

CH2M HILL
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Oakland, CA 94612
Tel 510.587.7787
Fax 510.622.9122



CH2MHILL

November 2, 2006

Docket Unit, MS-4
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Eastshore Energy Center (06-AFC-6)
City of Hayward Application for Development Permit

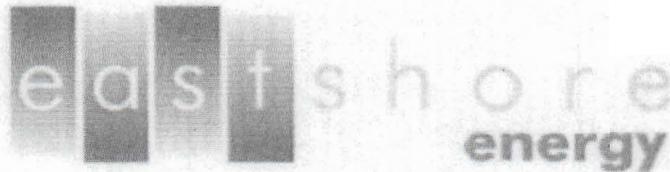
On behalf of Eastshore Energy LLC, enclosed are an original and 12 copies of the City of Hayward Application for Development Permit dated November 1, 2006. An electronic copy of the document has been sent directly to Mr. Lorne Prescott, Project Manager. Please direct any questions regarding this material to either me at 510.587.7787 or Jennifer Scholl at 805.568-0650.

Sincerely,

A handwritten signature in black ink, appearing to read "David A. Stein".

David A. Stein, PE
Vice President

C: Lorne Prescott, CEC
Greg Trewitt, Tierra Energy
Jennifer Scholl, CH2M HILL
Jane Luckhardt, Downey Brand



November 1, 2006

Jesus Armas
City Manager
City of Hayward
777 B Street, 4th Floor
Hayward, CA 94541

Richard Patenaude
Principal Planner
Planning Department
777 B Street, 1st Floor
Hayward, CA 94541

Dear Mssrs. Armas and Patenaude:

As you know, Eastshore Energy, LLC ("Eastshore") has filed an application for certification for the Eastshore Energy Center ("Project") with the California Energy Commission ("Commission"). Because the Project is larger than 50 megawatts in size it will receive its land use permit from the Commission consistent with the requirements of California Public Resources Code Section 25500. The Commission has exclusive jurisdiction over siting all but small power plants in California, and the Commission license is in lieu of all state, regional and local permit requirements.

Due to the Commission's exclusive jurisdiction, Eastshore is not required to ask the City of Hayward ("City") to approve this Project from a land use perspective. Nonetheless, we are fully committed to working with the City to assure compliance with the City's other requirements. Eastshore understands that the best way to initiate this collaborative process with the City is to submit the enclosed *Application for a Development Permit* ("Application"). Eastshore has taken the information developed for its application for certification and used that information to create an Application with the requisite attachments for the City to use to check the project against City requirements. Please note that the information provided in the Application is permitting level information as required by the Commission and does not include detailed design. The Project will create detailed design and engineering plans in the future, but those documents are typically not available until near the end of the Commission licensing process.

Eastshore appreciates the work already completed by the City's Fire Chief in an initial review of the Project. Eastshore will take those comments into account and understands that additional review of the Project by the Fire Chief may occur at this stage and will definitely occur during the building permit and plan review stage.

Eastshore understands that Project review takes City staff time and is prepared to pay the fees usually paid by project proponents for City review of their projects. Since the City's fee schedule does not have a specific fee amount for this type of review, Eastshore will be forwarding this week a deposit of \$750.00 to initiate the process and intends to discuss appropriate time and material fees with the City. Since the Commission's licensing proceeding is a certified California Environmental Quality Act equivalent process, the Commission will be conducting the environmental review of the Project. Therefore, Eastshore is not asking the City to conduct an environmental impact analysis of this Project. Eastshore has created summaries of the detailed environmental analysis contained in the application for certification and included that information in the attached Application for your reference. In addition to the environmental information prepared by Eastshore's consultants, the Commission staff will prepare detailed analyses of the

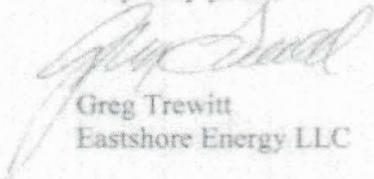
Mr. Greg Trewitt
October 31, 2006
Page 2 of 2

environmental impacts of the Project for public review in the form of the preliminary and final staff assessment.

Eastshore is committed to working with City staff to ensure that any additional and reasonable information needed by the City is provided keeping in mind that detailed design information will not be available until late 2007.

Eastshore Energy will provide the city of Hayward, the Hayward industrial corridor and the east bay with an alternative capacity and energy resource should peak demands exist. Eastshore looks forward to working with the City to create a project that meets City requirements and the energy needs of the region.

Very truly yours,



Greg Trewitt
Eastshore Energy LLC

NWP:JEL:ln

8/18/06 2

City of Hayward Application for a Development Permit

Eastshore Energy Center

Submitted by:
Eastshore Energy, LLC

November 1, 2006

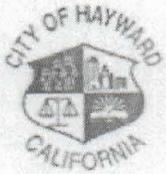


155 Grand Avenue, Suite 1000
Oakland, California 94612

CITY OF HAYWARD
DEVELOPMENT PERMIT APPLICATION

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CITY OF HAYWARD

PLANNING DIVISION

APPLICATION FOR A DEVELOPMENT PERMIT

777 B STREET, HAYWARD, CA 94541-5007

(510) 583-4200 • TDD (510) 247-3340 • FAX (510) 583-3649

APPLICATION NUMBER	_____
TYPE	_____
TAKEN BY	_____
DATE	_____

INITIAL FEE	_____
ADDITIONAL TIME & MATERIAL CHARGES NOT TO EXCEED	_____
<small>See Note 2</small>	

APPLICANT(S) Trewitt Greg
LAST NAME FIRST NAME

COMPANY NAME (IF APPLICABLE) Eastshore Energy, LLC

STREET 710 S. Pearl Street

CITY Denver STATE CO ZIP CODE 80209 PHONE NO. 303-722-0450

FAX NO. 303-722-0103 E-MAIL Greg.Trewitt@ CELL PHONE 303-909-8408

APPLICANT'S INTEREST IN PROPERTY: OWNER LESSEE OPTIONEE OTHER _____
Tierraenergy.com

INVOICES TO BE DIRECTED TO: OWNER APPLICANT OTHER _____

(Please provide address if other, see note 2)

PROPERTY OWNER(S) Trewitt Greg PHONE NO. 303-722-0450
LAST NAME FIRST NAME

STREET 710 S. Pearl Street CITY Denver STATE CO ZIP CODE 80209

FAX NO. 303-722-0103 E-MAIL Greg.Trewitt@ CELL PHONE 303-909-8408

Tierraenergy.com

TYPE OF PERMIT(S): SITE PLAN REVIEW GENERAL PLAN AMEND. PARCEL MAP TRACT MAP VARIANCE

USE PERMIT ADMIN. USE PERMIT ZONE CHANGE FROM _____ TO _____ OTHER _____

PROJECT ADDRESS/LOCATION 25101 Clawiter Road, Hayward, CA 94545

ASSESSOR'S MAP NO. 439-075-180(plantsite) 439-080-010 ZONING DISTRICT(S) Indus
(const. laydown area)

PROJECT DESCRIPTION (attach additional sheets if necessary) _____
construction and operation of a high efficiency, nominal 115.5 MW
intermediate/peaking natural gas-fired power generation facility.

