DREDGING & DEMOLITION
IN NEW BEDFORD HARBOR
AT NEW BEDFORD
COUNTY OF BRISTOL STATE OF MASS.
APPLICATION BY: CITY OF NEW BEDFORD

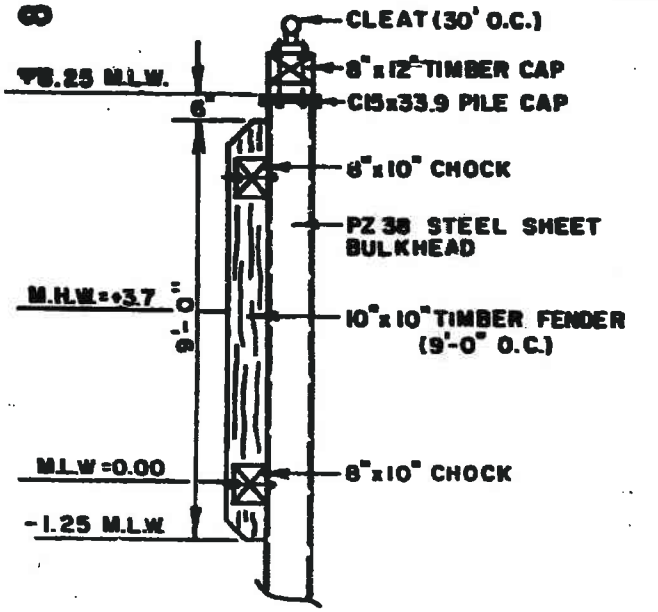
PURPOSE: PUBLIC DOCKING FACILITY
DATUM: MEAN LOW WATER

049-053-000-120-100



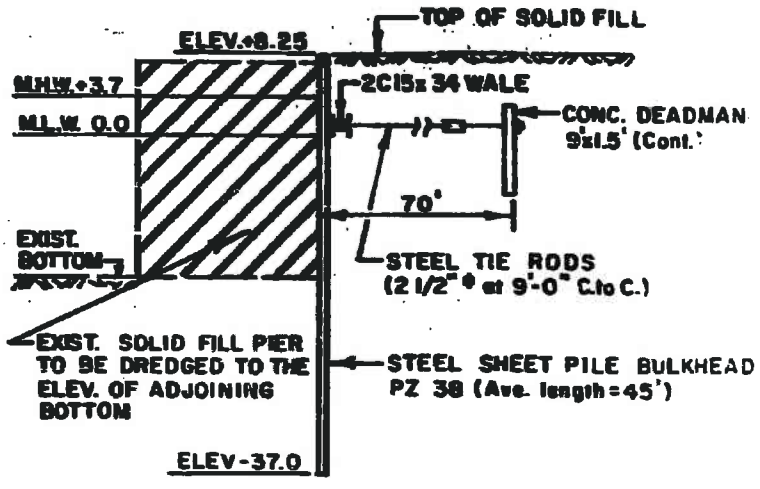

# PLAN OF BULKHEAD

100 0 100 200
SCALE IN FEET




# FENDER & PILE CAP

4 0 4 8
SCALE IN FEET

