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Staff:	Jim Baskin
Staff Report:	April 26, 2000
Hearing Date:	May 10, 2000
Commission Action:	

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.:	**1-99-077**
APPLICANT:	**City of Eureka**
PROJECT LOCATION:	Along the City of Eureka's Inner-channel Waterfront of Humboldt Bay, from ±360 ft. west of the foot of C Street to ±290 ft east of the foot of F Street, Eureka, California
PROJECT DESCRIPTION:	Demolition of all existing dock structures and reconstruction of a 420-ft.-long commercial fishing wharf, a 1,190-ft.-long trestle public boardwalk, a 530-ft-long floating dock, and associated shoreline protective works.
LOCAL APPROVALS RECEIVED:	City of Eureka Coastal Development Permit No. CDP-11-99, approved December 21, 1999.
LOCAL APPROVALS PENDING:	Humboldt Bay Harbor, Recreation, & Conservation District, (tentatively scheduled for 4/27/00)
OTHER APPROVALS REQUIRED:	US Army Corps of Engineers CWA §404 Permit; and Regional Water Quality Control Board CWA §401 Certification.

SUBSTANTIVE FILE DOCUMENTS:	City of Eureka Local Coastal Program; City of Eureka General Plan EIR SCH #96072062; Eureka Inner-Channel Dock and Boardwalk Revitalization Project Mitigated Negative Declaration SCH #99112064, certified December 21, 1999; Eureka Inner-Channel Dock and Boardwalk Revitalization Project Marine Resources Mitigation Monitoring and Reporting Program (SHN Consulting Engineers, 10/99); Eureka Inner-Channel Dock and Boardwalk Draft Planning Consideration Report (BERGER/ABAM, 10/99); Geotechnical Investigation Inner-Channel Dock & Boardwalk Revitalization Projects (Harding Lawson Associates, 4/16/99); and Parking Maximization Study in the City of Eureka (SPECTRUM Engineering, 3/31/98)

SUMMARY OF STAFF RECOMMENDATION

Staff recommends that the Commission approve with conditions the proposed City of Eureka Inner-Channel Dock and Boardwalk Revitalization Project. The project involves the removal of derelict waterfront structures and construction of an approximately 1,610-ft.long dock and boardwalk complex along approximately four blocks of the city's frontage on Humboldt Bay. Associated with these improvements are shoreline protection structures to protect the development from wave and tidal forces. The extension of public infrastructure to serve the project area would also be undertaken.

The project is a part of the City's on-going efforts to redevelop its waterfront which has included past approvals by the Commission for industrial dock works, commercial fishing support facilities, a small boat mooring basin, and coastal recreational and assembly amenities. The purpose of the project is to provide extensive public coastal access, recreational opportunities, and upgrade commercial fishing facilities along the City's central waterfront, an area presently occupied by an assortment of dilapidated buildings, piers, wharves and docking. It is the City's hope that these improvements will foster adjacent private development to revitalize its historic "Old Town" area and re-establish itself as a diversified northern California seaport.

As shoreline development, the project does raise potential concerns regarding protection of marine biological resources and coastal waters. In addition, ensuring that coastal access support facilities, such as parking areas, are adequately provided and located, risks

of exposure to geologic hazards are minimized, and visual resources are protected are other issues associated with the project.

The project setting is an urbanized waterfront planned and zoned for coastal-dependent and waterfront commercial uses. Though proposed mostly over tidal and submerged areas, the project site is landward of significant marine resource areas, most notably eelgrass (Zostera marina) beds along the inner-tidal mudflats adjacent to the navigation channel. The project has been configured to avoid intrusion into these areas. Demolition and construction activities have been conditioned to minimize effects to marine resources.

With respect to the potential impacts to marine resources, the project will involve the filling of coastal waters. A total of 4,280 cubic yards of fill as sheet piling, jetted/driven piles and shoreline protective works covering 7,115 square feet (ft^2) will be placed in bay waters. In addition, boardwalk and wharf decking and a floating dock will shade approximately 19,315 ft^2 of intertidal mudflat, rocky intertidal, and saltmarsh habitat areas. Replacement of these habitat areas is proposed at a 1:1 areal exchange ratio of in-kind and out-of-kind habitat. As discussed herein, staff is recommending that the replacement for lost saltmarsh habitat should be in-kind and increased to a 2:1 ratio to ensure that habitat values are fully restored for this more complex habitat type.

During the environmental review of the project, the City and Commission staff consulted with the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, the California Department of Fish and Game and the North Coast Regional Water Quality Control Board regarding potential impacts to bay and near-shore habitats, and water resources. These agencies advised that the project was not likely to have significant adverse impacts on the beneficial uses of the waters of Humboldt Bay or to federal and state listed fish and wildlife habitat provided that in-water development activities are conducted within specified time periods, replacement mitigation for filled wetlands is provided, and established best management practices to contain and minimize water quality disruptions are included in demolition and construction phase activities. These mitigation measures have been included in the recommended special conditions for the project.

Ensuring that the proposed new development includes adequate support infrastructure, such as parking, and protects and enhances coastal access were other concerns identified for the project. Based upon a parking use study developed for the project area, there is adequate under-utilized public parking within a reasonable distance from the project site.

The geotechnical report for the project provides recommendations regarding the placement of fill, piles and the sheetpile bulkhead. These recommendations address the use of geotextile liners on excavated surfaces beneath fill materials, pile jetting techniques to avoid lateral shifts during pile erection, and design of anchoring for

sheetpile bulkhead. These recommendations have also been included as special conditions for the project.

Finalized plans for all boardwalk and plaza improvements are not available as of the writing of this report. Therefore, a plan review requirement has been included with the other project special conditions to assure that visual resources of the project area are not adversely affected once the designs for boardwalk and plaza lighting, signage, and street art structures are finalized.

Staff believes the proposed project as conditioned is consistent with the Coastal Act and recommends approval.

STAFF NOTES

1. Jurisdiction and Standard of Review.

The proposed project is located within the incorporated boundaries of the City of Eureka along Humboldt Bay, about a mile inland from the ocean, in Humboldt County. The City of Eureka has a certified LCP, but those portions of the site below the High Tide Line are within an area shown on State Lands Commission maps over which the state retains a public trust interest. Therefore, the standard of review that the Commission must apply to the project is the Coastal Act.

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. MOTION, STAFF RECOMMENDATION, AND RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve Coastal Development Permit No. 1-99-077 pursuant to the staff recommendation.

Staff Recommendation of Approval:

Staff recommends a YES vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of the majority of the Commissioners present.

Resolution to Approve Permit:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as

conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS: See attached.

III. SPECIAL CONDITIONS:

1. U.S. Army Corps of Engineers Approval

PRIOR TO COMMENCEMENT OF CONSTRUCTION, permittee shall provide to the Executive Director a copy of a permit issued by the U.S. Army Corps of Engineers, or letter of permission, or evidence that no permit or permission is required. The applicant shall inform the Executive Director of any changes to the project required by the U.S. Army Corps of Engineers. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is required.

2. Final Wetland Mitigation Program

A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit for review and written approval of the Executive Director, a final wetland mitigation program for all wetland impacts associated with the proposed project. The program shall be developed in consultation with the California Department of Fish & Game and U.S. Fish & Wildlife Service and at a minimum shall include:

1. A detailed revised site plan of the wetland impact area that substantially conforms with the plan titled Eureka Inner Channel Dock and Boardwalk Revitalization Project Marine Resources Mitigation Monitoring and Reporting Program, dated October, 1999, and submitted to the Commission on November 24, 1999. The final plan must delineate all impact areas (such as on a map that shows elevations, surrounding landforms, etc.), the types of impact (both permanent and temporary), and the exact acreage of each impact so identified.

2. The baseline ecological assessment of the wetland impact area submitted on November 24, 1999.

3. A detailed final site plan of the mitigation site that substantially conforms with the site plan submitted to the Commission on November 24, 1999, as revised as follows:

   a. Replacement of in-kind saltmarsh habitat area based upon an exchange ratio of 2:1; and

   b. The location of intertidal mudflat and saltmarsh reference and monitoring cross-sections at the Parcel 4 mitigation site shall be shown.

   The mitigation site plan shall include both the extent of restored areas and the buffer surrounding the restored areas from adjacent development.

4. The goals, objectives, and performance standards set forth in the report entitled Eureka Inner Channel Dock and Boardwalk Revitalization Project Marine Resources Mitigation Monitoring and Reporting Program, dated October, 1999, and submitted to the Commission on November 24, 1999, for the mitigation site, as revised as follows:

   a. Plant cover percentages, density, and species diversity for replacement saltmarsh habitat based upon that in the reference area; and
   b. Faunal re-colonization success reference and monitoring counts for replacement intertidal mudflat habitat based upon direct sampling of the density of appropriate benthic and epi-benthic indicator species using established biological survey protocols.

5. The final design and construction methods that will be used to ensure the mitigation site achieve the defined goals, objectives, and performance standards.

6. Provisions for the full restoration of all wetland impacts that are identified as temporary (such as temporary fill areas). Restoration of temporarily impacted areas shall include at a minimum, restoration of before-impact elevations, restoration of before-impact hydrology, removal of all non-native plant species, and replanting with locally collected native wetland plant species.

7. Provisions for submittal, within 30 days of completion of initial restoration work of "as built" plans demonstrating that the wetland mitigation site has been established in accordance with the approved design and construction methods.

B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

3. Construction Responsibilities and Debris Removal

The permittee shall comply with the following construction-related requirements:

A. No construction materials, debris, or waste shall be placed or stored where it may be subject to wave erosion and dispersion;

B. Any and all debris resulting from construction activities shall be removed from the bay immediately;

C. Sand from the beach, cobbles, or shoreline rocks shall not be used for construction material; and

D. Staging and storage of construction machinery and storage of debris shall not take place on any adjacent coastal access support facilities (e.g., parking lots, bike paths, or walkways).

4. Erosion and Run-Off Control Plans

A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT,** the applicant shall submit, for review and approval of the Executive Director, a plan for erosion and run-off control.

1. EROSION CONTROL PLAN

a. The erosion control plan shall demonstrate that:

1) During construction, erosion on the site shall be controlled to avoid adverse impacts on adjacent properties and marine resources;
2) The following temporary erosion and sedimentation control measures shall be used during construction: "dry season" construction scheduling, straw bale barriers, silt fencing, sandbag/coffer damming, and outlet protection (outfall energy dissipaters);
3) Following construction, erosion on the site shall be controlled to avoid adverse impacts on adjacent properties

and resources through the use of re-seeding and mulching of bare soil areas; and

4) The following permanent erosion control measures shall be installed: geo-textile liners beneath rock slope protection structures.

b. The plan shall include, at a minimum, the following components:

1) A narrative report describing all temporary run-off and erosion control measures to be used during construction and all permanent erosion control measures to be installed for permanent erosion control;
2) A site plan showing the location of all temporary erosion control measures;
3) A schedule for installation and removal of the temporary erosion control measures;
4) A site plan showing the location of all permanent erosion control measures; and
5) A schedule for installation and maintenance of the permanent erosion control measures.

2. RUN-OFF CONTROL PLAN

a. The run-off control plan shall demonstrate that:

1) Run-off from the project site shall not increase sedimentation in waters of Humboldt Bay;
2) Run-off from all decking, walkways, and other impervious surfaces and slopes on the site shall be collected and discharged to avoid ponding or erosion either on or off the site;
3) An on-site spill prevention and control response program, consisting of the storage of clean-up materials, training, designation of responsible individuals, and reporting protocols to the appropriate public and emergency services agencies in the event of a spill, shall be implemented at the commercial fishing dock site to capture and clean-up any pollutants accidentally releases of oil, grease, fuels, lubricants, or other hazardous materials from entering coastal waters, as approved by the Regional Water Quality Control Board; and
4) Scouring at stormwater outfalls is prevented through the installation of energy dissipaters at their points of discharge.

b. The plan shall include, at a minimum, the following components:

1) A schedule for installation and maintenance of the outfall energy dissipaters, and implementation of the spill prevention and control program; and
2) A site plan showing finished grades (at 1-foot contour intervals) and drainage improvements.

B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

5. Conformance of Design and Construction Plans to Geotechnical Report Geologic Hazard

A. All final design and construction plans, including foundations, grading and drainage plans, shall be consistent with all recommendations contained in Section 6.0 of the Engineering Geologic Report titled Geotechnical Investigation Inner Channel Dock and Boardwalk Revitalization Projects, Eureka, California, prepared by Harding Lawson Associates and dated April 16, 1999. **PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the Executive Director's review and approval, evidence that an appropriate licensed professional has reviewed and approved all final design and construction plans and certified that each of those final plans is consistent with all of the recommendations specified in the above-referenced geologic evaluation approved by the California Coastal Commission for the project site.

B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

6. Boardwalk Plaza Improvements Plan Review

A. **PRIOR TO PLACEMENT OF BOARDWALK AND PLAZA IMPROVEMENTS**, the applicant shall submit, for the review and approval of the Executive Director, final plans for improvements for the public boardwalk and "C" and "F" Street Plazas. The plans shall be prepared by a qualified professional with experience in the fields of architecture, landscape architecture, and/or historic preservation.

1. The plans shall demonstrate that future public improvements and amenities at the project site are:

   a. Visually compatible with the character of surrounding areas with respect to lighting levels, structural heights, bulk, and do not significantly obstruct views from coastal scenic vistas (foot of "C" and "F" Streets) ; and

   b. Subordinate to the character of its setting (i.e., Humboldt Bay Inner Channel waterfront, Old Town district) with respect to architectural style, surface treatments, and physical appearance.

2. The plan review shall apply, either as one comprehensive review, or individually in modules, to the following types of improvements:

   a. Lighting --- ZED® Z-40 or equivalent lamp posts, shielded to direct illumination onto deck surfaces and not into bay waters;

   b. Informational kiosks and interpretative signage as detailed in the project site details (BERGER/ABAM, 12/7/99). Said kiosks and signage to be sited such that there long axis is parallel to coastal scenic vista points to minimize blockage of views; and

   c. Street art (i.e., focal point structures, such as masts, lanyards, booms, riggings, play structures, etc.) as detailed in the project site details (BERGER/ABAM, 12/7/99). Said focal-point structures are not to exceed 35 feet in height for the "C" Street "boat" or 50 feet in height for the "F" Street "mast."

B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

IV. FINDINGS AND DECLARATIONS.

A. Project Description.

The proposed project consists of the demolition and reconstruction of over one-quarter mile of the City of Eureka's central waterfront as part of an on-going economic development project for the area. Derelict dock, pier, wharf, bulkhead, and floating dock structures, comprising approximately 35,443 ft^2 in coverage, will be demolished with

their piles cut off at the bay mudline. An approximately 1,610-foot-long commercial fishing dock and public boardwalk complex would then be constructed.

1. Demolition and Construction Activities

Although the City intends to undertake construction of the dock and boardwalk complex in one phase, the project can best be described in units corresponding to the street blocks it adjoins from west to east as follows:

West of "C" Street: Demolish a deteriorated 380-ft.-long x 20-ft.-wide wooden dock structure fronting the site of the former Lazio Fish Company processing plant, consisting of approximately 150 creosote-treated wooden pilings and deteriorated decking over the easterly 290 feet. Remove the existing public floating dock, ramp, and bulkhead wall at the foot of "C" Street.

Construct a 420-ft.-long x 40-ft.-wide (16,800 ft^2) concrete marginal wharf berth commercial fishing dock ("Fisherman's Terminal Dock") from 360± ft. west of the west line of "C" Street to the east line of "C" Street, equipped with three jib cranes with electric winches (2-2 tons, 1-5 tons capacity), bollards on 60-ft. centers at the pile caps, and a fender system of pre-cast concrete piling with ultra-high molecular weight (UHMW) plastic facing spaced at 10-ft. centers, and overhead lighting.

Construct approximately 380 lineal feet of interlocking sheetpile bulkhead wall per ASTM A-328 standards, at the landward edge of the Fisherman's Terminal Dock, anchored by tie-rods and "dead man" anchors, including approximately 3,456 cubic yards (yd^3) of engineered backfill and pavement.

"C" St. to "D" St.: Remove the existing Humboldt State University Rowing Crew private floating dock at the foot of "D" Street.

Demolish approximately eight single- and double-spar dolphins, comprising approximately 20 creosote-treated wooden pilings.

Install approximately 64 lineal feet of cutoff wall at the foot of "C" Street behind approximately 160 yd^3 (1,450 ft^2) of rock slope protection.

Grade approximately 200 yd^3 of the existing top of bank and install 270± lineal feet (3,950 ft^2) of rock slope protection from the east line of "C" Street to "D" Street.

Construct a concrete public boardwalk extending over Humboldt Bay, generally ranging in width from 16-24 ft., with a 60-ft.-width at the foot of "D" Street, with the landward edge at the top of bank, 7-24 ft. from the Bulkhead Line; install ZED® Z40 overhead lighting standards, and guardrails; construct an interpretive kiosk, a sailing mast public art structure, and extend water and sewer service lines at the "C" Street Plaza.

Install a new tidegate on an existing 54-in. diameter reinforced concrete pipe within the "C" Street right-of-way.

"D" St. to "F" St.: Demolish a deteriorated 580-ft.-long x 20-ft.-wide wooden dock structure fronting the former Fisherman's Building and the Hum-Boats Sail, Canoe, and Kayak Center rental yard, consisting of approximately 320 creosote-treated wooden pilings and deteriorated decking. Remove the existing private floating dock and ramp fronting the Hum-Boats rental yard. Remove the existing public floating dock, ramp and the bulkhead wall at the foot of "F" Street.

Continue construction of a concrete public boardwalk extending over Humboldt Bay, generally ranging from 16-24 ft. in width, with lighting and guardrails.

Construct an 8-ft.-wide x 530±-ft. long (5,491 ft^2) floating dock adjacent to the proposed boardwalk, extending from the east line of "D" Street to approximately 50 ft. west of the west line of "F" Street.

Foot of "F" St.: Install approximately 138 lineal feet of cutoff wall at the foot of "F" Street behind approximately 124 yd^3 (1,120 ft^2) of rock slope protection.

Construct the 170-ft. wide "F" Street Plaza," from approximately 50 ft. west of the west line of "F" Street to approximately 62 ft. east of the east line of "F" Street, extending from approximately 50 ft. landward of the Bulkhead Line to approximately the Pierhead Line; install lighting, guardrails, and an interpretive kiosk; extend water & and sewer service lines.

Construct a new 18-in. diameter stormdrain and tidegate in the "F" Street right of way.

East of "F" St.: Demolish a deteriorated 50-ft.-long x 30-ft.-wide deteriorated wooden pier structure and approximately fifteen single- and double-spar dolphins, consisting of approximately 60 creosote-treated wooden pilings and deteriorated decking over the southerly 40 feet of the pier, fronting the proposed Humboldt Harbor Inn (Sicard) development.

Install approximately 101 cy^3 (910 ft^2) of rock slope protection extending from the east line of "F" Street to approximately 190 ft. east of the east line of "F" Street.

Continue construction of a concrete public boardwalk extending over Humboldt Bay, generally ranging from 16-20 ft. in width, extending from approximately 62 ft. east of the east line of "F" Street to approximately 290 ft. east of the east line of "F" Street.

Additional detailing of project improvements (i.e., utilities, boardwalk amenities, public art) are discussed under Findings Sections IV. H, below.

2. Marine Resources Mitigation Activities

The project also includes a wetlands mitigation component to be conducted at two off-site locations:

Eureka Small Boat Basin: Designate 20,200 ft^2 of rock slope protection as a mitigation site for an equivalent area (1:1 exchange ratio) of rocky intertidal habitat filled/shaded by the project.

City of Eureka Parcel 4: Create 4,200 ft^2 of intertidal mudflat and 3,000 ft^2 of saltmarsh habitat to replace approximately 5,500 ft^2 of intertidal mudflat and 730 ft^2 of saltmarsh habitat areas shaded and/or filled by the project, at a combination of 1:1 in-kind and out-of-kind replacement habitat areas.

Further details of this portion of the project are discussed under Findings Section IV. H, following.

B. Site Description.

1. Project Site

The project site is located on the eastern shore of Humboldt Bay within the City of Eureka along a reach known as the "Inner Channel" between the City's central waterfront and Woodley and Indian Islands (see Exhibits 1 and 2). The project setting comprises an urbanized commercial-industrial port that has mostly fallen into disrepair with the decline

in the region's timber and fish processing economies over the last thirty years. With the exception of floating docks at the foot of "C," "D," and "F" Streets, the majority of the site is occupied by an assortment of dilapidated wharfing, piers, and docks unsafe for port uses in their present condition.

Landward of the project site lies the City's "Old Town," a Victorian Era historical district developed primarily with an assortment of retail commercial, professional offices, residential and public uses. Along the waterfront to the east and west of the project site are commercial fishing docks and processing plants. Beyond those facilities lie the City's Adorni Recreational Center and the Wharfinger Building / Eureka Small Boat Basin complex, respectively.

The project site is located at or below the mean high tide line of the sea on tidelands that were legislatively granted to the City of Eureka. These tidelands are co-terminus with the Commission's area of original coastal development permit jurisdiction (see Exhibit 3). Adjoining portions of the overall Dock and Boardwalk Revitalization Project area located above the high tide line (i.e., the "C" and "F" Street Plazas) are within the City of Eureka's coastal development permit jurisdiction. On January 14, 2000, the City of Eureka approved coastal development permit CDP-11-99 authorizing those portions of the revitalization project within City's jurisdiction. The City's action on CDP-11-99 was not appealed to the Commission.

2. Mitigation Sites

The proposed location for mitigating rocky intertidal areas filled or shaded by the project is at the Eureka Small Boat Basin, approximately ¼ mile west of the project site. The Boat Basin consists of numerous floating dock slips and walkways constructed within the bay extending from a graded and filled parking lot area. The 1,480-lineal-foot frontage of the Boat Basin has been armored with approximately 92,000 ft^2 of rock slope protection. It is these materials which the City seeks to utilize to offset the proposed loss of rocky intertidal habitat by designating a portion of their coverage as a mitigation site.

"Parcel 4," the mitigation site for intertidal mudflat and saltmarsh habitat areas is a City-owned reclaimed tidelands property located approximately 2½ miles southwest of the project site behind the Bayshore Mall. The parcel consists of an overgrown industrial lot with remnant structural foundations and debris from its former use as a lumber mill. Further descriptions of the mitigation sites are included under Findings Section IV E, below.

C. Public Access.

Coastal Act Sections 30210, 30211, and 30212 require the provision of maximum public access opportunities, with limited exceptions.

Section 30210 states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Section 30211 states:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Section 30212 states:

> *(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:*
>
> *(1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,*
>
> *(2) adequate access exists nearby, or,*
>
> *(3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*

Coastal Act Section 30210 requires in applicable part that maximum public access and recreational opportunities be provided when consistent with public safety, private property rights, and natural resource protection. Section 30211 requires in applicable part that development not interfere with the public's right of access to the sea where acquired through use (i.e., potential prescriptive rights or rights of implied dedication). Section 30212 requires in applicable part that public access from the nearest public roadway to the shoreline and along the coast be provided in new development projects, except in certain instances, such as when adequate access exists nearby or when the provision of public access would be inconsistent with public safety.

In applying Sections 30211 and 30212, the Commission is limited by the need to show that any denial of a permit application based on these sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to avoid or offset a project's adverse impact on existing or potential public access.

The project site is located adjacent to Humboldt Bay, approximately 1½-mile inland and six miles up-channel from where bay waters enter the Pacific Ocean near the community of King Salmon. Due to the private commercial-industrial development pattern of the central waterfront, public coastal access points to and along the bay in the project area are limited to the foot of "C" and "F" Streets. Within ¼ mile to the east, west, and north of the project area are coastal access facilities, comprising the waterfront trails, boat launches and floating docks fronting the City's Adorni Recreational Center, Wharfinger Building / Eureka Small Boat Basin complex, and Woodley Island Marina, respectively.

Although not a standard of review in the Commission's retained jurisdiction area, the City of Eureka's LCP (adopted February 27, 1997) can be utilized by the Commission as guidance. The LCP addresses access points to Humboldt Bay in the project vicinity. Coastal Recreation and Access Policy 5.B.1. reads, in applicable part, as follows:

> *The City shall provide public open space and shoreline access throughout the Coastal Zone, particularly along the waterfront and First Street, through all of the following :...*
>
> *b. Establish a walkway system located on or near the shoreline throughout the city's waterfront Core Area.* [emphases added]

Among the primary objectives for Eureka's Dock and Boardwalk Revitalization Project is the goal of socially and economically reintegrating the City with its waterfront. To accomplish this goal, the project proposes to provide extensive coastal access and recreational opportunities for the enjoyment of its residents and visitors. Existing coastal access and recreational facilities within the project area are available only at the foot of "C" and "F" Streets, and along a vacant City lot between "C" and "D" Streets. The proposed project would make available 1,190 lineal feet of modulated-width public boardwalk and 530 lineal feet of floating dock, anchored by two waterfront plazas, providing a variety of active and passive recreational opportunities.

The development would also incrementally contribute to implementing a major goal of the City's local coastal plan access element by in-filling between other public access facilities (i.e., Adorni Center, Wharfinger complex), for the eventual development of contiguously accessible central waterfront.*

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* The Eureka waterfront is composed of a mixture of public and private properties fronting on Humboldt Bay. It should be noted that while the City's LCP calls for establishing a shoreline walkway "throughout the city's waterfront Core area," ingress/egress through some coastal-dependant use areas (i.e., commercial fishing loading docks and processing facilities) may not be appropriate for public safety reasons. Although the City has discussed the possibility of establishing viewing areas for the public to observe fishing dock operations, through-access in these areas may need to be re-routed inland to the sidewalk alongside First Street / Waterfront Drive.

Therefore, the Commission finds that the proposed project, which includes substantial new public access, is consistent with the public access policies of the Coastal Act.

D. Planning and Siting New Development.

Section 30250(a) of the Coastal Act states in applicable part that:

> *New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.*

The intent of this policy is to channel development toward more urbanized areas where services are provided and potential impacts to resources are minimized.

Coastal Act Section 30252 continues on to state that:

> *The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing nonautomobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.* [emphasis added]

The proposed development entails a 1,610-ft.long dock and boardwalk complex with associated shoreline protective works located along the central waterfront of the City of Eureka. The project site lies adjacent to City's "Old Town" district, fully developed with community water and sewer services and public utilities availability. The City of Eureka currently provides police, fire protection, and public transit services in the project area. In addition, the proposed project will lie bayward of First Street, and will abut the ends of "C," "D," "E," and "F" Streets, all public roads with fully improved, 60-ft-wide sections (2 lanes, on-street parking, curb, gutter, & sidewalk). The proposed development, therefore, is consistent with Coastal Act Section 30250(a) to the extent that it is located in a developed area with adequate water, sewer, utility, transportation, and other public service capabilities.

Adequacy of Parking Facilities

In regards to the maintenance and enhancement of public access to the coast under Section 30252, the adequacy of support facilities to serve the project is a concern as the project does not provide dedicated parking spaces for the proposed dock and boardwalk uses. The project would result in the loss of 36 existing on-street parking spaces associated with the closure of "C" and "F" Streets to vehicular traffic north of 1st Street. In addition, as the City's municipal code does not set parking standards for plazas and boardwalks (they are considered by the City as a form of public sidewalk), no parking requirements were established for the project. Further, in adopting the Mitigated Negative Declaration for the project, the City concluded that the project would not result in inadequate parking capacity in the Downtown area. This conclusion was based on (1) the lack of parking requirements within the City's municipal code for dock and boardwalk projects; (2) the findings and recommendations in previous parking studies conducted for the Downtown area; and (3) parking demand characteristics of prospective dock and waterfront users.

Off-Street Parking Standards for Waterfront Docks and Boardwalks

In concluding that adequate parking capacity is available to serve the project, the City first cites its municipal code's lack of off-street parking standards for dock and boardwalks. These facilities are effectively considered a form of public sidewalk for which off-street parking requirements are not enumerated. In such cases, the City relies on the use of on-street parking resources to serve the public use. As discussed under the following rationale, the City concluded that there was ample on-street parking within the project vicinity to adequately serve the proposed project.

Parking Maximization Study

In 1998, the City of Eureka commissioned a study to survey and analyze parking conditions, identify exist and future problem areas, and develop appropriate solutions for the Downtown and Henderson Center business districts (SPECTRUM Engineering, 3/31/98). With respect to existing conditions in the Downtown area, including the project site vicinity, the report found that:

> (W)hile there are acute spot problems [Staff Note: These parking deficient areas are located in the Old Town commercial district, not in proximity to the project site] as reported by several merchants and residents of Eureka, the overall picture is not critical. In all cases, according to the several detailed occupancy and turn-over surveys which we had taken, there is ample parking located within a one block distance from block faces where ample parking is a problem...

Preparation of the SPECTRUM study pre-dated the design of the proposed project. Consequently, no analysis of the effects of the dock and boardwalk was included. However, the report noted the presence of several public parking lots in the project vicinity. These include:

- 1st & "C" Street Parking Lot (64 spaces);
- 1st & "E" Street Parking Lot (27 spaces); and
- Samoa Bridge Boat Ramp Parking Lot (22 standard spaces, 20 double-length RV / boat trailer spaces).

In addition, walk-through surveys conducted as part of the SPECTRUM report identified several block faces within a 2-block proximity to the project site with typically unused parking spaces:

Block Face	**Observed Unused Spaces**
"C" Street between the waterfront and 1st Street:	9-10
"D" Street between the waterfront and 1st Street:	19-20
"E" Street between the waterfront and 1st Street:	12
"F" Street between the waterfront and 1st Street:	2 - 3
First Street between "C" and "D" Streets:	8 - 9
First Street between "D" and "E" Streets:	7 - 8
First Street between "E" and "F" Streets:	6 - 8
"C" Street between 1st and 2nd Streets:	3 - 6
"D" Street between 1st and 2nd Streets:	1 - 3
"E" Street between 1st and 2nd Streets:	2 - 3
2nd Street between "C" and "D" Streets:	8 - 9
2nd Street between "D" and "E" Streets:	4 - 5
Total Under-Utilized On-Street Parking Spaces within 2 Blocks of Project Site:	**81- 96**

Based on the results of the Parking Maximization Study, the City concluded there is an abundance of available parking facilities within a reasonable distance from the project site alleviating the need for additional dedicated parking to serve the project.

Parking Demand Characteristics of Dock and Waterfront Users

Finally, the City of Eureka also based their conclusion regarding the lack of parking impacts from the project based upon the use patterns of typical dock and boardwalk users. It is anticipated that significant portion of waterfront patrons will be visitors to the downtown area, either as customers to its commercial establishments or over-night occupants of visitor-serving facilities such as hotels, motels, and bed & breakfast inns. Many of these visitors will walk to the dock

and boardwalk from these businesses. In those cases, parking will have been provided at facilities serving those commercial uses. In addition, peak use times for waterfront attractions are generally in the evenings and on weekends when many commercial and professional office firms are closed. Consequently, this offset in parking demand will make available additional parking facilities during waterfront peak-use times.

The Commission thus concludes that the proposed project is located in an area with adequate public services availability. Further, the Commission concludes that the project has been designed and sited to include adequate support facilities, including parking, such that public access to the coast will be enhanced and maintained. Accordingly, the project is consistent with Sections 30250 and 30252 of the Coastal Act.

E. Fill in Coastal Waters and the Protection of Marine Resources.

The Coastal Act defines fill as including *"...earth or any other substance or material ... placed in a submerged area."* The proposed project includes the placement of fill in coastal waters, as the proposed piles, floating dock, and rock slope protection would be placed within intertidal and submerged areas of Humboldt Bay. The total area of fill proposed in coastal waters is 7,115 square feet. In addition, dock and boardwalk structures would shade an approximately 19,315-square-foot area of intertidal mudflat, rocky intertidal, and saltmarsh habitats.

The proposed project could have several potential adverse impacts on estuarine habitat. The piles and rock slope protection would be installed within intertidal mudflat and rocky habitats that support a variety of benthic organisms. In addition, the shading of intertidal areas will reduce incidental sunlight to the euphotic zone, potentially affecting biological productivity.

Several sections of the Coastal Act address the placement of fill within coastal waters and the construction of revetments and similar shoreline structures. Section 30231 provides in applicable part that:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes... shall be maintained and, where feasible restored...*

Section 30233(a) provides as follows, in applicable part:

> (a) The *diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation*

measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities.[emphases added]

Section 30235 provides, in applicable part:

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from

erosion, and when designed to eliminate or mitigate adverse impacts on local sand supply. [emphases added]

The above policies set forth a number of different limitations on what types of shoreline protection fill projects may be allowed in coastal waters. For analysis purposes, the limitations applicable to the subject project can be grouped into five general categories or tests. These tests are:

1. The purpose of the fill is either for one of the eight uses allowed under Section 30233, to serve coastal dependent uses, or to protect existing structures or public beaches in danger from erosion; and

2. The project is designed to eliminate or mitigate adverse impacts on local sand supply; and

3. The project has no feasible less environmentally damaging alternative; and

4. Adequate mitigation measures are provided to minimize the adverse impacts of the proposed project on habitat values; and

5. Habitat values are maintained and enhanced.

1. Permissible Use for Fill

The first general limitation set forth by the above-referenced Chapter 3 policies is that any proposed fill can only be allowed for certain limited purposes. Under Section 30233(a), fill in coastal waters can only be placed for one of eight different uses, including under sub-sections (1), "commercial fishing facilities," (4), "in open coastal waters other than wetlands, including streams, estuaries, and lakes, new and expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities," and (5), "incidental public services purposes, including ...burying... pipes... and maintenance of existing... outfall lines." The proposed project consists of the placement of solid fill and fixed wharf, boardwalk, dock float piling, and related infrastructure as part of a public waterfront complex for the mooring of commercial fishing vessels, a public boardwalk, and the launching and landing of recreational watercraft. The rock slope protection will serve coastal-dependent uses as the site is used as a combined coastal-dependent commercial dock, recreational boating, and coastal access facility which must be located on or adjacent to water to serve its basic functions. As such, the project consists of "new or expanded coastal-dependant industrial facilities," "new or expanded boating facility," and involves the installation of infrastructure for "incidental public service purposes." Therefore the Commission finds that the purpose of the fill is consistent with subsections (1), (4), and (5) of Section 30233(a) of the Coastal Act and is required to serve a coastal-dependent use consistent with Section 30235 of the Coastal Act.

2. Impact on Local Sand Supply

The proposed seawall will not adversely effect local shoreline sand suppy as the structure is sited on an enclosed harbor within Humboldt Bay. No changes in sediment transport for Humboldt Bay should result.

Therefore, the Commission finds that the project, as conditioned, will maintain the biological productivity and quality of Humboldt Bay, consistent with Section 30231 of the Coastal Act. Similarly, as conditioned, the proposed project will maintain the functional capacity of the wetlands as required by Section 30233(c).

3. No Feasible Less Environmentally Damaging Alternatives

A second general limitation set forth by the above-referenced Chapter 3 policies is that any proposed fill project must have no less environmentally damaging feasible alternative.

There are no apparent feasible alternatives to the project that would be less environmentally damaging. The applicant has provided information relating to the size of other pier and boardwalk projects, including the Santa Monica Pier, Santa Cruz Wharf, San Diego Boardwalk and the Port of Long Beach (see Exhibit No. 8). The currently proposed 16 to 76-ft. width of the boardwalk and wharf complex and the number of piles to be driven is not excessive in comparison with typical marinas, piers and boardwalks throughout the state (widths ranging from 12 to 150 feet). The proposed dock and boardwalk will extend no farther into Humboldt Bay than is necessary to meet essential project objectives (i.e., adequate spatial requirements for the loading and off-loading of commercial fishing vessel cargoes, adequate cross-sectional area for boardwalk functions, including the movement of persons, lighting, benches, bay viewing, and potential "sidewalk seating" for future adjoining private commercial visitor-serving uses such as restaurants). In addition, the surface of the piles and sheetpile bulkhead will be self-mitigating to a certain extent, as they will provide a substrate to which intertidal encrusting organisms may attach themselves to, a habitat feature precluded on the existing creosote-treated wooded pile surfaces.

A "no project" alternative would not accomplish the project objectives of providing the City and its visitors with extensive public access and coastal recreational opportunities, providing moorage for commercial fishing vessels, and fostering recreational boating, all priority uses under the Coastal Act. The derelict central waterfront structures would remain in place rendering the area unavailable for such uses, continuing to release wooden debris and hazardous materials into coastal waters from their creosote-treated piles, and visually blighting the area.
In developing plans for the dock and boardwalk complex, the City considered other design options that would have provided better operational advantages at the wharf and expanded access and recreational opportunities boardwalk. One such option involved the

"C" Street to "D" Street boardwalk segment being constructed entirely over bay waters. These project versions involved significantly greater areas of fill and/or encroached into environmentally sensitive eelgrass beds. These options were subsequently rejected because of the additional environmental effects that would have resulted.

