CALIFORNIA COASTAL COMMISSION
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Staff:	Charles Posner - LB
Staff Report:	8/22/2012
Hearing Date:	September 12-14, 2012
Commission Action:	

STAFF REPORT: CONSENT CALENDAR

Application Number:	**5-12-057**
Applicant:	**City of Long Beach Water Department**
Agent:	Christopher Pincherli, Senior Program Manager
Project Locations (3):	1) In the Alamitos Bay entrance channel, between the terminus of East Ocean Boulevard and Alamitos Landing; 2) In Naples Canal, adjacent to 5575 Naples Canal; and 3) Along the northern side of 2nd Street at the intersection of Shopkeeper Road, City of Long Beach, Los Angeles Co.
Project Description:	Installation of sacrificial anodes for cathodic protection of existing water pipelines, at one underground location and two underwater locations.
Staff Recommendation:	**Approval with conditions**

SUMMARY OF STAFF RECOMMENDATION

Staff is recommending that the Commission **approve** a coastal development permit for the proposed development with special conditions relating to protection of water quality and marine resources, public access along the shoreline, permit compliance, and assumption of risk. The applicant agrees with the recommendation. **See Page Two for the Motion to approve the permit application.**

TABLE OF CONTENTS

I. MOTION AND RESOLUTION……..…..……..……2
II. STANDARD CONDITIONS…….……..…..……3
III. SPECIAL CONDITIONS…….……..……3
IV. FINDINGS AND DECLARATIONS……...…..…6
A. PROJECT DESCRIPTION……...……6
B. MARINE RESOURCES AND WATER QUALITY..…….……7
C. PUBLIC ACCESS……..9
D. LOCAL COASTAL PROGRAM……9
E. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)……...……..9

APPENDIX A - Substantive File Documents..……..……...…….……10

EXHIBITS

Exhibit 1 – City of Long Beach, CA Map
Exhibit 2 – Project Location Map
Exhibit 3 – Anode Product Sheet
Exhibit 4 – Project Sites: CP1, CP3 & CP5
Exhibit 5 – CP1 Site Plan, Section and Details
Exhibit 6 – CP3 Site Plan and Section
Exhibit 7 – CP5 Site Plan, Section and Details

I. MOTION AND RESOLUTION

Motion: *"I move that the Commission **approve** the coastal development permit applications included on the consent calendar in accordance with the staff recommendations."*

Staff recommends a **YES** vote. Passage of this motion will result in approval of all the permits included on the consent calendar. An affirmative vote by a majority of the Commissioners present is needed to pass the motion.

Resolution:

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 and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions 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

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment.** 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 period of time. Application for extension of the permit must be made prior to the expiration date.

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

4. **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.

5. **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.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Eelgrass Survey and Mitigation Plan for Sites CP1 and CP3**

   A. Pre-Construction Eelgrass Survey. Prior to commencement of any disturbance of the intertidal or subtidal areas authorized under this coastal development permit, a valid pre-construction eelgrass (*Zostera marina*) survey shall be completed during the period of active growth of eelgrass (typically March through October). The pre-construction survey shall be completed prior to the beginning of dredging and pier construction and shall be valid until the next period of active growth. The survey shall be prepared in full compliance with the "Southern California Eelgrass Mitigation Policy" Revision 8 (except as modified by this special condition) adopted by the National Marine Fisheries Service and shall be prepared in consultation with the California Department of Fish and Game. The permittee shall submit the eelgrass survey for the review and approval of the Executive Director within five (5) business days of completion of each eelgrass survey and in any event no later than fifteen (15) business days prior to commencement of any disturbance of the lagoon intertidal or subtidal areas.

   B. Post-Construction Eelgrass Survey. If any eelgrass is identified in the project area by the survey required in Section A of this condition above, within one month after the conclusion of construction, the permittee shall survey the project site to determine if any eelgrass was adversely impacted. The survey shall be prepared in full compliance with the "Southern

California Eelgrass Mitigation Policy" Revision 8 (except as modified by this special condition) adopted by the National Marine Fisheries Service and shall be prepared in consultation with the California Department of Fish and Game. The permittee shall submit the post-construction eelgrass survey for the review and approval of the Executive Director within thirty (30) days after completion of the survey. If any eelgrass has been impacted, the permittee shall replace the impacted eelgrass at a minimum 1.2:1 ratio on-site, or at an approved location in Alamitos Bay, in accordance with the Southern California Eelgrass Mitigation Policy. All impacts to eelgrass habitat shall be mitigated at a minimum ratio of 1.2:1 (mitigation:impact). The exceptions to the required 1.2:1 mitigation ratio found within SCEMP shall not apply. Implementation of mitigation shall require an amendment to this permit or a new coastal development permit unless the Executive Director determines that no amendment or new permit is required.

2. **Caulerpa Taxifolia (Toxic Algae) Pre-Construction Survey for Sites CP1 and CP3**

A. Not earlier than ninety days nor later than thirty days prior to commencement or re-commencement of any disturbance of the intertidal or subtidal areas authorized under this coastal development permit, the permittee shall undertake a survey of the project area and a buffer area at least ten meters beyond the project area to determine the presence of the invasive alga *Caulerpa taxifolia*. The survey shall include a visual examination of the substrate.

B. The survey protocol shall be prepared in consultation with the Regional Water Quality Control Board, the California Department of Fish and Game, and the National Marine Fisheries Service.

C. Within five business days of completion of the survey, the permittee shall submit the survey for the review and approval of the Executive Director; and to the Surveillance Subcommittee of the Southern California Caulerpa Action Team (SCCAT). The SCCAT Surveillance Subcommittee may be contacted through William Paznokas, California Department of Fish & Game (858/467-4218) or Robert Hoffman, National Marine Fisheries Service (562/980-4043).

D. If *Caulerpa taxifolia* is found within the project or buffer areas, the permittee shall not proceed with the project until 1) the permittee provides evidence to the Executive Director that all *C. taxifolia* discovered within the project and/or buffer area has been eliminated in a manner that complies with all applicable governmental approval requirements, including but not limited to those of the California Coastal Act, or 2) the permittee has revised the project to avoid any contact with *C. taxifolia*. No revisions to the project shall occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

3. **Construction Responsibilities.** By acceptance of this permit, the permittee agrees to implement the proposed construction best management practices (BMPs) listed below:

A. No construction materials, equipment, debris, or waste will be placed or stored where it may be subject to wave, wind, or rain erosion and dispersion.
B. Machinery or construction materials not essential for project improvements are prohibited at all times in the subtidal or intertidal zones.
C. Divers will recover buoyant and non-buoyant debris discharged into coastal waters as soon as possible after loss.

D. Erosion control/sedimentation Best Management Practices (BMPs) shall be used to control sedimentation impacts to coastal waters during construction. BMPs shall include, but are not limited to: placement of sand bags around drainage inlets to prevent runoff/sediment transport into the bay and a pre-construction meeting to review procedural and BMP guidelines.
E. Any and all construction material and debris shall be removed from the site within two days of completion of construction and disposed of at an appropriate location. If the disposal site is located within the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place.
F. At the end of the construction period, the permittee shall inspect the project area and ensure that no debris, trash or construction material has been left on the shore or in the water, and that the project has not created any hazard to navigation.

4. **Public Access To and Along the Waterway.** The permittee and the development shall not interfere with public access along the shoreline in the project area, except for the temporary disruptions that may occur during the completion of the permitted development.

5. **Resource Agencies.** The permittee shall comply with all requirements, requests and mitigation measures from the California Department of Fish and Game, Regional Water Quality Control Board, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service with respect to preservation and protection of water quality and marine environment. Any change in the approved project that may be required by the above-stated agencies shall be submitted to the Executive Director in order to determine if the proposed change shall require a permit amendment pursuant to the requirements of the Coastal Act and the California Code of Regulations.

6. **Permit Compliance.** All development must occur in strict compliance with the proposal as set forth in the application, subject to any special conditions. Any deviation from the approved plans must be submitted for review by the Executive Director to determine whether an amendment to this coastal development permit is required.