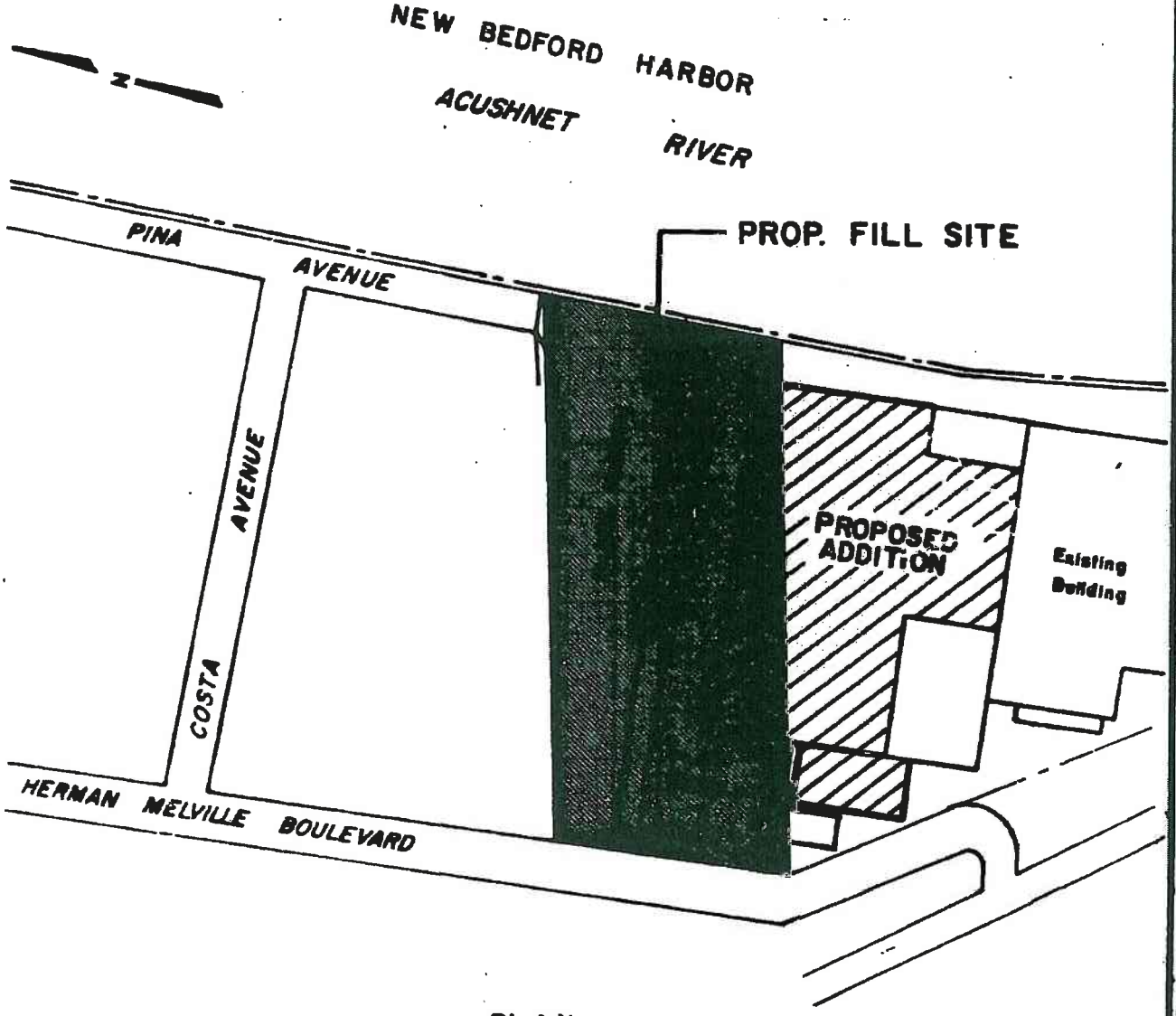



# SECTION A-A

20 10 0 20 40
SCALE IN FEET

PROPOSED BULKHEAD, SOLID FILL, DREDGING & DEMOLITION
IN NEW BEDFORD MASS

049-066-000-165-10




PLAN
SCALE: 1"=200'

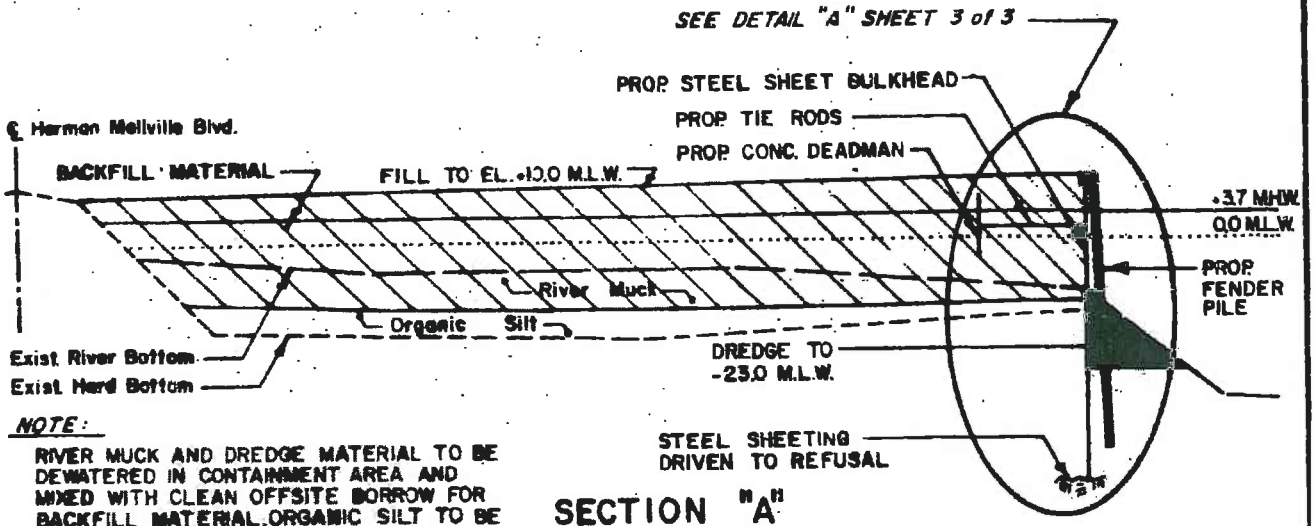
# PROPOSED BUILDING EXPANSION

NORTH TERMINAL BULKHEAD EXTENSION

TIBBETTS ENGINEERING CORP. NEW BEDFORD, MASS

049-0606-000-165-100

SHEET 2 OF 3




NOTE:

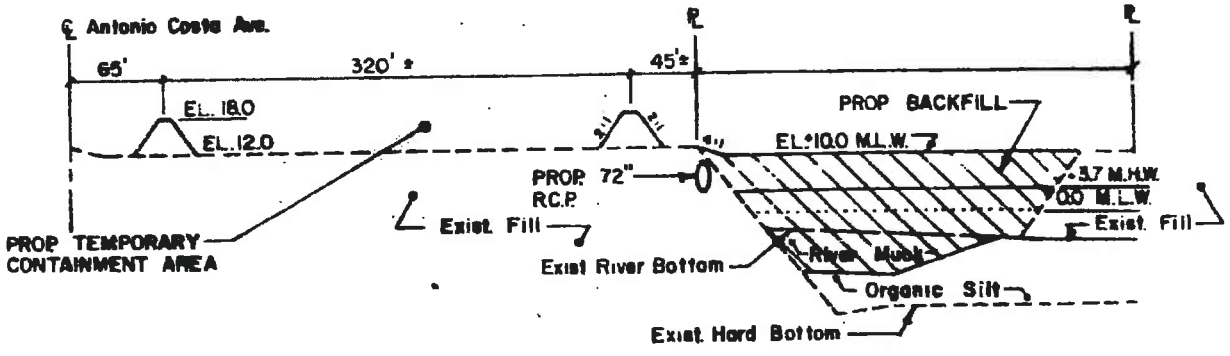
RIVER MUCK AND DREDGE MATERIAL TO BE DEWATERED IN CONTAINMENT AREA AND MIXED WITH CLEAN OFFSITE BORROW FOR BACKFILL MATERIAL. ORGANIC SILT TO BE COMPRESSED BY LOADING OF BACKFILL MATERIAL.

APPROX. 30,000 CUBIC YARDS OF RIVER MUD WILL BE DREDGED

## SECTION "A"

0 30 60 120 240 1"=120' HOR.

0 10 20 30 60 1"=30' VERT.




RICHARD L SILVIERA No 25808 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

## SECTION "B"

0 30 60 120 240 1"=120' HOR.

0 10 20 30 60 1"=30' VERT.

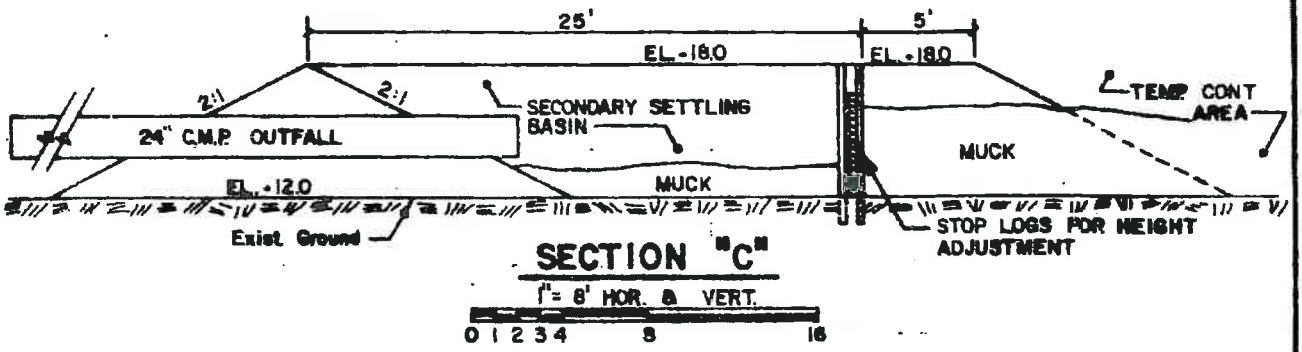
APPLICATION BY: THE CITY OF NEW BEDFORD

TIBBETTS ENGINEERING CORP. NEW BEDFORD MASS.