Developing the boardwalk in a more landward location --- in the form of an upland promenade --- was also considered. This option was also rejected due to its lack of meeting basic project objectives and other site-specific constraints. One of the primary objectives of the boardwalk is to reintegrate the City of Eureka with its waterfront. To achieve this goal, direct access to the bay waters was presented as being a crucial design element. In addition, many of the adjoining landward parcels are not under City ownership for which the added costs for acquisition could make the project financially infeasible. Even if so acquired, vacant land zoned for coastal-dependent uses in the central waterfront area is limited and generally takes the form of wide parcels with shallow lot depths platted for maximum bay frontage. Development of these properties with an upland boardwalk would leave little building area for development of other adjacent coastal-dependant and compatible waterfront uses.

Another design option considered involved the construction of cantilevered dock and boardwalk structures, where the need for in-water piles might be significantly reduced or eliminated. While this option might reduce the amount of fill in coastal waters, it would require extensive upland excavation and grading, or structural modifications to the project design that would be cost prohibitive.

Therefore, the Commission finds that the proposed reconstruction of the dock and boardwalk involves the least environmentally damaging feasible alternative as required by Section 30233(a).

4. Mitigation for Adverse Impacts

A third general limitation set forth by Sections 30231 and 30233(a) is that adequate mitigation to minimize the adverse impacts of the proposed project on habitat values must be provided.

Feasible mitigation measures are available to mitigate the potential adverse impacts of the project. The three main impacts of the proposed project are (1) the loss of intertidal mudflat, rocky intertidal, and saltmarsh habitat through direct filling with driven piles and rock slope protection; (2) shading of habitat areas by wharf and boardwalk decking; and (3) potential water quality impacts from project construction and accidental spills.

Construction of the rock slope protection will result in the filling of approximately 3,040 square feet of rocky intertidal and mudflat habitat areas below the high water line. In addition, the placement of piles to support the new dock and boardwalk complex will displace approximately 1,251 square feet of mudflat and rocky intertidal habitat. The

installation of sheetpile bulkhead and backfill will also cover a certain amount of intertidal and saltmarsh habitats. Altogether, the filling of approximately 7115 square feet of fill in coastal waters is associated with the project.

Associated with the preceding impact category are the effects associated with the construction of dock and boardwalk decking. These structures will shade an approximately 19,315 square feet area of rocky intertidal, mudflat, and saltmarsh habitat. This shading will reduce the amount of incidental sunlight and potentially decrease the productivity of marine organisms is these areas.

To mitigate for the loss of filled and shaded habitat areas, the City has proposed a mitigation plan, attached as Exhibit No. 6. As discussed in Findings Section IV. A, Project Description, the mitigation plan has three elements: (1) designate 20,200 square feet of rock slope protection at the Eureka Small Boat Basin as mitigation habitat area to replace an equivalent area of rocky intertidal habitat area filled or shaded by the project at a 1:1 exchange ratio; (2) remove an approximately 4,200 square feet of concrete foundation at the City's "Parcel 4" property and establish an equivalent amount of intertidal mudflat without eelgrass to compensate for intertidal mudflat areas shaded by the project at a 1:1 exchange ratio; and (3) excavate approximately 3,000 square feet of upland fill from an area on Parcel 4 and establish an equivalent area of saltmarsh habitat to compensate in-kind for 730 square feet of saltmarsh filled or shaded by the project and out-of-kind for the approximately 1,650 square feet of intertidal mudflat with saltmarsh filled or shaded by the project at a 1:1 exchange ratio.

The proposed rocky intertidal mitigation proposal consists of a mitigation "credit" applied to the rock slope protection previously placed at the Eureka Small Boat Basin, located approximately ¼ mile west of the project site. These materials were placed to armor the shoreline of the boat basin from wide and tidal forces to protect the mooring improvements at the boat basin. The mudflat areas that these materials covered was previously mitigated through creation of on-site, in-kind mudflat habitat (see Coastal Development Permit 1-98-028, approved June 11, 1998).

Although the riprap at the Small Boat Basin might provide viable habitat substrate for encrusting benthic organisms, the scope of that project did not include provisions for establishing a wetland mitigation bank at the site. Consequently, unless that project's coastal development permit is amended for such, recognizing the boat basin's shoreline hardening materials as mitigation area would not be appropriate. However, even without using credit from a previous project, the proposed boardwalk project will mitigate for the loss of rocky intertidal habitat. As mentioned in Findings Section IV. E. 2, above, the intertidal surface area of concrete pilings (459-24" diameter piles @ 6-ft. tidal bore = 20,188 square feet) and sheetpile bulkhead (380 lineal feet @ 6-ft. tidal bore = 2,280 square feet) will provide hard surfaces for encrusting littoral and benthic organisms to attach themselves to at a replacement ratio of approximately 1:1. This habitat feature is not available on the existing creosote-treated piles and bulkheads and approximates the

surface area of rocky intertidal habitat filled or shaded by the project. Accordingly, the project is self-mitigating with respect to the replacement of rocky intertidal habitat areas filled or shaded by the development.

Although proposed for another offsite location, the proposed mitigation for intertidal mudflat and saltmarsh will be developed adjacent to functioning wetland of the same types. The new mudflat area to be created is adjacent to the intertidal mudflat that exists on the mid-Humboldt Bay reaches. The proposed saltmarsh enhancement site is located between two areas where Point Reyes Birdsbeak (Cordylanthus maritimus ssp. palustris), a rare and endangered saltmarsh plant species, is well established.

The ratio of habitat creation to habitat loss is proposed at 1:1. Although this ratio is low in comparison with the ratio the Commission requires with some projects, the Commission has approved many projects at 1:1 ratios when the kind of habitat involved is unvegetated mudflat, such as the case with portions of the proposed dock and boardwalk project site. The biotic community in unvegetated mudflat areas is relatively simple in comparison with eelgrass or saltmarsh habitats, and the benthic organisms that are commonly found within unvegetated mudflat areas typically can be expected to fully colonize new mudflat areas within a couple of years. Given that the mudflat area at the mitigation site can be created adjacent to an adjoining mudflat habitat, benthic organisms can be expected to migrate to and colonize the new habitat fairly readily.

Similar rationale can be applied to the proposed 1:1 exchange ratio for rocky intertidal habitat. The ecological structure of organisms who utilize this substrate is likewise uncomplicated compared to other benthic communities. In addition, encrusting organisms rapidly colonize new rocky surfaces within a relatively short time frame. As discussed above, the application of a mitigation credit for the previous placement of rock slope protection at the offsite Small Boat Basin after its approval without such a banking provision is not appropriate. However, the on-site mitigation of rocky intertidal habitat with pile and bulkhead surfaces in combination with the removal of decaying treated wooden piles as proposed is consistent with marine resource protection policies.

The mitigation plan also proposes to replace filled or shaded saltmarsh habitat in-kind and a part of lost intertidal mudflat out-of-kind kind at a 1:1 exchange ratio. As previously discussed, the establishment of replacement saltmarsh habitat is not straightforward. Saltmarsh habitat is ecologically complex, utilized by a variety of micro and macro-faunal organisms. Plantings are generally more difficult to establish as their growth and successional rates are slower. Considerable delays between the wetland loss at the development site and wetland establishment at the mitigation site may occur resulting in a net decline in habitat availability. Accordingly, to compensate for the temporal as well as spatial loss of habitat, the Commission finds that increasing the required exchange ratio for in-kind saltmarsh replacement area from 1:1 to 2:1 is appropriate. Imposing this additional mitigation requirement is feasible as there is ample additional area at the mitigation site to accommodate replacement at a 2:1 exchange ratio.

The proposed mitigation plan also includes success standards, monitoring and remedial action procedures. Among these provisions are cross-sectional analysis of saltmarsh plant growth and community structure, and indirect assessment of mudflat re-colonization by benthic and epi-benthic organisms through bird foraging surveys. These performance standards reference relatively low success thresholds: For saltmarsh restoration, a minimum of 50% plant cover, comprised of not less than 50% of the plant species encountered in the adjacent existing saltmarsh is required to be in-place at the end of five years. No quantitative goal for the success of re-colonizing mudflat biota was set. Instead, only the surveying of bird use in the replacement area and comparing the counts with others taken in mudflats adjacent to the mitigation site is specified.

In order for the adverse impacts to habitat values associated with the filling of coastal waters to be adequately mitigated, they should at least approximate the functional capacity of adjacent habitat areas. Determinations of the success of a restoration effort should be based on quantifiable standards that can be objectively monitored and reviewed. The Commission thus finds that revisions to the mitigation plan's exchange ratio and performance criteria are appropriate. Accordingly, Special Condition No. 3 has been imposed, requiring the City to submit a revised mitigation plan for the review and approval by the Executive Director that incorporate an increase in in-kind saltmarsh exchange ratio from 1:1 to 2:1. The condition also includes a requirement that success criteria be based on a statistical comparison with reference habitat areas based on direct quantitative measurements (e.g., stem counts, basal area, benthic habitat survey protocols).

As conditioned, the Commission finds that the project will provide feasible mitigation measures that will adequately mitigate the impacts of the proposed project on the filling and shading of intertidal mudflat, rocky intertidal and saltmarsh habitats.

The proposed project could adversely affect the water quality in Humboldt Bay in at least three principal ways. First, the demolition of the dilapidated dock and pier structures may result in the release of wooden debris into intertidal and submerged areas. No specific preventative or clean-up measures addressing construction debris were identified in the project application. Second, site grading for installation of rock slope protection and other improvements may cause sedimentation of the bay due to entrainment of exposed soils in stormwater runoff or scouring at outfalls. Third, accidental spills associated with operations at the commercial fishing dock could result in hazardous materials entering coastal waters.

To reduce the potential for construction debris to enter the bay, the Commission attaches Special Condition No. 4, which requires that all construction debris be removed from the site upon completion of the project.

To ensure that sedimentation of the bay does not result from erosion of graded areas or scouring at outfalls, the Commission attaches Special Condition No. 5, which requires the

preparation of an erosion and runoff control plan to minimize adverse impacts to coastal waters.

Finally, to reduce the potential for hazardous materials being discharged into the bay from accidental spills at the commercial fishing dock, Special Condition No. 4 requires that a spill prevention and response program be developed as part of the required erosion and runoff control plan.

The Commission finds, that as conditioned, the proposed project will include adequate mitigation to minimize the potential water quality impacts of the project.

The Commission finds, that as conditioned, the proposed project is consistent with the third test for approvable fill projects set forth in Section 30233 of the Coastal Act and the requirements of Section 30231 of the Act in that adequate mitigation for the adverse environmental effects of the proposed project will be provided.

5. Maintenance and Enhancement of Estuarine Habitat Values

The fourth general limitation set by Sections 30231 and 30233(a) on fill projects is that any such proposed project shall maintain and enhance the biological productivity and functional capacity of the habitat, where feasible.

The proposed mitigation plan will both maintain and enhance the biological productivity and functional capacity of Humboldt Bay. As discussed above, the mitigation plan will ensure that through the creation of in-kind and out-of-kind replacement wetlands, there will be no net loss of combined mudflat, rocky intertidal and saltmarsh area. Thus habitat values are maintained. In addition, the proposed out–of-kind replacement for a part of intertidal mudflat area will be with highly valued saltmarsh developed between two existing areas of saltmarsh. These areas support a substantial population of Point Reyes Birdsbeak (Cordylanthus maritimus ssp. palustris), a species included on the Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlick, 1994) on List 1B (rare or endangered throughout its range). The removal of existing debris from the intertidal areas during site preparation work at the project site is also proposed by the applicant as a habitat enhancement measure.

Therefore, the Commission finds that the project, as conditioned, will maintain the biological productivity and quality of Humboldt Bay, consistent with Section 30231 of the Coastal Act. Similarly, as conditioned, the proposed project will maintain the functional capacity of the wetlands as required by Section 30233(c).

F. Allowable Shoreline Protective Device

Section 30235 of the Coastal Act states, in part, that revetments, breakwaters, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes

shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on shoreline sand supply.

The proposed project includes the placement of approximately 640 lineal feet of rock slope protection (RSP) along the shoreline in areas beneath the proposed boardwalk structure. The RSP will prevent continued bank erosion. The RSP will serve coastal-dependent uses as the site is used as a combined coastal-dependent commercial fishing dock, recreational boating, and coastal access facility which must be located on or adjacent to water to serve its basic functions.

The proposed seawall will not adversely effect local shoreline sand supply as the structure is sited on an enclosed harbor within Humboldt Bay. No changes in sediment transport for Humboldt Bay should result.

Therefore, the project is consistent with Section 30235 of the Coastal Act as the proposed rock slope protection is required to serve coastal-dependent uses and has been designed to minimize adverse impacts on local shoreline sand supply.

G. Geologic Hazards and New Development.

The Coastal Act contains policies to assure that new development provides structural integrity, minimizes risks to life and property in areas of high flood hazard, and does not create or contribute to erosion. Section 30253 of the Coastal Act states in applicable part:

> *New development shall:*
>
> (1) *Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> (2) *Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

The project involves grading and filling at or below the high tide line along a portion of Humboldt Bay which was reclaimed in the early 1900's. The area is blanketed in loose sandy fills, containing shell fragments, wooden debris, and other rubble, underlain successively by bay muds, interbedded dense sands and gravel, and stiff clay. These materials do not provide a competent building platform. Therefore, the dock and boardwalks structures have been designed to bear on pile foundations.

The geotechnical study for the project (Harding Lawson, 4/16/99) sets forth three sets of recommendations addressing site preparation and fill placement, the jetting and driving of pile pipes, and the installation of the interconnecting sheetpile bulkhead. To ensure that stability of the project site and the structural integrity of the dock and boardwalk improvements, the Commission attaches Special Condition No. 6, which requires that the recommendations of the geo-technical report be followed in constructing the project.

The Commission finds, that as conditioned, the proposed project will include adequate measures to insure structural stability, minimize risks to life and property from geologic instability, and ensure that erosion, geologic stability, or destruction of the site is prevented, consistent with Section 30253 of the Coastal Act.

H. Visual Resources.

Section 30251 of the Coastal Act states that the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance, and requires in applicable part that permitted development be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, and to be visually compatible with the character of surrounding areas. Furthermore, in designated highly scenic coastal areas, permitted development must be subordinate to the character of its setting.

The project site is located along the shoreline of Humboldt Bay, between the first public (First Street) road and the sea. Due to the presence of existing waterfront structures, views to and along the ocean are limited to the ends of "C" and "F" Streets and from a vacant parcel between "C" and "D" Streets. The City of Eureka LCP designates the northern waterfront area in general and the foot of "F" Street in particular as "scenic vista points". As noted previously, the LCP is not the standard of review for the project, but provides useful guidance. With respect to visual resource protection in such project area, Land Use and Development Framework Policies 1.H.1, 1.H.2, and 1.H.4 provide:

1.H.1. The City shall promote unobstructed view corridors to the waterfront from public streets and other public spaces through careful building siting and effective street tree maintenance.

1.H.2. The City shall create a gateway to the waterfront / inner harbor at the foot of F Street, defining the terminus of the street (e.g., flags, ship masts).

1.H.4. The City shall establish landmark features (e.g., buildings, sculptures) at the terminus of key Core Area streets, most importantly at the west end of 2nd Street (B Street) and at the foot of F Street.

Policy 1.D.1 goes on to address ensuring that new waterfront development occur in harmony with and enhance the character of the Old Town area:

The City shall retain the historic waterfront building scale and general character in waterfront revitalization and development as a means of creating a 'Victorian Seaport' identity for the waterfront area. New buildings developed along the waterfront north of First Street / Waterfront Drive should not exceed three stories or 50 feet in height.

The project entails the construction of a 1,610-ft.-long concrete dock and boardwalk complex extending to a height of approximately 12 feet above mean low low water (mllw). At such height, the dock and boardwalk structure will approximate that of the existing docks, wharfing, and piers in the project area, making the project visually compatible with the character of the surrounding area. In addition, the development of a dock and boardwalk along the project site will be subordinate to the character of the Old Town setting, an urbanized waterfront.

In addition to the dock and boardwalk structure itself, the project application also enumerated several improvements to be installed for the finished boardwalk and plaza areas. These include the installation of pathway lighting, informational kiosks and interpretative signage, benches, trash receptacles, planters, and drinking fountains along the boardwalk. Of these amenities, only the maximum height of the informational kiosks (16 feet above mllw) and generalized "typicals" of lamppost standards, benching, etc. were included in the application materials. In addition, decorative focal-point structural attractions are planned to be deployed at the two street plazas. Preliminary designs identify installation of boat play structure at the "C" Street Plaza, and erection of a sailing mast at the "F" Street Plaza (see Exhibit No. 7). City staff have indicated that while including the development of these features within the permit authorization for the dock and boardwalk is desired, the finalized design of lighting and boardwalk amenities has not been completed at this time. Accordingly, no thorough assessment of the potential impacts to coastal visual resources has been conducted for these finalized boardwalk elements.

To ensure that the scenic and visual qualities of coastal areas shall be considered and protected, the Commission attaches Special Condition No. 7, which requires that plans for boardwalk and plaza amenities establish that they will be visually compatible and subordinate to the character of the project setting. Imposing these standards is appropriate to ensure that in authorizing the design of submitted project improvements, any deviations in their final forms are adequately assessed with regard to their effect on coastal views and their physical expression with respect to the character of the area.

The Commission finds, that as conditioned, the proposed project will: (a) include adequate measures to insure that the scenic and visual qualities of coastal areas are considered and protected; (b) insure that permitted development is sited and designed to protect views to and along the ocean and scenic coastal areas; (c) minimize the alteration of natural land forms; (d) be visually compatible with the character of surrounding areas; and (e) be subordinate to the character of its setting.

I. State Waters

The project site is located in areas that were formerly State-owned waters or are otherwise subject to the public trust. However, these State-owned waters were transferred to the City of Eureka through a legislative grant. Therefore the applicant has the necessary property rights to carry out the project on former State-owned lands

J. U.S. Army Corps of Engineers Review

The project requires the review and approval by the U.S. Army Corps of Engineers. Pursuant to the Federal Coastal Zone Management Act, any permit issued by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that state. Under agreements between the Coastal Commission and the U.S. Army Corps of Engineers, the Corps will not issue a permit until the Coastal Commission approves a federal consistency certification or permit for the project. To ensure that the project ultimately approved by the Corps is the same as the project authorized herein, the Commission attaches Special Condition No. 2 which requires the permittee to submit to the Executive Director evidence of U.S. Army Corps of Engineers approval for the project prior to the commencement of work.

K. California Environmental Quality Act.

Section 13906 of the California Code of Regulation requires Coastal Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Public Resources Code Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect that the activity may have on the environment.

The proposed project has been conditioned to be consistent with the policies of the Coastal Act and the requirements of PRC §21080.5(d). Special condition(s) have been attached to require mitigation measures which will minimize all adverse environmental impacts. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

EXHIBITS:

1. Regional Location Map
2. Vicinity Map
3. Jurisdictional Map (excerpt)
4. Project Site Plans
5. Surface Feature Site Plans
6. Mitigation Plan
7. Preliminary / Conceptual Plans for Boardwalk Plaza Improvements
8. Information on Other Dock and Pier Projects

APPENDIX A

STANDARD CONDITIONS

1. Notice of Receipt and Acknowledgement. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable amount of time. Application for extension of the permit must be made prior to the expiration date.

3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.

4. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director of the Commission.

5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.

6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

EXHIBITS FOR 1-99-077
Eureka Boardwalk & Dock

W 21b

STAFF REPORT TO GO IN LATE MAILING

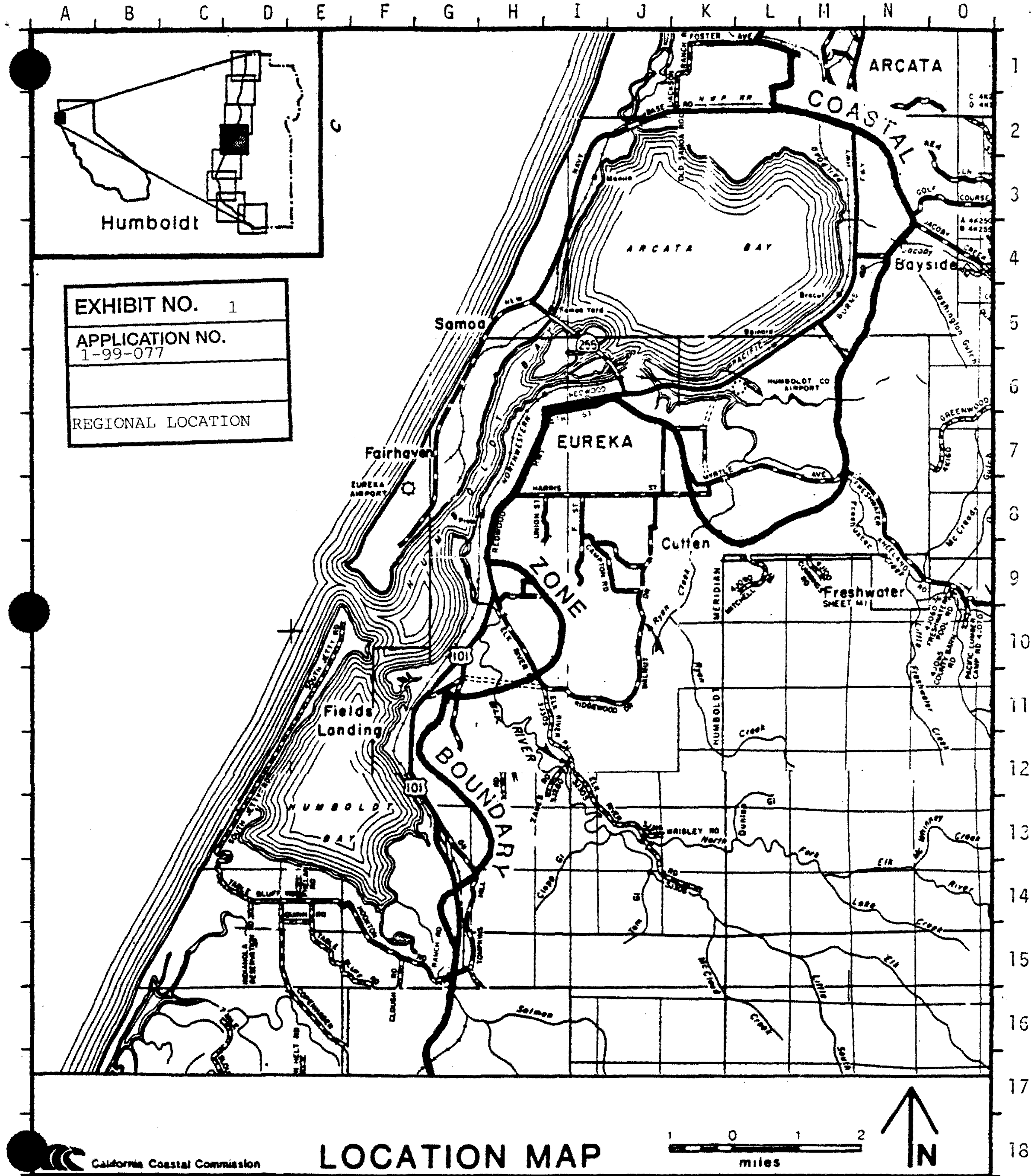


EXHIBIT NO. 1

APPLICATION NO.
1-99-077

REGIONAL LOCATION

California Coastal Commission

LOCATION MAP

County of Humboldt

Sheet 4 of 8

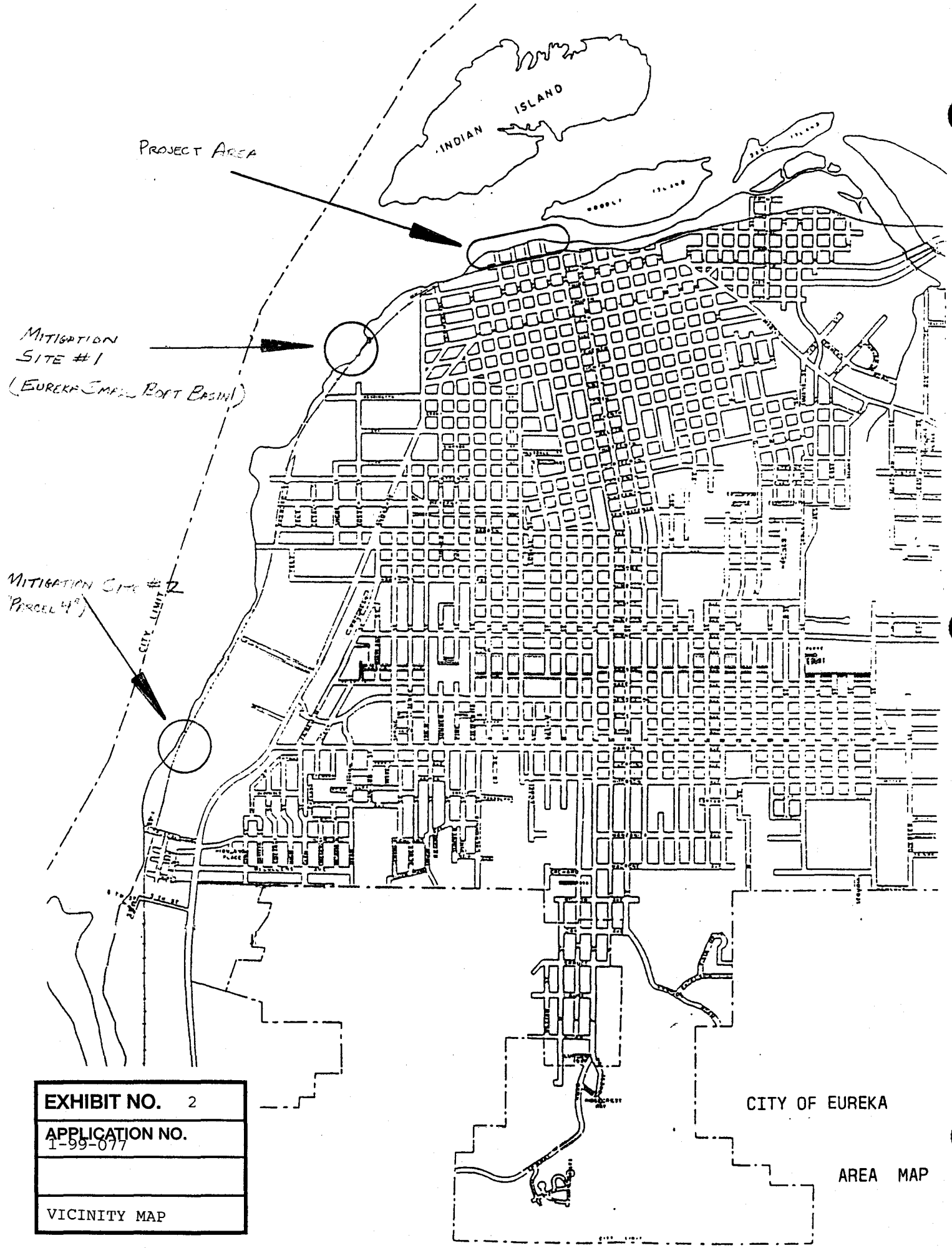


EXHIBIT NO.	2
APPLICATION NO.	1-99-077
VICINITY MAP	

COMMUNITY DEVELOPMENT

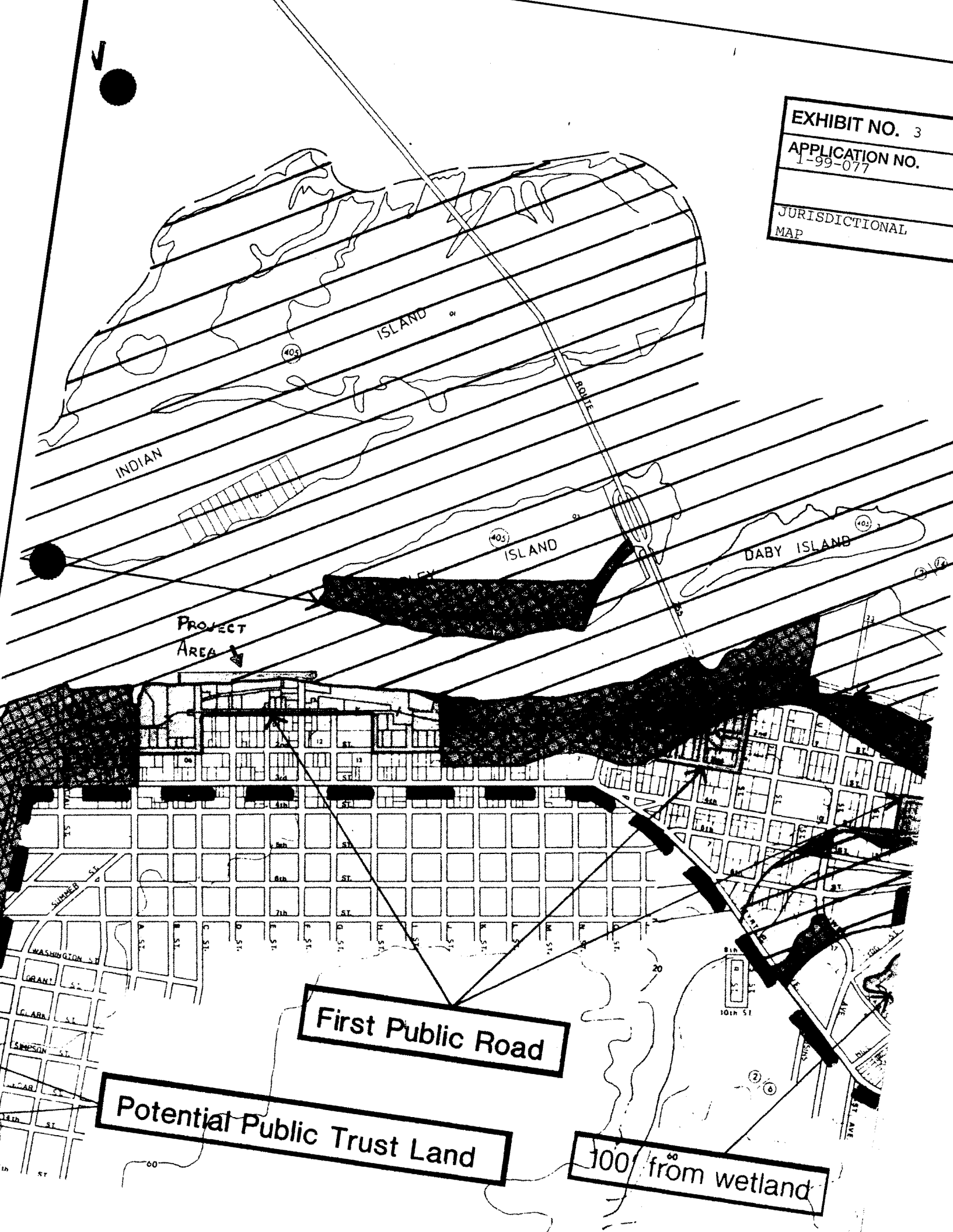
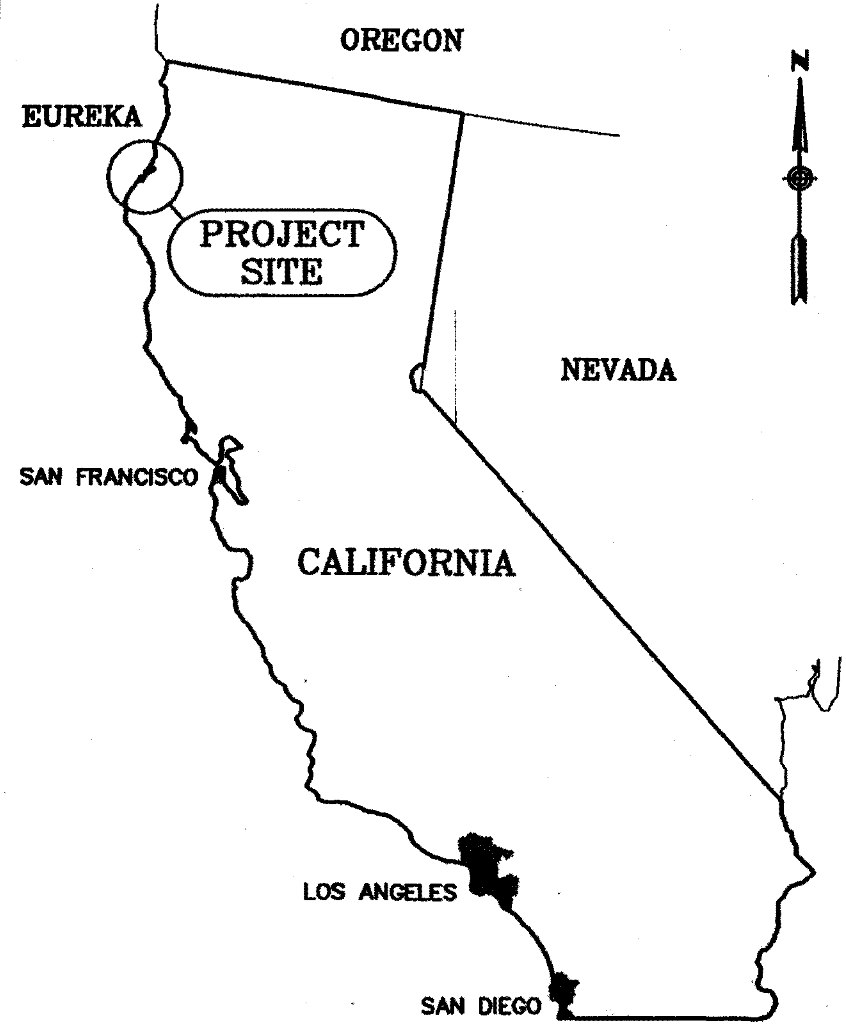
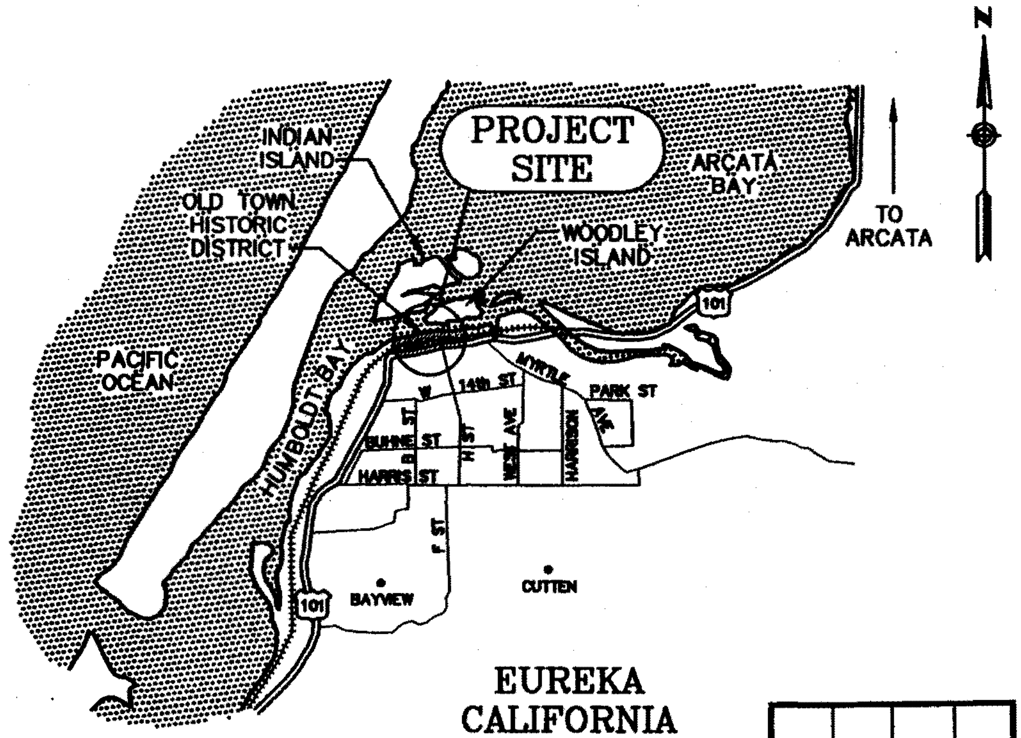


EXHIBIT NO. 3
APPLICATION NO. 1-99-077
JURISDICTIONAL MAP
INDIAN ISLAND
ISLAND
DABY ISLAND
PROJECT AREA
ROUTE
405
First Public Road
Potential Public Trust Land
100' from wetland