7. **Assumption of Risk.** By acceptance of this coastal development permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from waves, storm waves, flooding and erosion; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

IV. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

The applicant (City of Long Beach Water Department) proposes to install sacrificial anodes for cathodic protection of existing water pipes in three locations (one underground and two underwater) within the Commission's permit jurisdiction. Anodes have been installed throughout the City of Long Beach to protect existing water pipes from corrosion, but the proposed project involves three locations within the Commission's permit jurisdiction. The City of Long Beach issued Local Coastal Development Permit No. 1202-17 in April 2012 for the anodes placed within the City's permit jurisdiction.

The three project locations in the City of Long Beach are: 1) in the Alamitos Bay entrance channel, between Alamitos Landing and the terminus of East Ocean Boulevard (CP1), 2) in Naples Canal, adjacent to 5575 Naples Canal (CP3), and 3) along the northern side of 2nd Street, at intersection of Shopkeeper Road (CP5) (See Exhibits). The proposed project at each location is described below.

CP1 is the portion of the proposed project situated in the Alamitos Bay entrance channel, between Alamitos Landing and the terminus of East Ocean Boulevard (Exhibit #5). In this location, two pairs of eight-foot long (96"x 6.5"x 6.5") aluminum anodes are proposed to be placed underwater next to the existing water pipeline that traverses the waterway. Each pair of anodes will be attached to a steel frame (sled) that will be lowered into the water by a crane, and set onto the ocean floor by divers, at least fifty feet from the riprap shorelines. The water depth in the channel is approximately 15-to-20 feet deep, depending on the tide. One sled will be placed near the western bank of the channel, and the other sled will be placed near the eastern bank of the 500-foot wide channel. The installation of the CP1 anodes will take one day. Over time (about fifty years), the anodes and the steel frames on which they rest, will corrode and be dissolved by seawater (instead of the water pipe being protected by the sacrificial anodes). The proposed project also includes the attachment of wires between the anodes, the water pipe, and two 10"x 8"x 6" junction box/test stations.

CP3 is the portion of the proposed project situated in Naples Canal (Exhibit #6). In this location, two one-foot long (12"x 10"x 10") aluminum anodes are proposed to be placed underwater next to the existing water pipeline that traverses the waterway. Each anode will be set onto the canal bottom, one on each side, near the canal's vertical concrete seawalls. The proposed project also includes the placement of two small twelve-inch diameter junction box/test stations in the adjacent sidewalk (below grade), and the attachment of wires between the anodes, the water pipe, and the junction box/test stations. Two four-foot tall posts proposed to support new junction box/test stations have been deleted from the project.

CP5 is the portion of the proposed project situated along the northern side of 2nd Street, at intersection of Shopkeeper Road, in the vicinity of the Los Cerritos Wetlands (Exhibit #7). In this case, the proposed project involves burying eighteen five-foot long (60"x 7"x 7") aluminum anodes underground next to the existing water pipeline that runs along the northern side of the 2nd Street public right-of-way. The anode bed will be installed in a six-foot deep, 180-foot long trench, to be dug along the shoulder of the street (within five feet of the curb). There will be no stockpiling of fill since the trench will be dug and filled in sequence, two segments at a time. The excavated soil from one segment will be used to fill the prior segment of the trench (the soil from the first segment will be stored in a truck). The proposed trench is situated at least ten feet away from any potential wetland that may exist below the shoulder of the road. The applicants will implement a traffic control plan in order to minimize congestion on 2nd

Street during construction. The CP5 portion of the proposed project will take about three days to complete, with work occurring only between the hours of 9:30 AM and 3 PM to minimize traffic delays.

B. MARINE RESOURCES AND WATER QUALITY

Section 30230 of the Coastal Act states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30240 of the Coastal Act states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.*

Section 30233(a)(4) of the Coastal Act states:

> *(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: (4) 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.*

Sections 30230, 30231 and 30240 of the Coastal Act require the protection of water quality, biological resources and environmentally sensitive habitat areas. The proposed project will be occurring in coastal waters of a developed area (Alamitos Bay) that is heavily used by the public. Due to the project's location it is necessary to ensure that construction activities will be carried out in a manner that will not adversely affect recreation, water quality or marine resources.

Under Section 30233 of the Coastal Act, fill of open coastal waters is only allowed when several criteria are met, including: a) the project must fall within one of the allowable use categories specified; b) the proposed project must be the least environmentally damaging alternative; and c) feasible mitigation measures to minimize adverse environmental effects must be provided. The proposed project meets the first criteria (allowable use) because the proposed anodes (the fill) are necessary to protect existing public waterlines from corrosion and destruction (an incidental public service purpose). Therefore, the proposed project is an allowable use under Section 30233(a)(4) of the Coastal Act.

Next, the proposed project must be the least environmentally damaging alternative. The proposed project involves the minimal amount of underwater disturbance, a small number of anodes (six total underwater), and no significant adverse impacts. The California Department of Fish and Game (Loni Adams, Environmental Scientist) has reviewed the proposed project and has no objections, as long as the applicant complies with the requirement to implement best management practices to minimize adverse impacts to marine resources.[1]

Eelgrass beds are known to exist throughout the shallower waters of Alamitos Bay [Eelgrass Field Survey, Impact Assessment, and Mitigation Plan for the Alamitos Bay Marina Renovation Project, Long Beach, by Coastal Resources Management, Inc., December 15, 2007, revised October 1, 2009]. The applicants have not provided eelgrass surveys for the two underwater project sites within Alamitos Bay (CP1 and CP3). The applicants assert that the anodes can be placed on the bay bottom without any disturbance. However, the proposed placement of two 12”x 10”x 10” aluminum anodes in Naples Canal (CP3) could displace approximately two square feet of eelgrass, if the anodes are not carefully placed to avoid eelgrass. The two anode sleds proposed to be placed in the Alamitos Bay entrance channel could displace up to eighteen square feet of eelgrass, although the deeper water in this location (at least fifteen feet deep) makes it unlikely that any eelgrass beds would be disturbed at CP1.

In any case, the proposed project is required to mitigate any impacts to eelgrass beds, if such impacts occur. **Special Condition One** requires that a pre-construction eelgrass survey and a post-construction eelgrass survey be conducted in order to determine how much, if any, eelgrass was affected by the proposed project. As conditioned, any adverse effects to eelgrass will be mitigated in accordance with the Southern California Eelgrass Mitigation Policy. Implementation of any mitigation shall require an amendment to this permit or a new coastal development permit unless the Executive Director determines that no amendment or new permit is required.

Special Condition Two requires a pre-construction survey of the project sites for the invasive aquatic algae, *Caulerpa taxifolia*. This condition is necessary in order for the project to avoid contributing to the dispersal of *Caulerpa taxifolia*, even though the invasive algae have not been found in Alamitos Bay.

The proposed work will be occurring on, within, or adjacent to coastal waters. The storage or placement of construction material, debris, or waste in a location where it could be discharged into coastal waters would result in an adverse effect on the marine environment. To reduce the potential for construction related impacts on water quality, the Commission imposes **Special Condition Three** requiring, but not limited to, the appropriate storage and handling of construction equipment and materials to minimize the potential of pollutants to enter coastal waters. **Special Condition Three** requires the permittee to implement construction best management practices (BMPs) to protect water quality. Only as conditioned is the proposed project consistent with the marine resource sections of the Coastal Act.

[1] Email from Loni Adams to Christopher Pincherli dated July 11, 2012.

Special Condition Five requires the permittee to comply with all requirements, requests and mitigation measures from the California Department of Fish and Game, Regional Water Quality Control Board, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service with respect to preservation and protection of water quality and marine environment.

The proposed development is necessary to protect existing public waterlines from corrosion and destruction (an incidental public service purpose). The permit is conditioned to protect marine resources and mitigate the identified impacts. Therefore, the proposed project is consistent with the marine resource policies of the Coastal Act.

C. PUBLIC ACCESS

The public currently has unrestricted access along the shoreline at the project sites. **Special Condition Four** prohibits the development from interfering with public access along the shoreline in the project areas, except for the temporary disruptions that may occur during the completion of the permitted development. As conditioned, the proposed development will not have any new adverse impact on public access to the coast or to nearby recreational facilities. Thus, as conditioned, the proposed development conforms with Sections 30210 through 30214, Sections 30220 through 30224, and 30252 of the Coastal Act.