I HEREBY CERTIFY THAT I AM THE OWNER OF RECORD OF THE PROPERTY DESCRIBED ABOVE AND, FURTHER THAT I APPROVE OF THE PROPOSED USE CONTAINED HEREIN. SEE NOTE 2.

OWNER SIGNATURE X *Greg Trewitt*

I HEREBY STATE THAT THE FOREGOING STATEMENTS AND ANSWERS AND ALL DATA, INFORMATION AND EVIDENCE SUBMITTED HERewith ARE IN ALL RESPECTS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE AND CORRECT.

APPLICANT SIGNATURE X *Greg Trewitt*

STAFF REMARKS _____

THIS IS YOUR RECEIPT WHEN MACHINE VALIDATED _____

NOTE 1: FEES ARE NOT REFUNDABLE AND PAYMENT IN NO WAY GUARANTEES APPROVAL OF APPLICATION.
NOTE 2: THE OWNER IS RESPONSIBLE FOR PAYING ALL TIME AND MATERIAL CHARGES.



FIRE DEPARTMENT QUESTIONNAIRE

Business Name: Eastshore Energy, LLC Site Address: 25101 Clawiter Road

Please check the appropriate spaces below:

1. Will any of the following processes occur in this facility?

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Combustible fiber, generation or storage | <input type="checkbox"/> Laboratory facility | <input type="checkbox"/> Tire recapping or storage |
| <input type="checkbox"/> Dry cleaning | <input type="checkbox"/> Liquefied petroleum gas storage | <input type="checkbox"/> Welding |
| <input type="checkbox"/> Dry ovens | <input type="checkbox"/> Semi-conductor fabrication | <input type="checkbox"/> Wood-working shop |
| <input type="checkbox"/> Electroplating | <input type="checkbox"/> Spray painting | <input type="checkbox"/> Vehicle repair |
|
 | | |
| <input type="checkbox"/> Rack or pallet storage over 12 feet in height | | |
| <input checked="" type="checkbox"/> Free standing storage over 15 feet in height | | |
| <input type="checkbox"/> Area of storage over 1000 square feet | | |

2. Will your business store, transport, or handle any of the following?

- | | | |
|---|---|--|
| <input checked="" type="checkbox"/> Acutely Hazardous Materials | <input checked="" type="checkbox"/> Flammable liquids | <input type="checkbox"/> Reactive materials |
| <input checked="" type="checkbox"/> Carcinogens | <input type="checkbox"/> Flammable solids | <input type="checkbox"/> Pesticides |
| <input type="checkbox"/> Combustible liquids | <input checked="" type="checkbox"/> Hazardous waste | <input type="checkbox"/> Poisonous gases/liquids |
| <input checked="" type="checkbox"/> Compressed gasses | <input type="checkbox"/> Highly toxic material | <input type="checkbox"/> Pyrophoric |
| <input checked="" type="checkbox"/> Corrosives | <input type="checkbox"/> Irritants | <input type="checkbox"/> Sensitizers |
| <input type="checkbox"/> Cryogenes | <input type="checkbox"/> Organic coating | <input checked="" type="checkbox"/> Solvents |
| <input type="checkbox"/> Explosives | <input type="checkbox"/> Organic peroxide | <input checked="" type="checkbox"/> Toxic materials |
| <input type="checkbox"/> Fertilizer | <input type="checkbox"/> Oxidizers | <input type="checkbox"/> Unstable materials |
| <input checked="" type="checkbox"/> Flammable gases | <input type="checkbox"/> Radioactive material | <input type="checkbox"/> Water reactive |
| | | <input checked="" type="checkbox"/> Other health hazards |
| | | <input type="checkbox"/> Other regulated materials |

3. Is this project to be constructed on any of the following sites?

- | | |
|--|---|
| <input type="checkbox"/> | Site which is contaminated or possibly contaminated with a hazardous material |
| <input type="checkbox"/> | Former service station site |
| <input type="checkbox"/> | Site which is known to have had underground storage tanks |
| <input type="checkbox"/> Commercial nursery | |
| <input checked="" type="checkbox"/> | Former site known to have had a business which used or stored hazardous materials |
| <input type="checkbox"/> Former site use unknown | |

Completion of this form should be verified in the Fire Prevention Office. If any boxes in item number 2 are checked, you will need to complete a Chemical Inventory Worksheet Packet. If your business uses water for any purpose other than landscape irrigation and sanitary services (i.e., sinks, toilets, and showers), discharges cooling water of any type into the municipal sewer system, or discharges any wastes other than those from sanitary services into the municipal sewer system or stormwater system, then you are required to contact Wastewater Source Control at 293-8699, for approval.

I have read the above and certify that to the best of my ability, a designated representative of the owner/tenant, the information is true.

GREG TREWITT
Print Name
VP
Title

[Signature]
Signature
Oct 31st, 2006
Date

Section 1.0 Introduction

Eastshore Energy has had several meetings during the course of 2006 with the City Manager of Hayward to discuss aspects of the proposed power project at 25101 Clawiter Road. This document is being submitted as a request from the City Manager of the City of Hayward, California at a meeting held on July 12th, 2006. The document is being submitted to provide specific information responses to the requirements of the City of Hayward Development Permit Application.

The information is organized consistent with the order of the Development Application Instructions. As the City is aware, the Eastshore Energy Center is subject to the jurisdiction of the California Energy Commission (CEC). The CEC review process incorporates an evaluation of all applicable laws, ordinances, regulations and standards (LORS), including City of Hayward requirements. An Application for Certification (AFC) was submitted to the CEC on September 22, 2006. If a certification license is granted by the CEC, all other State and local requirements will be incorporated in the license as conditions of certification.

This document is intended to provide an overview of the Eastshore LLC's expected compliance with City of Hayward Development Application requirements by including narrative discussions or figures from the AFC to address the application requirements. All referenced figures from the Eastshore Energy AFC have been attached to this document. As part of this submittal, Eastshore Energy, LLC has also attached a copy of the Eastshore Energy Center AFC, Volumes 1 and 2. The AFC and associated appendices provide additional project information not included in this submittal. As part of the CEC licensing process, engineering design has been performed for a permit level of detail only, and it is expected that additional project details will be performed during final design. As additional details are developed, Eastshore Energy, LLC will supply the appropriate information to the City. It is expected that the final engineering design drawings and plans will be submitted for review to the Chief Building Official following issuance of the CEC license.

Section 2.0 Plans

A number of figures and plans were developed for the Eastshore Energy AFC. Figures from the AFC have been included in this application to address the requested information. Following each numbered Site Plan requirement, a narrative response is also included to address site plan requirements.

Readers Note: All figure references reflect the figure references in the Eastshore Energy Center AFC.

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Section 2.1 Site Plan

1. The parcel(s), including all property lines, adjacent streets to centerline, and/or land uses within 20 feet of the property.