LOCATION MAP



VICINITY MAP

EXHIBIT NO. 4

APPLICATION NO. 1-99-077

PROJECT PLAN MAPS
PAGE 1 OF 20

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

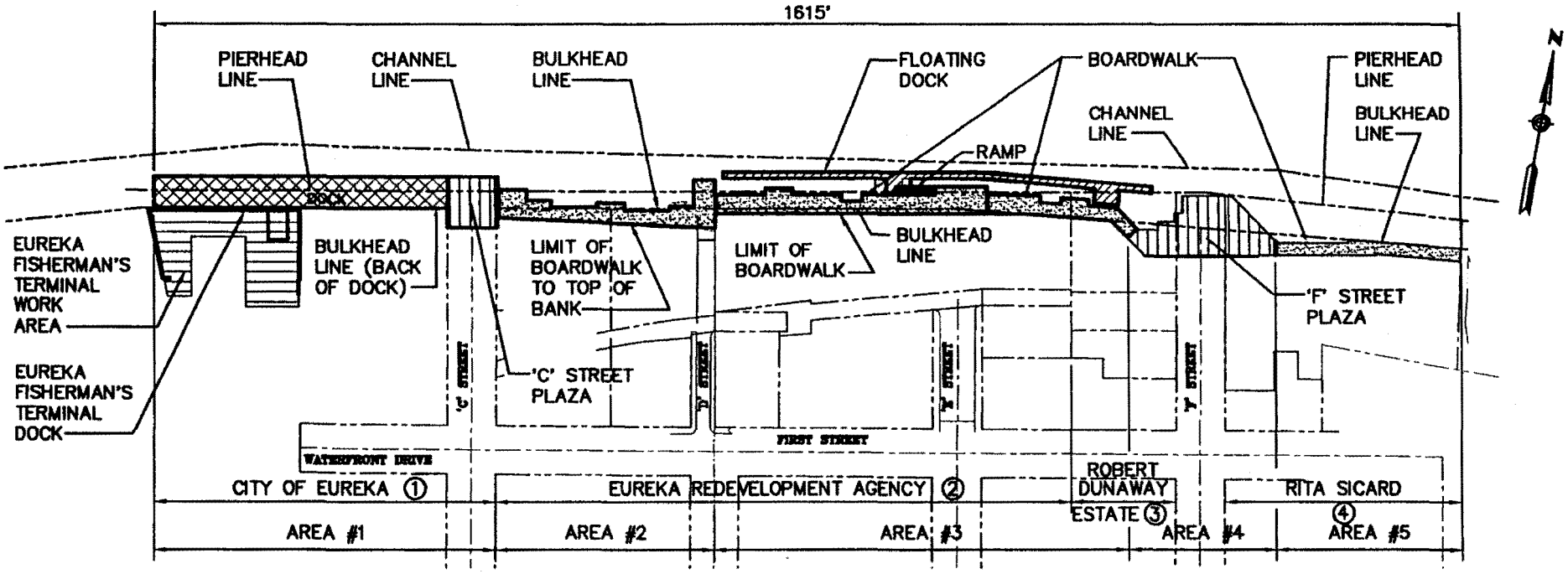
DATUM: MLLW - 0.0'

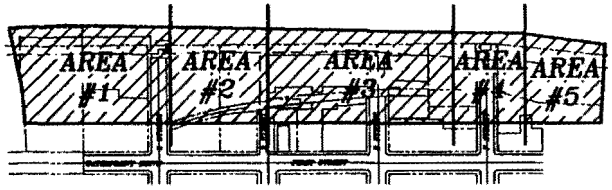
ADJACENT PROPERTY OWNERS:

1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN:	HUMBOLDT BAY
AT:	EUREKA OLD TOWN WATERFRONT
COUNTY OF:	HUMBOLDT
STATE:	CALIFORNIA
APPLICATION BY:	CITY OF EUREKA
SHEET: 1 OF 20	DATE: NOVEMBER 1999





KEY PLAN

PROJECT PLAN

LEGEND

- FISHERMAN'S TERMINAL DOCK 14,480 sq ft
- FISHERMAN'S TERMINAL WORK AREA 13,976 sq ft
- PUBLIC PLAZA AREA 13,140 sq ft
- BOARDWALK 23,590 sq ft
- FLOATING DOCK (TRANSIENT MOORAGE) 5,491 sq ft

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:

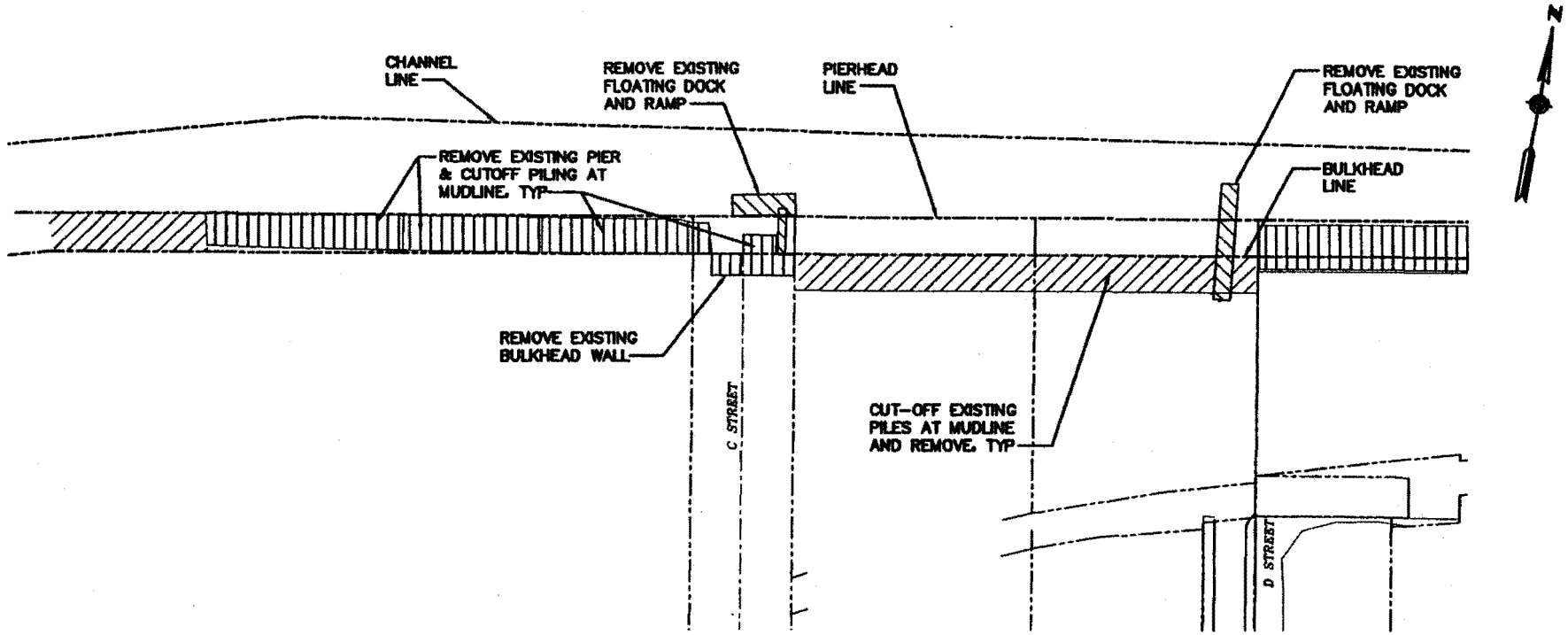
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

200 0 200 400

scale 1"=200' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

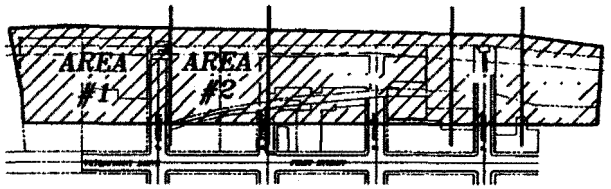
IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 2 OF 20 **DATE:** NOVEMBER 1999



LEGEND

- REMOVE EXISTING PIER & CUT OFF PILING AT MUDLINE
  19,193 sq ft TOTAL
- REMOVE EXISTING PILING
  (REMAINS OF EXISTING DOCK)
  11,570 sq ft TOTAL
- REMOVE FLOATING DOCK
  4,480 sq ft TOTAL

DEMOLITION PLAN
AREAS 1 AND 2



KEY PLAN

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

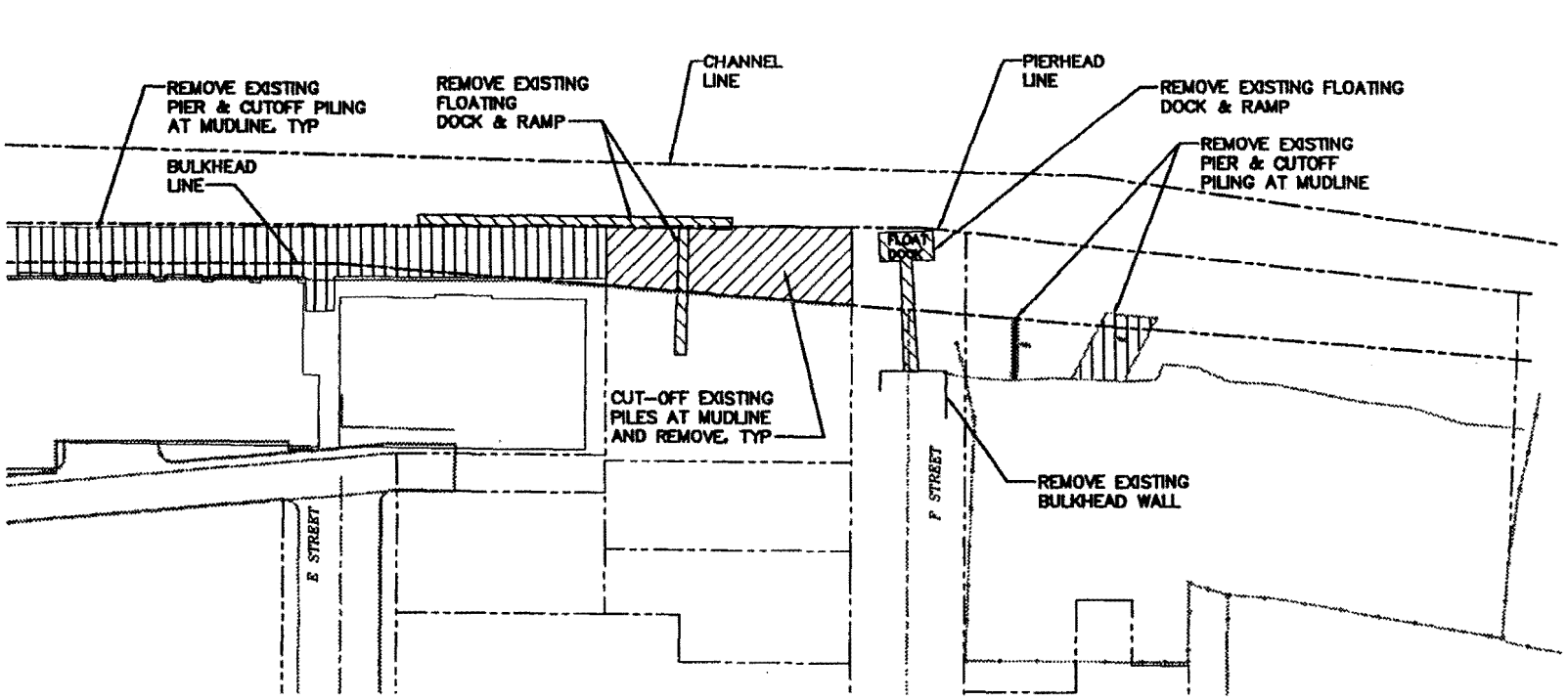
DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

100 0 100 200
scale 1"=100' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

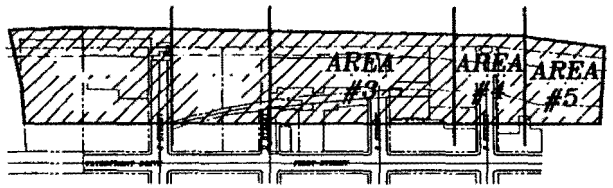
IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 3 OF 20 **DATE:** NOVEMBER 1999



LEGEND

- REMOVE EXISTING PIER & PILING SEE SHT 3 FOR TOTAL AREA
- REMOVE EXISTING PILING (REMAINS OF EXISTING DOCK) SEE SHT 3 FOR TOTAL AREA
- REMOVE FLOATING DOCK SEE SHT 3 FOR TOTAL AREA

DEMOLITION PLAN
AREAS 3, 4 AND 5



KEY PLAN

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

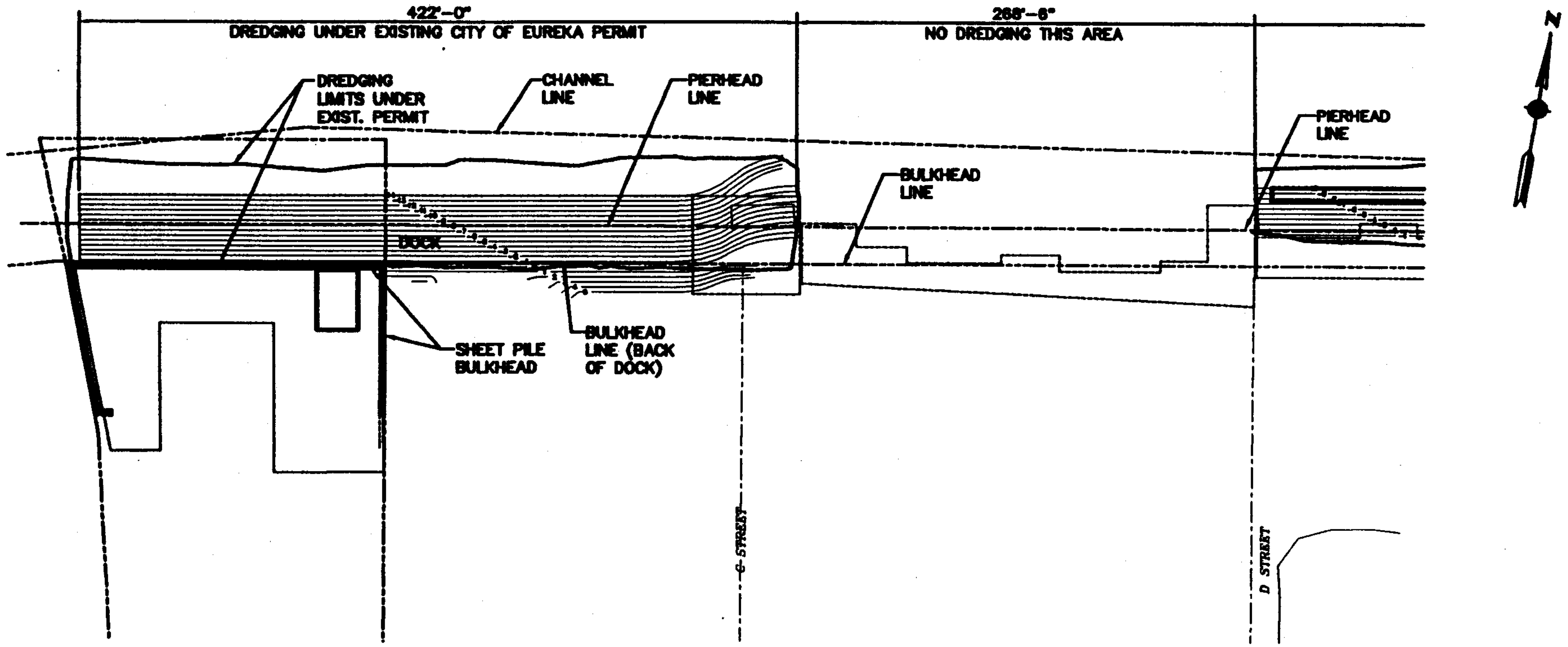
DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

100 0 100 200
scale 1"=100' feet

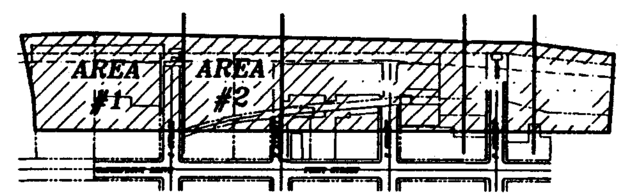
CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 4 OF 20 **DATE:** NOVEMBER 1999



CITY OF EUREKA INNER CHANNEL MAINTENANCE DREDGING PLAN

AREAS 1 AND 2



KEY PLAN

NOTE: ALL AREAS SHOWN WITH CONTOURS ARE TO BE DREDGED BY CITY OF EUREKA UNDER EXISTING APPROVED DREDGE PERMIT

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

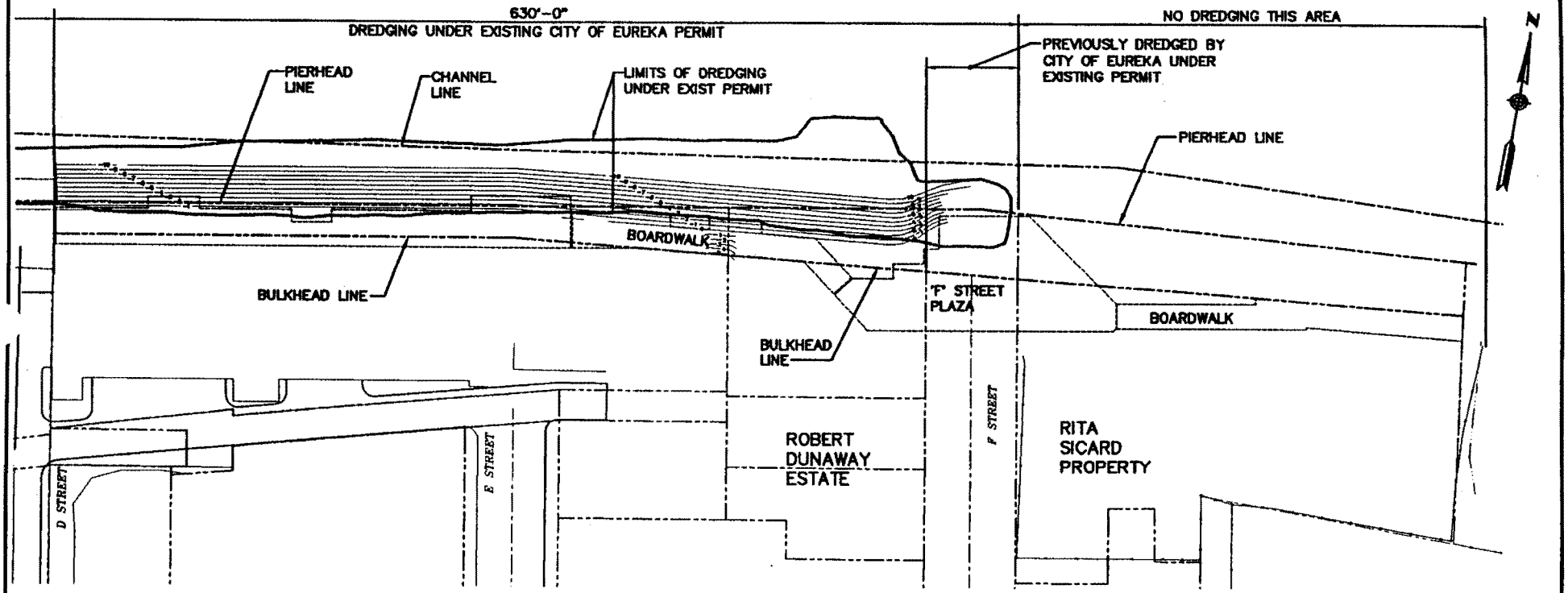
ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

100 0 100 200

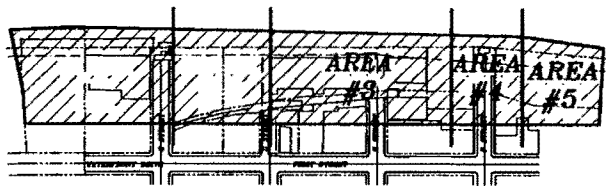
scale 1"=100' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN:	HUMBOLDT BAY
AT:	EUREKA OLD TOWN WATERFRONT
COUNTY OF:	HUMBOLDT
STATE:	CALIFORNIA
APPLICATION BY:	CITY OF EUREKA
SHEET: 5 OF 20	DATE: NOVEMBER 1999



CITY OF EUREKA
INNER CHANNEL MAINTENANCE DREDGING PLAN
AREAS 3, 4, AND 5



KEY PLAN

NOTE: ALL AREAS SHOWN WITH CONTOURS ARE TO BE DREDGED BY CITY OF EUREKA UNDER EXISTING APPROVED DREDGE PERMIT

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

100 0 100 200
scale 1"=100' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 6 OF 20 **DATE:** NOVEMBER 1999

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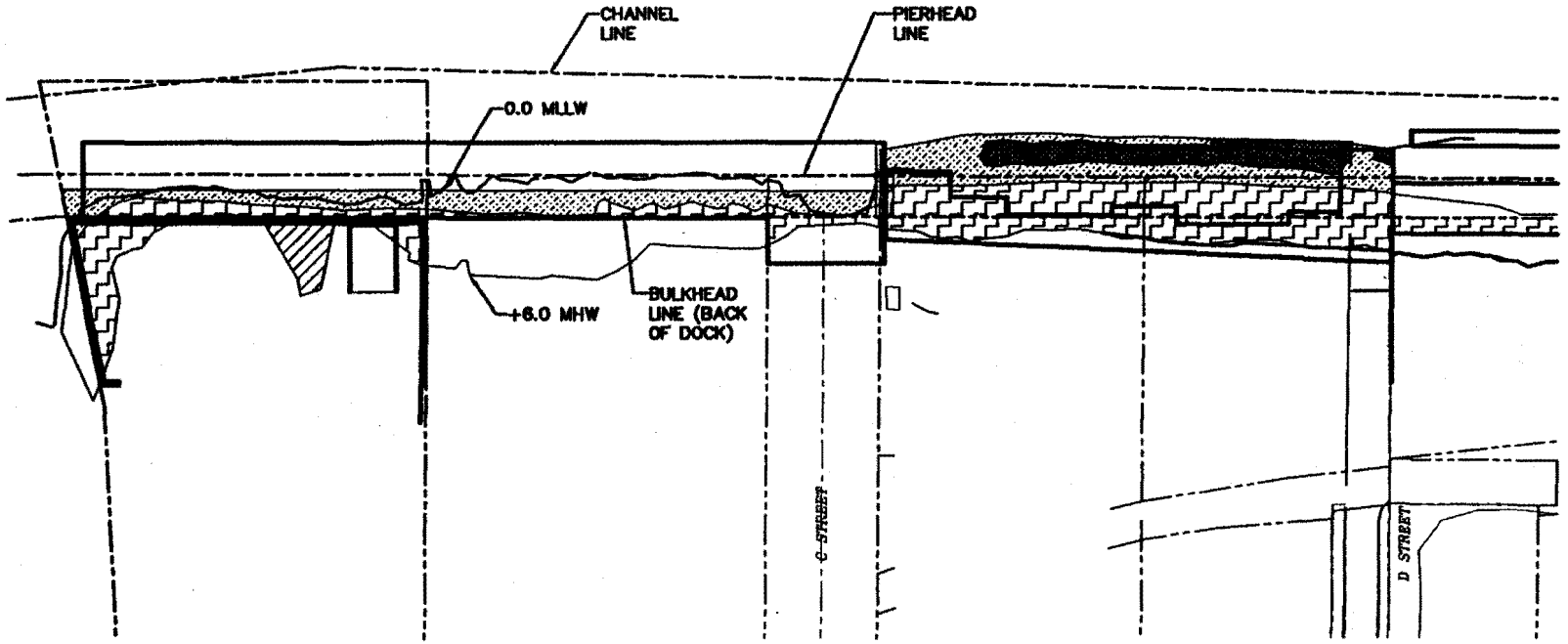
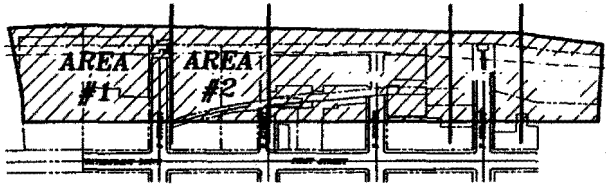


LEGEND

- ROCKY INTERTIDAL 27,600 sq ft TOTAL
- MUD FLAT W/O EEL GRASS 26,200 sq ft TOTAL
- MUD FLAT W/ EEL GRASS 4,800 sq ft TOTAL
- SALT MARSH 730 sq ft TOTAL

MARINE RESOURCES PLAN
AREAS 1 AND 2

NOTE
EXISTING MARINE RESOURCES NOT SHOWN WERE PREVIOUSLY ADDRESSED BY EXISTING DREDGING PERMITS.



KEY PLAN

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

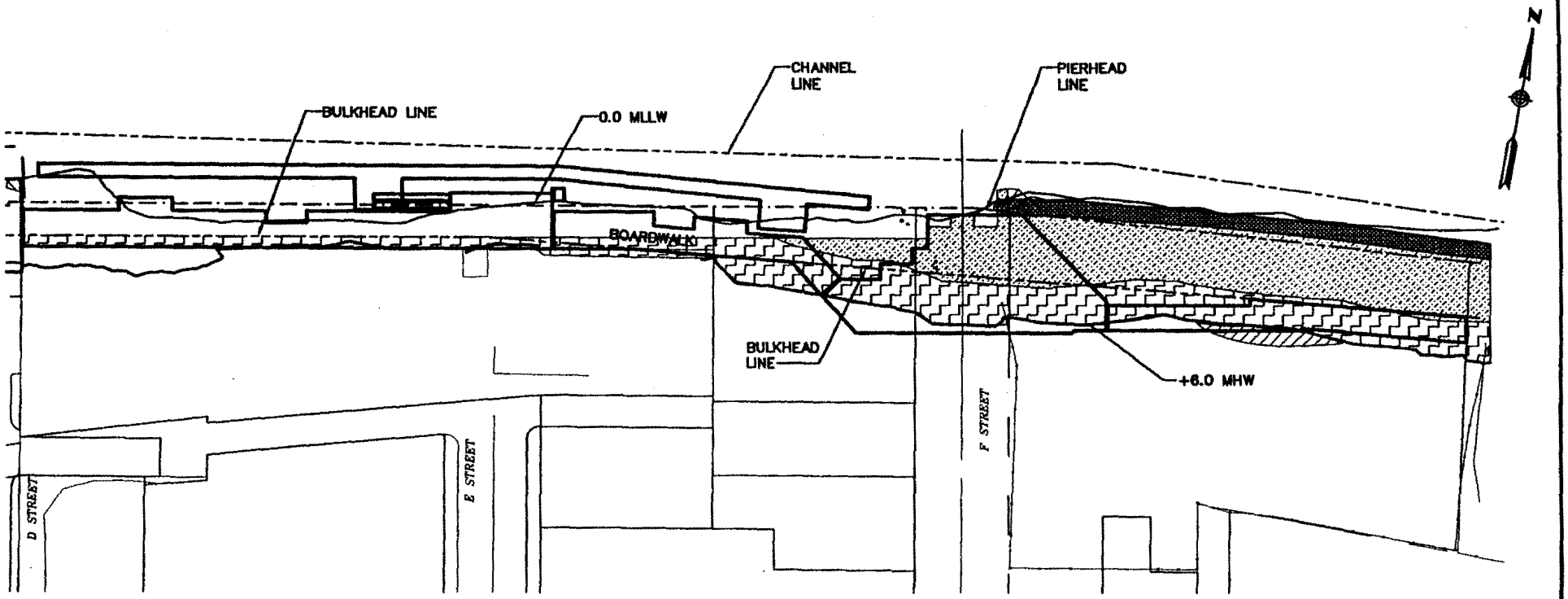
DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

100 0 100 200
scale 1"=100' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 7 OF 20 **DATE:** NOVEMBER 1999

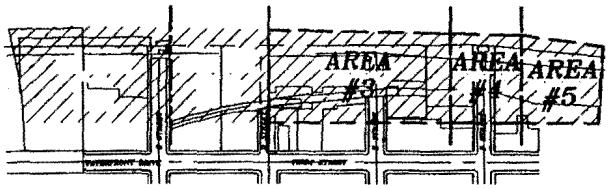


LEGEND

- ROCKY INTERTIDAL — SEE SHEET 7 FOR TOTAL AREA
- MUD FLAT W/O EEL GRASS — SEE SHEET 7 FOR TOTAL AREA
- MUD FLAT W/ EEL GRASS — SEE SHEET 7 FOR TOTAL AREA
- SALT MARSH — SEE SHEET 7 FOR TOTAL AREA

MARINE RESOURCES PLAN
AREAS 3, 4 AND 5

NOTE
EXISTING MARINE RESOURCES NOT SHOWN WERE PREVIOUSLY ADDRESSED BY EXISTING DREDGING PERMITS.



KEY PLAN

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
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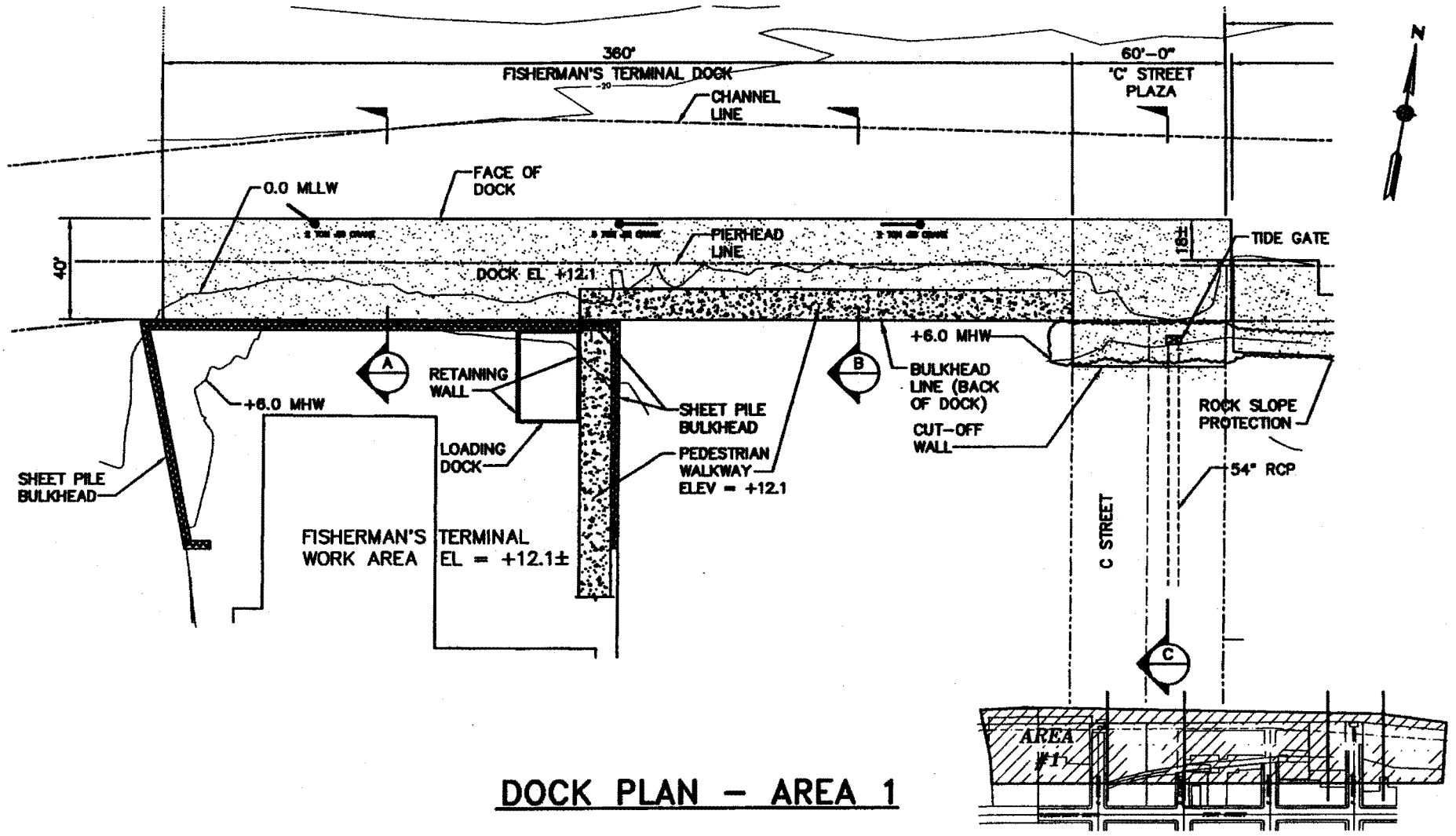
4. RITA SICARD

100 0 100 200
scale 1"=100' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 8 OF 20 **DATE:** NOVEMBER 1999



DOCK PLAN – AREA 1

KEY PLAN

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

60 0 60 120

scale 1"=60' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 9 OF 20 **DATE:** NOVEMBER 1999

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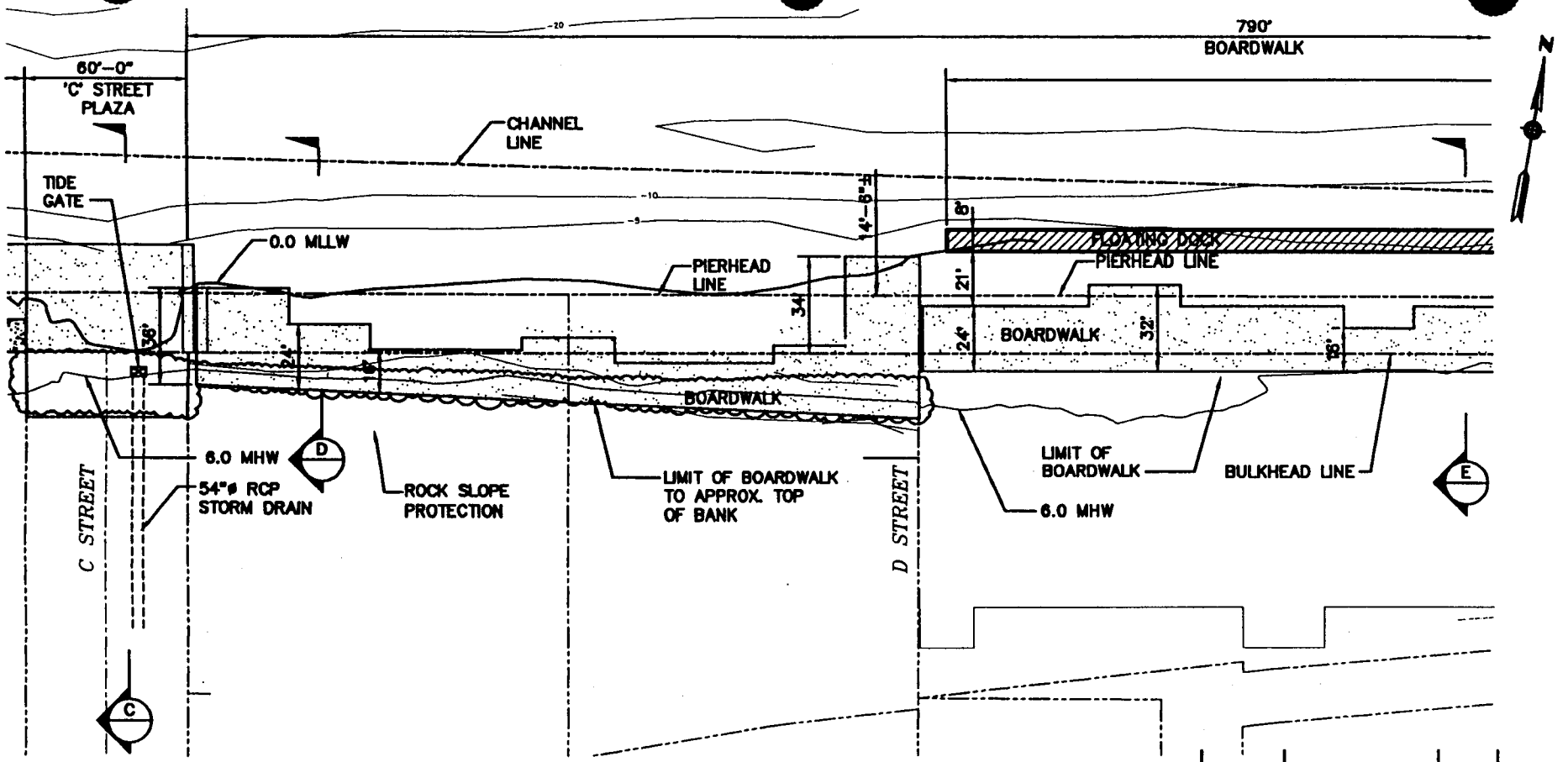
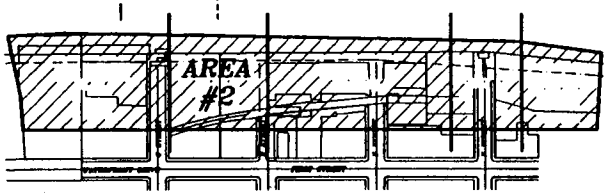


DOCK PLAN – AREA 2



KEY PLAN

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

60 0 60 120
scale 1"=60' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 10 OF 20 **DATE:** NOVEMBER 1999