D. LOCAL COASTAL PROGRAM

A coastal development permit is required from the Commission for the proposed development because it is located within the Commission's area of original jurisdiction. The Commission's standard of review for the proposed development is the Chapter 3 policies of the Coastal Act. The City of Long Beach certified LCP is advisory in nature and may provide guidance. The Commission certified the City of Long Beach LCP on July 22, 1980. As conditioned, the proposed development is consistent with Chapter 3 of the Coastal Act and with the certified LCP for the area.

E. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the California Code of Regulations requires Commission approval of coastal development permit application 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). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The City of Long Beach is the lead agency for the purposes of California Environmental Quality Act review of the proposed project. On March 14, 2012, the City of Long Beach issued CEQA Categorical Exemption No. CE-12-009 for the proposed cathodic protection system in accordance with State CEQA Guidelines Section 15301, Class 13 (Repair and Maintenance of existing facilities).

Furthermore, the proposed project has been conditioned in order to be found consistent with the Chapter 3 policies of the Coastal Act. As conditioned, there are no feasible alternatives or additional feasible mitigation measures available which would substantially lessen any significant adverse effect which the

activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally damaging feasible alternative and complies with the applicable requirements of the Coastal Act to conform to CEQA.

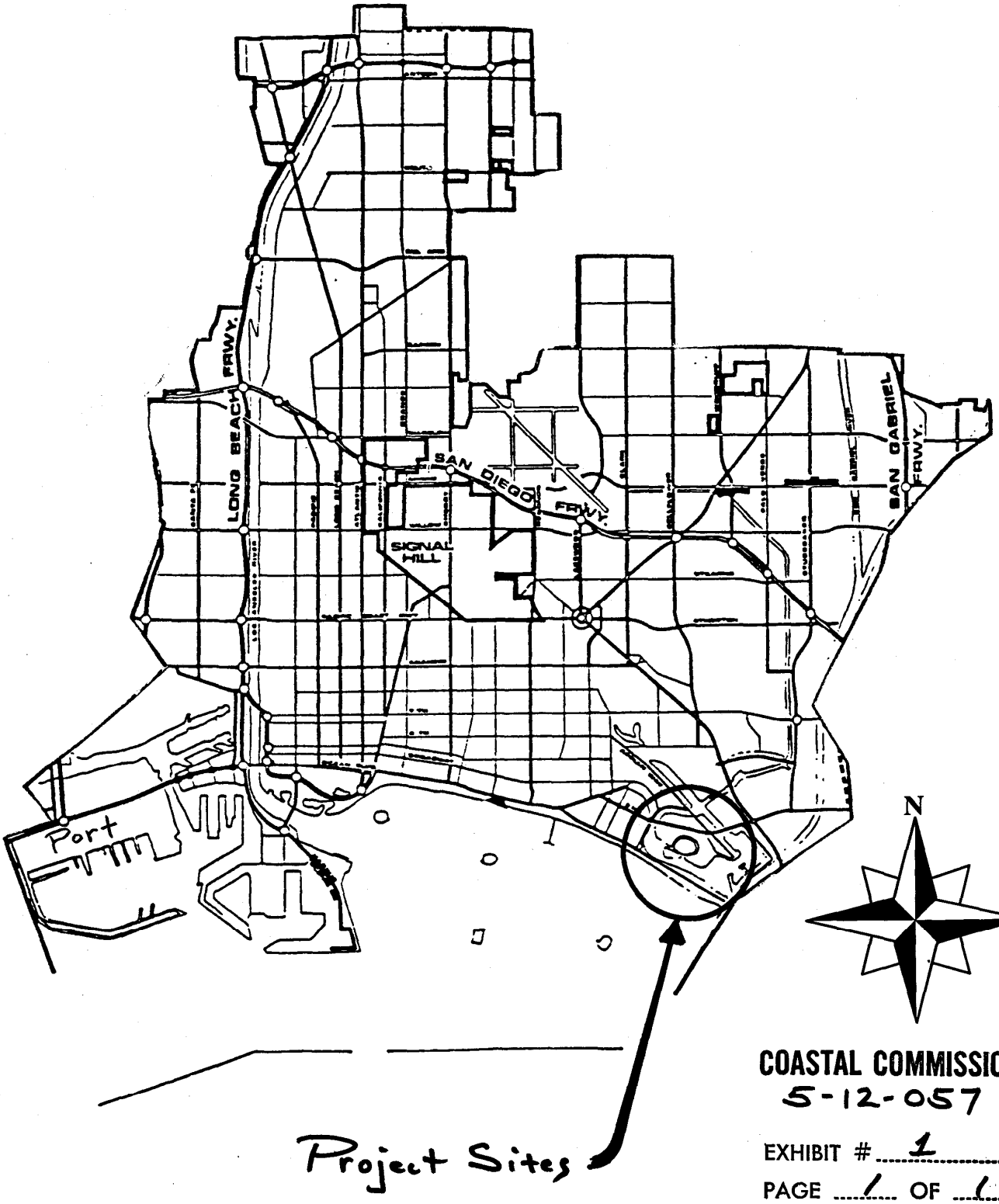
Appendix A - Substantive File Documents

1. City of Long Beach Certified Local Coastal Program (LCP), 7/22/80.

2. Local Coastal Development Permit No. 1202-17 (Long Beach Water Dept.).

3. Eelgrass Field Survey, Impact Assessment, and Mitigation Plan for the Alamitos Bay Marina Renovation Project, Long Beach, by Coastal Resources Management, Inc., December 15, 2007, revised October 1, 2009.