Refer to Figure 1.2-1 for the project location and adjacent city streets.

Refer to Figure 1.2-3 for the general site arrangement showing the parcel and property lines.

Refer to Figures 8.4-1 and 8.4-2 for land use designations and zoning designations within 1-mile from the project site.

2. Location of proposed structure(s) and existing structures to remain. Show distance between buildings and from buildings to property lines (including setbacks for second story if different from ground floor.)

Refer to Figures 1.2-2A and 1.2-2B for existing site conditions and an artists rendering of Eastshore Energy Center. These figures show the project area and surrounding uses.

Refer to Figures 1.2-3, 1.2-4A, and 1.2-4B for the site general arrangement and site elevations.

3. Location of proposed and to be retained wall(s) and fences within the site.

Refer to Figure 1.2-3 for the general site arrangement.

4. Existing and proposed easements, and above- and below-ground utilities (such as fire hydrants, power poles, electrical boxes, etc.) and tanks.

Refer to Figure 1.2-3 for the general site arrangement.

5. Parking and Traffic Circulation:

- a. Existing and proposed streets on the frontage of and within the development.

Include any sidewalks, curbs, curb cuts, striping and medians. Show existing off-site parking restrictions, existing and proposed driveways, bus stops, loading zones, and parking spaces on frontage streets. Show traffic circulation arrows and traffic control signs. Show radii of all curb returns.

Refer to Figure 1.2-3 for the general site arrangement showing the internal traffic control, circulation, and parking areas. Additional details regarding internal site circulation and parking will be refined during the final design phase of the project.

Refer to Figure 8.10-2 for local transportation facilities.

Refer to Figure 8.10-3 and 8.10-4 for existing morning and afternoon peak-hour turning movements.

No project improvements are planned for Clawiter Road and there will be no changes to the existing site access from Clawiter Road.

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- b. Dimensioned parking layout - angle of parking, dimensions of stalls, internal driveways and flares, and approaches from streets, aisles, designation of standard and compact car parking stalls, loading spaces, and walkways. (See attachments E and F.)

Refer to Figure 1.2-3 for the general site arrangement showing the parking areas. Additional details regarding internal site parking will be refined during the final design phase of the project.

- c. Handicapped parking and access to building(s), if required.

Refer to Figure 1.2-3 for the general site arrangement showing the parking areas. The site arrangement does not identify ADA parking spaces. However, if required, the parking area could be revised to accommodate this requirement.

- d. Identify all surface materials.

Site surface materials will be both paving and gravel for the plant site and some areas of limited gravel on the offsite construction laydown area.

- 6. Location and dimensions of trash/recycle enclosure(s), including identification of materials and/or equipment stored, if any.

Refer to Figure 1.2-3 for the general site arrangement. Additional details regarding trash/recycle enclosure(s) will be refined during the final design phase of the project.

Several hazardous materials, including one regulated substance (aqueous ammonia), will be stored in amounts above the threshold quantity at the generating site during operation. Non regulated hazardous materials include biocide, citric acid, cleaning chemicals/detergents, corrosion inhibitor, diesel no.2, hydraulic oil, lube oil, mineral insulating oil, and sulfuric acid.

Many of the hazardous materials that will be stored onsite are corrosive and are a threat to humans (particularly workers onsite) if inhaled, ingested, or contacted with the skin.

Eastshore will have 19 percent aqueous ammonia solution in two stationary above ground storage tanks. The capacity of each tank will be approximately 10,000 gallons.

The ammonia unloading area will be a bermed area approximately 26 feet by 10 feet by 6 inches.

- 7. Location and dimensions of group and private usable open space (residential only).

Not applicable.

- 8. Location and design of signs.

Additional details regarding signs at the entrance of the site along Clawiter Road as well as internal site signs will be refined during the final design phase of the project.

- 9. Location of existing trees and other natural site features, such as rock outcrops.

Refer to Figures 8.2-1 for regional biological resources, including regional parks, wildlife refuges, and creeks. Refer to Figures 8.4-1 and 8.4-2 for land use designations and

**CITY OF HAYWARD
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zoning designations within 1-mile from the project site. Refer to Figure 8.9-1 for surrounding soil designations.

10. Location of landscape areas.

Refer to Figures 8.11-2a through 8.11-2g for landscape character photos surrounding the project site.

11. A "Planning Data Summary" that includes the following information:

a. Total lot area and percent of lot covered by structures.

The project will be located on a 6.22-acre industrial parcel, of which 1.59 acres will be covered by structures.

b. Type of construction and occupancy use of proposed building (from the Uniform Building Code).

Occupancy will include the following:

- 14 nominal 8.4-MW (gross) Wartsila 20V34SG natural gas-fired, spark-ignited reciprocating engine-generator sets
- 14 state-of-the-art air pollution control systems representing best available control technology (BACT), one system per engine, consisting of a selective catalytic reduction (SCR) unit for oxides of nitrogen (NO_x) control and an oxidation catalyst unit for carbon monoxide (CO) and precursor organic compounds (POC) control
- 14 approximately 70-foot tall stacks, each with a separate continuous emissions monitoring system (CEMS)
- An acoustically engineered main building enclosing the 14 engines, workshop and control room
- Closed-loop cooling system consisting of multiple fan-cooled radiator assemblies outside the main engine building
- Two 10,000-gallon aqueous (19 percent by weight) ammonia storage tanks and handling system serving the SCR units
- One approximately 35,000-gallon raw water storage tank
- One nominal 225-kW diesel-fired emergency black start generator
- Miscellaneous ancillary equipment
- Onsite water and wastewater service interconnections
- Onsite 115-kV switchyard, including switchgear and step-up voltage transformers
- Approximately 1.1 miles of 115-kV, single-circuit transmission line connecting to PG&E's Eastshore Substation

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- Approximately 200-foot offsite natural gas line connection to PG&E Line 153
 - Chain-link security fencing to enclose the facility, with a secured entrance on Clawiter Road
 - A 4.65-acre temporary construction laydown and parking area immediately across Clawiter Road from the Eastshore site
- c. Total gross floor area of each structure.

Building Gross Floor Area	Width, ft	Length, ft	SF
Control Room and Offices	88.5	35	3,098
Maintenance Store Room	69.33	34	2,357
Employee Changing Room	16.5	20.5	338
Compressor Room	53.5	22	1,177
Switchgear Room	88.6	34.8	3,083
Engine Hall A	160.9	68.9	11,086
Engine Hall B	164	68.9	11,300
Switchyard Control Building	15	25	375
TOTAL			32,814

The “floor area” does not apply to most of the items above (i.e., Compressor Room, Switchgear Room, Engine Hall A, Engine Hall B, and Switchyard Control Building). Floor area only applies to the those portions of engine hall considered “habitable”, including the control room and associated office space on the second floor and the maintenance shop area on the first floor. The gross floor area is 5,793 square feet.

- d. Minimum number of parking spaces required, and number and type proposed, both open and covered. (Contact a planner at 583-4200 for requirement.)