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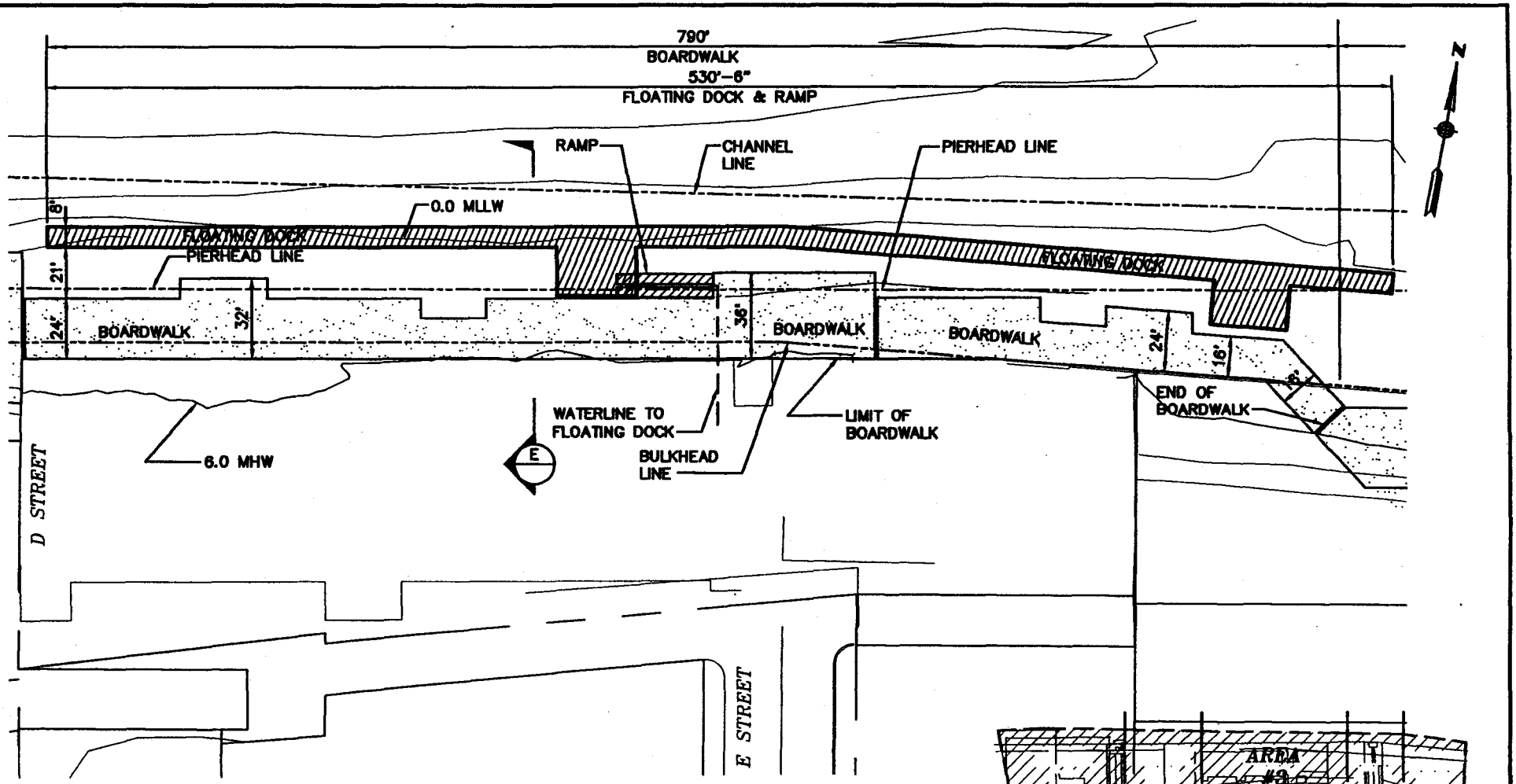

DOCK PLAN – AREA 3

KEY PLAN

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

60 0 60 120

scale 1"=60' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 11 OF 20 **DATE:** NOVEMBER 1999

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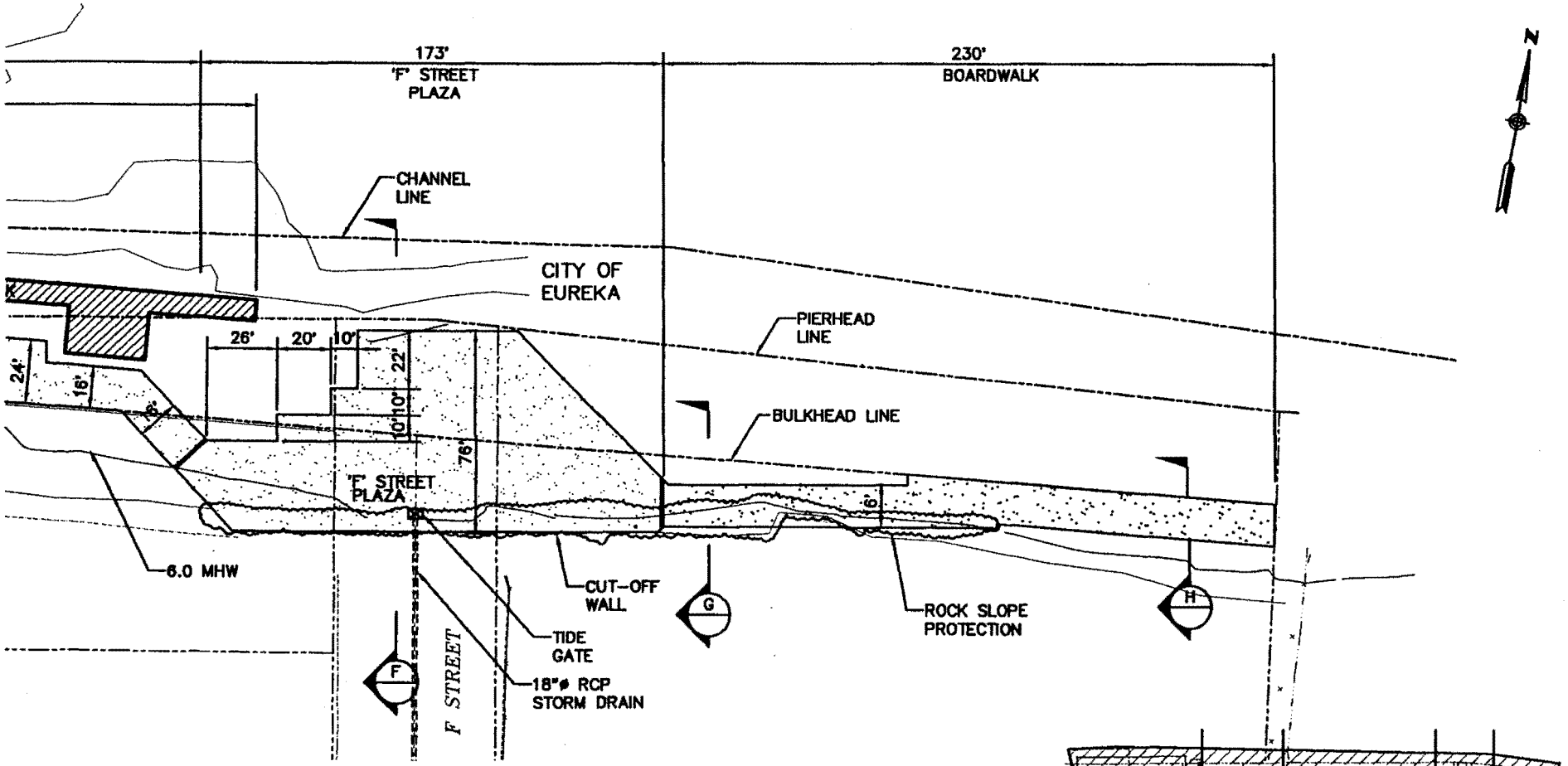
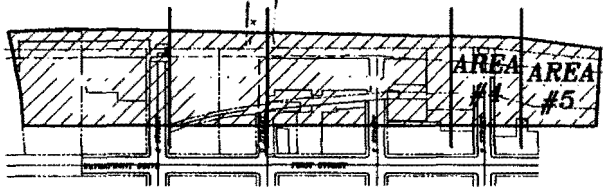


DOCK PLAN – AREAS 4 & 5



KEY PLAN

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

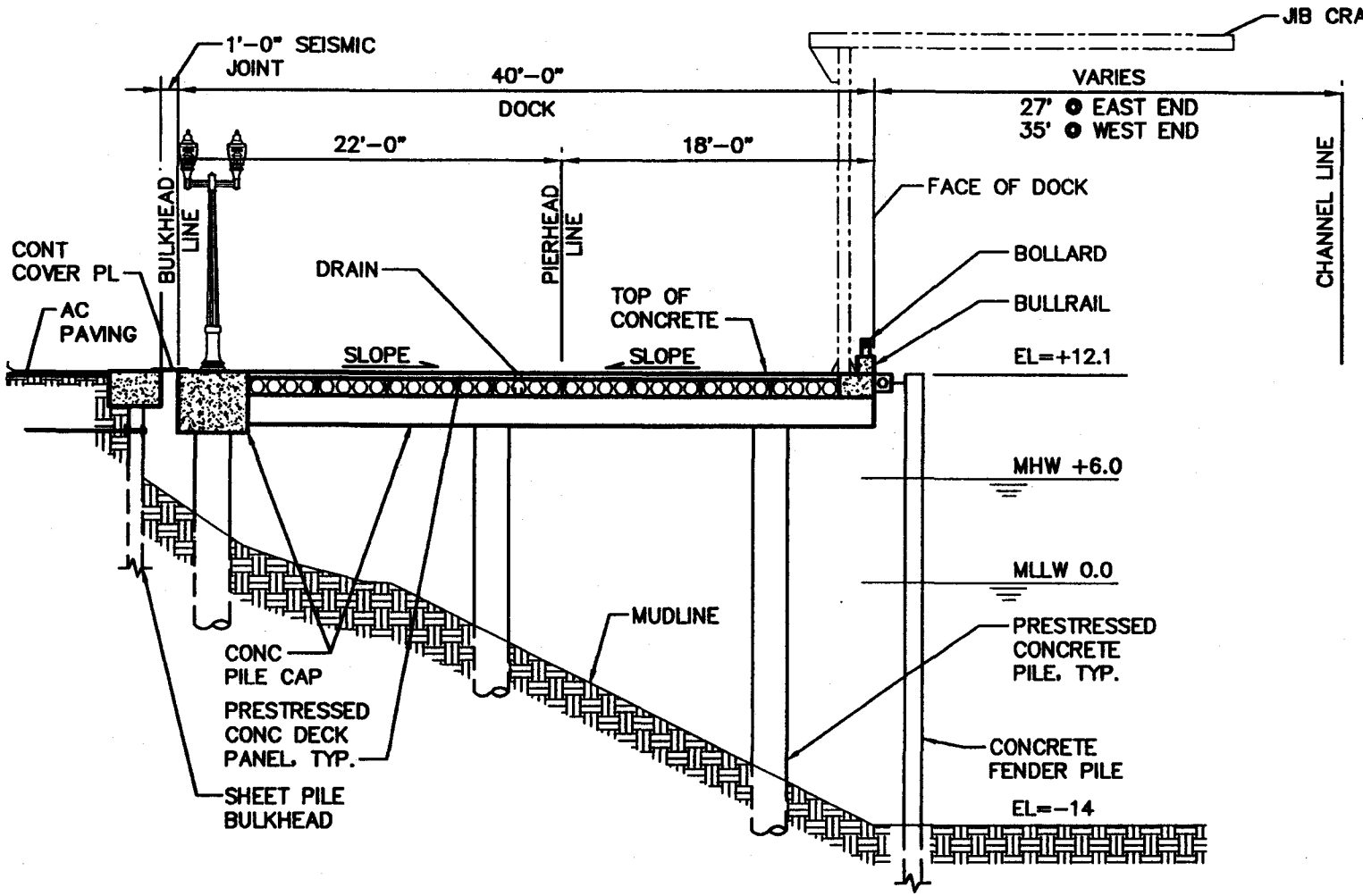
ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

60 0 60 120

scale 1"=60' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 12 OF 20 **DATE:** NOVEMBER 1999



NOTES:

1. ELEVATIONS SHOWN ARE U.S. ARMY CORPS OF ENGINEERS DATUM.(MLLW) ADD 0.38 FEET FOR ELEVATIONS BASED ON CITY OF EUREKA DATUM.
2. UNLESS OTHERWISE SHOWN ON THE PLANS, MUDLINE ELEVATIONS ARE IN ACCORDANCE WITH PERMITS CURRENTLY ISSUED AND ARE TO BE DREDGED BY OTHERS PRIOR TO THIS CONSTRUCTION.

(A) SECTION – DOCK AT FISHERMAN'S TERMINAL

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:

1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

10 5 0 10 20

scale 1"=10' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY

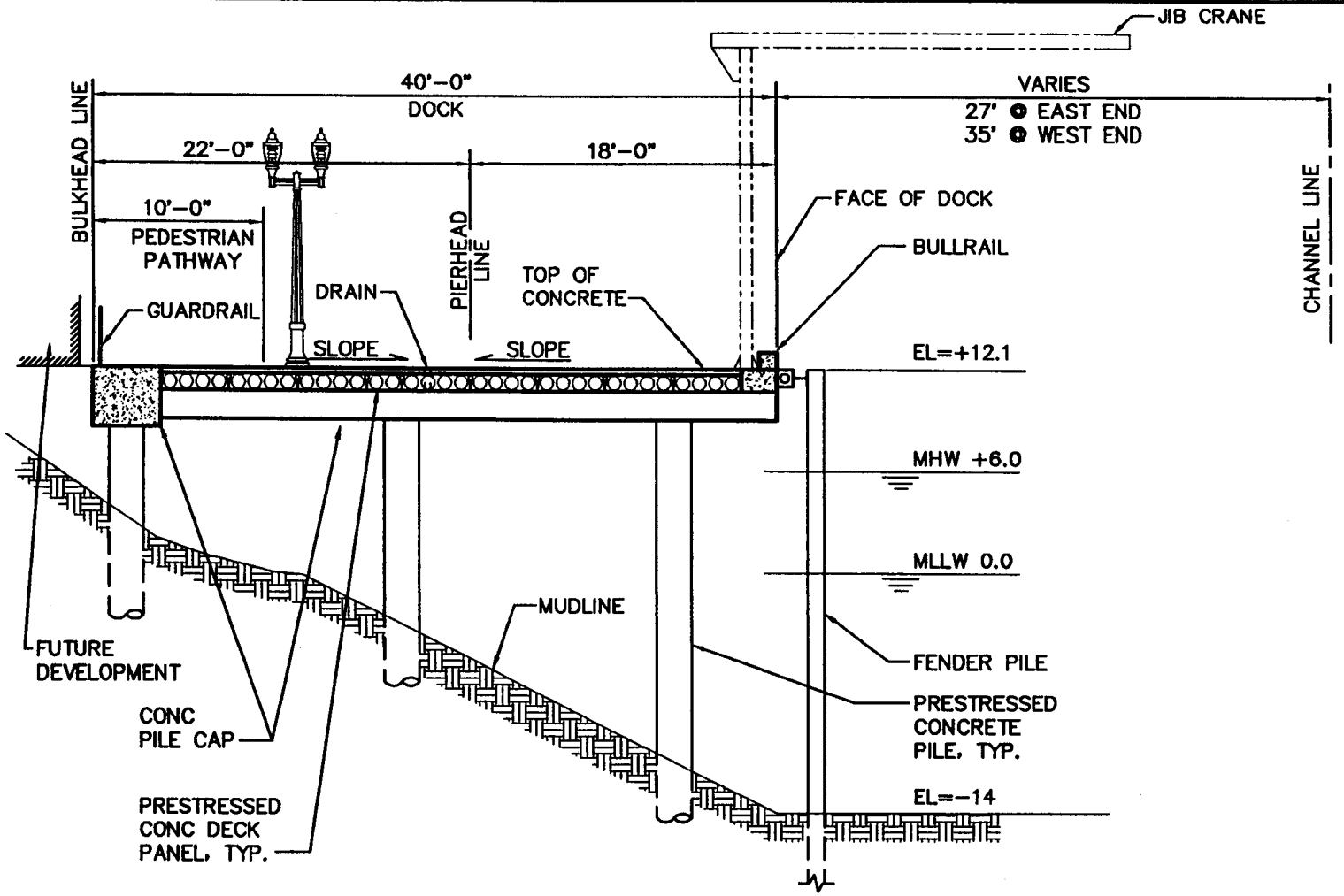
AT: EUREKA OLD TOWN WATERFRONT

COUNTY OF: HUMBOLDT

STATE: CALIFORNIA

APPLICATION BY: CITY OF EUREKA

SHEET: 13 OF 20 **DATE:** NOVEMBER 1999



NOTES:

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2. UNLESS OTHERWISE SHOWN ON THE PLANS, MUDLINE ELEVATIONS ARE IN ACCORDANCE WITH PERMITS CURRENTLY ISSUED AND ARE TO BE DREDGED BY OTHERS PRIOR TO THIS CONSTRUCTION.

(B) SECTION - DOCK AT FISHERMAN'S TERMINAL

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:

1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

10 5 0 10 20

scale 1"=10' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY

AT: EUREKA OLD TOWN WATERFRONT

COUNTY OF: HUMBOLDT

STATE: CALIFORNIA

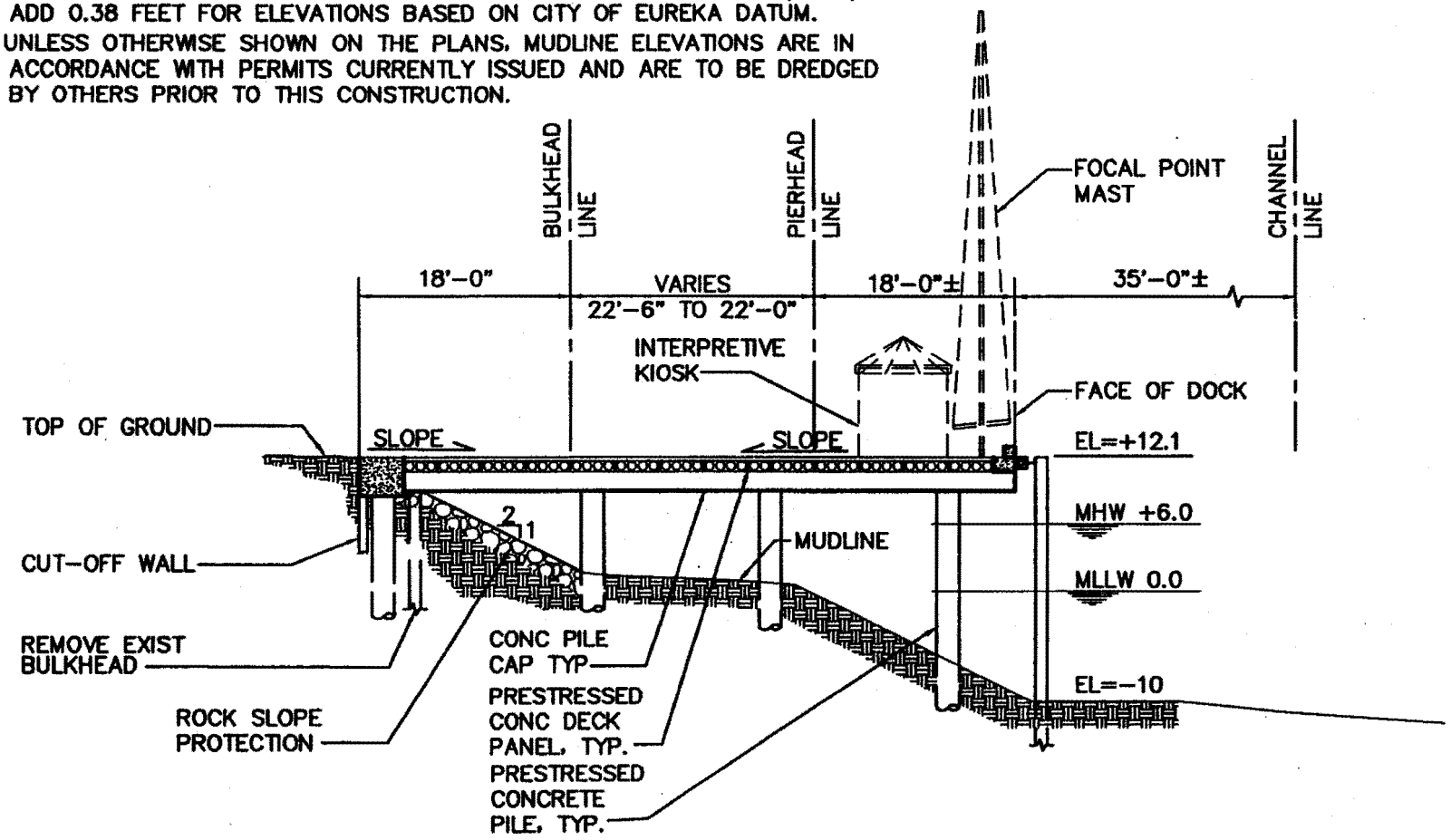
APPLICATION BY: CITY OF EUREKA

SHEET: 14 OF 20 **DATE:** NOVEMBER 1999

PLOTTED: Mon Nov 22 1999 12:05pm FILENAME: C:\1999\A99018' 'I:\Dwgs\EUREKA_8-99\B1_2x11Sects\e-14.dwg SCALE: 1

NOTES:

1. ELEVATIONS SHOWN ARE U.S. ARMY CORPS OF ENGINEERS DATUM (MLLW). ADD 0.38 FEET FOR ELEVATIONS BASED ON CITY OF EUREKA DATUM.
2. UNLESS OTHERWISE SHOWN ON THE PLANS, MUDLINE ELEVATIONS ARE IN ACCORDANCE WITH PERMITS CURRENTLY ISSUED AND ARE TO BE DREDGED BY OTHERS PRIOR TO THIS CONSTRUCTION.



(C) SECTION – DOCK AT 'C' STREET PLAZA

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:

1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

5 0 10 20 30 40

scale 1/16"=1' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 15 OF 20 **DATE:** NOVEMBER 1999

NOTE:
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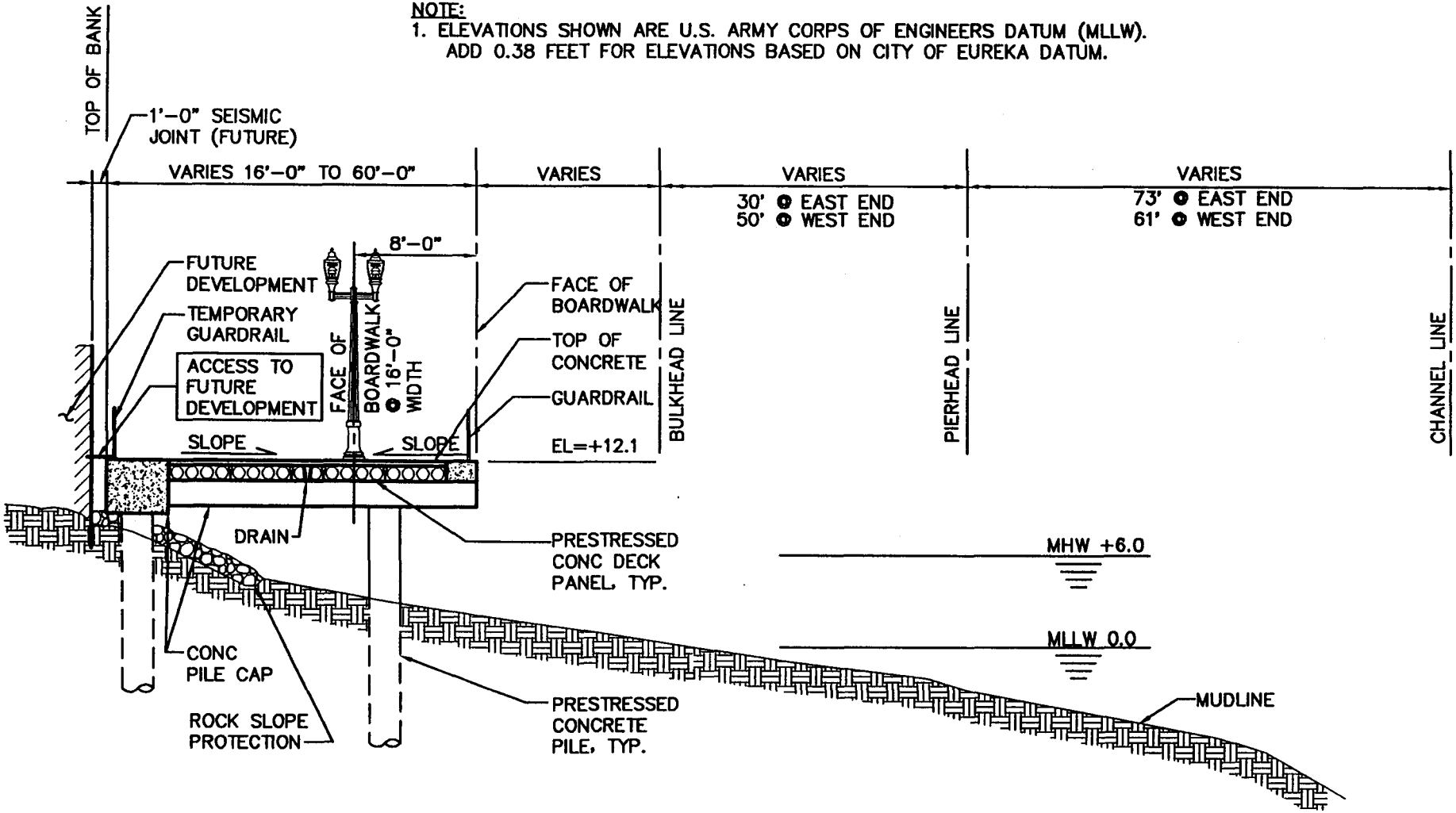
ADD 0.38 FEET FOR ELEVATIONS BASED ON CITY OF EUREKA DATUM.



(D) SECTION – BOARDWALK BETWEEN 'C' AND 'D' STREETS

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

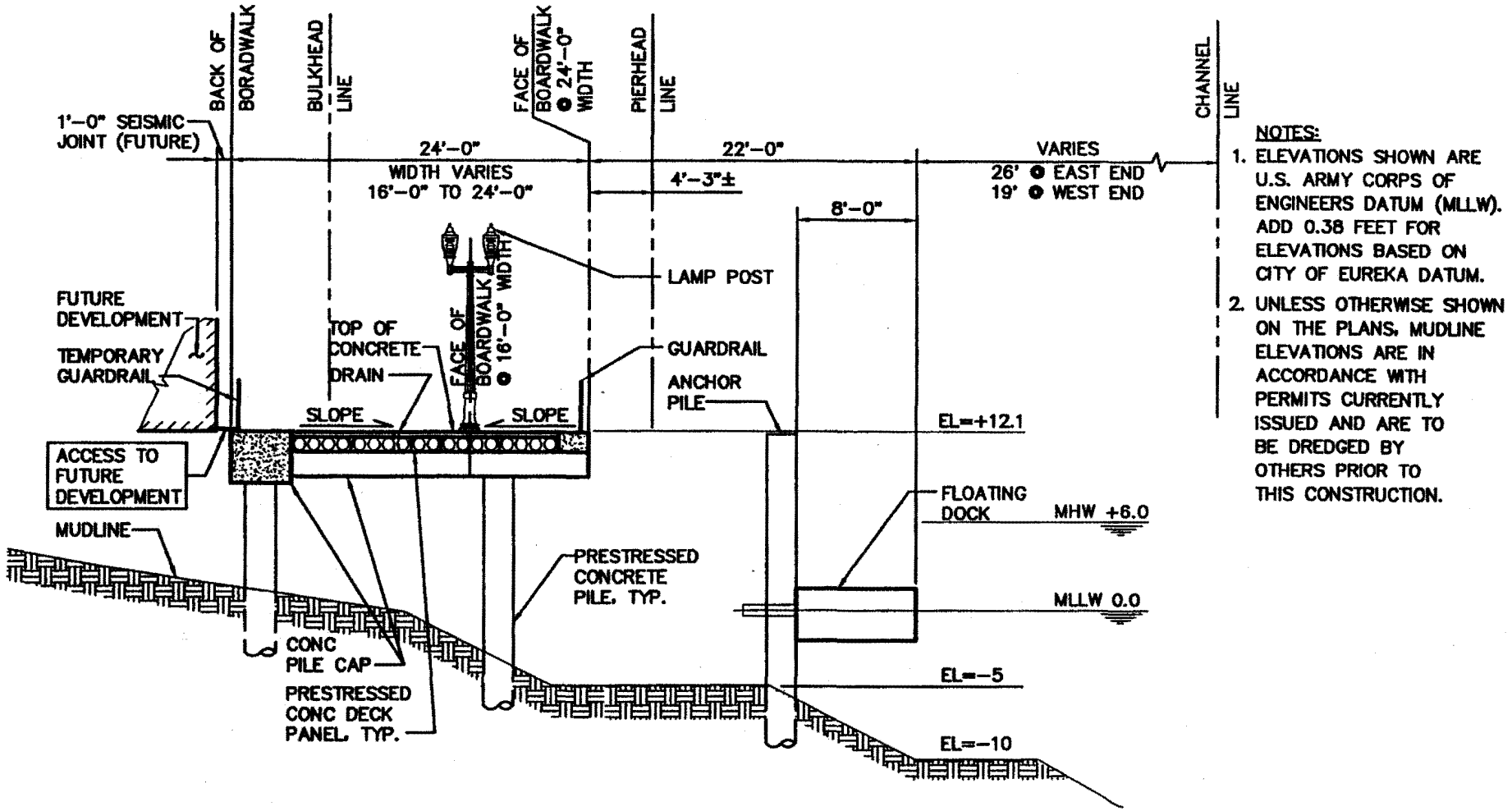
DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

10 5 0 10 20
scale 1"=10' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 16 OF 20 **DATE:** NOVEMBER 1999



NOTES:

1. ELEVATIONS SHOWN ARE U.S. ARMY CORPS OF ENGINEERS DATUM (MLLW). ADD 0.38 FEET FOR ELEVATIONS BASED ON CITY OF EUREKA DATUM.
2. UNLESS OTHERWISE SHOWN ON THE PLANS, MUDLINE ELEVATIONS ARE IN ACCORDANCE WITH PERMITS CURRENTLY ISSUED AND ARE TO BE DREDGED BY OTHERS PRIOR TO THIS CONSTRUCTION.

(E) SECTION – BOARDWALK & FLOATING DOCK BETWEEN 'D' AND 'E' STREETS

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:

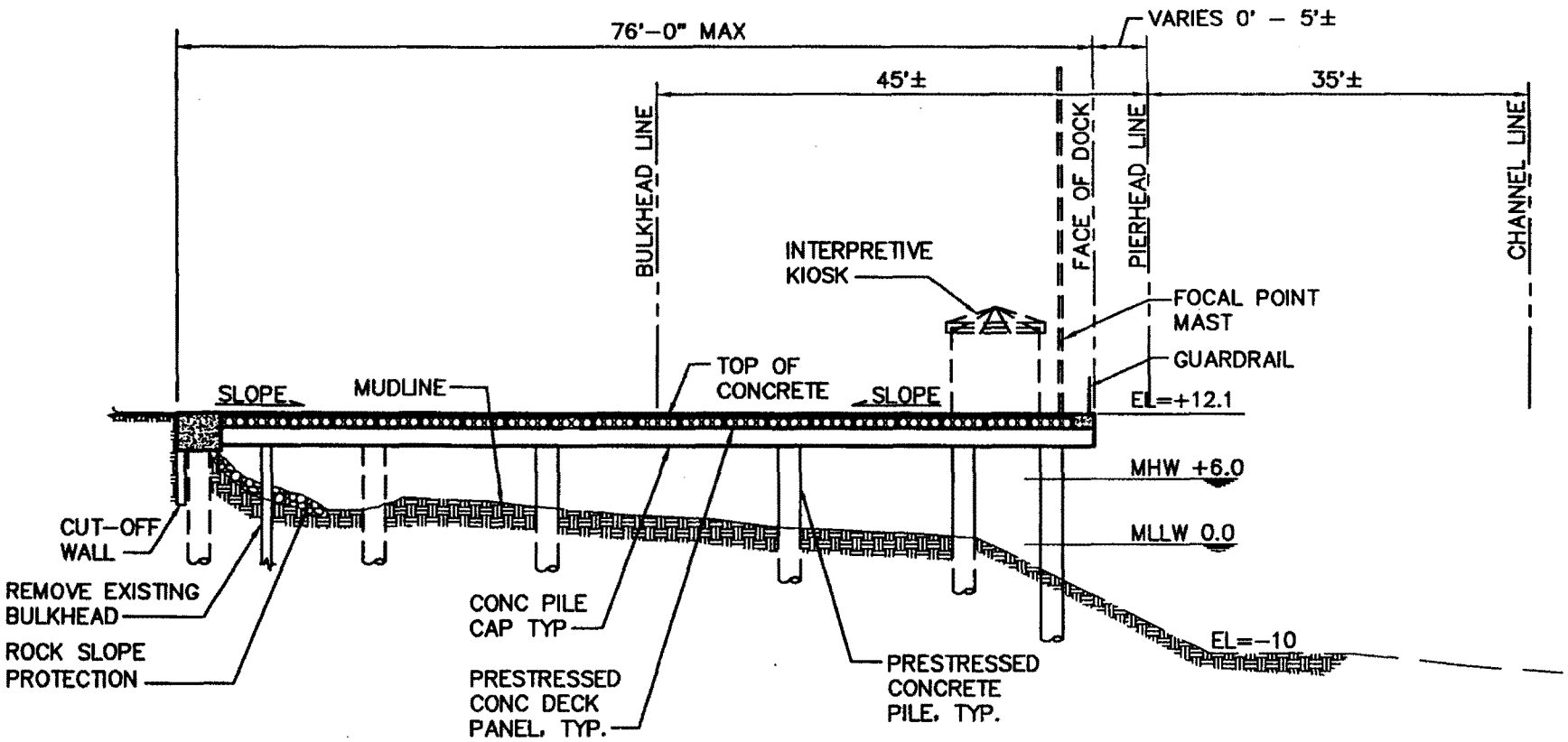
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

5 0 5 10 15 20 25

scale 3/32"=1' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 17 OF 20 **DATE:** NOVEMBER 1999



NOTES:

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2. UNLESS OTHERWISE SHOWN ON THE PLANS, MUDLINE ELEVATIONS ARE IN ACCORDANCE WITH PERMITS CURRENTLY ISSUED AND ARE TO BE DREDGED BY OTHERS PRIOR TO THIS CONSTRUCTION.