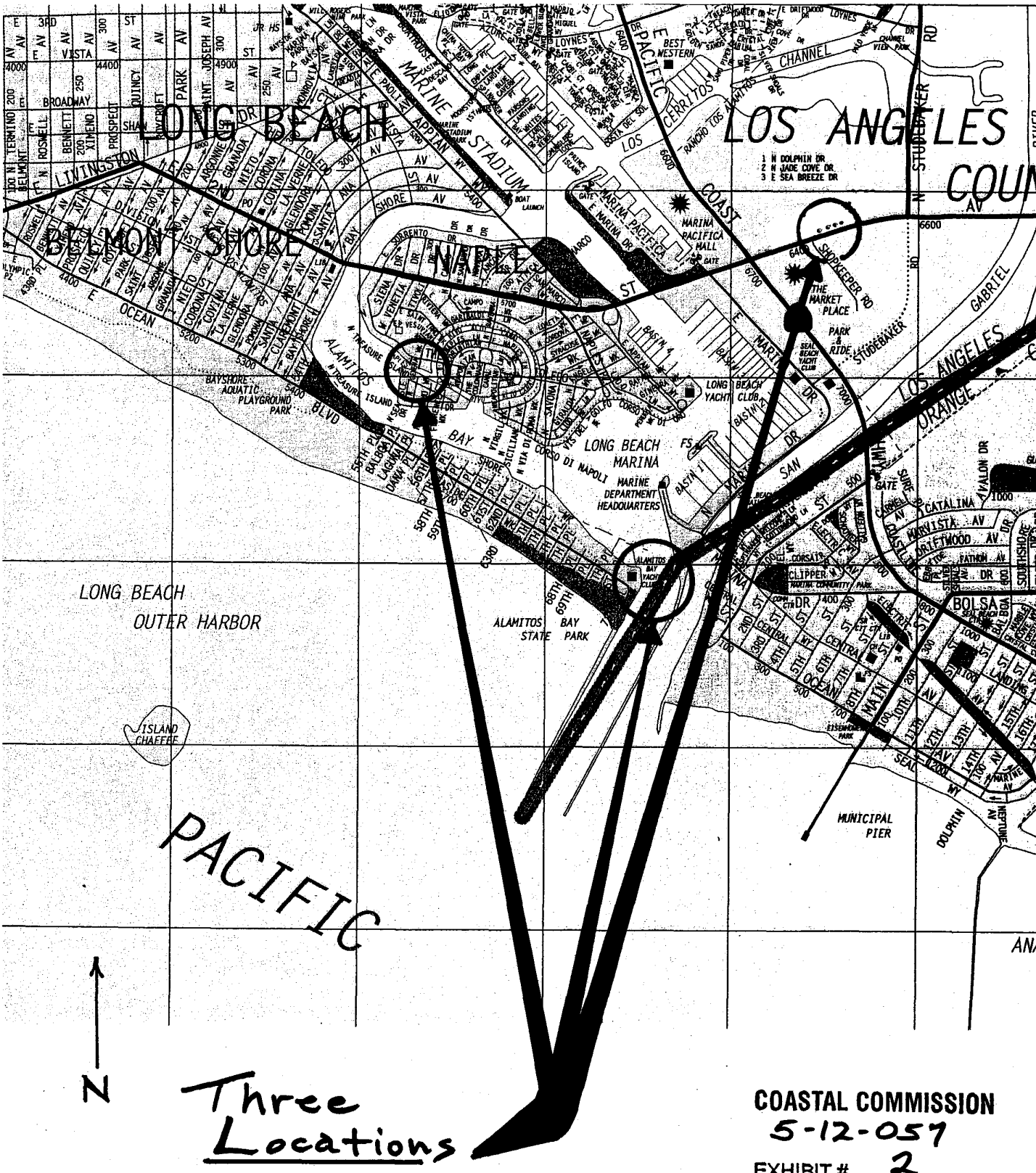
City of Long Beach



COASTAL COMMISSION
5-12-057

EXHIBIT # 1

PAGE 1 OF 1



Three Locations

COASTAL COMMISSION
5-12-057
EXHIBIT # 2
PAGE 1 OF 1

Magnesium

SuperMAG™

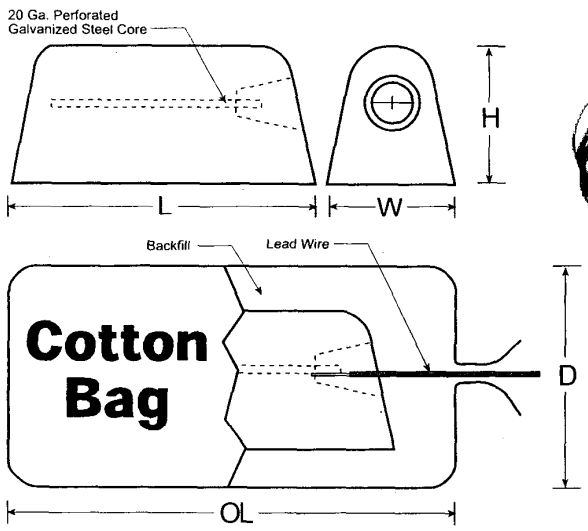
High Potential Anodes

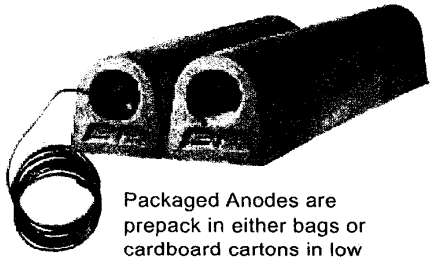
ISO 9001 DNV DNV Certification, Inc. REGISTERED FIRM

Galvotec Alloys produces High Potential anodes under our trademark SuperMAG™. Chemical analysis and potential tests are performed on every heat.

PRODUCT NO.	MODEL NO.	Weight				Anode Dimensions									
		BARE		PKDG.		Width (W)		Height (H)		Length (L)		Diameter (D)		Overall Length (OL)	
		lbs	kg	lbs	kg	in	mm	in	mm	in	mm	in	mm	in	mm
GA-MG-3 HP	3D3	3	1.4	8	3.6	3.50	89	3.75	95	5.00	127	6.0	152	10	254
GA-MG-5 HP	5D3	5	2.3	17	7.7	3.50	89	3.75	95	8.50	216	6.0	152	12	305
GA-MG-9 HP	9D3	9	4.1	27	12.2	3.50	89	3.75	95	14.00	356	6.0	152	17	432
GA-MG-17 HP	17D3	17	7.7	45	20.4	3.50	89	3.75	95	25.75	654	7.5	191	34	864
GA-MG-20 HP	20D2	20	9.1	70	31.8	2.75	70	3.00	76	59.75	1518	5.0	127	66	1676
GA-MG-32 HP	32D5	32	14.5	70	31.8	5.50	140	5.00	127	20.50	521	8.0	203	28	711
GA-MG-32 HP	32D3	32	14.5	91	41.3	3.50	89	3.75	95	45.25	1149	6.5	165	53	1346
GA-MG-40 HP	40D3	40	18.1	96	43.5	3.50	89	3.75	95	59.75	1518	6.5	165	66	1676
GA-MG-48 HP	48D5	48	21.8	100	45.4	5.50	140	5.75	146	31.00	787	8.0	203	38	965
GA-MG-60 HP	4x4x60	60	27.2	125	56.7	4.00	102	4.00	102	60.00	1524	7.0	178	64	1626

Other shapes, sizes and weights available on request.





Packaged Anodes are prepack in either bags or cardboard cartons in low resistivity, quick wetting, prepared backfill consisting of 75% hydratred gypsum, 20% bentonite, and 5% sodium sulphate.

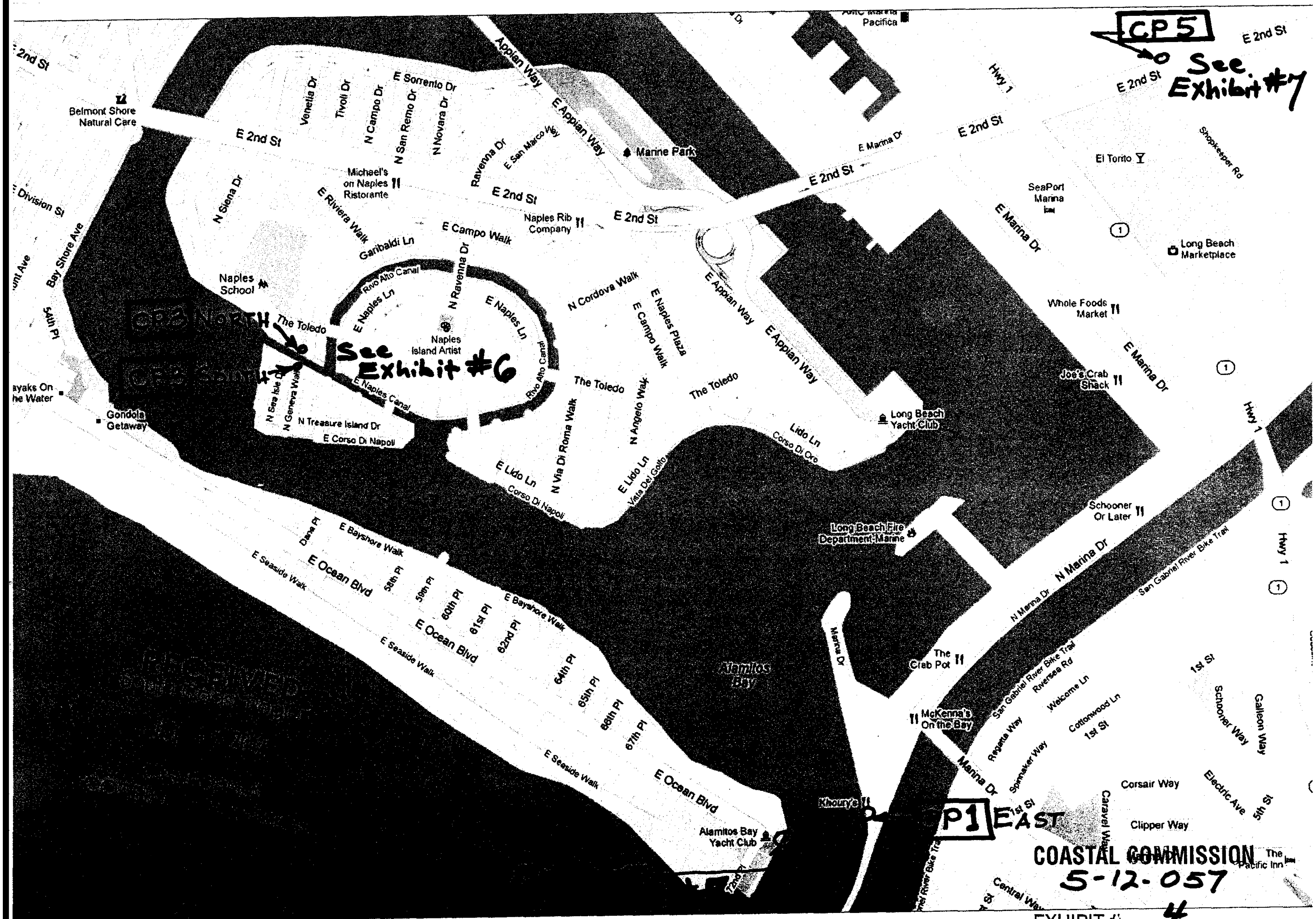
Connecting Wire: Standard 10 feet of solid or stranded #12 AWG Copper Lead Wire/THWN/THNN.