As discussed above, the total square footage for habitable space (i.e., Control Room, Office, Maintenance Store Room, and Employee Changing Room) is 5,793 square feet. Using this square footage, 12 parking spaces are required. Six stripped parking spots are currently shown on the general site arrangement (Figure 1.2-3) and are intended to cover shift workers. Additional parking can be accommodated between the radiators on the north side of the facility and this will be refined during the final design phase of the project.

- e. For residential development only:

- Density is the square feet of lot area per dwelling unit. Show maximum allowed by ordinance and what is proposed;

Not applicable.

- Total square feet of private and group usable open space required and proposed) for multi-family residential development.

Not applicable.



FIGURE 1.2-2A
EXISTING SITE CONDITIONS
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA



FIGURE 1.2-2B

ARTIST RENDERING OF EASTSHORE ENERGY CENTER

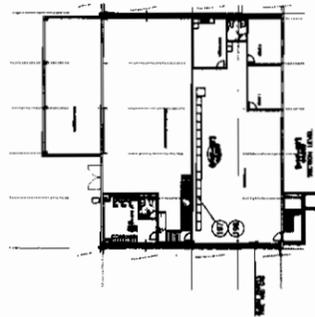
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

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ENGINE HALL & UTILITY BLOCK				MECHANICAL UTILITY AREA			
ITEM NO	PCS	CODE (FIRST)	DESCRIPTION	WEIGHT INCL. LOADS KG	WEIGHT INCL. LOADS LB	MOUNTING LEVEL MET	MOUNTING LEVEL INCH
1	14	SAA	ENGINE GENERATOR SET	134700	296862	+0.000	0'-0"
4	14	BEA	ALUMINA MODULE	4200	9258	+0.000	0'-0"
37	14	ZBB	GAS REGULATING UNIT	200	440	+0.000	0'-0"
60	2	TCA	WORKING AIR UNIT	670	1477	+0.000	0'-0"
62	2	TSA	STARTING AIR UNIT	710	1563	+0.000	0'-0"
63	4	FSB	STARTING AIR BOTTLE 3.0M ³ /7500 GAL	4335	9555	+0.000	0'-0"
64	2	NSA	STARTING AIR BOTTLE 1.0M ³ /2500 GAL	1080	2376	+0.000	0'-0"
71	14	NCA	EXHAUST GAS RESISTOR 800X1000 GAL	660	1456	+0.000	0'-0"
72	14	NCA	EXHAUST GAS RESISTOR 800X1000 GAL	660	1456	+0.000	0'-0"
82	14	NCA	EXHAUST GAS RESISTOR 800X1000 GAL	660	1456	+0.000	0'-0"
83	14	NCA	EXHAUST GAS RESISTOR 800X1000 GAL	660	1456	+0.000	0'-0"
104	14	SN	DOXING BOX	55	121	+4.940	16'-2"
106	14	SN	DOXING BOX	55	121	+4.940	16'-2"
108	14	SN	DOXING BOX	55	121	+4.940	16'-2"
182	14	SN	DOXING BOX	55	121	+4.940	16'-2"
183	14	SN	DOXING BOX	55	121	+4.940	16'-2"
184	14	SN	DOXING BOX	55	121	+4.940	16'-2"
185	14	SN	DOXING BOX	55	121	+4.940	16'-2"
186	14	SN	DOXING BOX	55	121	+4.940	16'-2"
187	14	SN	DOXING BOX	55	121	+4.940	16'-2"
188	14	SN	DOXING BOX	55	121	+4.940	16'-2"
189	14	SN	DOXING BOX	55	121	+4.940	16'-2"
190	14	SN	DOXING BOX	55	121	+4.940	16'-2"
191	14	SN	DOXING BOX	55	121	+4.940	16'-2"
192	14	SN	DOXING BOX	55	121	+4.940	16'-2"
193	14	SN	DOXING BOX	55	121	+4.940	16'-2"
194	14	SN	DOXING BOX	55	121	+4.940	16'-2"
195	14	SN	DOXING BOX	55	121	+4.940	16'-2"
196	14	SN	DOXING BOX	55	121	+4.940	16'-2"
197	14	SN	DOXING BOX	55	121	+4.940	16'-2"
198	14	SN	DOXING BOX	55	121	+4.940	16'-2"
199	14	SN	DOXING BOX	55	121	+4.940	16'-2"
200	14	SN	DOXING BOX	55	121	+4.940	16'-2"
215	14	SN	DOXING BOX	55	121	+4.940	16'-2"
216	14	SN	DOXING BOX	55	121	+4.940	16'-2"
217	14	SN	DOXING BOX	55	121	+4.940	16'-2"
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220	14	SN	DOXING BOX	55	121	+4.940	16'-2"
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222	14	SN	DOXING BOX	55	121	+4.940	16'-2"
223	14	SN	DOXING BOX	55	121	+4.940	16'-2"
224	14	SN	DOXING BOX	55	121	+4.940	16'-2"
225	14	SN	DOXING BOX	55	121	+4.940	16'-2"
226	14	SN	DOXING BOX	55	121	+4.940	16'-2"
227	14	SN	DOXING BOX	55	121	+4.940	16'-2"
228	14	SN	DOXING BOX	55	121	+4.940	16'-2"
229	14	SN	DOXING BOX	55	121	+4.940	16'-2"
230	14	SN	DOXING BOX	55	121	+4.940	16'-2"

DAY / STORAGE TANK / UNLOADING AREA				MECHANICAL UTILITY AREA			
ITEM NO	PCS	CODE (FIRST)	DESCRIPTION	WEIGHT INCL. LOADS KG	WEIGHT INCL. LOADS LB	MOUNTING LEVEL MET	MOUNTING LEVEL INCH
40	1	OAA	LO UNLOADING PUMP UNIT (CLEAN)	-	-	-	-
41	1	OAA	CLEAN LO TANK 55M ³ /1453 GAL	-	-	-	-
42	1	OAA	CLEAN LO TANK 55M ³ /1453 GAL	-	-	-	-
43	2	OAA	USED/SERVICE LO TANK 1.1M ³ /284 GAL	-	-	-	-
44	2	OAA	LO TRANSFER PUMP UNIT	-	-	-	-
45	2	OAA	SCR REGENT TANK 10,000 GAL	-	-	-	-
105	2	OAA	DIRTY WATER HOLDING TANK 20M ³ /5284 GAL	-	-	-	-
155	1	OAA	DIRTY WATER HOLDING TANK 20M ³ /5284 GAL	-	-	-	-