2360087

049-066-000-165-100

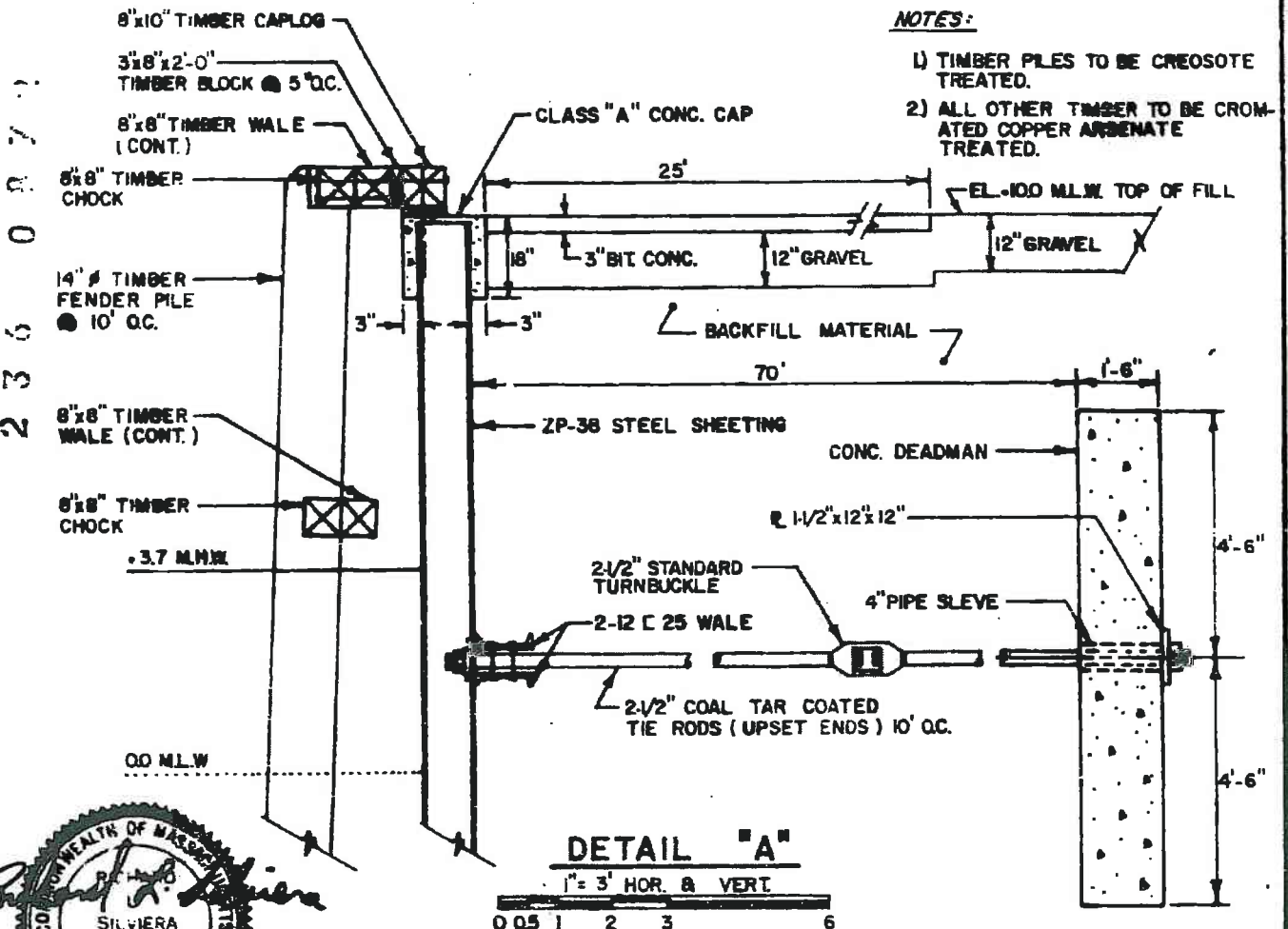
SHEET 3 OF 3




## SECTION "C"

1"= 8' HOR. & VERT.

0 1 2 3 4 8 16




NOTES:

1) TIMBER PILES TO BE CREOSOTE TREATED.
2) ALL OTHER TIMBER TO BE CROMATED COPPER ARSENATE TREATED.

## DETAIL "A"

1"= 3' HOR. & VERT.

0 0.5 1 2 3 6

APPLICATION BY:
THE CITY OF NEW BEDFORD

COMMONWEALTH OF MASSACHUSETTS
RICHARD D. SILVIERA
No. 28009
REGISTERED PROFESSIONAL ENGINEER

TIBBETTS ENGINEERING CORP. NEW BEDFORD MASS.