Typical Electrochemical Properties

Amps/Hrs./Lb.	500-580
Efficiency	50-58%
Closed Circuit Potential	-1.50 to -1.75v
Open Circuit Potential	-1.70 to -1.78v

Alloy Compositions	
Element	%
Aluminum (Max.)	0.01
Manganese (Min)	0.50 - 1.30
Iron (Max.)	0.03
Nickel (Max.)	0.001
Copper (Max.)	0.02
Other (Max.)	0.30
Magnesium	Balance

Anodes

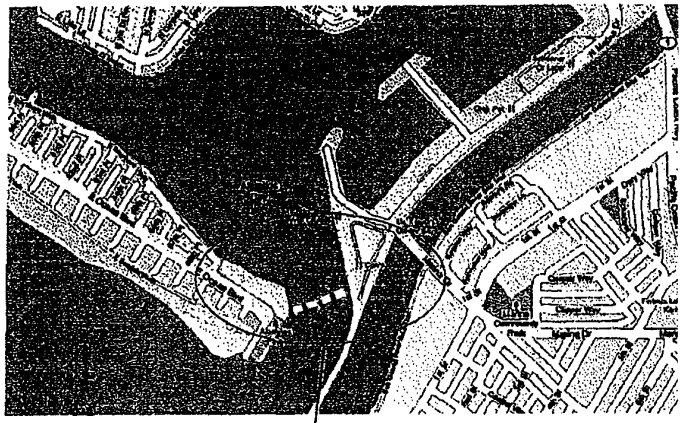


3 Sites: CP1, CP3 & CP5 (Exhibits 5-7)

COASTAL COMMISSION
5-12-057
EXHIBIT # 4
PAGE 1 OF 1

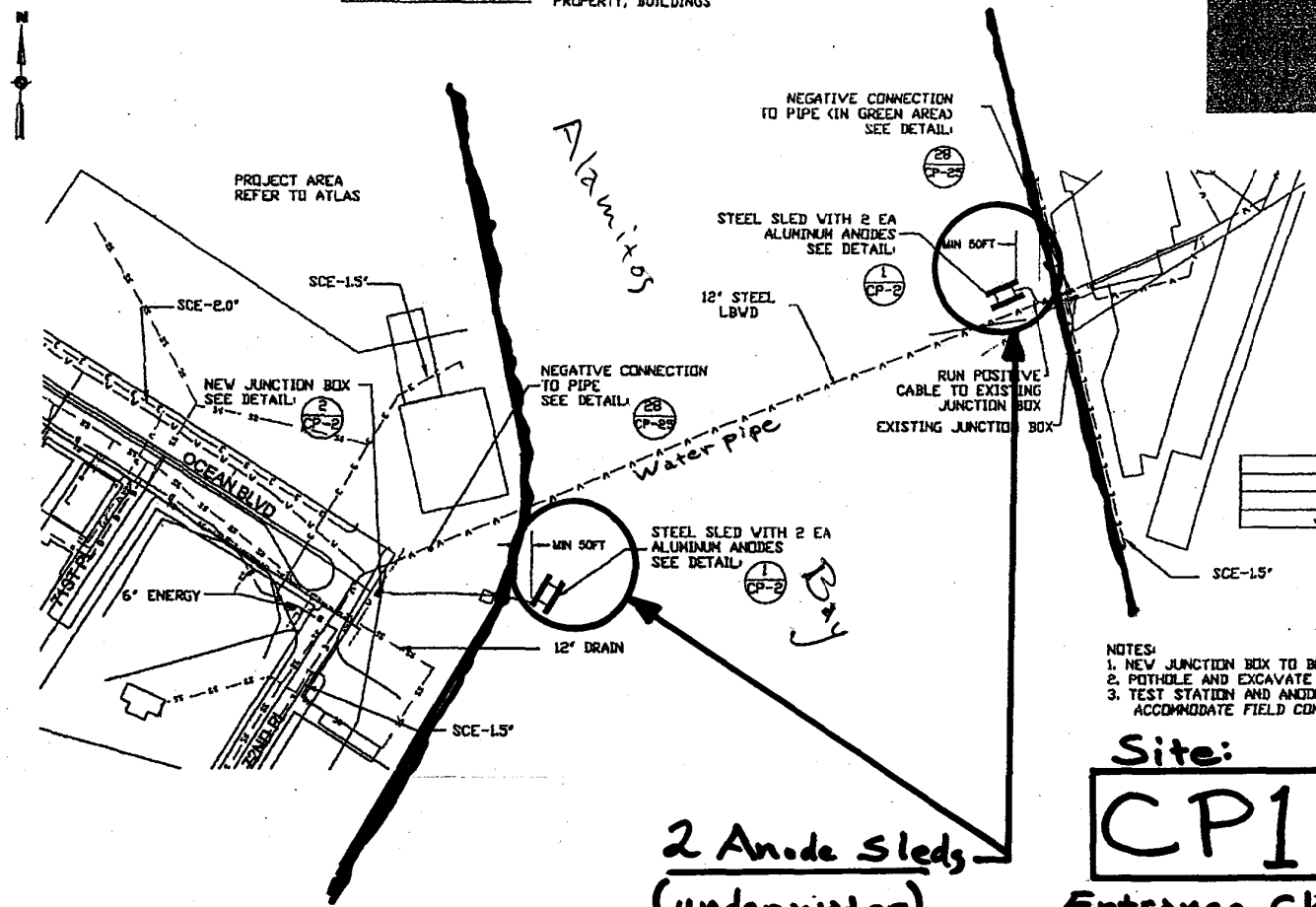
LEGEND

—G—G—G—	EXISTING GAS LINE
—W—W—W—	EXISTING MAIN WATER LINE
—SS—SS—	EXISTING SEWER LINE
—W—W—	EXISTING WATER LATERAL
—O—O—	EXISTING OIL LINE LATERAL
—SD—SD—	EXISTING DRAIN LINE
—RW—RW—	EXISTING RECLAIMED WATER LINE
—E—E—	EXISTING CITY POWER LINE
—T—T—	EXISTING VERIZON LINE
———	PROPERTY, BUILDINGS



PROJECT AREA
REFER TO ATLAS

N



GPS COORDINATES

DESCRIPTION	LATITUDE (DD)	LONGITUDE (DD)
WEST SLED	33.7456084	-118.1164430
EAST SLED	33.7466118	-118.1150418
JUNCTION BOX	33.7455537	-118.1168708

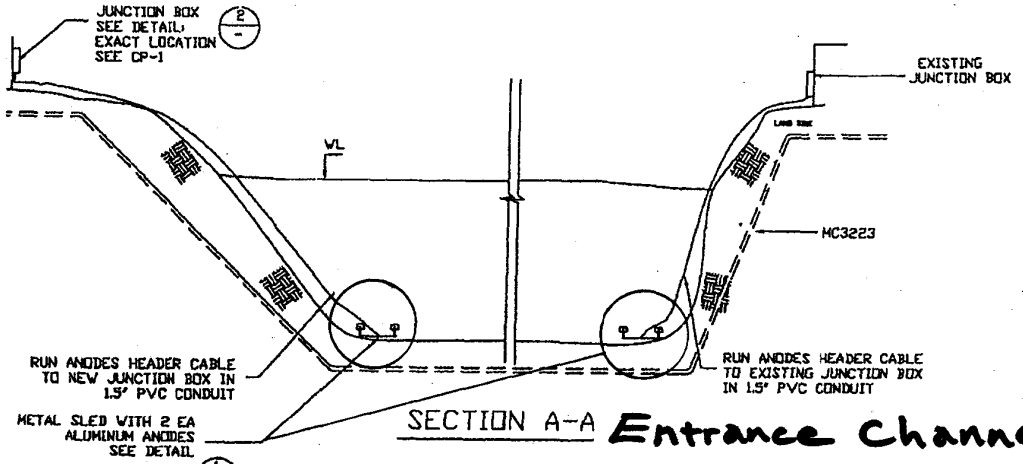
NOTES:
1. NEW JUNCTION BOX TO BE INSTALLED IN GRASS AREA ON PROPERTY LINE.
2. POTHOLE AND EXCAVATE THE PIPE TO CONNECT STRUCTURE LEADS TO THE EXISTING PIPE
3. TEST STATION AND ANODE LOCATIONS CAN BE MOVED UP TO 10 FT IN ANY DIRECTION TO ACCOMMODATE FIELD CONDITION.