BUILDING SECOND FLOOR PLAN

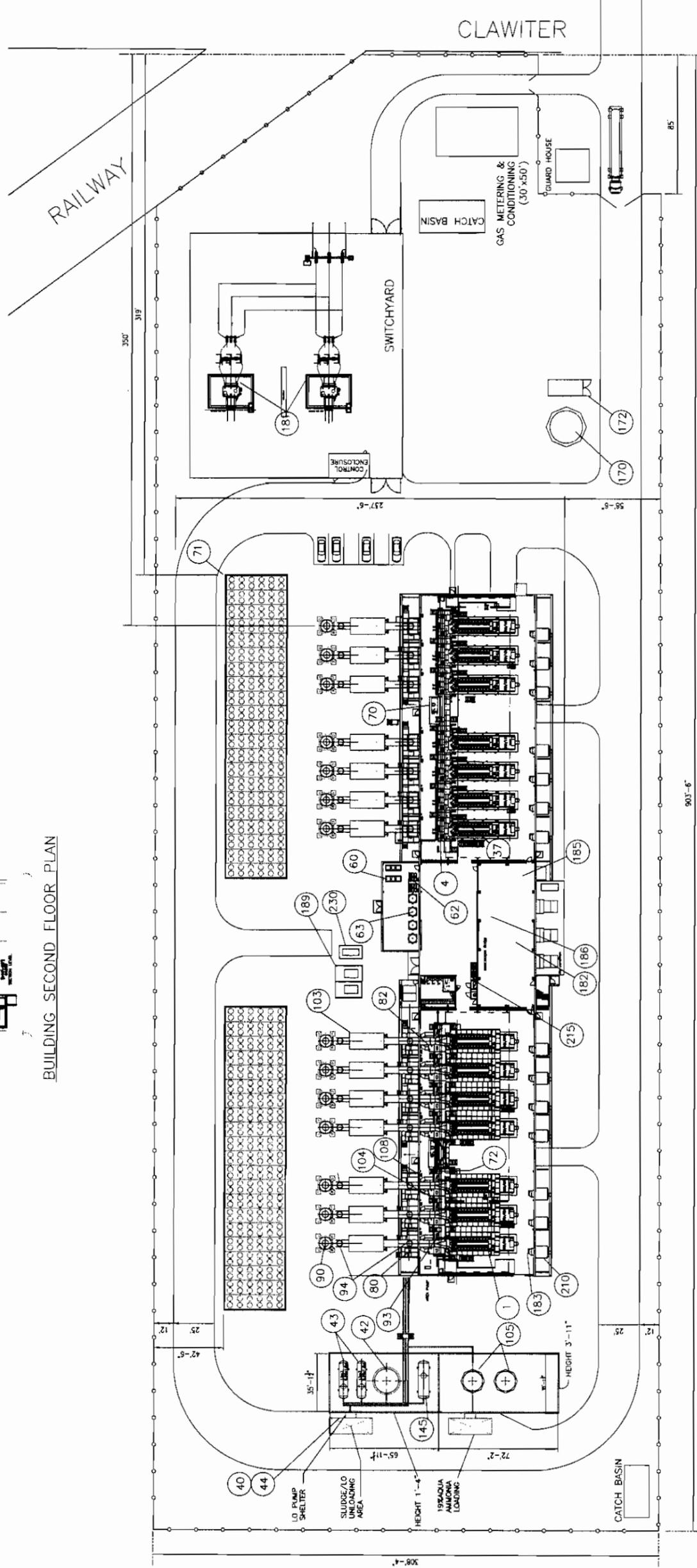
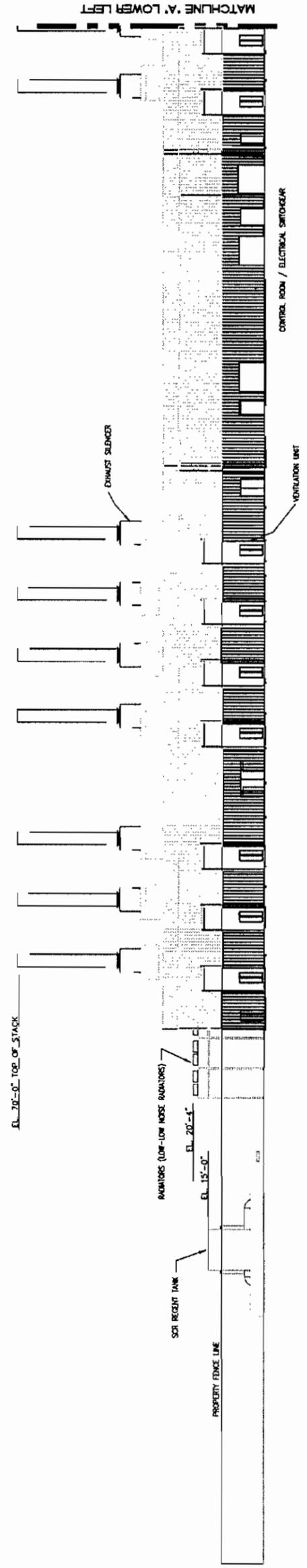
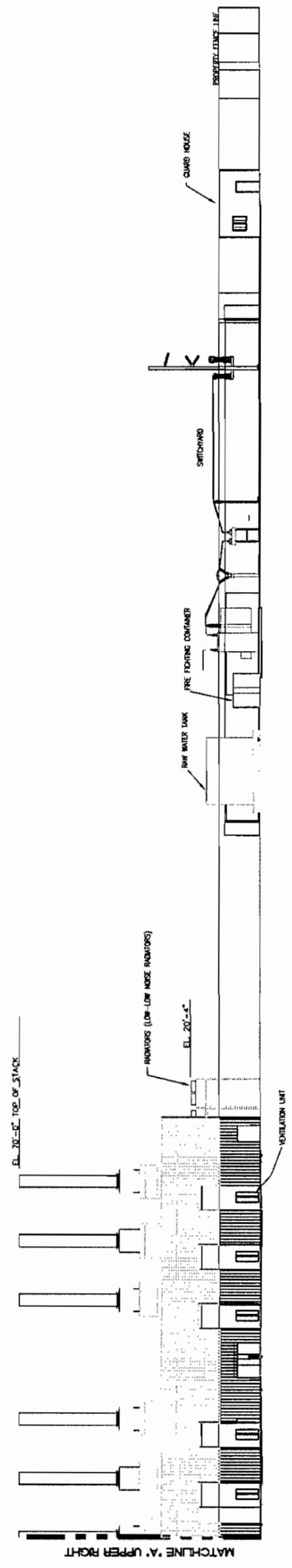