(F) SECTION - 'F' STREET PLAZA

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:

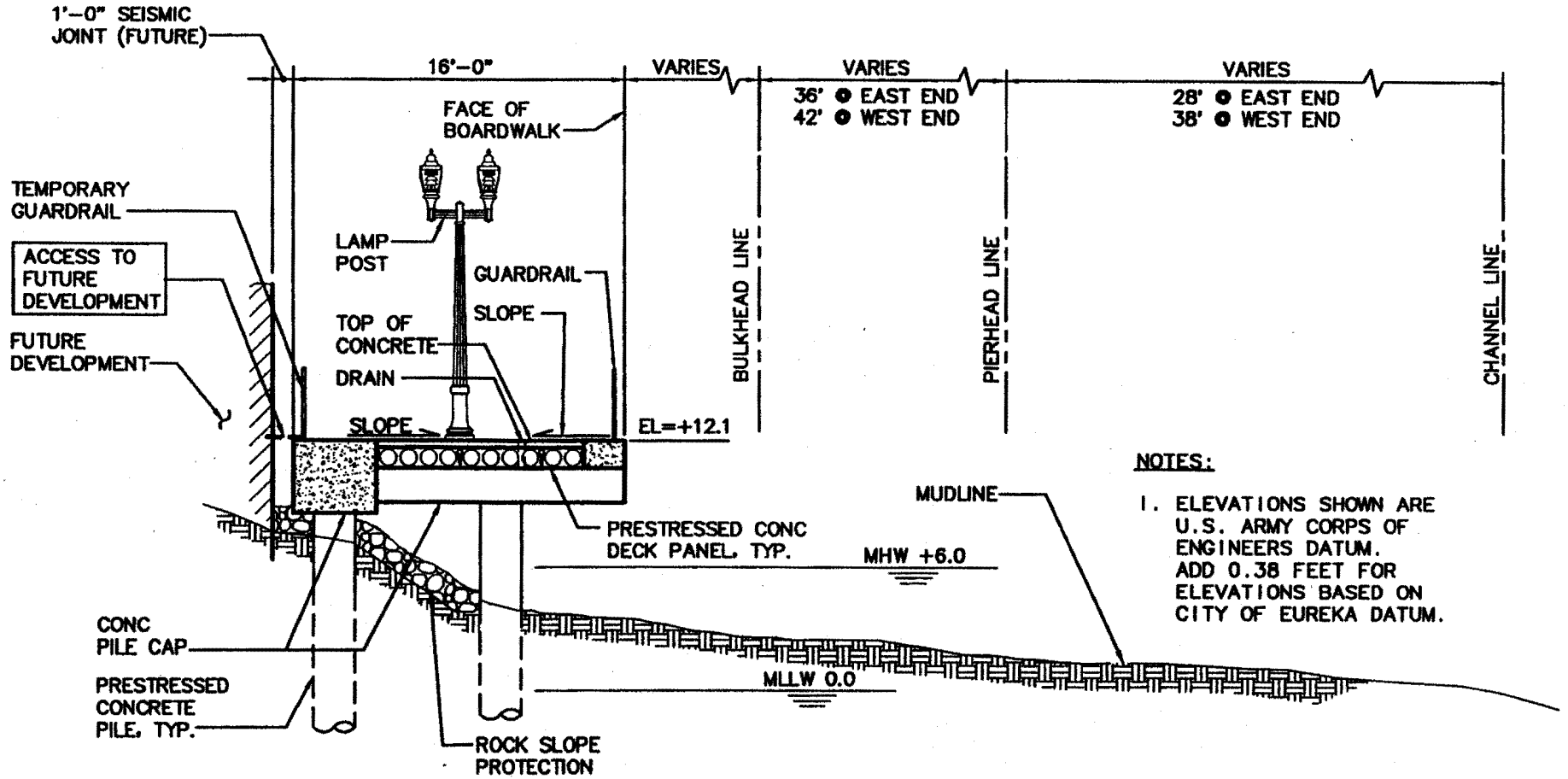
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

5 0 10 20 30 40

scale 1/16"=1' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 18 OF 20 **DATE:** NOVEMBER 1999



(G) SECTION – BOARDWALK EAST OF 'F' STREET

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

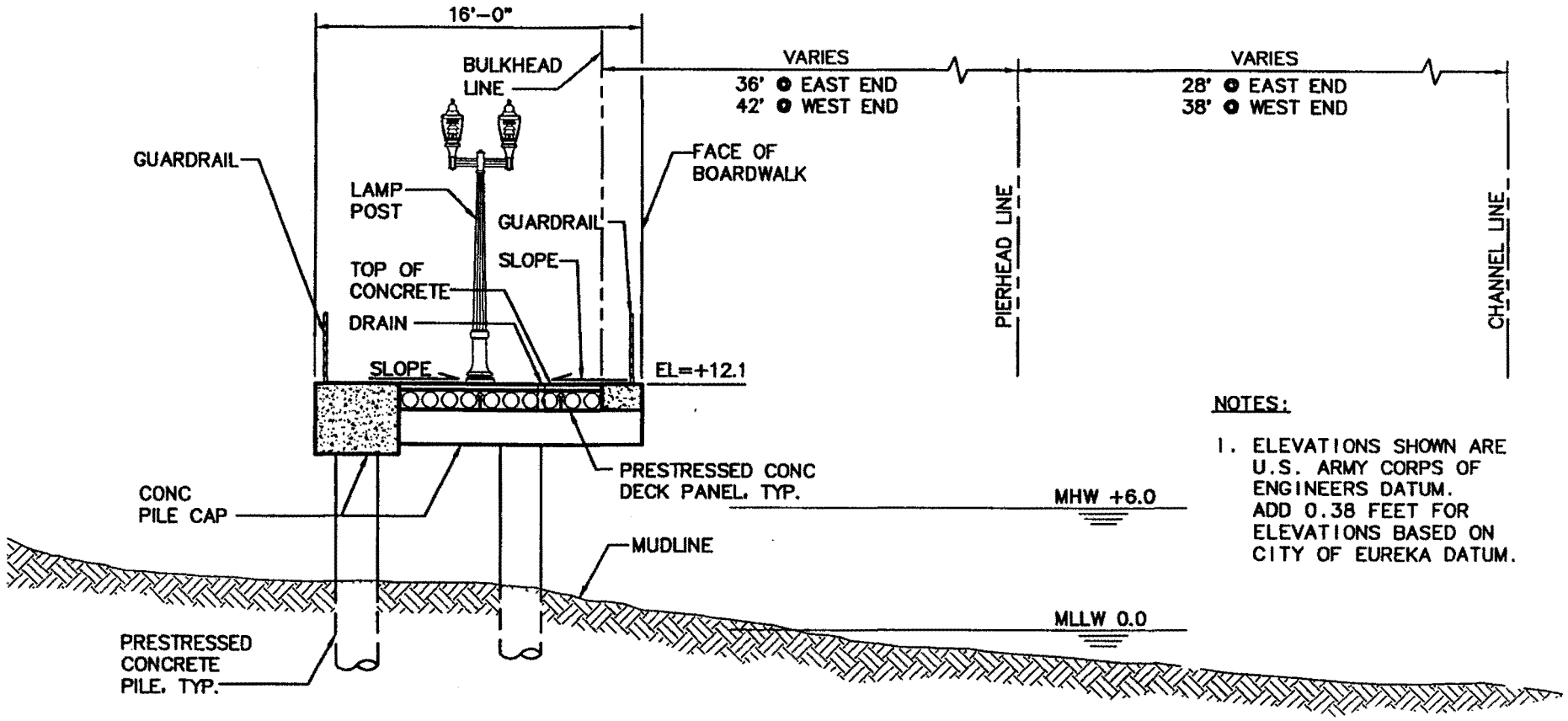
DATUM: MLLW - 0.0'

ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

5 0 5 10 15 20
scale 1/8"=1' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 19 OF 20 **DATE:** NOVEMBER 1999



(H) SECTION – BOARDWALK EAST OF 'F' STREET

PURPOSE: INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DATUM: MLLW - 0.0'

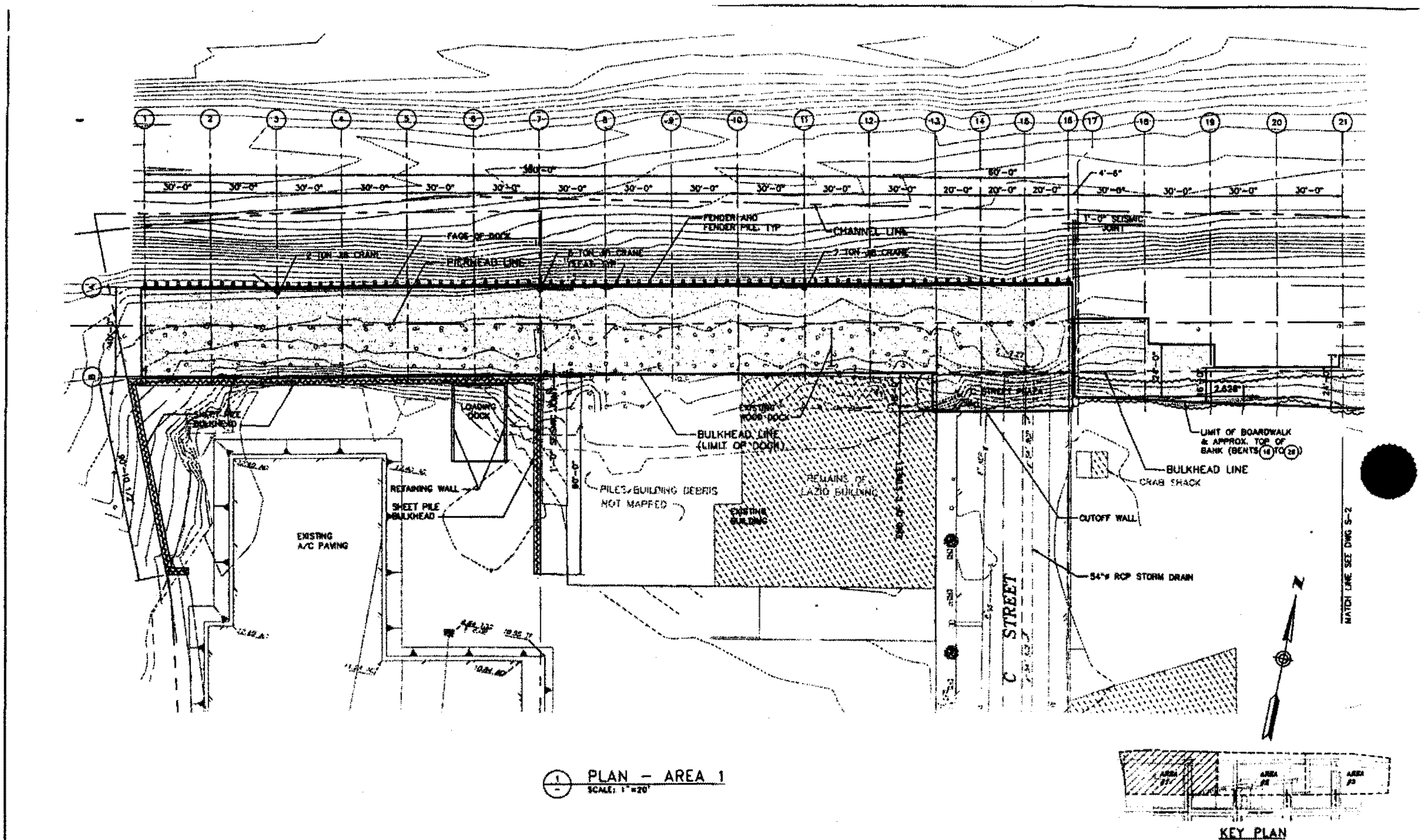
ADJACENT PROPERTY OWNERS:
1. CITY OF EUREKA
2. EUREKA REDEVELOPMENT AGENCY
3. ROBERT DUNAWAY ESTATE
4. RITA SICARD

5 0 5 10 15 20

scale 1/8"=1' feet

CITY OF EUREKA
531 K STREET
EUREKA, CALIFORNIA

IN: HUMBOLDT BAY
AT: EUREKA OLD TOWN WATERFRONT
COUNTY OF: HUMBOLDT
STATE: CALIFORNIA
APPLICATION BY: CITY OF EUREKA
SHEET: 20 OF 20 **DATE:** NOVEMBER 1999



PLAN – AREA 1
SCALE: 1"=20'

City of Eureka
Public Works/Engineering Department
531 K Street, Third Floor
Eureka, California 95501

BERGER/ABAM ENGINEERS INC.

INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

SURFACE FEATURE PLAN - SHEET 1

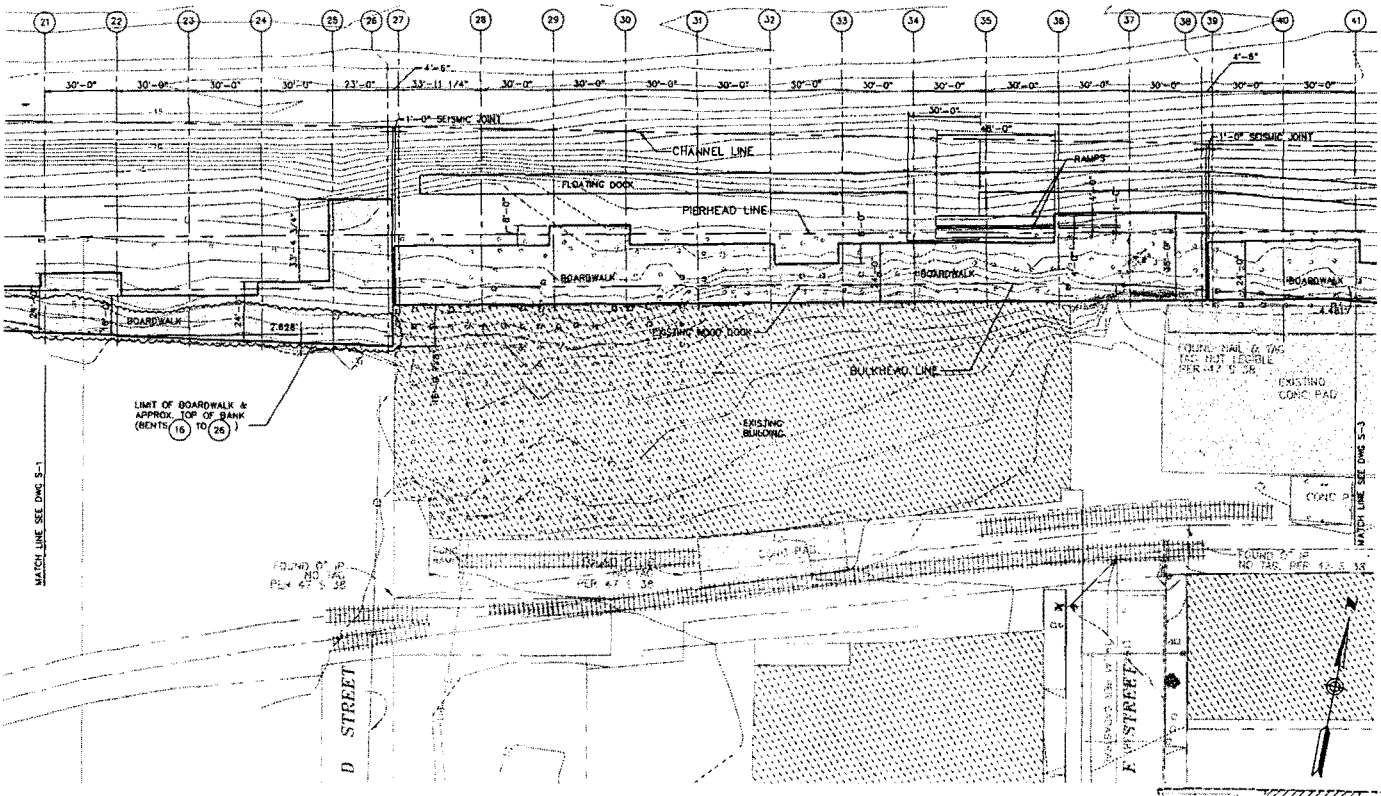
DRAWING NO. S-1

EXHIBIT NO. 5

APPLICATION NO.
1-99-077

SURFACE FEATURE PLAN

PAGE 1 OF 3



2 PLAN – AREA 2
SCALE: 1"=20'

KEY PLAN

City of Eureka
Public Works/Engineering Department
531 K Street, Third Floor
Eureka, California 95501

BERGER/ABAM ENGINEERS INC.

APPROVED _____ DATE
CITY ENGINEER

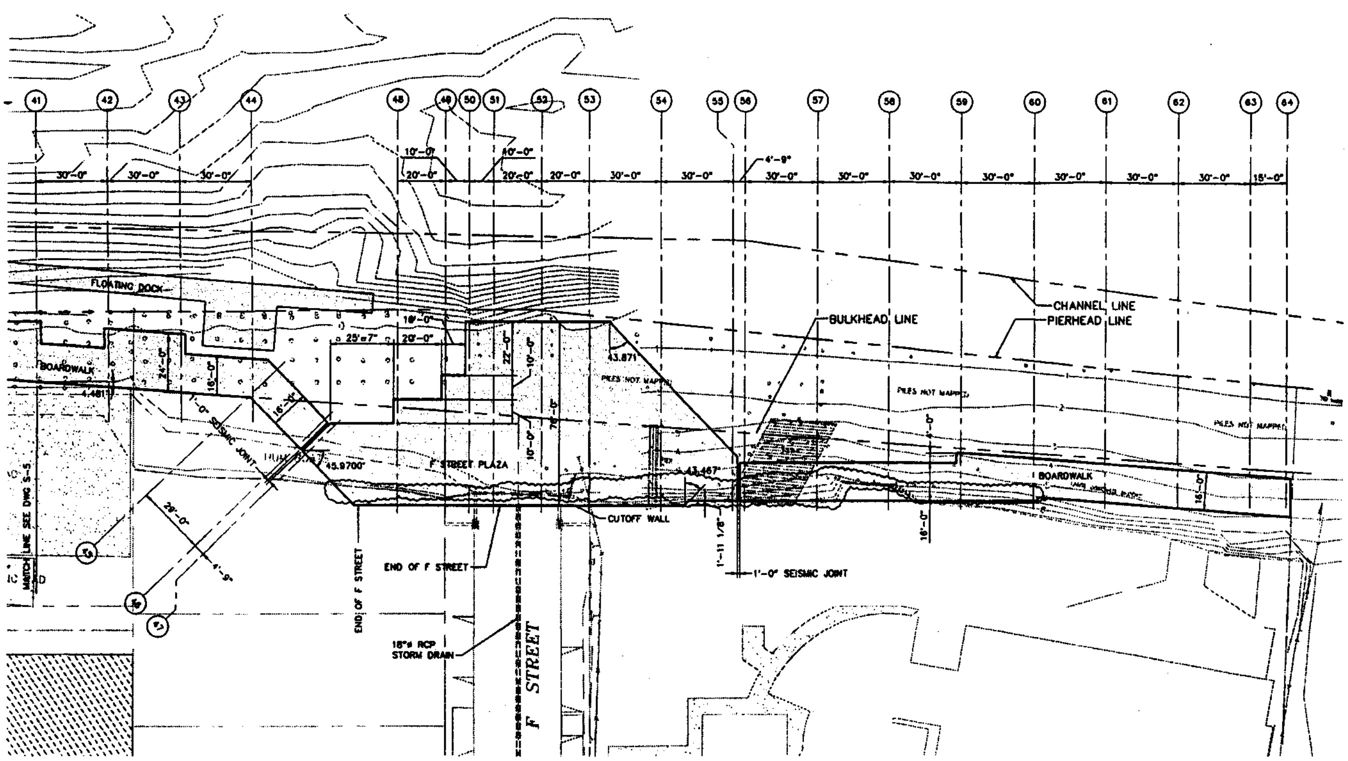
DAB II 8/6/99 DRAWN BY DATE
YGS DESIGNED BY DATE
CHECKED BY DATE
PROJ ENGR DATE

MARK	REVISION	BY	APP.	DATE

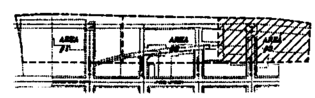
INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

SURFACE FEATURE PLAN - SHEET 2

DRAWING NO. S-2
CONTRACT NO. _____
SHEET NO. _____ OF _____



PLAN – AREA 3
SCALE: 1"=20'



KEY PLAN

City of Eureka
Public Works/Engineering Department
531 K Street, Third Floor
Eureka, California 95501

BERGER/ABAM ENGINEERS INC.

INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION	DRAWING NO. S-3	CONTRACT NO.
SURFACE FEATURE PLAN - SHEET 3	SHEET NO. ___ OF ___	

Reference: 098175.100

EUREKA INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION PROJECT MARINE RESOURCE MITIGATION MONITORING AND REPORTING PROGRAM

Prepared For:

CITY OF EUREKA
Department of Public Works

CONSULTING ENGINEERS & GEOLOGISTS, INC.
812 W. Wabash Ave.
Eureka, CA 95501-2138
707/441-8855

October 1999

EXHIBIT NO. 6
APPLICATION NO. 1-99-077
MITIGATION MONITOR-ING & REPORTING
PROGRAM PAGE 1 OF 16

EUREKA INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION PROJECT MARINE RESOURCE MITIGATION PLAN

I. PROJECT BACKGROUND

The Eureka Inner Channel Dock and Boardwalk Revitalization Project (Project) encompasses an area generally located between the United States Eureka Inner Channel Bulkhead Line and the Channel Line, from approximately 360 feet west of the west line of "C" Street to approximately 290 feet east of the east line of "F" Street. This mitigation plan was developed to provide mitigation for anticipated impacts from the Project to intertidal mudflat, rocky intertidal, and saltmarsh habitats. The proposed Project includes the demolition of all existing dock structures and reconstruction of an approximately 1,610 foot long, trestle type fixed public pedestrian boardwalk along Eureka's waterfront and having access at several locations along its length.

Based on the Project design, impacts to marine resources include:

1) shading of intertidal mudflat without eelgrass, intertidal rocky habitat, and saltmarsh; and,
2) fill of intertidal rocky habitat and saltmarsh.

II. SUMMARY OF AREAS IMPACTED BY THE PROJECT

To identify habitat types impacted by the Project a biological assessment was completed. For the purpose of the biological assessment, the study area was defined as the area between the –3 foot elevation mean lower low water (MLLW) and the top of bank, with the exception of approximately 360 feet to 180 feet west of the west line of "C" Street, where the landward boundary was the limits of paving improvements completed by the City of Eureka in 1998.

Within the above described study area, portions of the sub-marine environment adjacent to the project area were addressed under previously approved dredging permits, and therefore, are excluded from this determination of project impacts. The City of Eureka dredging project ACOE nos. 222150 and 222160 covered proposed dredging in the vicinity of the Landing Dock, Fisherman's Dock and F Street Dock, the limits of which are summarized as follows:

1) Eureka Fisherman's Terminal and Dock (C Street): dredging base elevation set at -14 feet MLLW at 20 feet seaward from pier line, with a 2:1 slope shoreward; the extent of impact shoreward is expected to reach +2 feet MLLW, or an average 8 feet within the pier line.

2) D Street east to F Street extension: dredging base elevation set at -10 feet MLLW at dock face, with a 1:1 slope shoreward; the extent of impact shoreward is expected to reach +2 feet MLLW or higher, approximately equal to the bulkhead line.

Since the average upper elevational extent of intertidal mudflat is +1 feet MLLW, the approved dredging will essentially eliminate all existing intertidal mudflat and eelgrass habitat within those waterfront segments. The limits of dredging which is not part of this Project are shown on sheets excerpted from the Army Corps of Engineers permit application (See Sheets 5 and 6 of 19 attached). Impacts to marine resources from the permitted dredging for the project were addressed as part of the dredging permit process and are not included in the biological assessment. No dredging is proposed as part of this Project.

An initial survey of the study area was conducted by David Imper, SHN Consulting Engineers & Geologists, on September 24, 1998. The intertidal resources were subsequently surveyed and mapped on October 7, 1998, during a 0.8 foot low tide. A laser rangefinder was used to map the distribution of eelgrass and other habitats to the nearest foot, throughout the area.

The biological resources present in various portions of the study area were investigated previously in conjunction with the Fishermen's Building and Dock project, located between D and F Streets (Theiss & Associates, 1994a), the Landing Dock Reconstruction project, located between B and C Streets (Theiss & Associates 1994b), and the Eureka Fisherman's Wharf project, located between D and F Streets (ESA, 1998). The habitats present within the project area include, from high to low elevation, disturbed upland, salt marsh, rocky intertidal, intertidal mudflat, open water and pilings. The rocky intertidal and intertidal mudflat habitats mapped are shown on sheets excerpted from the Army Corps of Engineers permit application for the project (See Sheet 7 and 8 of 20 attached). Habitat types and the area that will be shaded or eliminated are presented in Table 1.

A. Shading

1. Intertidal Mudflat without Eelgrass. Approximately 5,500 square feet of intertidal mudflat will be shaded due to overhead coverage by the proposed boardwalk (Table 1).

2. Intertidal Rocky. Approximately 13,600 square feet of intertidal rocky habitat will be shaded due to overhead coverage by the proposed boardwalk (Table 1).

3. Saltmarsh. Approximately 215 square feet of saltmarsh will be shaded due to overhead coverage by the proposed boardwalk (Table 1).

B. Fill

1. Intertidal Rocky. Approximately 6,600 square feet of intertidal rocky will be filled by the construction of new bulkheads, placement of engineered fill, and construction of rock slope protection.

2. Saltmarsh. Approximately 515 square feet of saltmarsh will be filled by the placement of engineered fill.

III. MITIGATION PLAN

A. Goals and Objectives

The goal of this mitigation plan is to provide replacement of habitat impacted by the construction of the boardwalk on the Eureka Inner Channel. To accomplish the goal three objectives have been identified:

1. Remove an approximately 4,200 square foot concrete foundation from an area adjacent to Humboldt Bay on property owned by the City of Eureka. The property is known as Parcel 4. Intertidal mudflat without eelgrass will be established to the extent possible in the area where the foundation was removed to compensate for intertidal mudflat shaded by the project.

2. Excavate approximately 3,000 square feet of upland fill from an area on Parcel 4. The area excavated will be used to establish saltmarsh habitat. The saltmarsh will be established to compensate for shading and filling of saltmarsh by the project.

3. Designate approximately 20,200 square feet of rocky intertidal habitat located within the Eureka Small Boat Basin Rehabilitation Project as mitigation. The rocky intertidal habitat will be established within the rock slope protection (RSP) constructed at the Boat Basin.

B. Selection of Mitigation Areas

1. Intertidal Mudflat. The location selected for establishing intertidal mudflat is located on Parcel 4 along the perimeter of Humboldt Bay (Figures 1 & 2). The location was selected for the following reasons:

   - the intertidal mudflat mitigation area is located adjacent to an existing area of intertidal mudflat,
   - the elevation at the base of the concrete foundation is suitable for establishing intertidal mudflat,
   - the location lacks a zone of transition between saltmarsh and intertidal mudflat with eelgrass, and
   - intertidal mudflat can be established without causing significant disturbance of adjacent habitat.

INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION PROJECT
MITIGATION PLAN

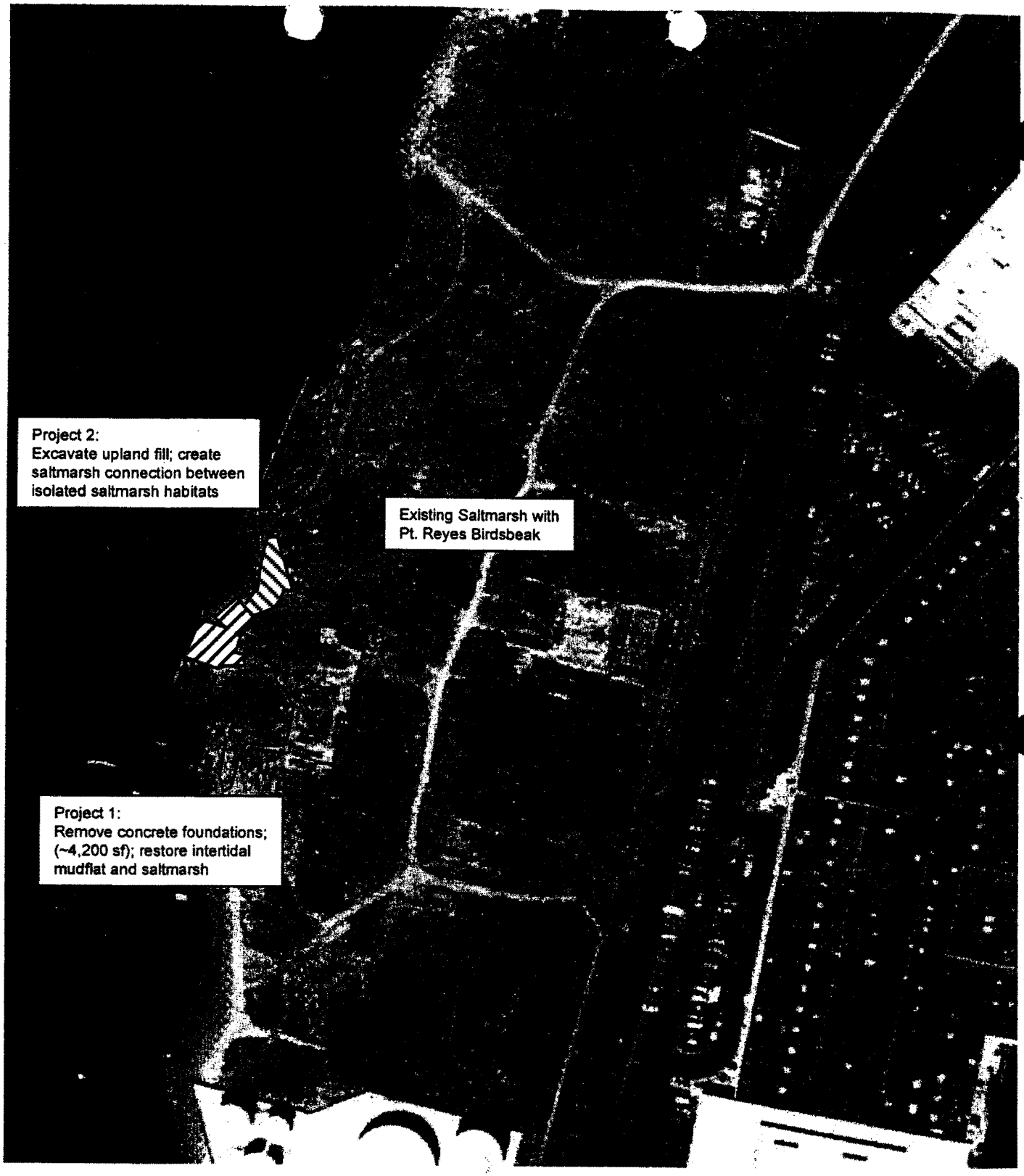
LOCATION MAP
CITY OF EUREKA PARCEL 4

SHN 098175.100
AUGUST, 1999

FIGURE 1

N

EUREKAP4



INNER CHANNEL DOCK AND
BOARDWALK REVITALIZATION PROJECT

PROPOSED MITIGATION
CITY OF EUREKA PARCEL 4
4/12/93 AERIAL PHOTOGRAPH

N

Scale: 1 in = ~170 ft

SHN

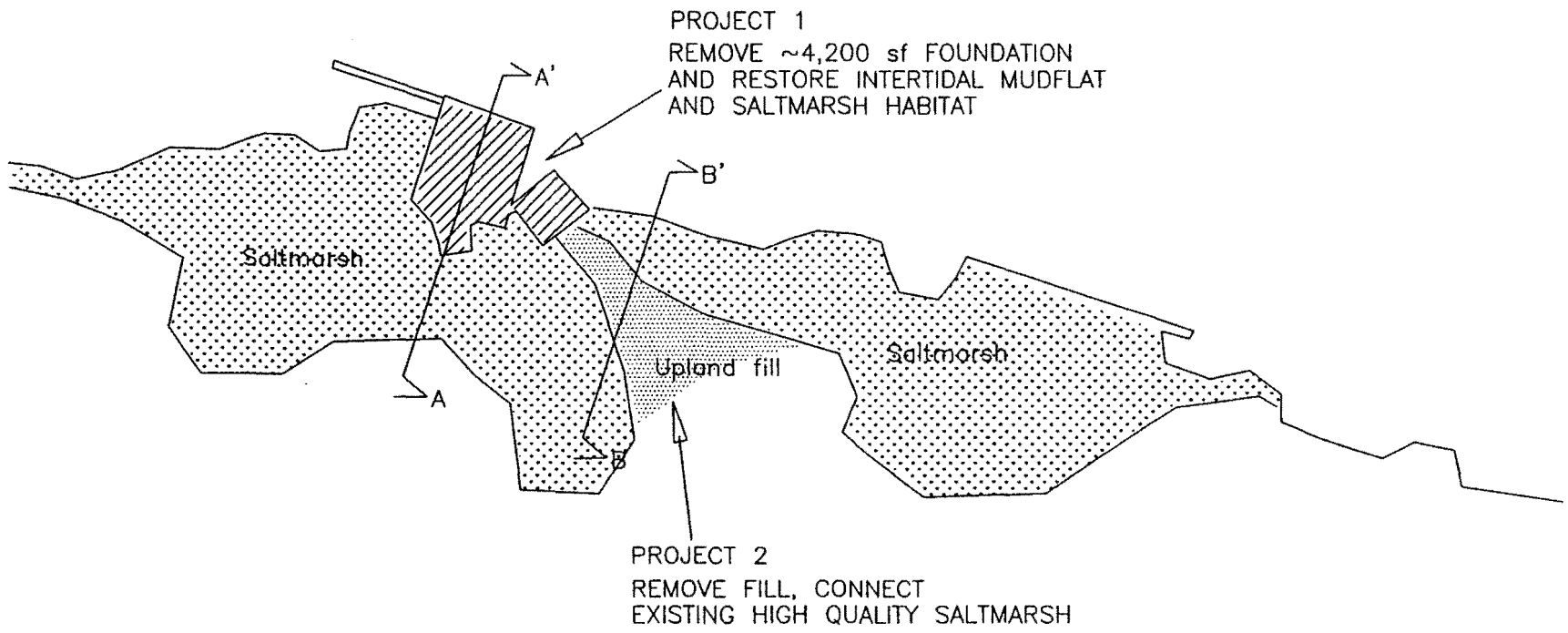
SHN 098175.100
AUGUST, 1999

FIGURE 2

EURPARCEL4MITIG

CITY OF EUREKA PARCEL 4
PLAN VIEW

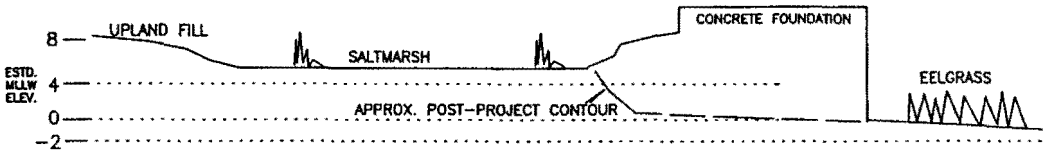
0 100'
APPROXIMATE SCALE



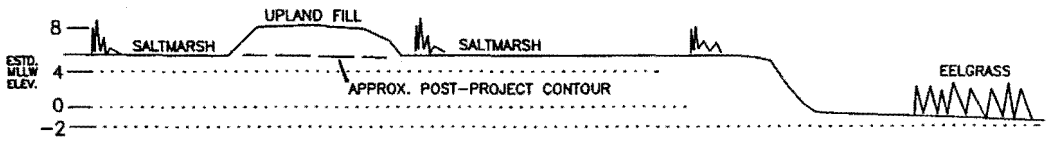
CROSS-SECTIONS

NO SCALE

PROFILE A-A'



PROFILE B-B'



INNER CHANNEL DOCK AND
BOARDWALK REVITALIZATION PROJECT
CITY OF EUREKA PROPERTY PARCEL 4

MARINE RESOURCE MITIGATION PLAN
PLAN AND CROSS-SECTION VIEWS

SHN 098175.100
AUGUST, 1999

SHN

FIGURE 3

2. Saltmarsh Mitigation Area. The location selected for the establishing salt marsh is immediately upland of the proposed intertidal mudflat mitigation area on Parcel 4 (Figure 2). The location was selected for the following reasons:

   - the salt marsh mitigation area is located between two well established areas of saltmarsh which contain the rare and endangered species Pt. Reyes Birdsbeak (*Cordylanthus maritimus* ssp. *palustris*),
   - the salt marsh mitigation area will provide a connection between the two areas of existing saltmarsh, thus enhancing habitat quality,
   - the salt marsh mitigation area will provide a buffer to the proposed intertidal mudflat mitigation area, and
   - saltmarsh can be established without causing significant disturbance of adjacent habitat.

3. Rocky Intertidal. The location for designation of rocky intertidal habitat is located within the Eureka Small Boat Basin. The location was selected for the following reasons:

   - suitable substrate is available,
   - the large availability of substrate allows the mitigation site to be located in one continuous area,
   - there is minimal cost to establishing the mitigation area, and
   - there has not been any mitigation credit taken for the creation of the habitat.

IV. CHARACTERISTICS OF THE MITIGATION AREAS

A. Location and Setting

1. Intertidal Mudflat and Saltmarsh. Parcel 4, owned by the City of Eureka, is located on the eastern perimeter of Humboldt Bay, immediately west of the Bayshore Mall (Figure 1). The parcel encompasses approximately 15 acres of which there is approximately 1,800 lineal feet fronting Humboldt Bay. The mitigation site is located in the southern portion of Parcel 4.

This portion of the Eureka waterfront was one of the first to be filled, either late in the 1800's or soon after the turn of the century. A map of surveys conducted by the U.S. Army Corps of Engineers as of 1929 shows the same fill footprint present today. The majority of the shoreline in this reach of Humboldt Bay is armored with RSP, ranging from cobble to boulder size. A concrete bulkhead extends intermittently along approximately 400 feet of shoreline in the southern half of the property. Upland of the RSP and bulkhead lies a fill plain. The property currently includes several old concrete structures including walls and foundations, presumably related to a former sawmill operation.

The average elevation of the fill plain appears to be between 6 and 8 feet MLLW. A large topographic depression is located inland from a narrow raised area located just inside the concrete bulkhead (Figure 2). The depression receives occasional saltwater incursion from waves breaking over or tidal water breaching unprotected portions of the shoreline. As a result, the low, interior portion of the property is covered by salt marsh, ranging from very low quality (i.e., sparse, few species, compacted fill) to high quality salt marsh (very dense, high species diversity). Dominant species include *Spartina densiflora, Salicornia virginica, Distichlis spicata,* and other species typical of high salt marsh around Humboldt Bay. This salt marsh also supports a substantial population of the Pt. Reyes birdsbeak (*Cordylanthus maritimus* ssp. *palustris*), which is included on List 1B (rare or endangered throughout its range) in the Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlick, 1994). The remainder of the fill plain is covered by scattered willows, blackberry, or himalaya berry thickets and exotic grassland.