2 Anode Sleds
(underwater)

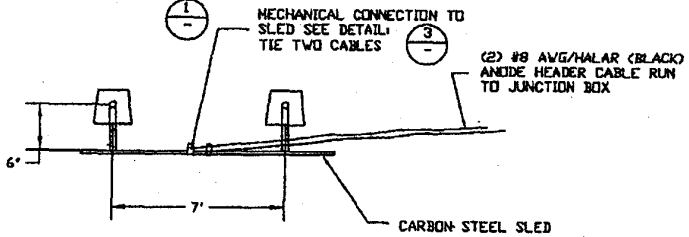
Site:
CP1
Entrance Channel

COASTAL COMMISSION

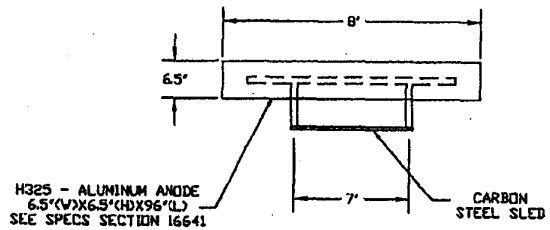
EXHIBIT # 5
PAGE 1 OF 2



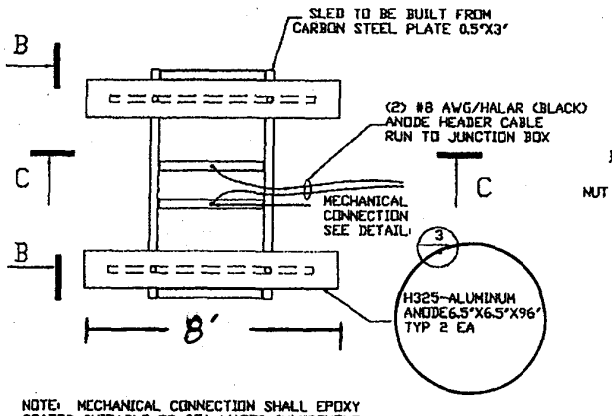
SECTION A-A **Entrance Channel**



SECTION B-B

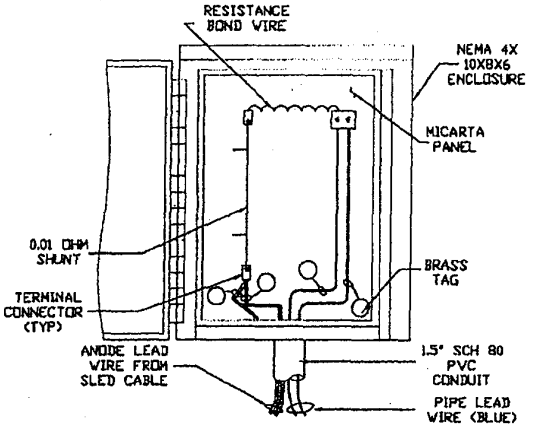


SECTION C-C

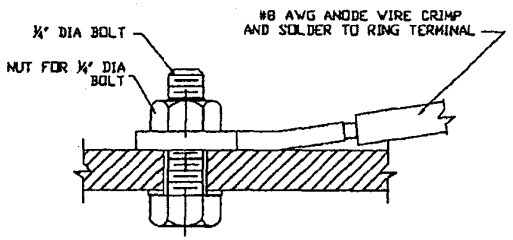


NOTE: MECHANICAL CONNECTION SHALL EPOXY COATED SUITABLE TO SEA WATER INVIROMENT

1 — SLED WITH 2 EA ALUMINUM ANODES
NTS



2 — JUNCTION BOX
NTS

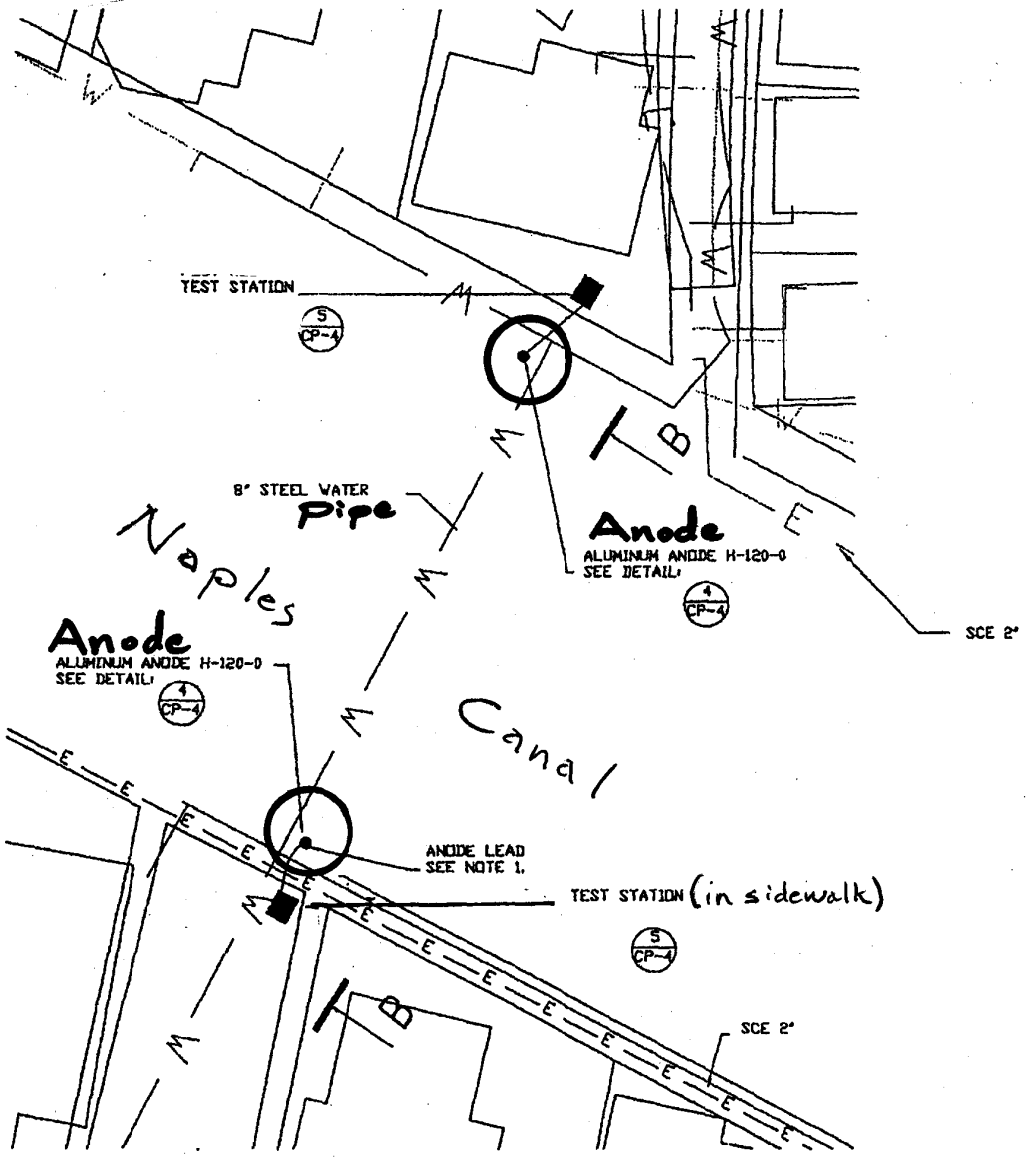


NOTE: NEGATIVE CONNECTION TO THE PIPE SHOWN ON CP-1. NEGATIVE WIRE #8 AWG HMWPE WELD TO THE PIPE PER DETAIL X/CP-23.