FIGURE 1.2-3
SITE GENERAL ARRANGEMENT
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA
ALAMEDA COUNTY





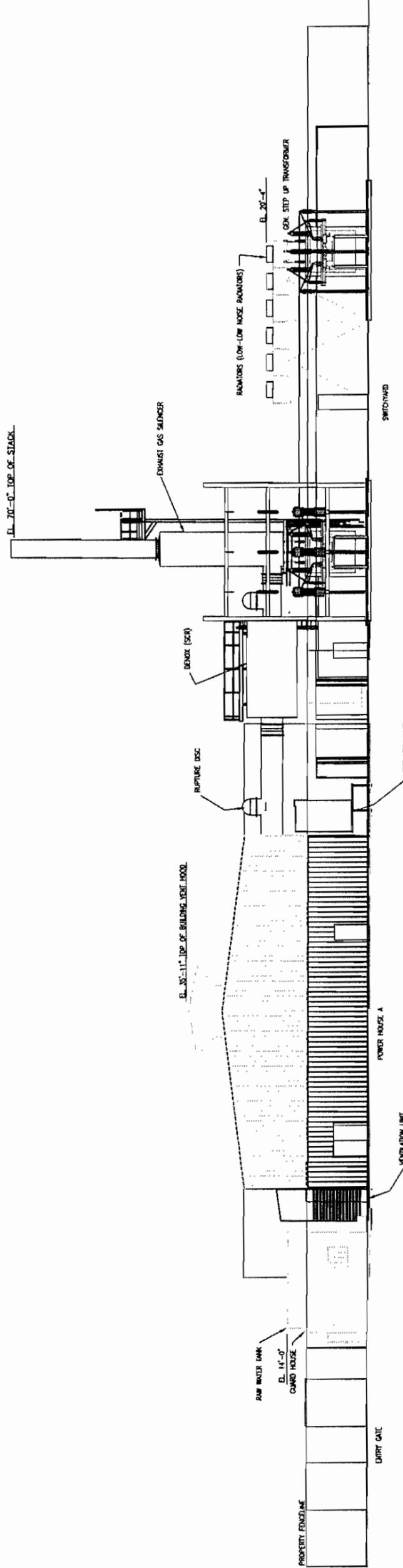
PLANT ELEVATION LOOKING NORTH



PLANT ELEVATION LOOKING NORTH - CONTINUE

FIGURE 1.2-4A
SITE ELEVATION NORTH
 VIEW LOOKING NORTH
 EASTSHORE ENERGY CENTER
 HAYWARD, CALIFORNIA
 ALAMEDA COUNTY



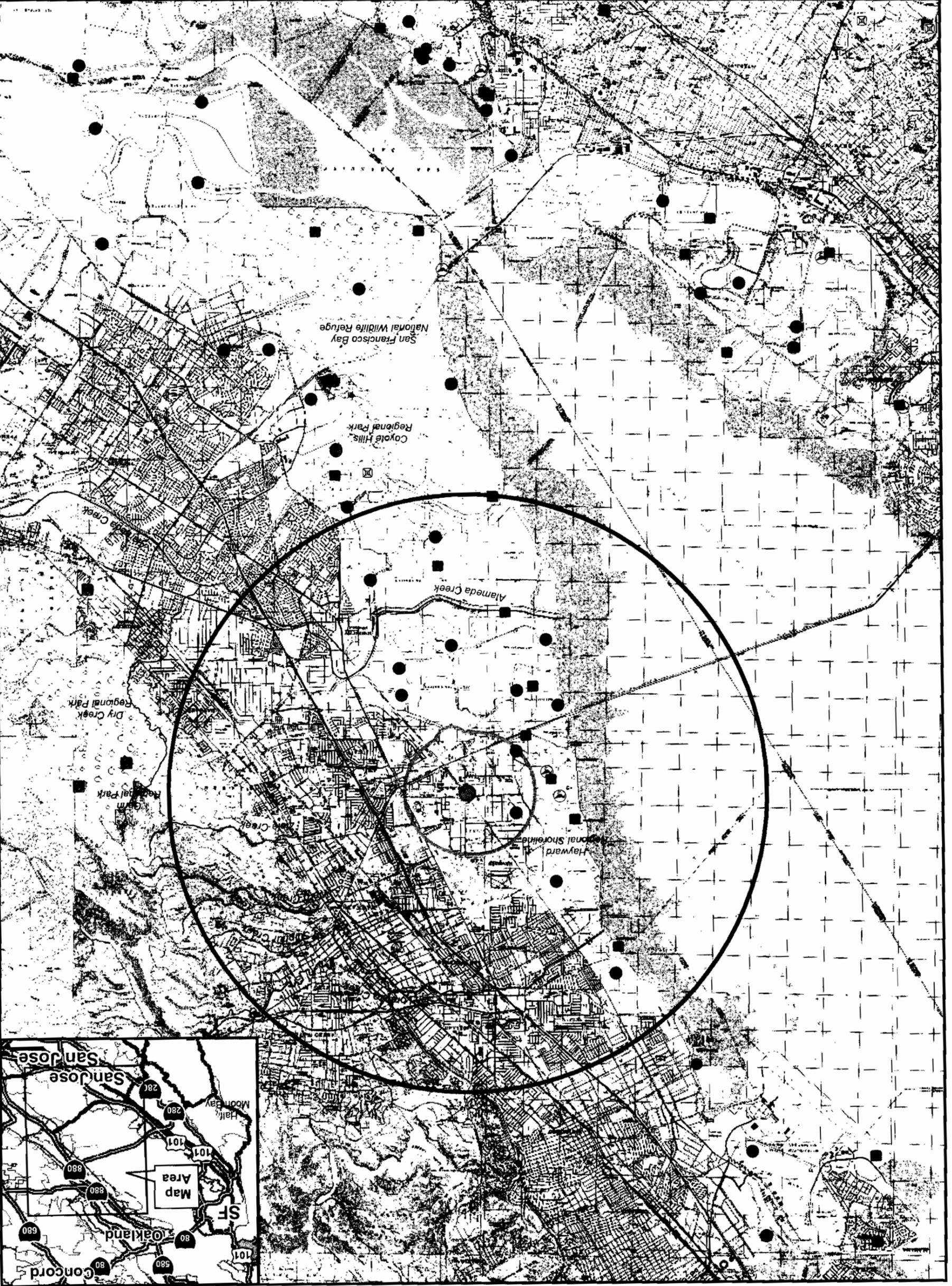


PLANT ELEVATION LOOKING WEST

FIGURE 1.2-4B
SITE ELEVATION DRAWING -
VIEW LOOKING WEST
 EASTSHORE ENERGY CENTER
 HAYWARD, CALIFORNIA
 ALAMEDA COUNTY

SCALE IS APPROXIMATE
Miles
0 0.5 1 2
**FIGURE 8.2-1
REGIONAL BIOLOGICAL
RESOURCES**
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

- LEGEND**
- ☒ CNDDB An
 - California least tern
 - California clapper rail
 - California black rail
 - Bay checkerspot butterfly
 - California red-legged frog
 - California seabird
 - California tiger salamander
 - Contra Costa goldfields
 - Myrtle's silverspot
 - Site Location
 - Bank Swallow
 - Western Snowy Plover
 - Santa Cruz tarplant
 - Salt-Marsh Harvest Mouse
 - 1 Mile Buffer
 - 5 Mile Buffer
 - Salt Evaporators



LEGEND

- | | | |
|---|--|--|
|  Site Location |  High Density Residential |  Mobile Home Park |
|  1 mile buffer from Project Site Includes 1/4 mile buffer from outlying Transmission Lines |  Industrial Corridor |  Parks and Recreation |
|  Transmission Line Route |  Limited Medium Density Residential |  Public and Quasi-Public |
|  Baylands |  Limited Open Space |  Retail and Office Commercial |
| |  Low Density Residential | |
| |  Medium Density Residential | |