2. Rocky Intertidal. The Eureka Small Boat Basin is located on Waterfront Drive, approximately ¼ mile east of Commercial Street. Currently, the Boat Basin is being reconstructed. As part of the reconstruction project, approximately 1,480 lineal feet, or 92,000 square feet, of RSP has been installed. The RSP was installed in the Spring of 1999.

B. Substrate

1. Intertidal Mudflat. A concrete foundation is located in the area proposed for establishing intertidal mudflat. Soil beneath the foundation could not be examined to determine its characteristics. However, soil immediately adjacent to the foundation to the north indicates that there is suitable younger bay mud present beneath the foundation. It is expected that the same mud will be encountered beneath the excavation within the range of the intertidal mudflat zone (+1 ft. to +4 ft. MLLW).

2. Saltmarsh. In the area proposed to be converted to saltmarsh, the soil consists of compacted fill of unknown origin. In the adjacent saltmarsh, the presence of the compacted fill allows saltwater that enters these areas to remain perched. Saltmarsh has not encroached into the proposed mitigation area because the elevation of the existing ground surface prohibits saltwater from reaching it. The depth of the compacted fill in the upland area is believed to be sufficient to allow removal to the required elevation for establishing salt marsh.

3. Rocky Intertidal. The area proposed for rocky intertidal mitigation extends from an elevation of approximately -8 feet to +11.5 feet MLLW. The RSP consists of up ¼ to ½ ton rock with a diameter of between 2-4 feet. The rock will make suitable substrate for establishing rocky intertidal habitat.

C. Hydrology

1. Intertidal Mudflat. The intertidal mudflat mitigation area will be exposed to a tidal range between approximately +1 ft. to +4 ft. MLLW. This range of tidal water exposure will insure a diurnal intrusion of saltwater into the area. The lower elevation of the proposed mitigation area will coincide with, but not overlap with, the upper limit of intertidal mudflat vegetated with eelgrass. The lower elevation of the intertidal mudflat mitigation area will be established at approximately +1 ft MLLW. A consistent slope of the mudflat surface will be maintained from the lower elevation at the bayward edge to the landward limit. At that point, there will be a transition slope to the adjacent saltmarsh. The elevation (+5 ft. to +6 ft. MLLW) at the top of this transition slope will control tidal inundation of the adjacent areas.

2. Saltmarsh. The saltmarsh mitigation area will be exposed to a tidal range between approximately +5 ft. to +6 ft. MLLW. The surface elevation will be consistent with the adjacent salt marsh. This range of tidal water exposure will insure coverage with saltwater on a frequent basis. The top of the intertidal mudflat transition slope will form the lower elevation of the saltmarsh area. The upper elevation of the saltmarsh area will be controlled hydraulically by a soil berm to limit incursion of saltwater into the upland area.

3. Intertidal Rocky. The elevation of the RSP will allow a portion between approximately +8 ft. and +9 ft. MLLW to be exposed to diurnal tidal inundation. The diurnal inundation will favor the colonization of the rock surface by algae and intertidal organisms.

D. Habitats

1. Intertidal Mudflat. In the proposed intertidal mudflat mitigation area, there is no biological habitat present.

2. Saltmarsh. In the proposed saltmarsh mitigation area, the fill plain is covered by scattered willows, blackberry, or himalaya berry thickets and exotic grassland.

3. Rocky Intertidal. In the proposed rocky intertidal mitigation area there is no habitat present.

V. MITIGATION DETAILS

A. Intertidal Mudflat

The existing concrete foundation will be broken up by a hydraulically operated breaker or by blasting. To remove chunks of the broken concrete, reinforcement steel may need to be cut with a acetylene torch. The concrete will be loaded into dump trucks with an excavator and disposed of properly. Any fill present within the foundation will be excavated. During the demolition of the foundation, any material that drops off into the adjacent mudflat will be removed. Heavy equipment and dump trucks will access the area through the adjacent fill plain area proposed for saltmarsh mitigation. Prior to finalizing the work, a control elevation marker will be established in the upland fill plain area within sight distance of the intertidal mudflat. The control marker will be used to determine the intertidal mudflat surface elevation. Work will be scheduled to occur during a seasonal period of minus tides. All work will be completed during low tide so as to insure there is no work completed in Humboldt Bay and minimize the introduction of concrete fines into Humboldt Bay. There will be no planting conducted as part of the plan. Two cross sections will be completed following the completion of the excavation work. The cross sections will be located on approximately 50 foot centers and display the bayward limit of the work and the transition slope to the adjacent saltmarsh. The cross sections will be used to verify the final elevation of the intertidal mudflat surface. The location of the cross section will be permanently marked for subsequent monitoring.

B. Saltmarsh

Excavation in the proposed saltmarsh mitigation area will follow completion of work in the intertidal mudflat mitigation area. Prior to beginning excavation, the limits of the proposed excavation will be marked with survey stakes and flagging. Elevational control used in the completion of the intertidal mudflat mitigation will also be used to determine the final elevation of the saltmarsh surface. At the start of excavation, the transition slope to the adjacent intertidal mudflat mitigation area will be verified. Then, the existing fill plain will be excavated as necessary (between approximately 1 and 2 feet) to establish

saltmarsh. The elevation will be consistent with the adjacent saltmarsh surfaces. Work will progress incrementally from the bayward edge of the saltmarsh to the upland limit. Excavated fill will be loaded by an excavator into dump trucks and disposed of properly. A portion of the excavated fill will be used on site to form a berm at the upland limit of the saltmarsh. Heavy equipment and dump trucks will access the area through the upland fill plain. Throughout the excavation work, periodic daily inspections will be completed to insure there are no incursions of the excavation or heavy equipment into the adjacent saltmarsh. Because of the proximity to existing high quality saltmarsh there are no plans to revegetate the mitigation area. Once the proper elevation is established within the mitigation area and saltwater is allowed to enter, intrusion of saltmarsh vegetation from the adjacent areas is expected to occur. Two cross sections will be completed following the completion of the excavation work. One cross sections will extend through the center of the mitigation area, approximately perpendicular to Humboldt Bay and display the interconnection with the adjacent saltmarsh. The remaining cross section will be drawn approximately parallel to Humboldt Bay in order to display the transition slope to the adjacent intertidal mudflat mitigation area, and the interconnection with the adjacent saltmarsh. The location of the cross sections will be permanently marked for subsequent monitoring.

C. Intertidal Rocky

There will be no additional work necessary for the creation of rocky intertidal habitat at the Boat Basin.

VI. MITIGATION PLAN IMPLEMENTATION SCHEDULE AND SUPERVISION

The proposed mitigation plan will be implemented within 6 months of the start of construction on the Eureka Inner Channel Dock and Boardwalk Revitalization Project. Prior to implementation, the City of Eureka Public Works Department will seek bids from or retain the services of a qualified contractor. A City of Eureka Public Works Department representative or a qualified consultant will be selected and given the responsibility for supervising and implementing the mitigation plan. The California Department of Fish and Game (DFG) and any other authorizing agencies will be notified at least one month before the work is to begin and given the name and contact information for the party responsible for supervising and documenting implementation of the mitigation plan. The notification will also identify the proposed work dates and daily hourly work schedule as verification that work will not be completed while areas are affected by tidal water.

The party supervising the work will be responsible for directing the contractor. The depth and horizontal extent of excavation will be documented. Any damage to adjacent intertidal mudflat or saltmarsh due to the operation of heavy equipment will be noted. Additional documentation will include the volume of material removed from each of the mitigation areas. Handling and dispensing of petroleum product for equipment operation will be conducted outside sensitive habitat areas, to be verified by the responsible party.

Following the implementation of the mitigation plan a report will be prepared summarizing all work completed. The report shall include the following:

- name of the contractor who completed the work,
- name of the party responsible for supervising the work,
- work dates and hours the work was completed,
- a site plan illustrating the limits of work in each of the mitigation areas, and
- cross sections and elevations for each of the mitigation areas.

The report will be submitted to the City of Eureka Public Work Department, which will then forward the report to the DFG and any other authorizing agencies. The report will be submitted within 30 days of implementing the mitigation plan.

In the event that any unusual circumstances occur which will delay the completion of the mitigation plan once it has be initiated, DFG and other authorizing agencies will be notified.

VII. PERFORMANCE STANDARDS

A. Mitigation Ratios

An in-kind mitigation ratio of 1:1 is proposed for saltmarsh and intertidal rocky habitat. There are suitable areas available at Parcel 4 and the Eureka Small Boat Basin to achieve this ratio.

An in-kind mitigation ratio of 1:1 is also proposed for approximately 70% of the intertidal mudflat impacted by the project. For the remaining 30% of intertidal mudflat, an out-of-kind 1:1 saltmarsh for mudflat mitigation ratio is requested. The request is based on the opportunity to create high quality saltmarsh and enhance the population of Pt. Reyes Birdsbeak which is believed to warrant "out of kind " mitigation. The physical difficulty and expense of restoring the remaining 30% of the impacted mudflat at the Parcel 4 site is another reason for the request.

B. Habitat

Performance standards for the mitigation plan consists of creation of essentially equivalent areas of intertidal mudflat, saltmarsh, and rocky intertidal habitat, to that impacted by the Inner Channel Dock and Boardwalk Revitalization Project. The final area of each habitat established shall not vary by more than 10% from the area proposed to be established.

Specific performance standards for each of the habitat types are as follows:

- establishment of 3,850 square feet of intertidal mudflat, supporting benthic and epibenthic biota similar in composition to that present in adjacent unimpacted areas. The benthic biota will be measured indirectly by completing a survey of bird use in the mitigation area and comparing that to bird counts taken in mudflat adjacent to the mitigation area.

- creation of 2,380 square feet of saltmarsh habitat biologically equivalent to the adjacent saltmarsh at the mitigation site. After a period of 5 years the new saltmarsh shall exhibit a minimum of 50% plant cover, comprised of not less than 50% of the plant species encountered in the adjacent existing saltmarsh.

- establishment of 20,200 square feet of rocky intertidal habitat. The habitat established shall contain visual evidence of colonization by algae and intertidal faunal organisms including barnacles, amphipods, and isopods.

C. Food Supply

The food supply available within the intertidal mudflat shall be similar to that available in the adjacent mudflat at the mitigation site. Shorebird use of the mitigation area will be monitored and compared to that in adjacent mudflat areas. The use of the mitigation area by shorebirds will be used indirectly to determine the presence of benthic and epibenthic organisms that comprise the intertidal mudflat food supply.

D. Exotics

The saltmarsh mitigation area shall not be impaired by the introduction of exotic plant species. The presence of exotic species will be documented during observations completed as part of the monitoring program field visits. Any exotic plant species identified will be physically removed.

E. Topography

The mitigation areas shall not be impaired due to excessive accumulation of sediments or erosion of adjacent fill. Accumulation of sediment shall be documented during observations completed as part of the monitoring program field visits. If excessive sediments or erosion is observed which has significantly changed the topography of the mitigation areas, then survey data shall be collected across the original post excavation cross sections as part of the monitoring program.

F. Water Quality

Water quality in the mitigation areas shall be comparable to that present in Humboldt Bay. Water quality conditions shall be documented during observations completed as part of the monitoring program field visits. Observation shall include verification of the free flow of tidal saltwater into the mitigation areas as allowed by elevational controls. The mitigation areas shall not be adversely impacted by concentrated discharge of storm water from upland areas. The presence of concentrated discharge will be documented during observations completed as part of the monitoring program field visits. If concentrated discharge is observed, the quality of the discharge shall be documented noting the presence of turbidity, dissolved petroleum hydrocarbons, and other deleterious material.

VIII. MONITORING AND REPORTING PROGRAM

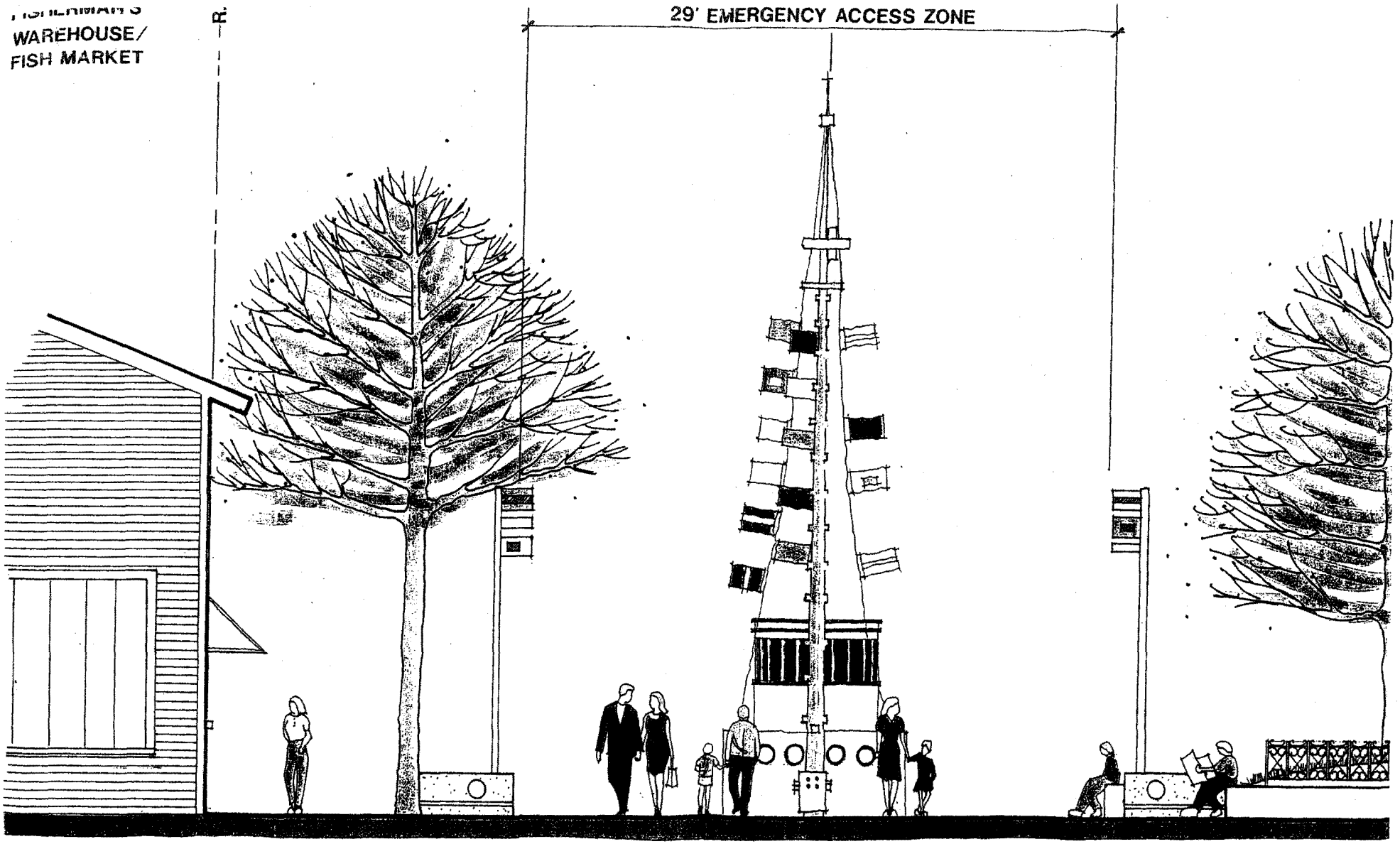
A monitoring and reporting program will be implemented after the completion of the excavation work in both areas. The monitoring program will consist of two field visits to the site per year; once in the 1st (January, February, March) and 3rd (July, August, September) quarters. The monitoring program will have a duration of five years. A report will be completed within 3 months of implementing the plan and annually, thereafter by October 30th. Annual reports will be submitted to the DFG and any other authorizing agencies. During the field visits, the mitigation areas will be observed for accumulation of sediments, erosion of the transition slope, erosion of the upland berm, and intrusion of saltmarsh vegetation into the saltmarsh mitigation area. Changes in the hydrology of the mitigation areas caused by excessive accumulation of sediments or erosion will be noted. Shorebird observations will be completed and counts taken. Quantitative sampling data shall be recorded in the 3rd quarter sufficient to document compliance with the performance standards. Results of the field visits will be documented and maintained on file at the City of Eureka. The field notes will be used in the preparation of the annual report, which will evaluate the success of the mitigation plan. Recommendations for any corrective action necessary to insure the continued success of the mitigation plan will be included in the report.

IX. CORRECTIVE ACTION

In the event that semi-annual monitoring and reporting identifies any conditions that significantly effect the performance standards, a corrective action plan will be developed by the City of Eureka Public Works Department through consultation with the DFG and other authorizing agencies. Recommendations for specific corrective actions will be reviewed and evaluated in conjunction with field observation data. The mitigation site will be inspected with DFG and any authorizing agency personnel to verify the suitability of the recommended corrective action or make modifications. A corrective action plan will be submitted to the DFG and any other authorizing agencies prior to completion of any action. The City of Eureka Public Works Department shall be fully responsible for any failure to meet the performance standards of the mitigation plan.

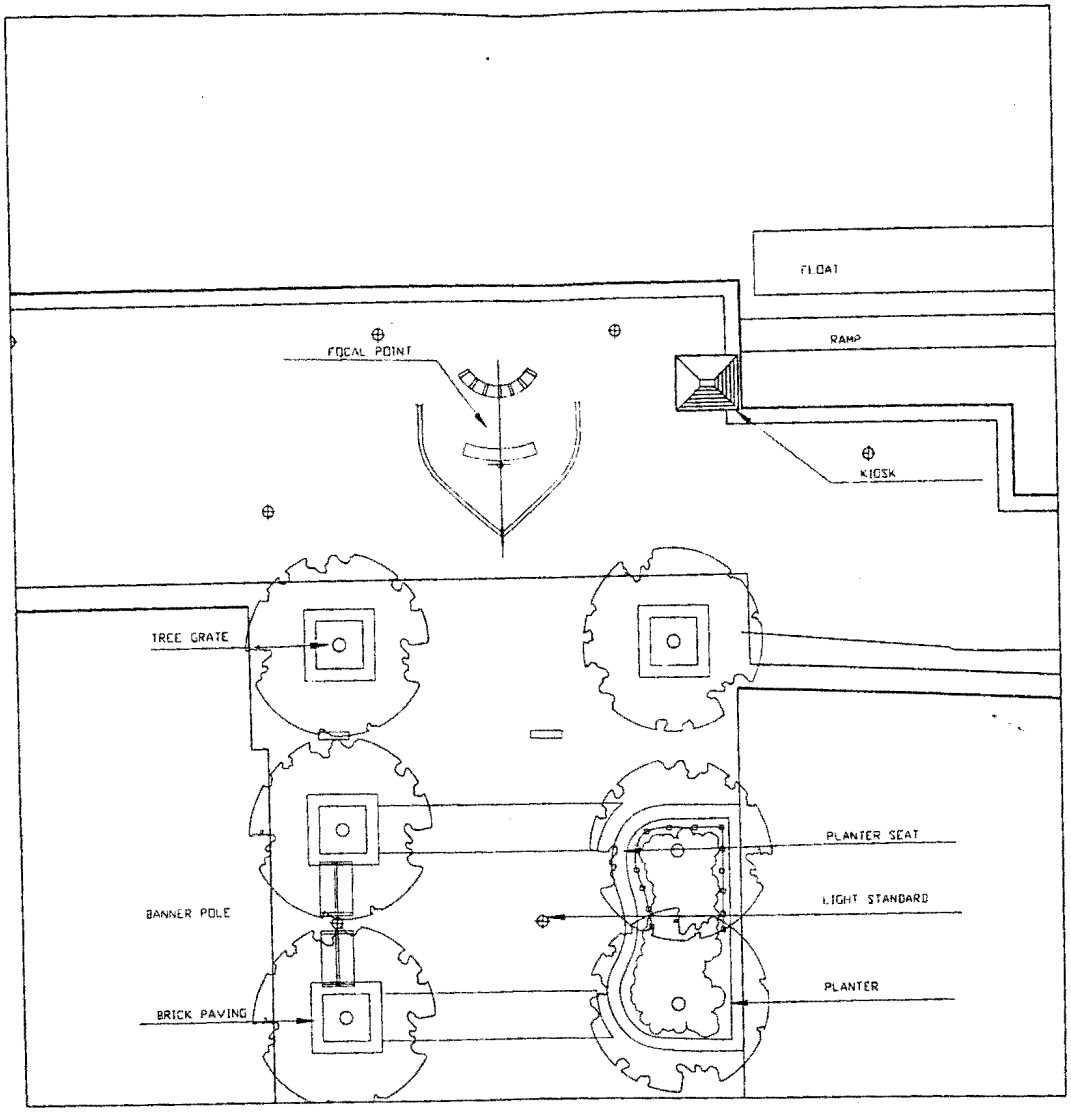
If it is determined that the habitat mitigation plan will not likely result in attaining the performance standards, then the potential need for identification of other sites will be discussed. Any details pertaining to the selection of an alternative site will be discussed and presented to DFG and any authorizing agencies as required. The City of Eureka Public Works Department shall be responsible for developing a alternative site mitigation plan and obtaining approval from the DFG and any other authorizing agencies.

EXHIBIT NO. 7
APPLICATION NO. 1-99-077
PRELIMINARY CONCEPTUAL PLANS FOR BOARDWALK IMPROVEMENT
Page 1 of 13



SECTION AT C STREET

SCALE: 1/4" = 1'-0"



DETAIL PLAN OF C STREET PLAZA

SCALE 1/8"=1'

THE BRENNAN ASSOCIATES, PLLC
landscape architects /planners

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Public Works/Engineering Department
531 K Street, Third Floor
Eureka, California 95501

BERGER/ABAM ENGINEERS INC
33301 9TH AVENUE SOUTH
FEDERAL WAY, WASHINGTON 98003-6395

APPROVED _____ DATE
ENGINEER

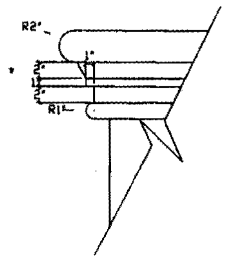
AM/CM DRAWN BY 12/7/99 DATE
JB/DS DESIGNED BY 12/7/99 DATE
JB CHECKED BY 12/7/99 DATE
PROJ ENGR 12/7/99 DATE

MARK	REVISION	BY	APP.	DATE

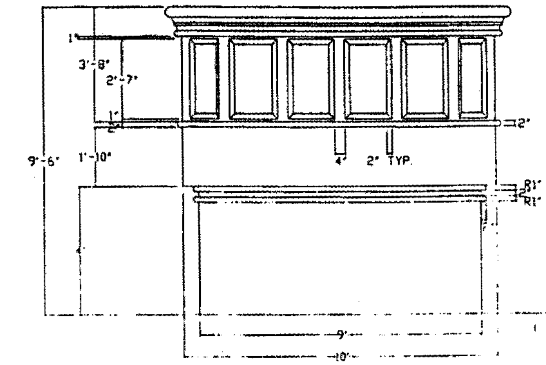
INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DETAIL LAYOUT PLAN - C ST.

DRAWING NO. L-5
CONTRACT NO.
SHEET NO. 5 OF



(A) TOP CAP DETAIL
SCALE: 1-1/2" = 1'-0"



(B) CABIN ELEVATION DETAIL
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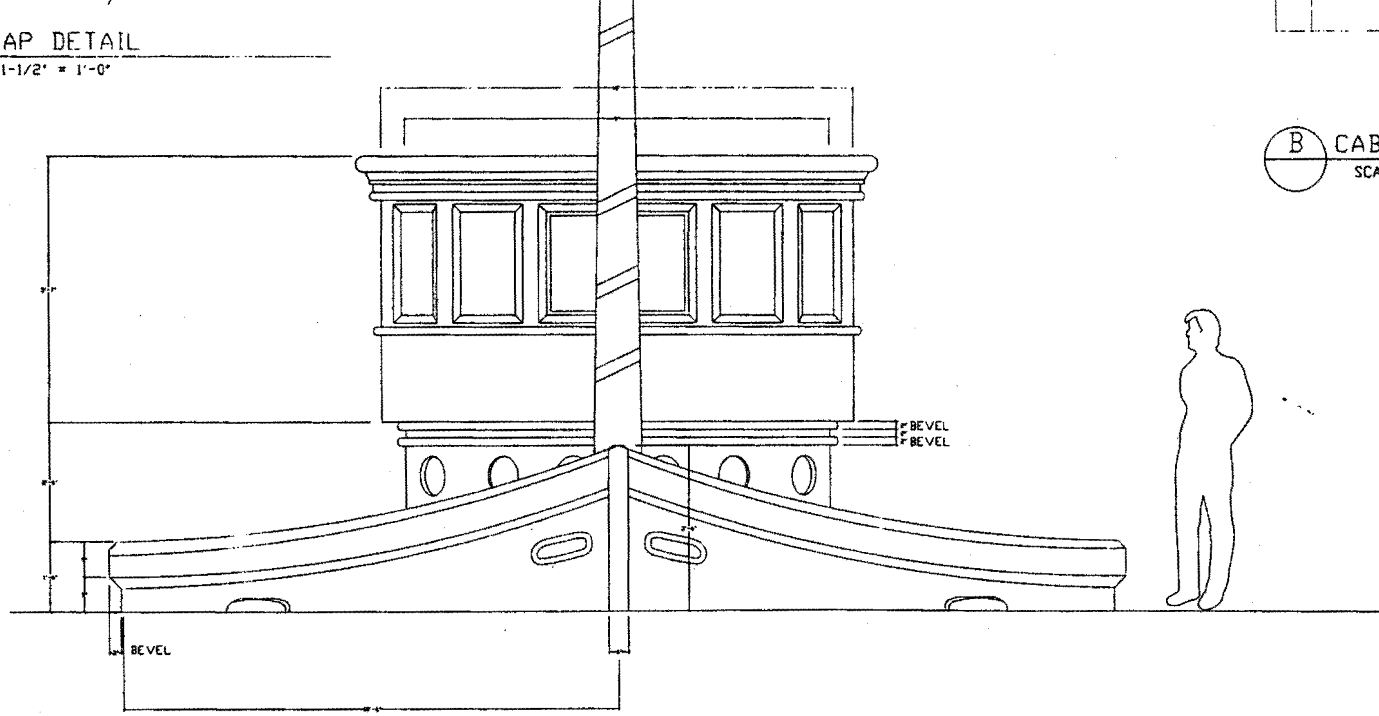
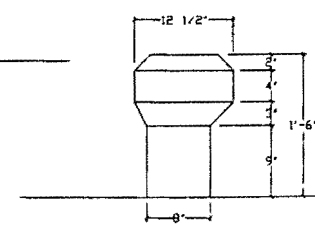


(C) FRONT ELEVATION "C" STREET FOCAL POINT
SCALE: 3/4" = 1'-0"



(D) END ELEVATION OF BOAT RAIL
SCALE: 1/2" = 1'-0"

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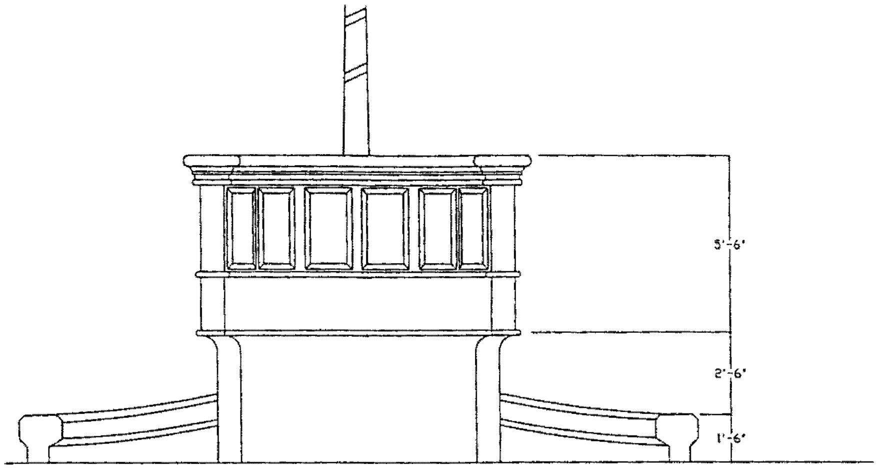
FEDERAL WAY, WASHINGTON

APPROVED	BTS 12/7/98 DRAWN BY DATE	DLB 12/7/98 CHECKED BY DATE	MARK	REVISION	BY	APP.	DATE
ENGINEER DATE	JAB 12/7/98 DESIGNED BY DATE	JJ 12/7/98 PROJ ENGR DATE					

INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION
SITE DETAILS - SHEET 4

DRAWING NO. L-9
CONTRACT NO.
SHEET NO. OF



A BACKSIDE ELEVATION "C" STREET FOCAL POINT
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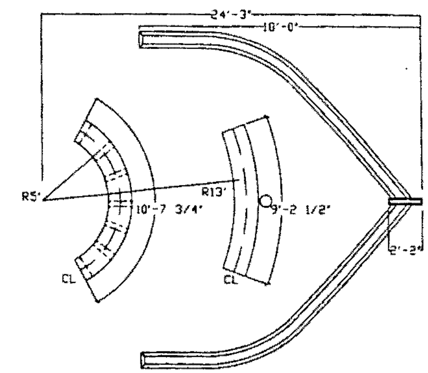
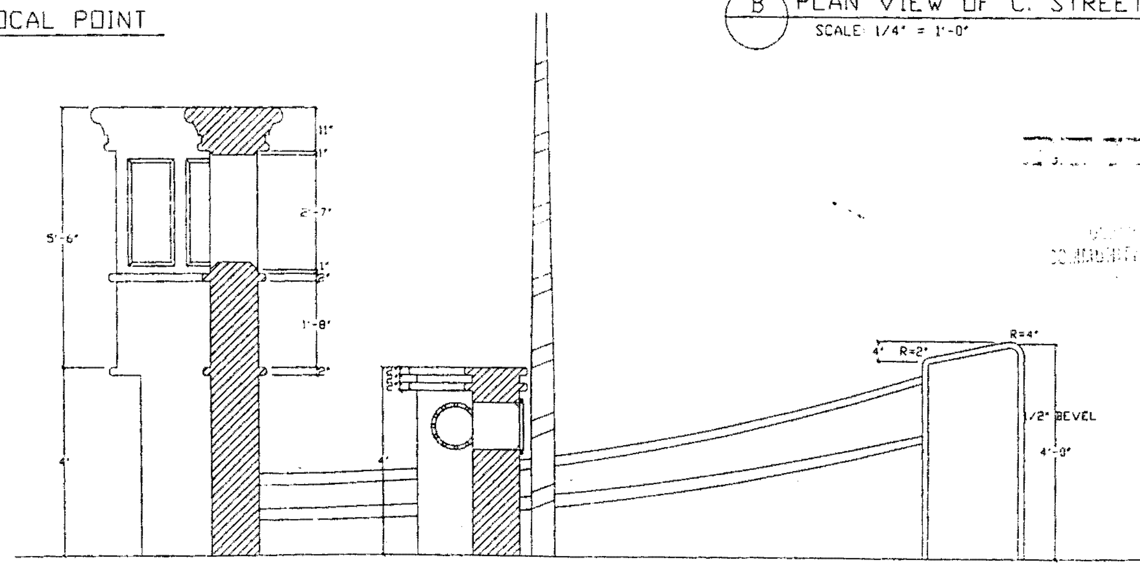


B PLAN VIEW OF C. STREET FOCAL POINT
SCALE: 1/4" = 1'-0"



C SECTION/ELEVATION "C" STREET FOCAL POINT
SCALE: 3/4" = 1'-0"

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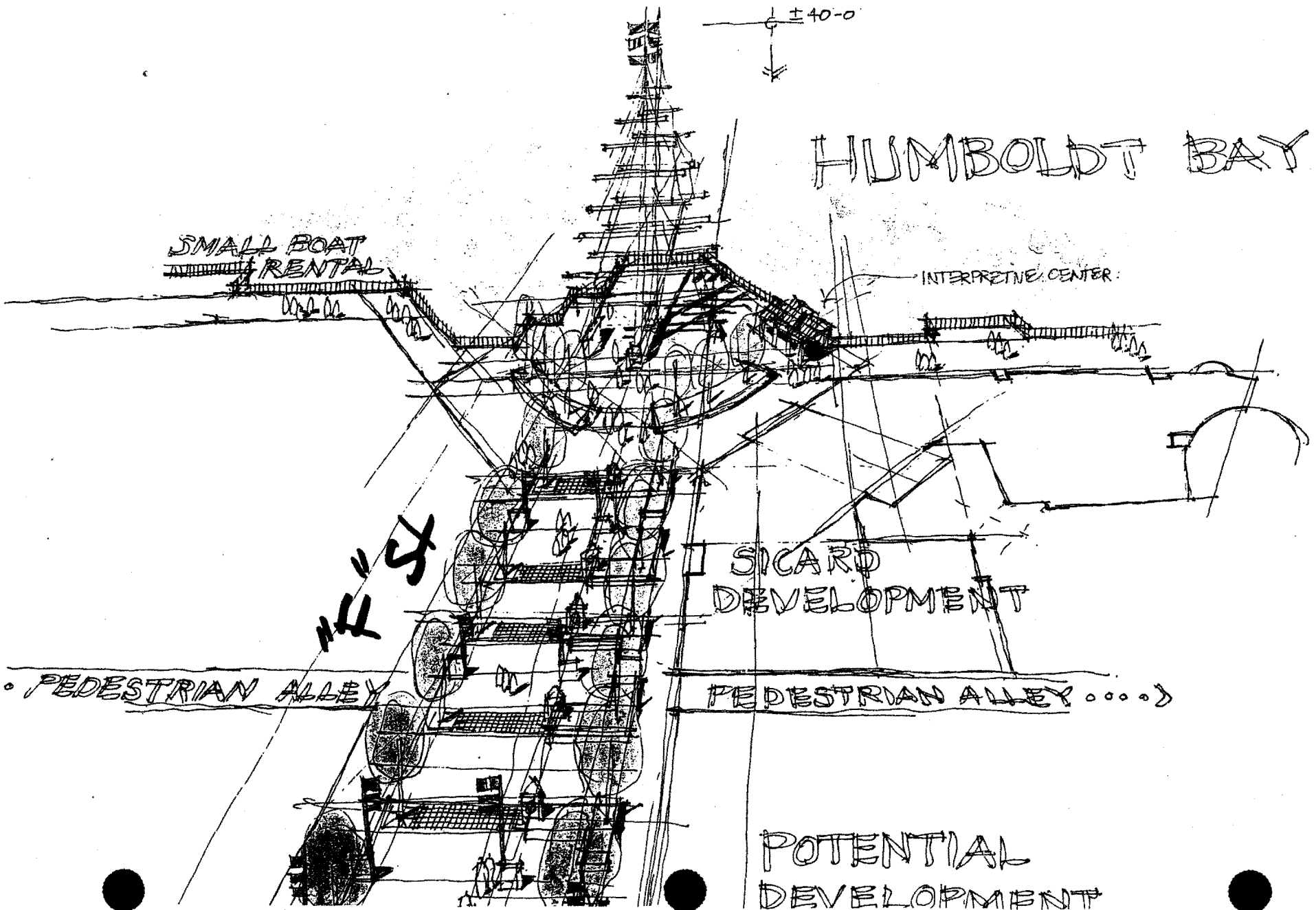
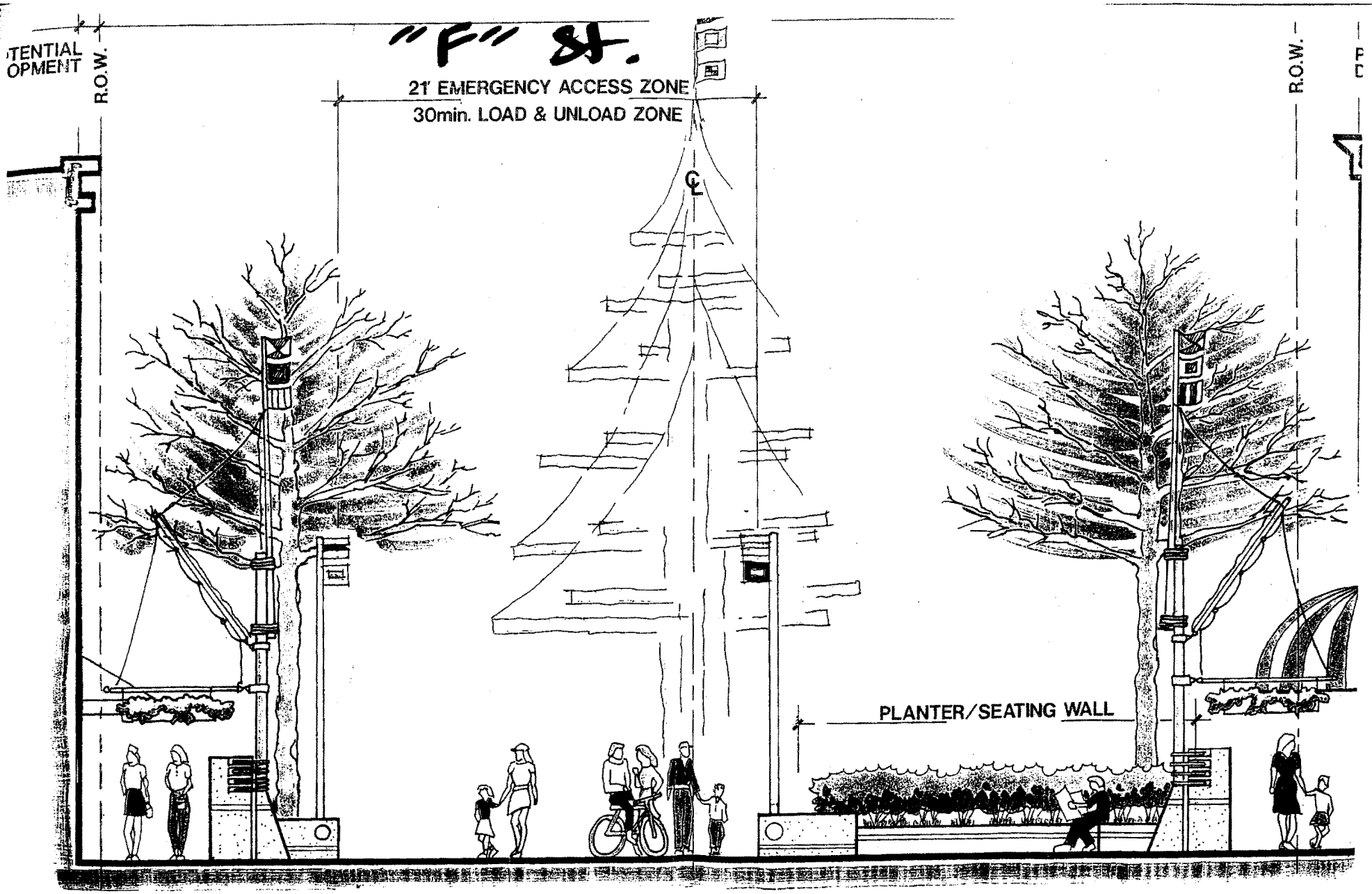
APPROVED				MARK	REVISION	BY	APP.	DATE
DATE	BJS 12/7/98 DRAWN BY DATE	DLB 12/7/98 CHECKED BY DATE						
ENGINEER	JAB 12/7/98 DESIGNED BY DATE	TL 12/7/98 PROJ ENGR DATE						

INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

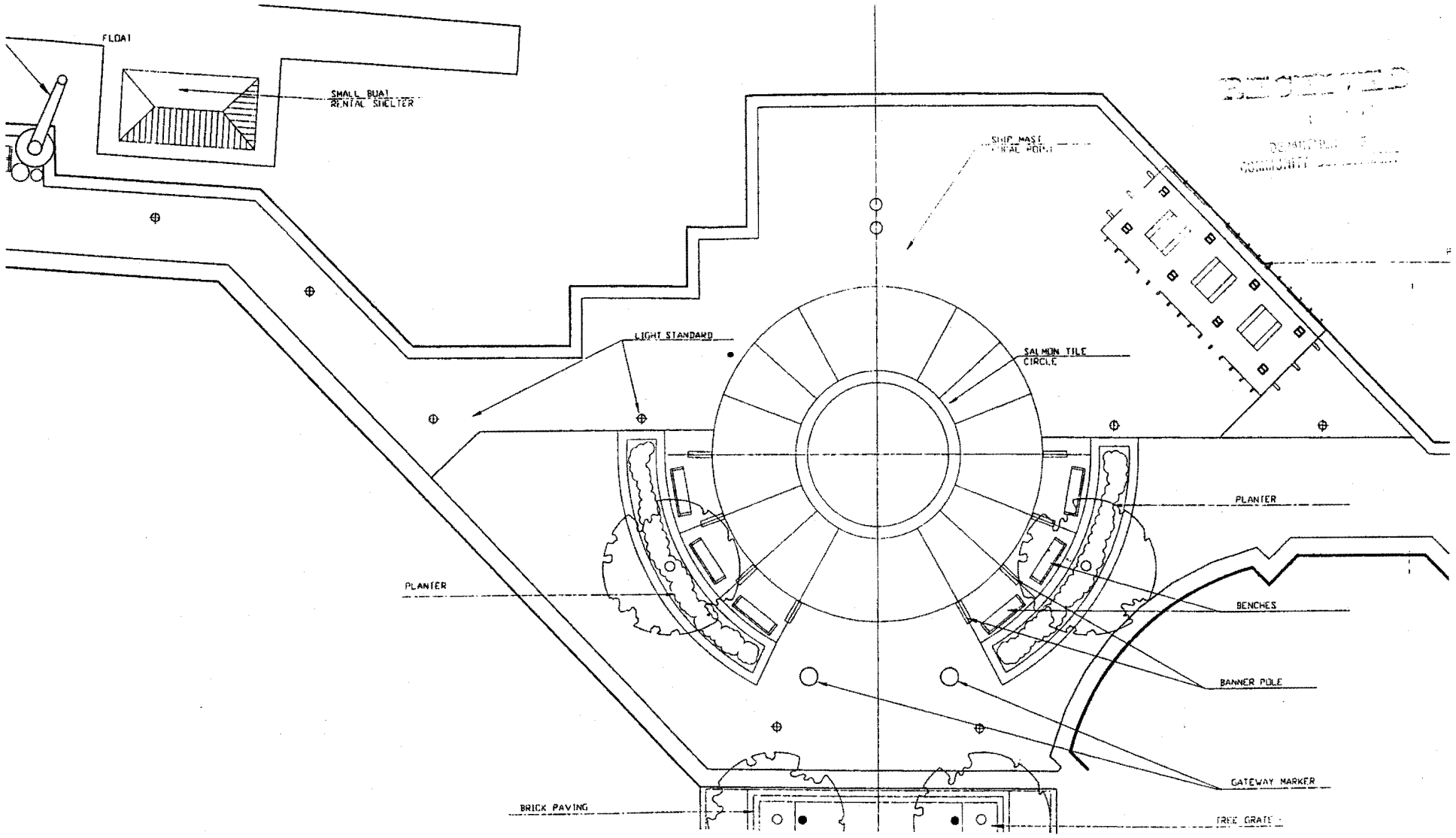
SITE DETAILS – SHEET 5

DRAWING NO. L-10
CONTRACT NO.
SHEET NO. 10 OF


±40-0
HUMBOLDT BAY
SMALL BOAT RENTAL
INTERPRETIVE CENTER
SICARD DEVELOPMENT
PEDESTRIAN ALLEY
PEDESTRIAN ALLEY
POTENTIAL DEVELOPMENT



SECTION AT F STREET



DETAIL PLAN OF F STREET PLAZA

SCALE 1/8"=1'

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Public Works/Engineering Department
531 K Street, Third Floor
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BERGER/ABAM ENGINEERS

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DATE
ENGINEER

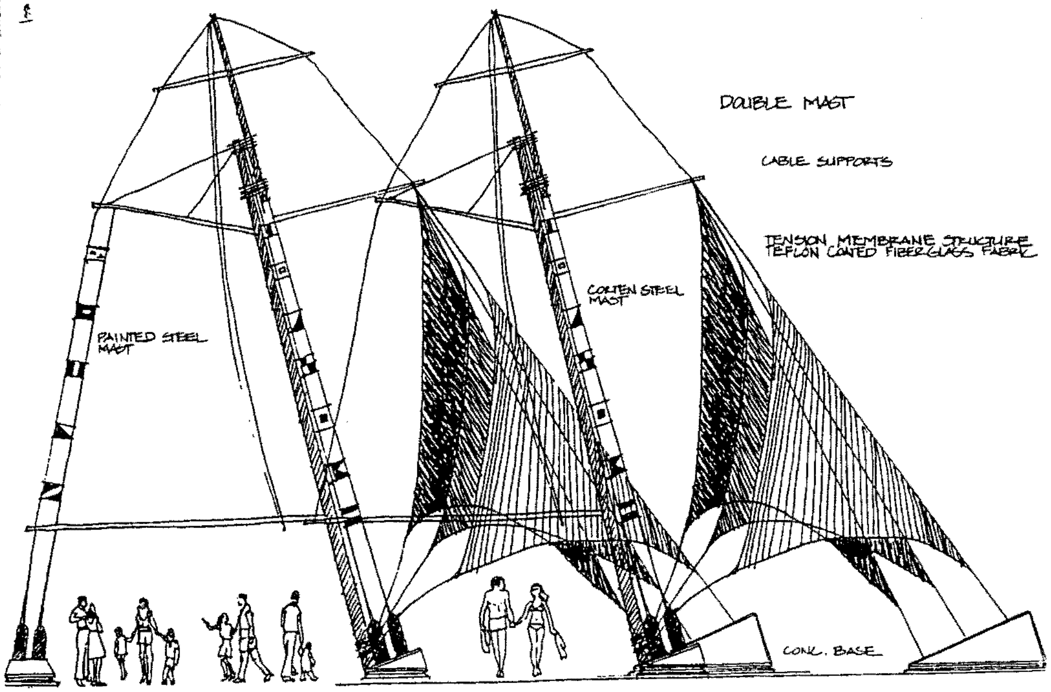
AM/EM 12/2/99 DRAWN BY DATE
DESIGNED BY DATE
PROJ. ENGR DATE

MARK REVISION BY APP. DATE

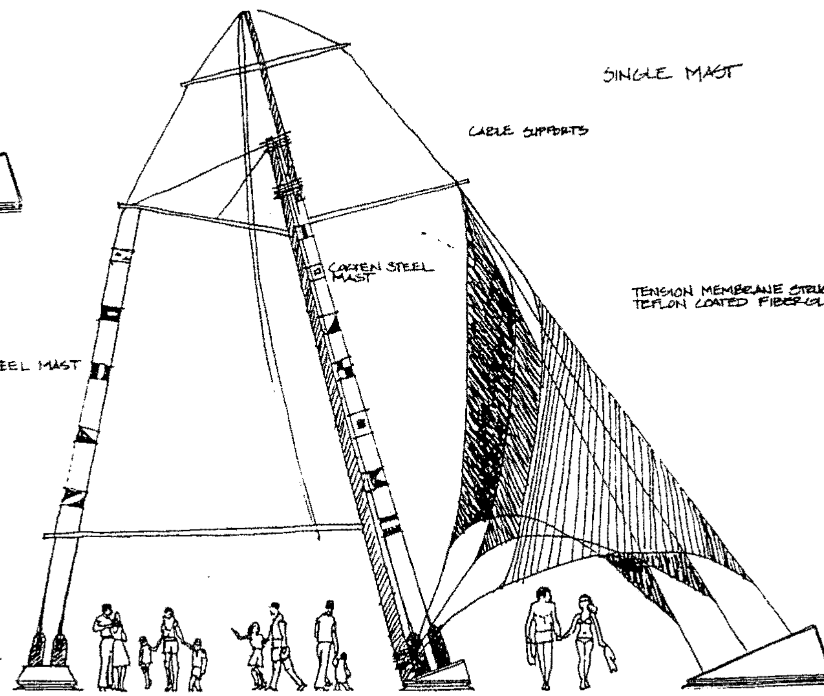
INNER CHANNEL BOARDWALK RESTAURATION

DETAIL LAYOUT PLAN F ST.

DRAWING NO.
CONTRACT NO.
SHEET NO. 4 OF



SCALE 1"=4'



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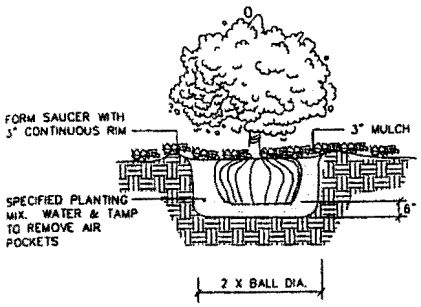
ENGINEER	JB/DS 12/7/99 DESIGNED BY DATE	TL 12/7/99 PROJ ENGR DATE	MARK	REVISION	BY	APP. DATE

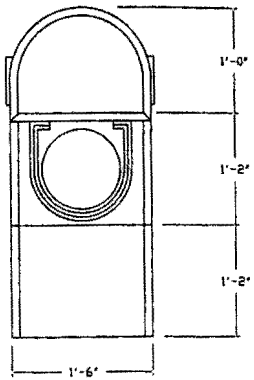
INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DETAIL SHEET

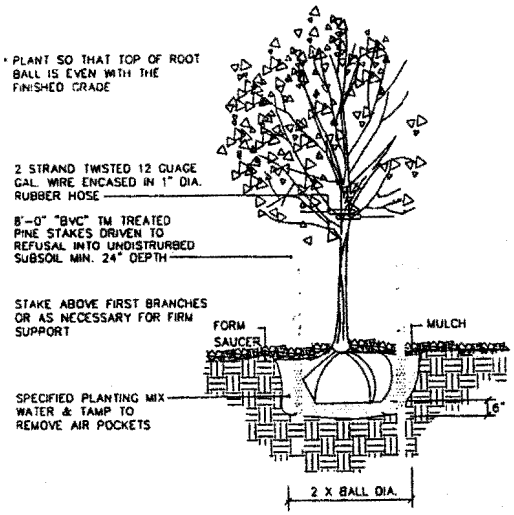
DRAWING NO. L-
CONTRACT NO. ______
SHEET NO. ______ OF ______



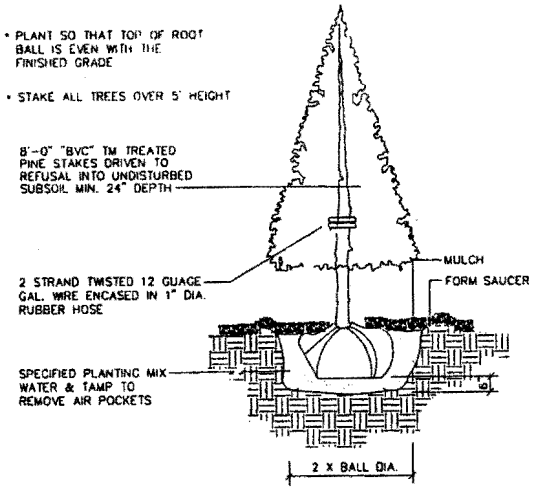
A SHRUB PLANTING
NTS



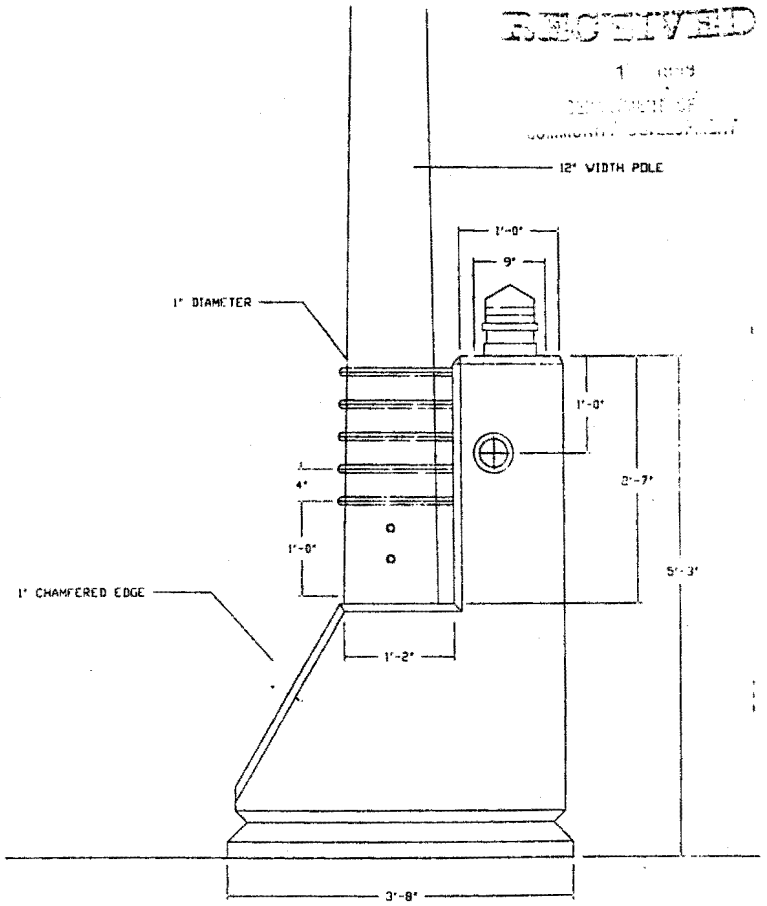
B GATEWAY MARKER PLAN VIEW
1-1/2"=1'-0"



D TREE PLANTING & STAKING
NTS



E CONIFER TREE PLANTING & STAKING
NTS



NOTE:
COMPACT FLOURESCENT BULB RECOMMENDED

C GATEWAY MARKER
1-1/2"=1'-0"

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ENGINEER

BTS	12/7/98	DLB	12/7/98
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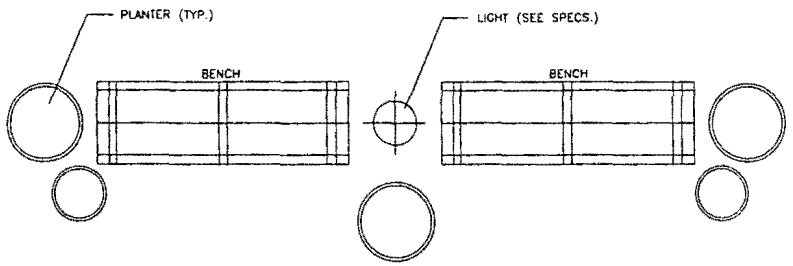
JAB	12/7/98	TL	12/7/98
DESIGNED BY	DATE	PROJ ENGR	DATE

MARK	REVISION	BY	APP.	DATE

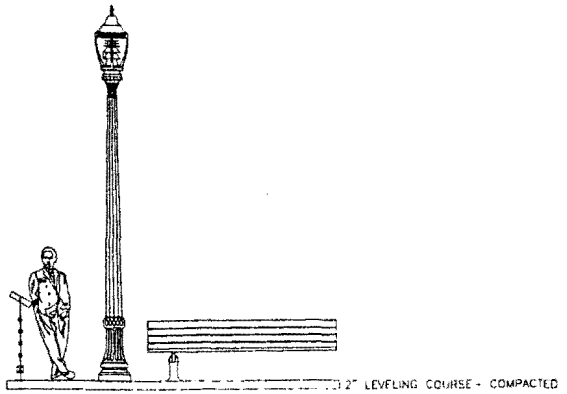
INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

SITE DETAILS – SHEET 1

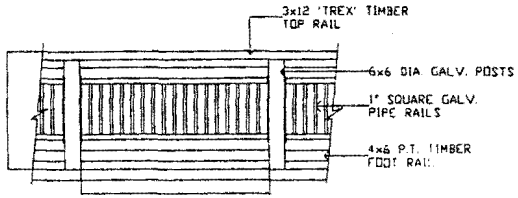
DRAWING NO. L-6
CONTRACT NO. _____
SHEET NO. 6 OF _____



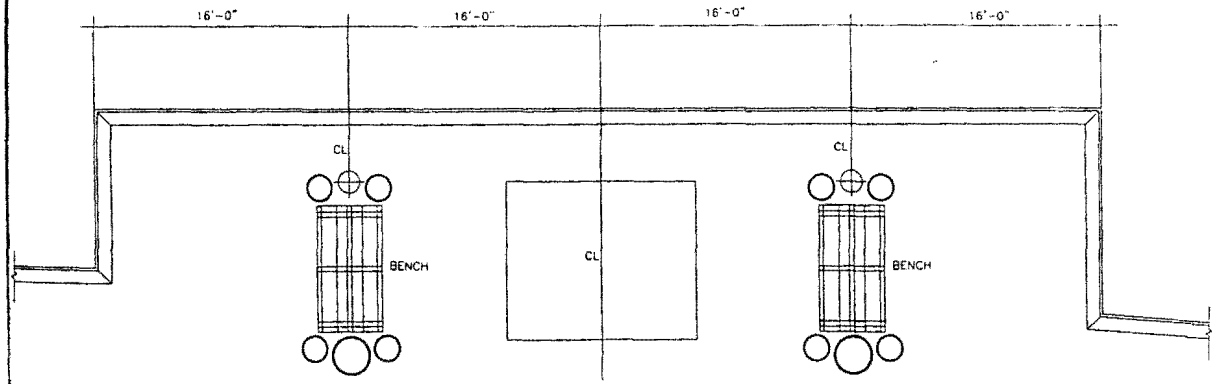
A TYPICAL BENCH LAYOUT A
1/2" = 1'-0"



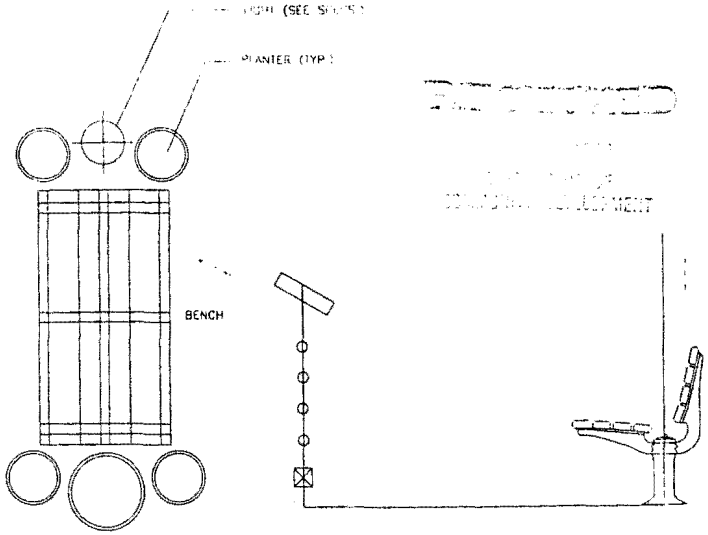
B TYPICAL BENCH & RAILING SECTION
3/8" = 1'-0"



C RAILING DETAIL
1/2" = 1'-0"



D BENCH LAYOUT C DETAIL
1/4" = 1'-0"



D BENCH DETAIL
NTS

E BENCH & RAILING SECTION
NTS

THE BRENNAN ASSOCIATES, PLLC
landscape architects /planners

City of Eureka
Public Works/Engineering Department
531 K Street, Third Floor
Eureka, California 95501
(707)441-4191 FAX(707)441-4202

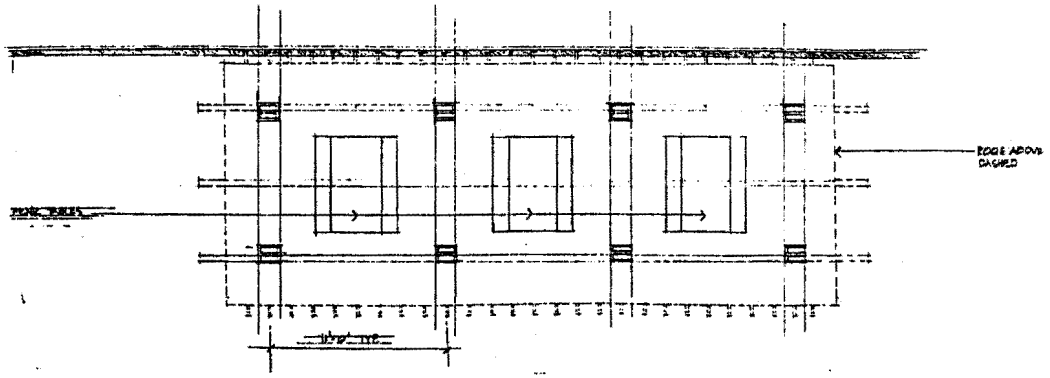
BERGER/ABAM ENGINEERS INC
33301 9TH AVENUE SOUTH
FEDERAL WAY, WASHINGTON 98003-6395
(206)431-2300 FAX (206)431-2250

APPROVED ____ DATE	BTS 12/7/98 DRAWN BY DATE	DLB 12/7/98 CHECKED BY DATE					
ENGINEER	JAB 12/7/98 DESIGNED BY DATE	TL 12/7/98 PROJ ENGR DATE	MARK	REVISION	BY	APP.	DATE

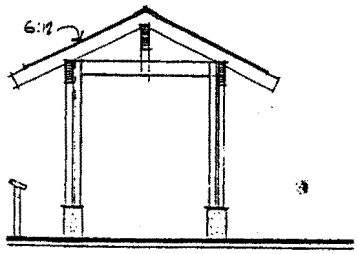
INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

SITE DETAILS- SHEET 2

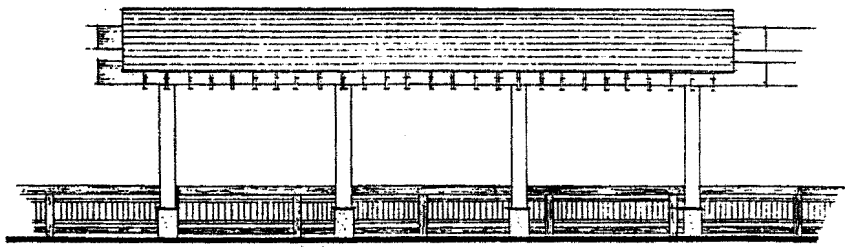
DRAWING NO. L-7
CONTRACT NO. ____
SHEET NO. 7 OF ____



FLOOR PLAN
1/4"=1'-0"



NORTH ELEVATION
1/4"=1'-0"



WEST ELEVATION
1/4"=1'-0"

RECEIVED

THE BRENNAN ASSOCIATES, PLLC
landscape architects/planners

City of Eureka
Public Works/Engineering Department
531 K Street, Third Floor
Eureka, California 95501
(707)441-4191 FAX(707)441-4202

BERGER/ABAM ENGINEERS INC
33301 9TH AVENUE SOUTH
FEDERAL WAY, WASHINGTON 98003-6395
(206)431-2300 FAX:(206)431-2230

APPROVED ____ DATE	AM/CM 12/7/99 DRAWN BY DATE	JB 12/7/99 CHECKED BY DATE					
ENGINEER	JB/DS 12/7/99 DESIGNED BY DATE	TL 12/7/99 PROJ ENGR DATE	MARK	REVISION	BY	APP.	DATE

INNER CHANNEL DOCK AND BOARDWALK REVITALIZATION

DETAIL SHEET

DRAWING NO. L-
CONTRACT NO
SHEET NO. OF

TRANSMITTAL

TO: **CITY OF EUREKA**
PUBLIC WORKS / ENGINEERING DEPARTMENT
531 K STREET, 3RD FLOOR
EUREKA, CA 95501

FROM: **LEE / BRENNAN ASSOCIATES**
SUITE 200, 100 S.KING STREET
SEATTLE, WA, 98102

RE: **EUREKA SITE FURNITURE**

The following is a list of suggested site furnishings for the Eureka Project as well as our recommendations on the character and suppliers of these features. We have attached copies of product examples for your review and comment.

BOLLARDS
- Hitch Post
- Maglin Mooring Bollard
- Maglin Bollard

FOCAL POINT
- Mooring Bollard Tie Off / Winch

BIKE RACK
- Heritage Company
- Landscape Forms P1 Rack
- BRP - Highwheeler

BENCH
- Maglin Harborfront
- Trystan
- Urban Accessory

TREE GRATE
- Urban Accessory

TRENCH DRAIN
- Urban Accessory

TRASH RECEPTICLE
- Heritage Metropolitan Series

PLANTER
- Heritage Company
- Terra Cast.

RAILING
- Wood and Metal Rail
- All Metal Rail

DRINKING FOUNTAIN (OPTIONAL)
- Trystan
- Murdock

Live From Santa Monica Bay, California

Another Westland Network Production

This live picture is fro Santa Monica Pier a d is updated every 10 minutes. You ward the Santa Monica Pier and the Pacific Ocean. The camera location is courtesy of the office of Dr. Berman. Use the reload button on your browser to see a new photo.

Sister Cam - See the Amazing Venice Beach Cam !

Please send comments to: don@westland.net

http://www.westland.net/piercam/

EXHIBIT NO. 8
APPLICATION NO. 1-99-077
Page 1 of 17
INFORMATION ON OTHER DOCK AND PIER DEVELOPMENTS

BEACH CAM Venice, California

~~Sister Cam - Santa Monica Pier Cam~~

Venice

~~On the Waterfront Cafe~~

~~Where the View is as Good as the Brew~~ ~~on the Waterfront Cafe~~

This is a live photo from Venice Beach, California. ~~Venice~~ BeachCam is ~~located~~ on top of the Good See Store , and is updated every 10 minutes. The best time to ~~see Beach Cam is on the weekend~~ when up to 150,000 people visit Venice Beach a day. You are looking South from the North end of Venice. From this angle you can see the boardwalk, bike path, sand and the beautiful Pacific Ocean. On a clear day, you can see Catalina Island.

Attention Night Time Visitors: There is not much to see at night. However, you can see some cool Recent Day Shots

Visit Venice - The next best thing to being here!

Please send comments to: don@westland.net

Surf Cam, Tides & Weather

Special Events

Interactive Tour

Critters & Creatures

S.C. Boat Rentals Weekly Fishing Report

Shopping, Dining & Recreation

Wharf History

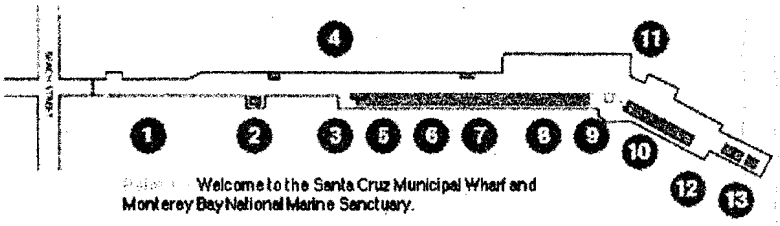
Santa Cruz Links

General Info & FAQs

HOME

Santa Cruz Wharf

Point 1 -- Santa Cruz Wharf & National Marine Sanctuary



Welcome to the Santa Cruz Wharf. You have just left land behind and now stand over the sea that covers three quarters of the globe. It might be more accurate to call our world the earth/sea. Life began in the oceans and the oceans continue to shape terrestrial life everyday. We'll discuss this as we go along.

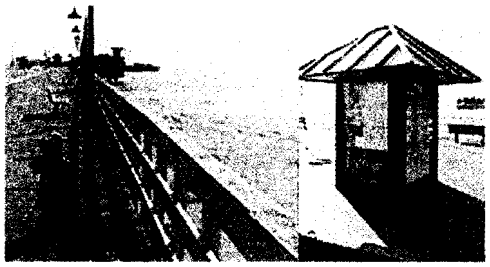
You also stand on the most recent of five wharves since 1850. This is the longest public wharf on the West Coast: a half mile long. With about 4,500 wood pilings, it makes a bend at the last third to accommodate the oncoming wave action. It was also designed like this to accommodate the loading of ships.

The Wharf was originally built for commerce but has become primarily recreational over the years. It is now an open marine park. The very first wharf was built to provide access for carts to carry loads of potatoes to rowboats, which carried these out to anchored schooners. From here, they sailed to San Francisco and from there to the Gold Rush country and lots of hungry 49ers. Succeeding commercial shipments over the years were lime and gunpowder. One of the historic five Wharves was called the Powder Wharf for exactly this reason.

Wharves generally don't last long without constant maintenance because of the strength of the sea. The Pacific is not as peaceful as its name implies. Our coast is very active and wild in character. Brine and surf wears everything down; even the continent. The sand you see on the beach results from wearing down of the coastline and river sediments from the moutains.

Orientation
It's easy to think we are looking

west as we look out to sea, but actually as you walk down the wharf, you are walking directly south or even southeast, not west. We are gazing from the northern end of Monterey Bay directly south. "West" is actually to your right. What seems to be an "an island" in the distance is the Santa Lucia Mountains above the city and point of Monterey.



Entrance to the half-mile long Wharf and first kiosk with the Sanctuary map.

Here you can see on the map of the Marine Sanctuary where we are in comparison to the rest of the coastline. The map also shows you that we are in the middle of a very special place, which is why our region was designated a National Marine Sanctuary.

Just as on land, some parts of the ocean and coastal environment are more unique than others. We have Yosemite in the Sierra, Big Basin Redwoods State Park in the Coastal Ranges, and the Monterey Bay National Marine Sanctuary here. The Marine Sanctuary was designated 6 years ago after 17 years of study and negotiation. It is largest of the nation's 12 marine sanctuaries. It is contiguous with two other marine sanctuaries off San Francisco: the Gulf of the Farollones and Cordell Bank. All of central coastal California is biologically rich as well as geographically varied. It has a number of undersea mountains and canyons.

On the Sanctuary chart in the kiosk, you can see depicted the Monterey Submarine Canyon, deepest in the continental United States. In the middle of Monterey Bay, if you take a big breath and dive straight down, you will go two miles before you hit bottom. The canyon is about 10,000 feet deep. In fact, the average depth of all the oceans is about 10,000 feet. Monterey Canyon attracts deep ocean marine life very close to shore, such as whales and life forms only found far offshore. We'll see some pictures of these as we go. And we'll visit the new Marine Sanctuary office.

But before we go, let's take one more look around us. Here we can most plainly appreciate the transition from a terrestrial to marine environment.

But let's walk on. We have half a mile to go.

2nd Stop

UP TO TOP

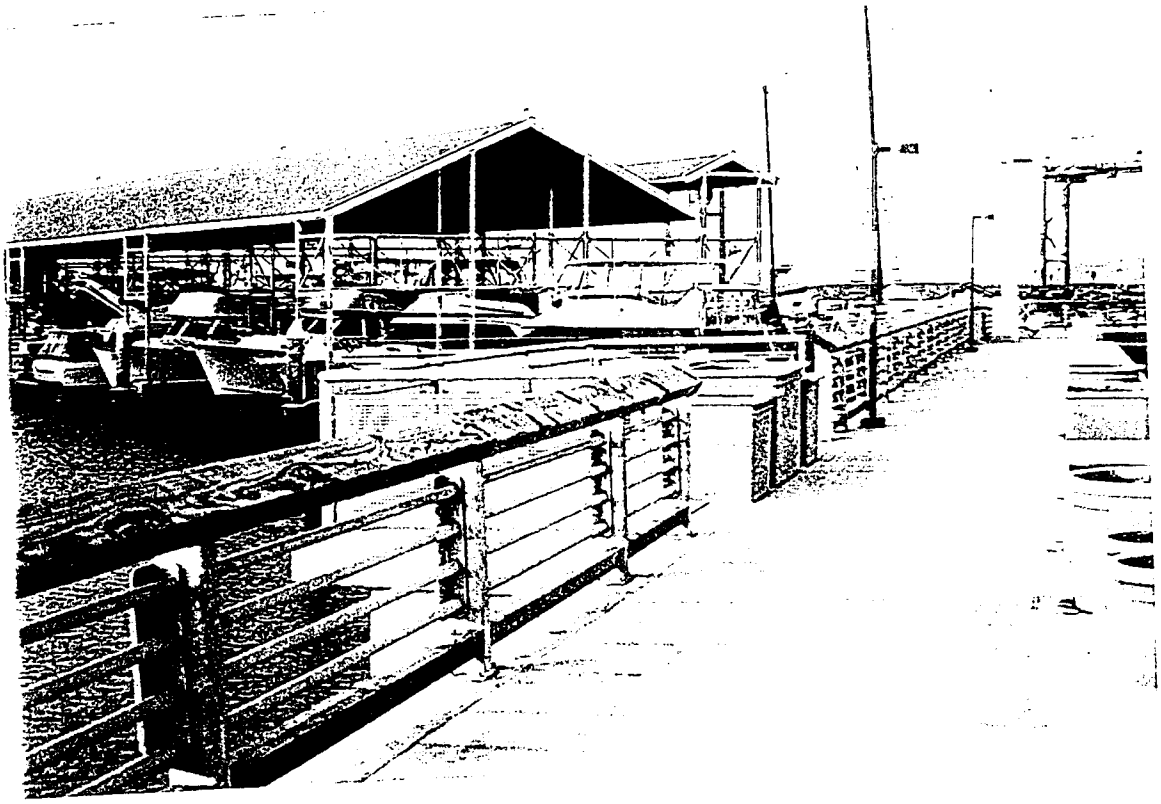
Mission Beach

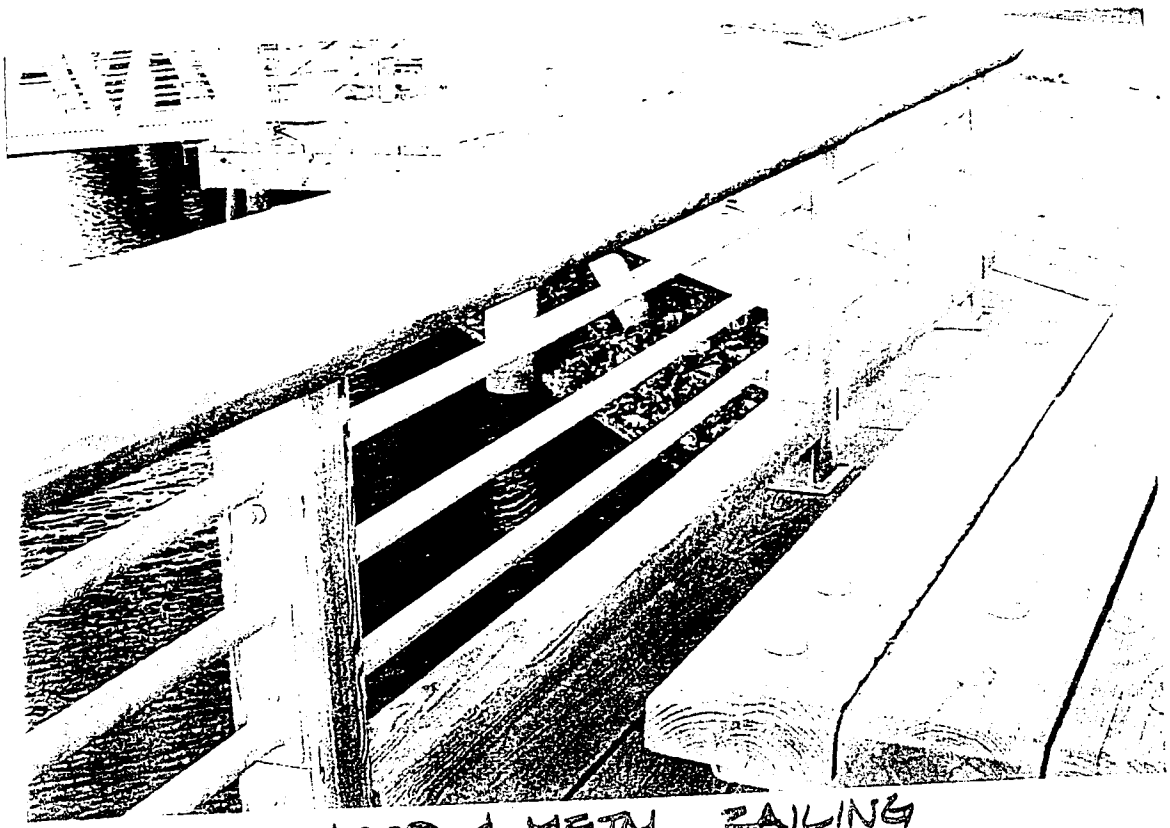
Located right on The Boardwalk, just steps from the sand and surf of Southern California's world famous Pacific Beach, **The Pacific Sands Motel** welcomes swimmers, surfers, sunbathers, families with children, international travelers and even a few four-legged types from time-to-time.