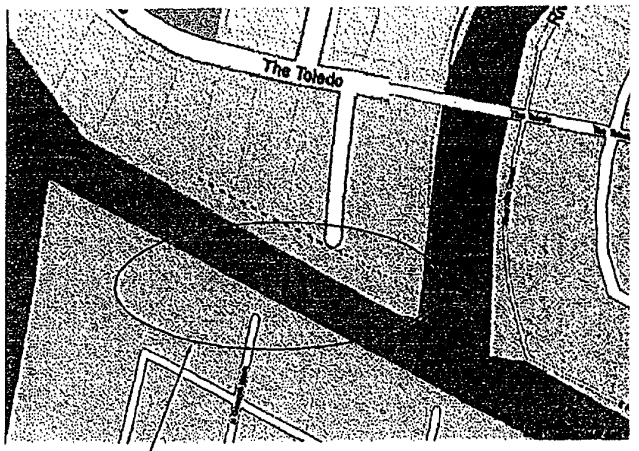
3 — WIRE TO SLED CONNECTION
NTS

Site:
CP1
Entrance Channel

COASTAL COMMISSION
5-12-057
EXHIBIT # 5
PAGE 2 OF 2



2 Anodes (underwater)



LEGEND

—G—G—G—	EXISTING GAS LINE
—W—W—W—	EXISTING MAIN WATER LINE
—SS—SS—	EXISTING SEWER LINE
—W—W—	EXISTING WATER LATERAL
—O—O—	EXISTING OIL LINE LATERAL
—SD—SD—	EXISTING DRAIN LINE
—RW—RW—	EXISTING RECLAIMED WATER LINE
—E—E—	EXISTING CITY POWER LINE
—T—T—	EXISTING VERIZON LINE
———	PROPERTY, BUILDINGS

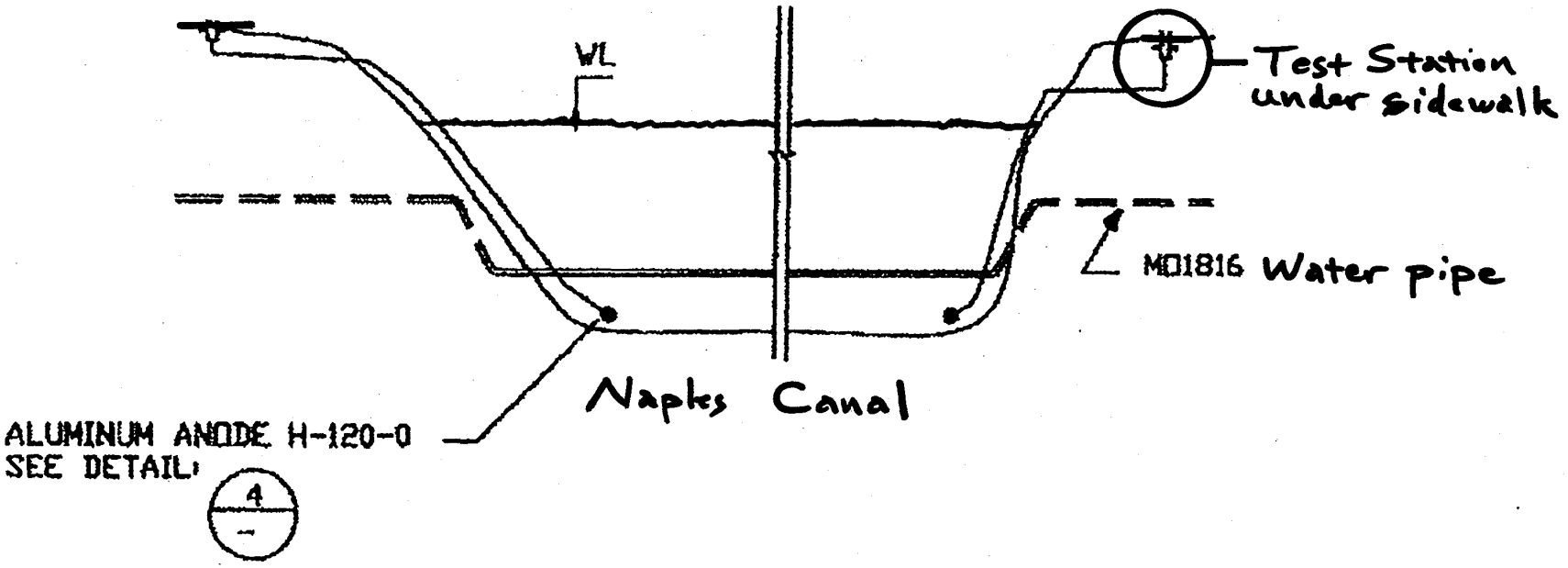
NOTE:
1. NEW ANODE LEAD WIRE CROSSING CITY LIGHT POWER LINE. DIG WITH CAUTION.
2. TEST STATION AND ANODE LOCATIONS CAN BE MOVED UP TO 10 FT IN ANY DIRE ACCOMMODATE FIELD CONDITION.

GPS COORDINATES

DESCRIPTION	LATITUDE (DD)	LONGITUDE (DD
SOUTH ANODE	33.7539030	-118.1267974
NORTH ANODE	33.7540084	-118.1266125
SOUTH TS	33.7538681	-118.1267903
NORTH TS	33.7540526	-118.1265828

Site
CP3
Naples Canal

COASTAL COMMISSION
5-12-057
EXHIBIT # 6
PAGE 1 OF 2



NOTE:
1. ANODE LEAD WIRE CROSSING CITY LIGHT POWER LINE. DIG WITH CAUSION
2. INSTALL TEST STATION IN EXISTING CONCRETE PAVEMENT 6' OFF HANDRAIL.