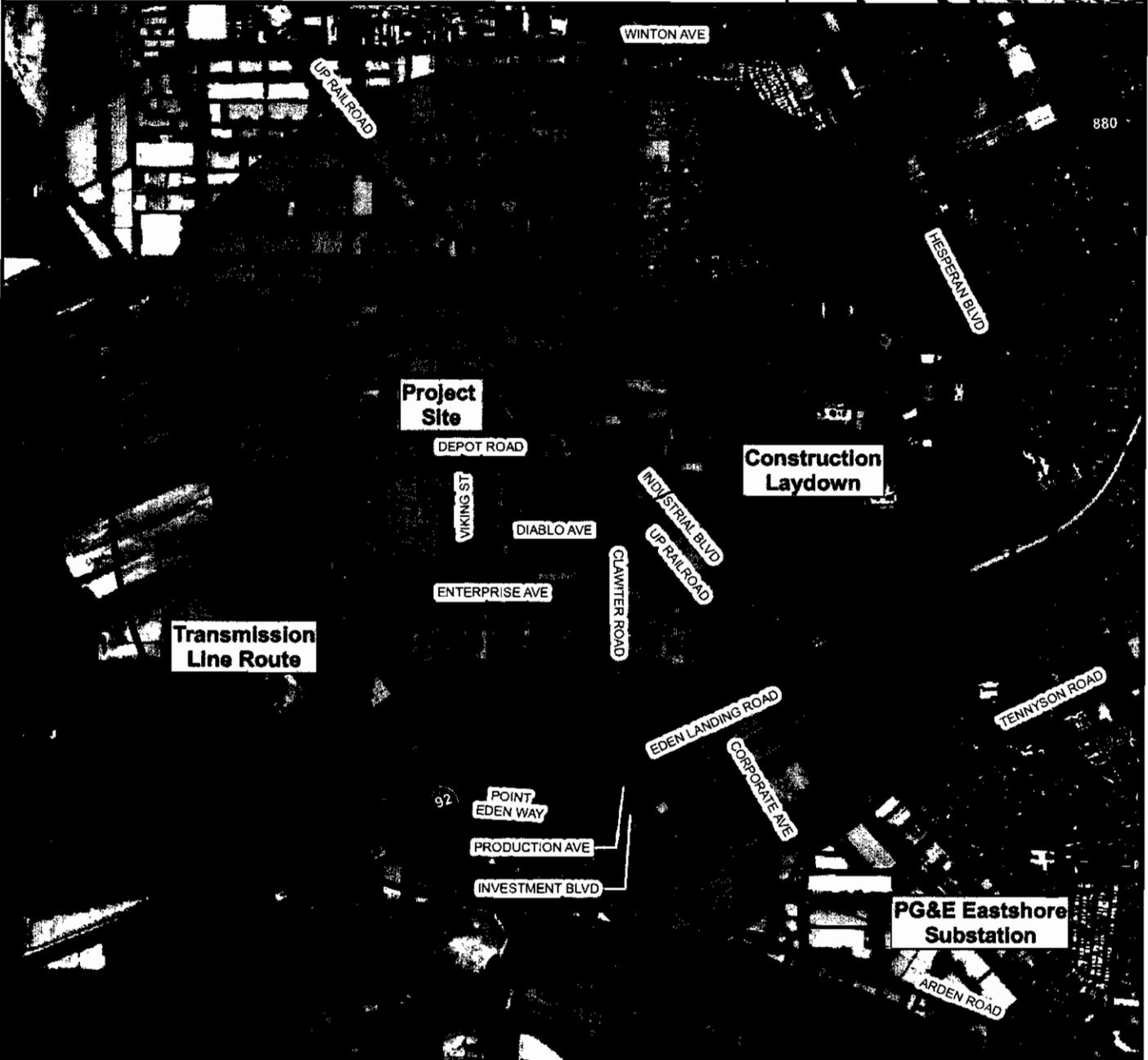
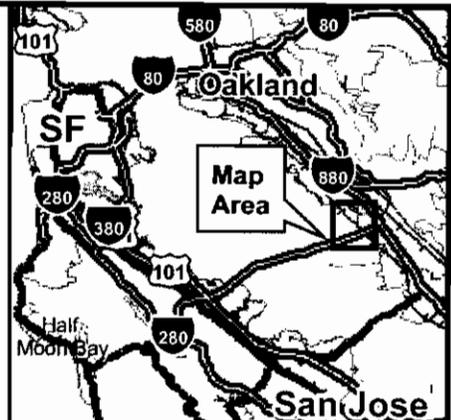


FIGURE 8.4-1
LAND USE DESIGNATIONS
 EASTSHORE ENERGY CENTER
 HAYWARD, CALIFORNIA

LEGEND

- | | | | | | | | |
|--|---|--|--|--|---|--|--|
| | Site Location | | Agriculture | | Medium Density Residential Min Lot Area - 2,500 sq ft | | Planned Development |
| | 1 mile buffer from Project Site Includes 1/4 mile buffer from outlying Transmission Lines | | Central Business | | Medium Density Residential Min Lot Area - 3,500 sq ft | | Single Family Residence Min Lot Area - 4,000 sq ft |
| | Transmission Line Route | | Flood Plain | | Mobile Home Park | | Single Family Residence Min Lot Area - 5,000 sq ft |
| | Other | | High Density Residential Min Lot Area - 1250 sq ft | | Neighborhood Commercial | | |
| | | | Industrial | | | | |