Click For more information

San Diego

2.





?

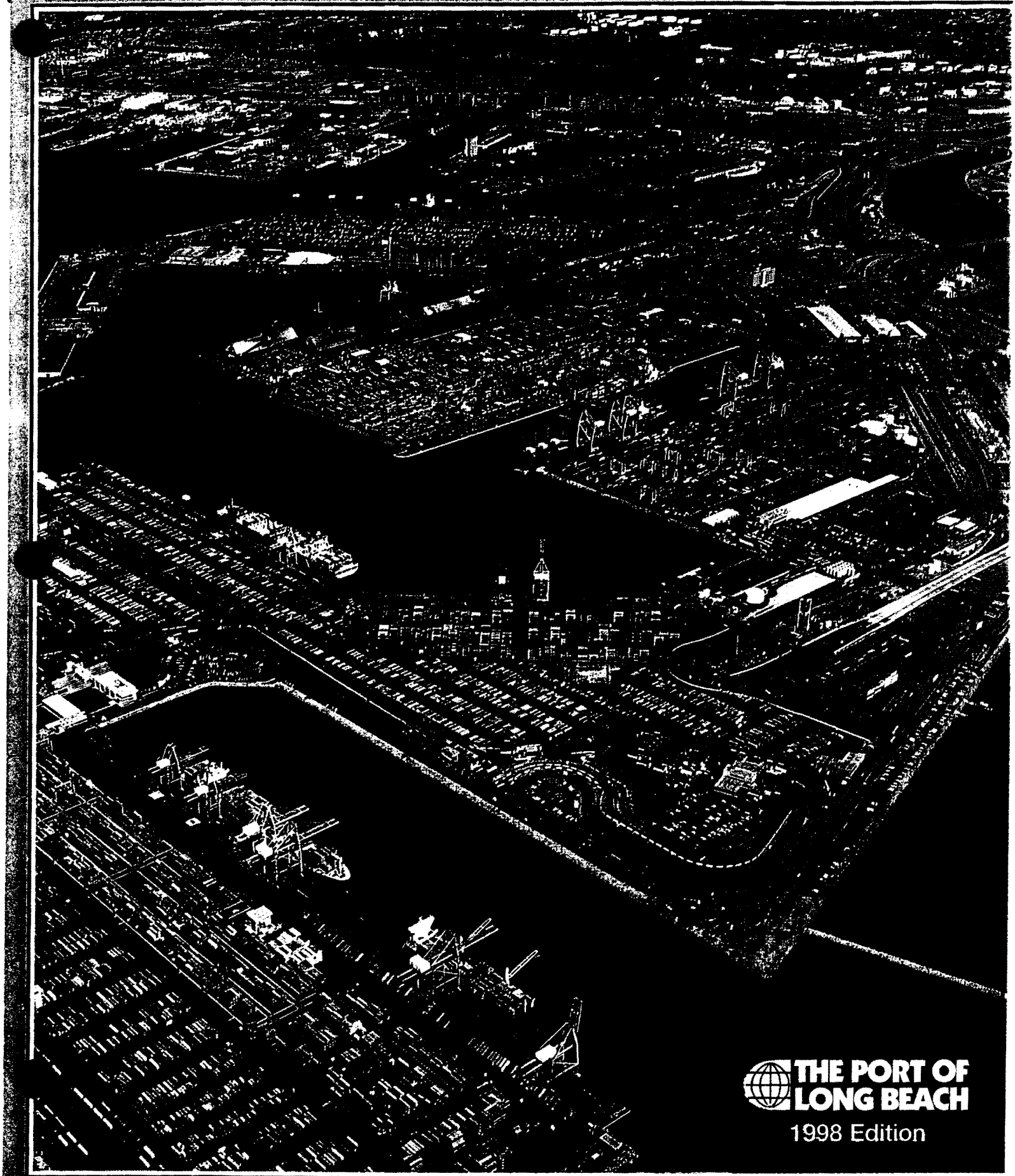
COMBINED WOOD & METAL RAILING
FOR BOARDWALK

(A)

MUNICIPAL PIER, CITY OF TACOMA, WA

Harbor Handbook

A DIGEST OF PORT FACILITIES AND SERVICES



THE PORT OF LONG BEACH

1998 Edition


THE PORT OF LONG BEACH
ANAHEIM ST
PIER B ST
9TH ST
TERMINAL
ISLAND
CARRACK AVE
CITY OF LOS ANGELES
CITY OF LONG BEACH
PIER A WAY
HENRY FORD AVE
PACIFIC AVE
SHORELINE DR
TRUCK GATES
U.S. COAST GUARD
SO. CALIF. EDISON
SEASIDE BLVD
PIER E
NEW DOCK ST
OCEAN BLVD
U.S. NAVAL SHIPYARD
PIER F AVE
PACIFIC AVE
HARBOR PLAZA
U.S. NAVAL STATION
LONG BEACH
NAVY MOLE
7TH ST
6TH ST
5TH ST
BROADWAY
WORLD TRADE CENTER
CITY HALL
OCEAN BLVD
CONVENTION CENTER
AQUARIUM
PIER J AVE EAST
Containerized Cargoes
Breakbulk / Neo-bulk Cargoes
Dry Bulk Cargoes
Petroleum / Liquid Bulk Cargoes

CONTAINERIZED CARGOES

Long Beach is the nation's leading containerport and consistently ranks among the top ten containerports in the world. The Port of Long Beach has more than 800 acres devoted to eight container-handling facilities. A total of 44 container cranes serve shipping lines from all parts of the world. Five of the terminals have on-dock rail facilities which handle double-stack intermodal shipments to and from all sections of the country.

PIER & BERTH LOCATION:	PIER A BERTHS A90-A94		PIER C BERTHS C60-C62		PIER E BERTHS E24-E26	
TERMINAL OPERATOR:	Hanjin Shipping Company 700 Hanjin Way Long Beach, CA 90813 (562) 951-2500 FAX: (562) 624-8732				California United Terminals 1200 Pier E St. Long Beach, CA 90802 (562) 435-8235 FAX: (562) 432-6430	
TOTAL TERMINAL AREA:	170 ac.	68.8 ha.	58.9 ac.	23.8 ha.	75 ac.	30.4 ha.
LENGTH OF BERTHS:	3,600 ft.	1,097 m	1,804 ft.	550 m	1,950 ft.	594 m
WHARF HEIGHT:	15.2 ft.	4.6 m	15 ft.	4.5 m	11.3-18.4 ft.	3.4-5.6 m
CRANE TRACK GAUGE:	100 ft.	30.4 m	100 ft.	30.4 m	50 ft.	15.2 m
CLEAR LIFT ABOVE WATER:	125 ft.	38.1 m	115 ft.	35 m	98-125 ft.	29.9-35.1 m
BOOM OUTREACH:	165 ft.	50.3 m	155 ft.	47.2 m	115-141 ft.	35.1-38.1 m
BACKREACH:	50 ft.	15.2 m	50 ft.	15.2 m	50 ft.	15.2 m
OPEN STORAGE AREA:	90 ac.	36.4 ha.	56.9 ac.	23.2 ha.	57.9 ac.	23.4 ha.
DESIGN DEPTH OF WATER:	50 ft.	15.2 m	45 ft.	13.7 m	48 ft.	14.6 m
CARGOES HANDLED:	General cargo in containers		General cargo in containers		General cargo in containers	
SPECIAL EQUIPMENT/FACILITIES:	On-dock railyard capable of simultaneously working two 8,000-foot-long stack trains. Six post-Panamax, Paceco-Mitsui container cranes. Main gate with 20 entry/exit lanes. 652 terminal reefer outlets. Storage for 18,000 TEU's.		Three 40-long-ton container cranes, 50 tons with cargo beam. 4,000 TEUs grounded capacity; 1,384 40-ft. chassis slots; 2,014 FEUs stacked and 114 spaces for reefer boxes.		Grounded and chassis operation. Two RO/RO ramps (11ft., 3.4 m), one stern ramp (13 ft, 4.0 m). Five 40-ton traveling container cranes, transtainers, top handlers, side handlers. Storage space for 14,400 TEUs grounded containers. 2,500 FEUs chassis slots, 400 reefer outlets. 11 lane main-gate and six scales. Rail spurs.	

PIER & BERTH LOCATION:	PIER F BERTHS F6-F10		PIER G BERTHS G227-G230		PIER J BERTHS J232-J234	
TERMINAL OPERATOR:	Long Beach Container Terminal, Inc. Pier F, Berths F6-F10 Long Beach, CA 90802 (562) 435-8585 FAX: (562) 437-1206 lbctop@oocl.com		Sea-Land Service, Inc. 669 Harbor Plaza Long Beach, CA 90802 (562) 432-7411 FAX: (562) 590-2025		International Transportation Service, Inc. 1281 Pier J Ave. Long Beach, CA 90802 (562) 435-7781 FAX: (562) 499-0496	
TOTAL TERMINAL AREA:	100 ac.	40.4 ha.	95 ac.	38.4 ha.	123 ac.	49.8 ha.
LENGTH OF BERTHS:	2,700 ft.	823 m	2,550 ft.	778 m	2,300 ft.	701 m
WHARF HEIGHT:	15 ft.	4.6 m	15.6 ft.	4.8 m	16 ft.	4.9 m
CRANE TRACK GAUGE:	100 ft.	30.4 m	100 ft.	30.4 m	50 & 100 ft.	15.2 & 30.4 m
CLEAR LIFT ABOVE WATER:	105 ft.	32 m	106 ft.	32.3 m	92-115 ft.	29.3-35 m
BOOM OUTREACH:	137 ft.	41.8 m	115-127 ft.	35-38.7 m	115-145 ft.	35-44.2 m
BACKREACH:	50 ft.	15.2 m	60 ft.	18.3 m	35-45 ft.	10.7-13.7 m
OPEN STORAGE AREA:	73.8 ac.	29.9 ha.	92 ac.	37.2 ha.	68.4 ac.	27.7 ha.
DESIGN DEPTH OF WATER:	50 ft.	15.2 m	42-44 ft.	12.8-13.4 m	36-42 ft.	11-12.8 m
CARGOES HANDLED:	General cargo in containers		General cargo in containers		General cargo in containers	
SPECIAL EQUIPMENT/FACILITIES:	Grounded and chassis operation. Five traveling container cranes of 40-long-ton capacity, 45 tons without spreader. Two transtainers, four-high stacking. 10,000 TEUs ground capacity, including 240 reefer outlets. 3,600 FEUs chassis slots, 504 FEU chassis stacked vertically. On-dock rail facility.		Grounded and chassis operation. Five 35-ton traveling container cranes. Storage capacity: 10,230 TEUs; 2,550 grounded; 5,900 chassis, including 482 reefer chassis spaces. Container freight station separate from terminal with 71,150 square feet (6,610 m^2). Four transtainers.		Grounded and chassis operation. Five 50-long-ton and three 40-long-ton container cranes. 11 40-long-ton and seven 30-long-ton capacity transtainers. Space for storing 12,800 TEUs on ground, including 384 reefer outlets. Wheeled: 307 20-foot units and 1,500 40-foot units. 4,000 TEUs chassis slots. Container freight station with 70,000 square feet (6,505m^2). On-dock rail facility.	

PIER & BERTH LOCATION:	PIER J BERTHS J243-J247		PIER J BERTHS J266-J270	
TERMINAL OPERATOR:	Pacific Container Terminal 1521 Harbor Scenic Dr. Berths J243-J247 Long Beach, CA 90802 (562) 435-0842 FAX: (562) 432-3834		Maersk Pacific, Ltd. Pier J, Berth J266 Long Beach, CA 90802 (562) 901-3500 FAX: (562) 590-9079 maerskline.com	
TOTAL TERMINAL AREA:	110 ac.	44.5 ha.	107 ac.	43.3 ha.
LENGTH OF BERTHS:	3,300 ft.	1,006 m	2,711 ft.	826 m
WHARF HEIGHT:	15.9 ft.	4.8 m	15 ft.	4.6 m
CRANE TRACK GAUGE:	50 ft.	15.2 m	50 ft. & 100 ft.	15.2 & 30.4 m
CLEAR LIFT ABOVE WATER:	91-106 ft.	27.7-32.3 m	106 ft.	32.3 m
BOOM OUTREACH:	115-125 ft.	35-38 m	115-150 ft.	35-45 m
BACKREACH:	50 ft.	15.2 m	50-75 ft.	15.2-22.8 m
OPEN STORAGE AREA:	57.4 ac.	23.2 ha.	64 ac.	25.9 ha.
DESIGN DEPTH OF WATER:	36.4-42 ft.	11-12.8 m	45 ft.	13.7 m
CARGOES HANDLED:	General cargo in containers		General cargo in containers	
SPECIAL EQUIPMENT/FACILITIES:	Grounded and chassis operation. Six traveling container cranes (three post-Panamax) with 40-ton capacity. Five 40-ton transtainers. Space for storing 3,001 wheeled imports, 6,088 TEUs of empty containers storage. 6,228 TEUs ground import storage. Complete reefer container service. Container and chassis repair with 685 wheeled reefer outlets. On-dock rail facility.		Grounded and chassis operation. Three 50-ton, two 40-ton and one 30-ton ship-to-shore cranes (three post-Panamax). Nine 40-ton, rubber-tired gantry cranes. 2,257 TEUs wheeled slots for containers. 70 of which are dual voltage 220/440v. On-dock, double-stack rail yard. 432 reefer outlets.	

BREAKBULK, NEO-BULK CARGOES

The Port maintains facilities that handle traditional breakbulk, neo-bulk and general cargoes. Automobiles, lumber, steel and newsprint are among the cargoes handled at various terminals in the Port. Specialized equipment helps move these cargoes to their final destinations both domestically and throughout the world.

PIER & BERTH LOCATION:	PIER B BERTHS B82, B83		PIER D BERTHS D28-D31		PIER D BERTH D34	
TERMINAL OPERATOR:	Toyota Logistics Services, Inc. 785 Edison Ave. Long Beach, CA 90813 (562) 437-6767 FAX: (562) 437-1477 kirk_welch@notes.toyota.com		California United Terminals 1200 Pier E St. Long Beach, CA 90802 (562) 435-8235 FAX: (562) 432-6430		California United Terminals 1200 Pier E St. Long Beach, CA 90802 (562) 435-8235 FAX: (562) 432-6430	
CARGOES HANDLED:	Automobiles		Breakbulk general		Breakbulk general and steel products	
TOTAL TERMINAL AREA:	177 ac.	71.6 ha.	15.6 ac.	6.3 ha.	15.6 ac.	6.3 ha.
LENGTH OF BERTHS:	1,300 ft.	396 m	1,985 ft.	605 m	927.4 ft.	282.6 m
WHARF HEIGHT:	14.6 ft.	4.5 m	11 ft.	3.4 m	13.8 ft.	4.2 m
WHARF AREA:	61,750 sq. ft.	5,737 m^2	89,325 sq. ft.	8.300.9 m^2	41,734.8 sq. ft.	3,878.3 m^2
APRON WIDTH:	95 ft.	30 m	45-130 ft.	13.7-39.6 m	45 ft.	13.7 m
OPEN STORAGE AREA:	110.9 ac.	44.8 ha.	6.6 ac.	2.7 ha.	.4 ac.	.2 ha.
LOADING PLATFORM AREA:	102,460 sq. ft.	9,518.4 m^2	6,000 sq. ft.	557 m^2	10,240 sq. ft..	951.3 m^2
DESIGN DEPTH OF WATER:	38 ft.	11.6 m	43-47 ft.	13.1-14.3 m	36 ft.	10.9 m
TRANSIT SHED AREA:	4,830,000 sq. ft.	448,884 m^2	N/A		66,715 sq. ft.	6,177 m^2
SPECIAL EQUIPMENT/FACILITIES:	Office building, processing buildings, body shop and car wash.		Stevedoring equipment. Heavy lift capability, rail spur, RO/RO capability.		Stevedoring equipment.	

PIER & BERTH LOCATION:	PIER D BERTHS D50-D54	PIER E BERTHS E12, E13	PIER E BERTHS E17, E18
TERMINAL OPERATOR:	Forest Terminals Pier D, Berth D50 Long Beach, CA 90802 (562) 432-5401 FAX: (562) 436-9870	California United Terminals 1200 Pier E St. Long Beach, CA 90802 (562) 435-8235 FAX: (562) 432-6430	California United Terminals 1200 Pier E St. Long Beach, CA 90802 (562) 435-8235 FAX: (562) 432-6430
CARGOES HANDLED:	Newsprint	Bananas, steel and rolling stock	Breakbulk general
TOTAL TERMINAL AREA:	13.8 ac. 5.6 ha.	20.4 ac. 8.3 ha.	9.7 ac. 3.9 ha.
LENGTH OF BERTHS:	2,200 ft. 677 m	2,696 ft. 821 m	1050 ft. 320 m
WHARF HEIGHT:	10.2-17.1 ft. 3.1-5.2 m	18.7-22.2 ft. 5.7-6.8 m	11.6-22.4 ft. 3.5-6.8 m
WHARF AREA:	63,645 sq. ft. 5,912 m²	108,462 sq. ft. 10,076 m²	43.050 sq. ft. 4,000.5 m²
APRON WIDTH:	30-38 ft. 9.1-11.6 m	45-200 ft. 13.7-61 m	41-51 ft. 12.5-15.5 m
OPEN STORAGE AREA:	6.9 ac. 2.8 ha.	4.3 ac. 1.7 ha.	20 ac. 8.1 ha.
LOADING PLATFORM AREA:	9,750 sq. ft. 906 m²	12,000 sq. ft. 1,115 m²	70,468 sq. ft. 6,546 m²
DESIGN DEPTH OF WATER:	36 ft. 11 m	32-36 ft. 9.7-11 m	37-42 ft. 11.2-12.8 m
TRANSIT SHED AREA:	494,800 sq. ft. 45,968 m²	180,000 sq. ft. 16,722 m²	N/A
SPECIAL EQUIPMENT/FACILITIES:	Specialized ships and barges designed for newsprint vacuum handling, loading and unloading. Vacuum lift truck on dock. Easy access to Long Beach Freeway. Minimum truck loading time.	Mobile cranes, forklifts, RO/RO ramp. Heavy lift capability.	Stevedoring equipment.

PIER & BERTH LOCATION:	PIER E BERTHS E20-E22	PIER F BERTHS F204, F205	PIER F BERTHS F206, F207
TERMINAL OPERATOR:	California United Terminals 1200 Pier E St. Long Beach, CA 90802 (562) 435-8235 FAX: (562) 432-6430	Cooper/T. Smith Stevedoring Co. Pier F, Berth F204 Long Beach, CA 90802 (562) 436-2259 FAX: (562) 590-0547 vinere@coopertsmith.com	Crescent Terminals Inc. Pier F, Berth F206 Long Beach, CA 90802 (562) 432-6477 FAX: (562) 436-7215 vwisnie@ssofa.com
CARGOES HANDLED:	Breakbulk general	Steel products, plywood and lumber	Steel products, plywood, lumber, project cargoes and large machi
TOTAL TERMINAL AREA:*	75ac. 30.4 ha.	19.7 ac. 8 ha.	22 ac. 8.9 ha.
LENGTH OF BERTHS:	2000 ft. 609.7 m	1,265 ft. 386 m	1,200 ft. 366 m
WHARF HEIGHT:	18 ft. 5.5 m	18.5 ft. 5.6 m	18.5 ft 5.6 m
WHARF AREA:	67,694sq. ft. 6,289 m²	130,000 sq. ft. 12,077 m²	57.500 sq. ft. 5,341 m²
APRON WIDTH:	45-130 ft. 13.7-39.6 m	50-150 ft. 15.2-45.7 m	48 ft. 14.6 m
OPEN STORAGE AREA:*	57.9 ac. 23.4 ha.	15.5 ac. 6.3 ha.	12.2 ac. 4.9 ha.
LOADING PLATFORM AREA:	27,000 sq. ft. 2,500 m²	9,000 sq. ft. 836 m²	13,800 sq. ft. 1,288 m²
DESIGN DEPTH OF WATER:	42 ft. 12.8 m	36 ft. 11 m	32 ft. 9.8 m
TRANSIT SHED AREA:	N/A	180,000 sq. ft. 16,722 m²	190,000 sq. ft. 17,651 m²
SPECIAL EQUIPMENT/FACILITIES:	Stevedoring equipment. *Shares space with Berths E24-E26	Terminal services. Rail served	Stevedoring equipment. Rail served.

PIER & BERTH LOCATION:	PIER T BERTH T118	PIER T BERTH T122	PIER T BERTH T122
TERMINAL OPERATOR:	Pacific Coast Recycling Co. 482 Pier T Ave. Berth 118 Long Beach, CA 90802 (562) 628-8100 FAX: (562) 628-8103	Fremont Forest Products Pier T, Berth T122 Long Beach, CA 90802 (562) 435-4839 FAX: (562) 696-8574	Weyerhaeuser Company 280 Pier T Ave. Long Beach, CA 90802 (562) 432-3373 FAX: (562) 432-8611
CARGOES HANDLED:	Recyclable metal and steel products	Lumber and lumber products	Lumber and lumber products
TOTAL TERMINAL AREA:	18.9 ac. 7.6 ha.	9 ac. 3.6 ha.	16 ac. 6.5 ha.
LENGTH OF BERTHS:	750 ft. 229 m	600 ft. 183 m	600 ft. 183 m
WHARF HEIGHT:	22 ft. 6.7 m	22.9 ft. 7 m	22.9 ft. 7 m
WHARF AREA:	52,000 sq. ft. 4,832 m²	48,000 sq. ft. 4,444 m²	48,000 sq. ft. 4,444 m²
APRON WIDTH:	65 ft. 19.8 m	40 ft. 12.2 m	40 ft. 12.2 m
OPEN STORAGE AREA:	13.5 ac. 5.5 ha.	7.7 ac. 3.1 ha.	9.9 ac. 4 ha.
LOADING PLATFORM AREA:	N/A	N/A	N/A
DESIGN DEPTH OF WATER:	36 ft. 11 m	32-35 ft. 9.7-10.6 m	32-35 ft. 9.7-10.6 m
TRANSIT SHED AREA:	N/A	15,000 sq. ft. 1,389 m²	N/A
SPECIAL EQUIPMENT/FACILITIES:	Dockside vessel loading crane. Rail served.	Three dry storage sheds. 150 ft. notched wharf to accommodate barges and lumber handling equipment. Notch height: -12.7 ft. (-3.9 m). Rail spur.	Storage located at Berths T115-116. 150 ft. notched wharf to accommodate barges and lumber handling equipment. Notch height: -12.7 ft. (-3.9 m).

DRY BULK CARGOES

The movement of dry bulk commodities through the Port of Long Beach for export to Asia, Europe and other destinations has traditionally been a major dollar-earner for the nation and has helped reduce the nation's trade imbalance.

Two dry bulk export terminals on Piers F and G can work three ships simultaneously. Coal, petroleum coke, sulfur and white products can be shipped through these terminals. A covered coal shed, capable of storing 175,000 metric tons of coal, permits the loading of ships entirely from dockside storage. Two bulk cement facilities also are located in the Port, one on Pier D and another on Pier F.

TERMINAL OPERATOR:	National Gypsum Co. 1850 Pier B St. Long Beach. CA 90813 (562) 435-4465 FAX: (562) 495-3922	Pacific Coast Cement Corp. 601 Pier D St. Long Beach, CA 90802 (562) 435-0195 FAX: (562) 432-0282	G-P Gypsum Corp. 1401 Pier D St. Long Beach, CA 90802 (562) 435-7094 FAX: (562) 432-5096
CARGOES HANDLED:	Bulk gypsum	Bulk cement	Bulk gypsum
TOTAL TERMINAL AREA:	19.9 ac. 8.1 ha.	2 ac. .8 ha.	10 ac. 4 ha.
LENGTH OF BERTHS:	650 ft. 198 m	1,100 ft. 335 m	640 ft. 195 m
WHARF HEIGHT:	14.6 ft. 4.5 m	13.8 ft. 4.2 m	17.2 ft. 5.2 m
STORAGE AREA:	1.5 ac. .6 ha.	N/A	N/A
DESIGN DEPTH OF WATER:	38 ft. 11.6 m	36 ft. 11 m	40 ft. 12.2 m
SPECIAL EQUIPMENT/FACILITIES:	Adjustable, elevated receiving hopper served by an elevated electric belt conveyor system extending to a 40,000-ton capacity storage building. 800-900 tons per hour capacity.	Silo capacity: 50,000 tons. screw type unloader capacity: 600-800 tons per hour. Unloads to conveyor system directly to silos. Highest elevated vertical screw: 70 feet. Maximum reach: 94 feet from face of wharf (concrete); 91.5 feet from PHL.	Rail served.

DRY BULK CARGOES

PIER & BERTH LOCATION	PIER F, BERTH F208	PIER F, BERTH F210	PIER F, BERTH F211
TERMINAL OPERATOR:	MCC-Lucky Cement Co. Pier F, Berth F208 Long Beach, CA 90802 (562) 495-0600 FAX: (562) 495-5929	Morton Salt Co. 1050 Pier F Ave. Long Beach, CA 90802 (562) 437-0071 FAX: (562) 437-2451	Koch Carbon, Inc. Pier F, Berth F211 Long Beach, CA 90802 (562) 436-4680 FAX: (562) 432-7166 koerpere@kochind.com
CARGOES HANDLED:	Bulk cement	Bulk salt	Petroleum coke
TOTAL TERMINAL AREA:	4.2 ac. 1.7 ha.	5.1 ac. 2.1 ha.	12.8 ac. 5.2 ha.
LENGTH OF BERTHS:	420 ft. 128 m	1,100 ft. 335 m	1,100 ft. 335 m
WHARF HEIGHT:	18.9 ft. 5.8 m	19 ft. 5.8 m	19.3 ft. 5.9 m
STORAGE AREA:	N/A	2.7 ac. 1.1 ha.	6.7 ac. 2.7 ha.
DESIGN DEPTH OF WATER:	40 ft. 12.2 m	40 ft. 12.2 m	40 ft. 12.2 m
SPECIAL EQUIPMENT/FACILITIES:	Kovako - B. V. vacuum discharge system. Maximum outreach: 45 meters; unloading capacity: 800 tons per hour. Covered storage: 50,000 sq. ft.; 58,000 ton capacity.	Movable incline, elevated electric belt conveyor system with receiving hopper extending from wharf to stockpile area. Packaging plant adjacent. Rail served.	Receipt, storage, blending and vessel loading of petroleum coke. Terminal services for exporting and importing of prilled sulfur and other bulk materials.

TERMINAL OPERATOR:	Metropolitan Stevedore Co. 1045 Pier G Ave. Berths G212-G215 Long Beach, CA 90802 (562) 983-8400 FAX: (562) 983-8520 www.metsteco.com
CARGOES HANDLED:	Petroleum coke, coal, potash, borax, soda ash, concentrates and prilled sulfur
TOTAL TERMINAL AREA:	22.9 ac. 9.3 ha.
LENGTH OF BERTHS:	2,110 ft. 643 m
WHARF HEIGHT:	18.5-18.8 ft. 5.6-5.7 m
STORAGE AREA:	18 ac. 7.2 ha.
DESIGN DEPTH OF WATER:	50 ft. 15.2 m
SPECIAL EQUIPMENT/FACILITIES:	Two electric traveling bulk shiploaders. **Loader #1** Outreach: 56 ft. (17.7 m) Clear height: 47.7 ft. (14.5 m) Traveling distance: 1,800 ft. (548.6 m) Designed capacity: 3,500 tons/hour Actual: 1,500-2,000 tons/hr. Working hours: 16-hrs/day **Loader #2** Outreach: 79 ft. (24.1 m) Clear height: 64 ft. (19.5 m) Traveling distance: 700 ft. (213.4 m) Designed capacity: 5,000 tons/hr. Actual: 2,500-3,000 tons/hr. Working hours: 16-hrs/day. **Rail facilities:** Two 100-car unit trains can be accommodated while waiting movement to dump sites. One rotary and three bottom-dump systems. Bulk materials are handled by 48-inch (1.2 m) and 72-inch (1.9 m) belt conveyor systems extended to shiploader through tunnel from storage facilities. **Storage capacity:** 675,000 tons

LIQUID BULK CARGOES

For more than a quarter-century, the Port of Long Beach has provided the deepest dredged main channel in the United States – minus 76 feet at mean low water. The majority of the liquid bulk terminals handle crude oil and liquid petroleum products, the Port's leading tonnage commodities. Tallow and food oils, as well as liquid chemicals, are discharged at other Port facilities.

PIER & BERTH LOCATION:	PIER B BERTHS B76-B78	PIER B BERTHS B82, B83	PIER B BERTHS B84-B87
TERMINAL OPERATOR:	ARCO Terminal Services Corp. 1350 Pier B St. Long Beach, CA 90813 (562) 499-2210 FAX: (562) 499-2301	Petro-Diamond Terminal Co. 1920 Lugger Way Long Beach, CA 90813 (562) 435-8364 FAX: (562) 491-5407	Texaco Refining and Marketing 2101 E. Pacific Coast Highway Wilmington, CA 90744 (310) 522-6000 FAX: (310) 522-6019
CARGOES HANDLED:	Petroleum products: Gasoline, blending stocks, MTBE, diesel, naptha jet fuel, nonenes tetramers, fuel oils, carbon black and crude oil	Gasoline, gasoline blend stocks, diesel, toluene, MTBE and lube oil	Crude oil, petroleum products and bunker fuel
TOTAL TERMINAL AREA:	19.9 ac. 8.1 ha.	5.7 ac. 2.3 ha.	10.7 ac. 4.3 ha.
LENGTH OF BERTHS:	2,192 ft. 668 m	1,060 ft. 323 m	1,980 ft. 604 m
WHARF HEIGHT:	14.4 ft. 4.4 m	14.4 ft. 4.4 m	16.8 ft. 5.1 m
DESIGN DEPTH OF WATER:	46 ft. 14 m	38 ft. 11.6 m	52 ft. 15.8 m
SPECIAL EQUIPMENT/FACILITIES:	Capacity for storage: 1,800,000 BBLS. Terminal has several pipeline connections to other companies. Loading arms on dock are eight-inch Chiksan and are capable of loading rates of 10,000 to 15,000 BBLS per hour. Three vessels can be loaded or discharged simultaneously.	Terminal has pipeline connections which allow petroleum products to be shipped to most L.A. Basin refiners and common carrier pipelines. One eight-inch dock hose connecting into one of two 500-foot, 12-inch dock lines capable of receiving up to 7,500 BBLS per hour. Truck rack at the terminal is capable of loading 100 trucks per twenty-four hour period. Permits are available for DSP and bonded storage. Capacity for	Discharge capacity: 32,000 BBLS per hour: 24-inch pipeline to storage and tank farm. Storage capacity: 245,000 BBLS.

LIQUID BULK

PIER & BERTH LOCATION:	PIER D BERTHS D30-D31	PIER F BERTH F211	PIER J BERTH J242
TERMINAL OPERATOR:	Baker Commodities, Inc. Pier D, Berth D30 Long Beach, CA 90802 (562) 436-1137 FAX: (562) 436-2355	Chemoil Marine Terminal 1004 Pier F Ave. Berths F209 & G211A Long Beach, CA 90802 (562) 901-1960 FAX: (562) 901-1964	Westway Terminal Co. 1395 Pier J Ave. Berth J242 Long Beach, CA 90802 (562) 435-5623 FAX: (562) 590-8101 www.westwayterminal.com
CARGOES HANDLED:	Tallow and vegetable oils (coconut, palm and cottonseed oil)	Petroleum products and bunker fuel	Miscellaneous bulk liquid chemicals
TOTAL TERMINAL AREA:	1.2 ac. .5 ha.	6.2 ac. 2.5 ha.	4.5 ac. 1.8 ha.
LENGTH OF BERTHS:	1,480 ft. 451 m	1,630 ft. 496 m	700 ft. 213.4 m
WHARF HEIGHT:	19.5 ft. 5.9 m	19.1 ft. 5.8 m	15 ft. 4.6 m
DESIGN DEPTH OF WATER:	43 ft. 13 m	40 ft. 12.2 m	36 ft. 11 m
SPECIAL EQUIPMENT/FACILITIES:	Two, six-inch pipelines from Berth D-30 to storage tanks. Storage capacity: 6.7 million gallons. Three 10-inch pipelines from Berth D-32 to storage tanks. Rail served.	Storage capacity: 425,000 BBLS. Pipeline system to handle ships, barges, trucks and railcars. Pipeline connection to Carson tank farm, which supplies petroleum products to most L.A. Basin refiners and terminals. Rail served.	Pumping and pipeline system designed to handle product from barges, ships, railcars and trucks. Heavy duty pumps to handle a variety of bulk liquids. Storage tank capacity: 5.2 million gallons. Rail served.

PIER & BERTH LOCATION:	PIER S BERTH S101	PIER T BERTH T121
TERMINAL OPERATOR:	Dow Chemical Co. 305 Henry Ford Ave. San Pedro, CA 90731 (310) 224-5374 FAX: (310) 831-3213	ARCO Pipeline Co. 5900 Cherry Ave. Long Beach, CA 90805-4454 (562) 728-2000 FAX: (562) 728-2065 ztcdth@is.arco.com
CARGOES HANDLED:	Miscellaneous bulk liquid chemicals	Crude oil and petroleum products
TOTAL TERMINAL AREA:	10 ac. 4 ha.	11.7 ac. 4.7 ha.
LENGTH OF BERTHS:	700 ft. 213.4 m	1,250 ft. 381 m
WHARF HEIGHT:	15.5 ft. 4.7 m	20 ft. 6.1 m
DESIGN DEPTH OF WATER:	36 ft. 11 m	76 ft. 22.4 m
SPECIAL EQUIPMENT/FACILITIES:	Dedicated pump and piping systems to transfer products to and from ships, barges, railcars and tank trucks. Storage capacity: 15 million gallons. Rail served.	Four 16-inch diameter articulated crude unloading arms and one, eight-inch diameter articulated bunker/diesel loading arm; 275 psi max. working pressure; designed to accommodate tankers from 50,000 to 265,000 dwt; arms are FMC Chiksan with hydraulic couplings. Storage tankage available at ARCO facilities in Carson and the inner harbor via 42-inch and 24-inch pipelines.

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