SECTION B-B

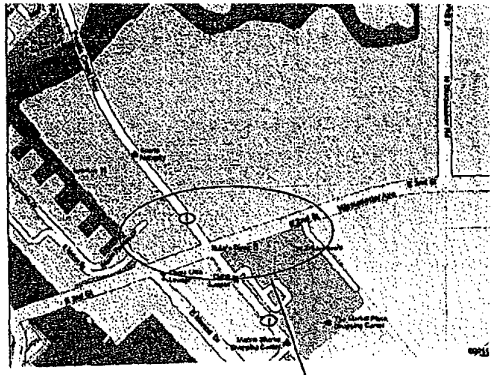
CP3

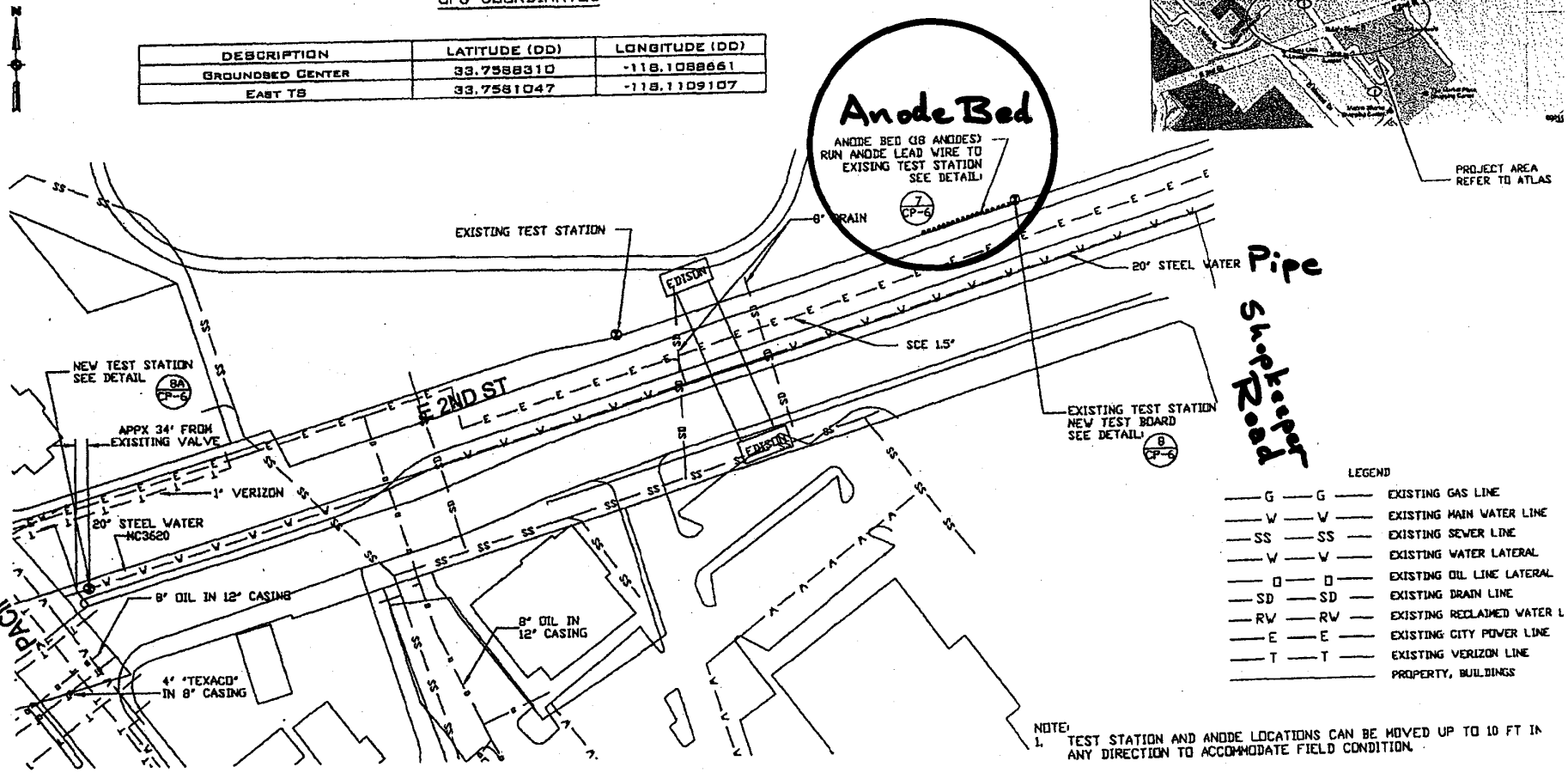
Naples Canal

COASTAL COMMISSION
5-12-057
EXHIBIT # 6
PAGE 2 OF 2

GPS COORDINATES

DESCRIPTION	LATITUDE (DD)	LONGITUDE (DD)
GROUNDBED CENTER	33.7588310	-118.1088661
EAST TS	33.7581047	-118.1109107

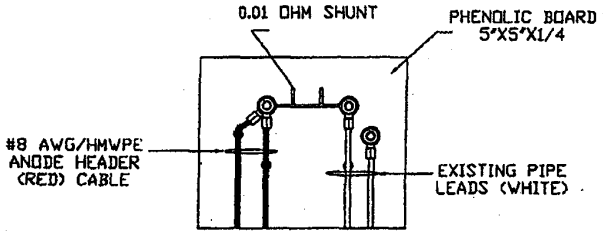




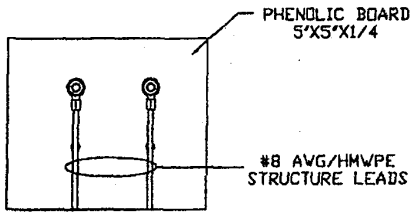
Anode Bed - underground

Site:
CP5
2nd St.

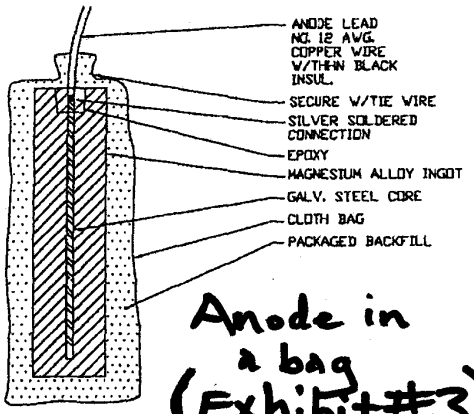
COASTAL COMMISSION
5-12-057
EXHIBIT # 7
PAGE 1 OF 2



8 — NEW TERMINAL BOARD
NTS



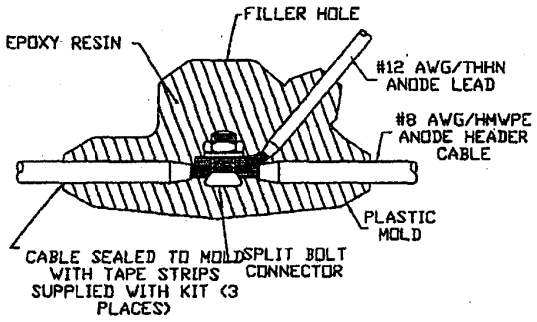
8A — NEW TERMINAL BOARD
NTS.



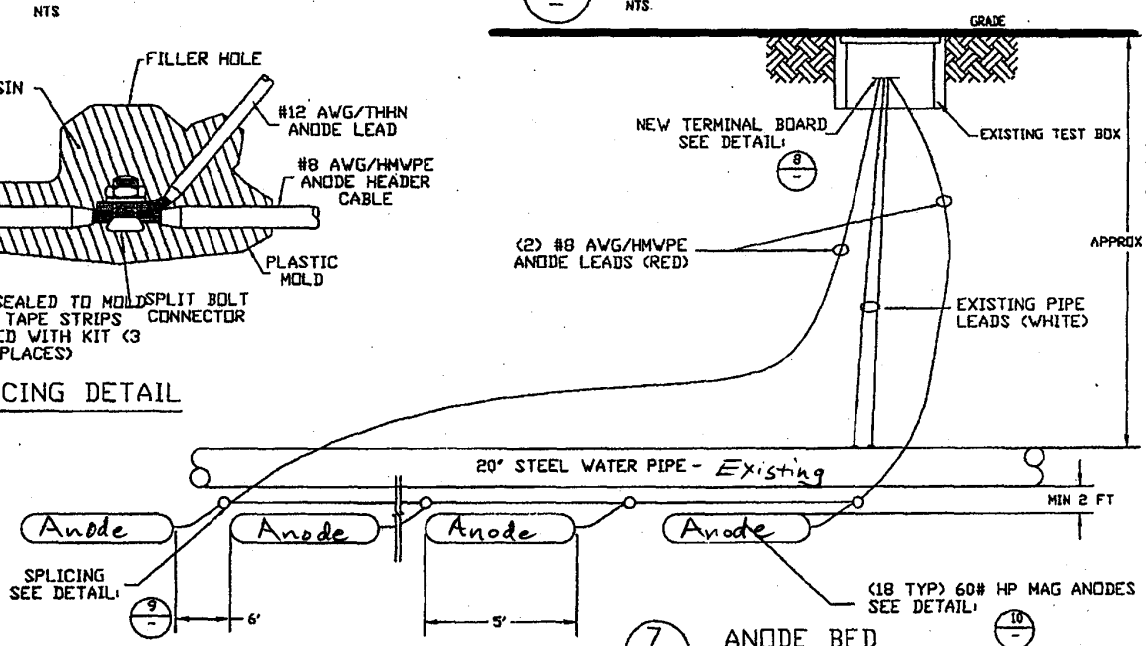
Anode in a bag (Exhibit #3)

MAGNESIUM ANODE DIMENSIONS 4IN x 4IN x 60IN
SEE SPECIFICATION 16641 FOR CHEMICAL COMPOSITION AND BACKFILL
IMPORTANT NOTE: REMOVE PLASTIC BAG FROM ANODE BEFORE INSTALLING.

10 — HP MAG ANODE
NTS



9 — SPLICING DETAIL
NTS



7 — ANODE BED
NTS

Anode Bed-underground

Site: CP5 2nd St.

COASTAL COMMISSION
5-12-057
EXHIBIT # 7
PAGE 2 OF 2