0 500 1,000 2,000 Feet
SCALE IS APPROXIMATE

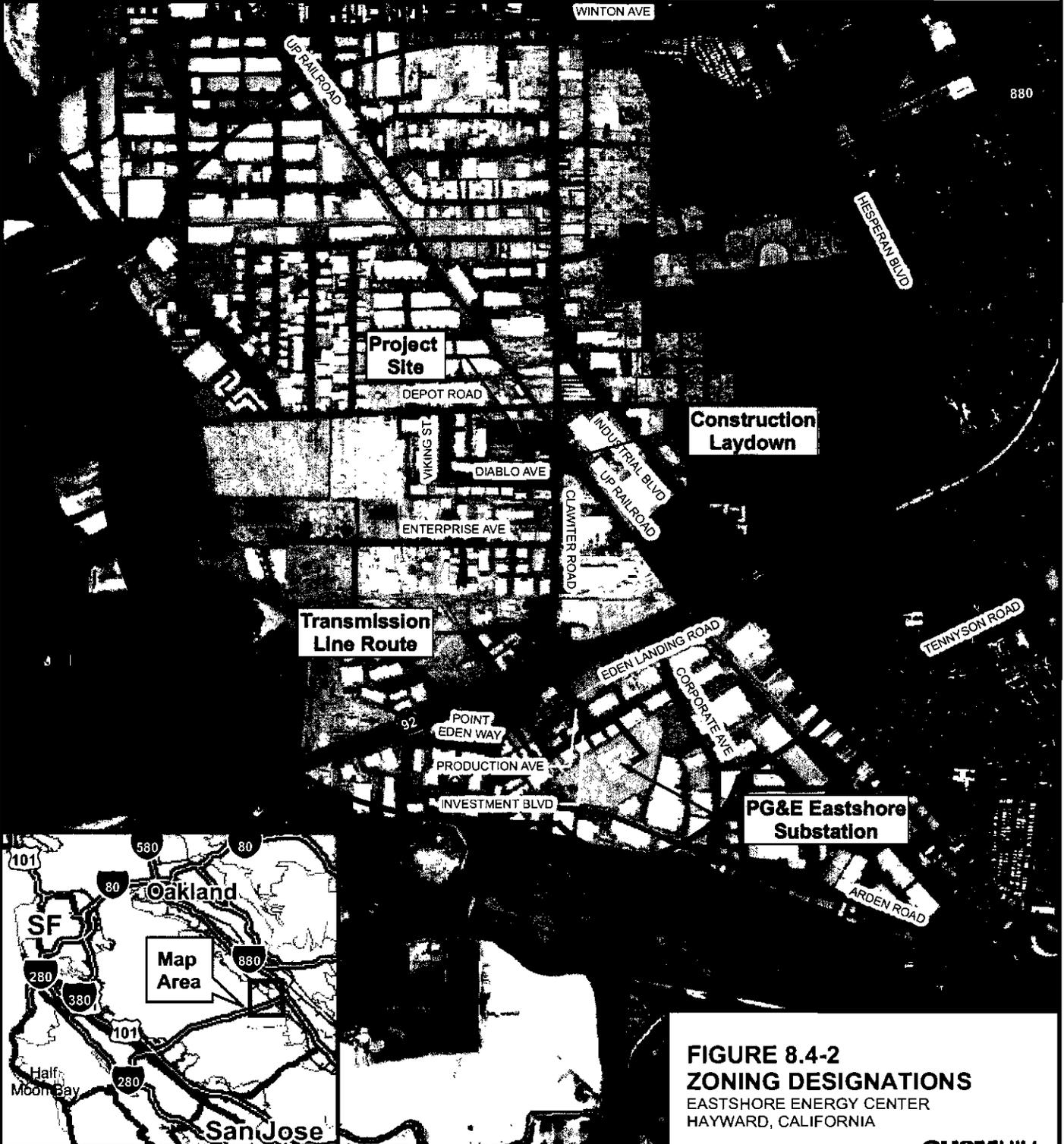
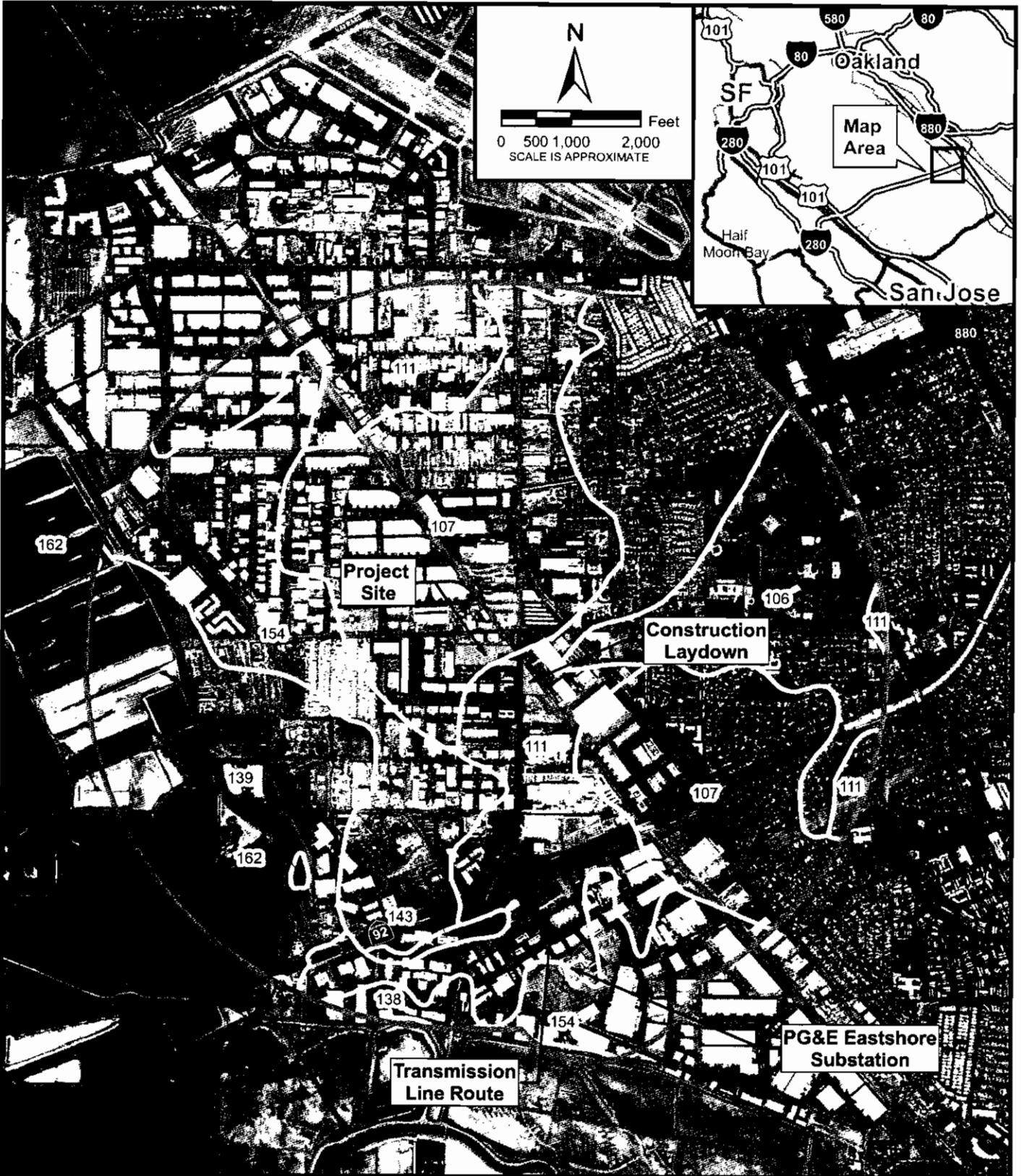


FIGURE 8.4-2
ZONING DESIGNATIONS
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA



LEGEND

-  Site Location
-  1 mile buffer from Project Site
Includes 1/4 mile buffer from
outlying Transmission Lines
-  Soil Map Unit Boundary
-  Transmission Line Route

Soil Map Unit Key

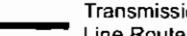
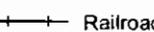
- 106 Botella loam, 0 to 2 percent slopes
- 107 Clear Lake clay, 0 to 2 percent slopes, drained
- 111 Danville silty clay loam, 0 to 2 percent slopes
- 138 Reyes clay, ponded
- 139 Reyes clay, drained
- 143 Sycamore silt loam, drained
- 154 Willows clay, drained
- 162 Water

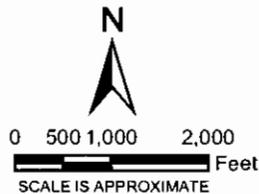
**FIGURE 8.9-1
SOILS MAP**

EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

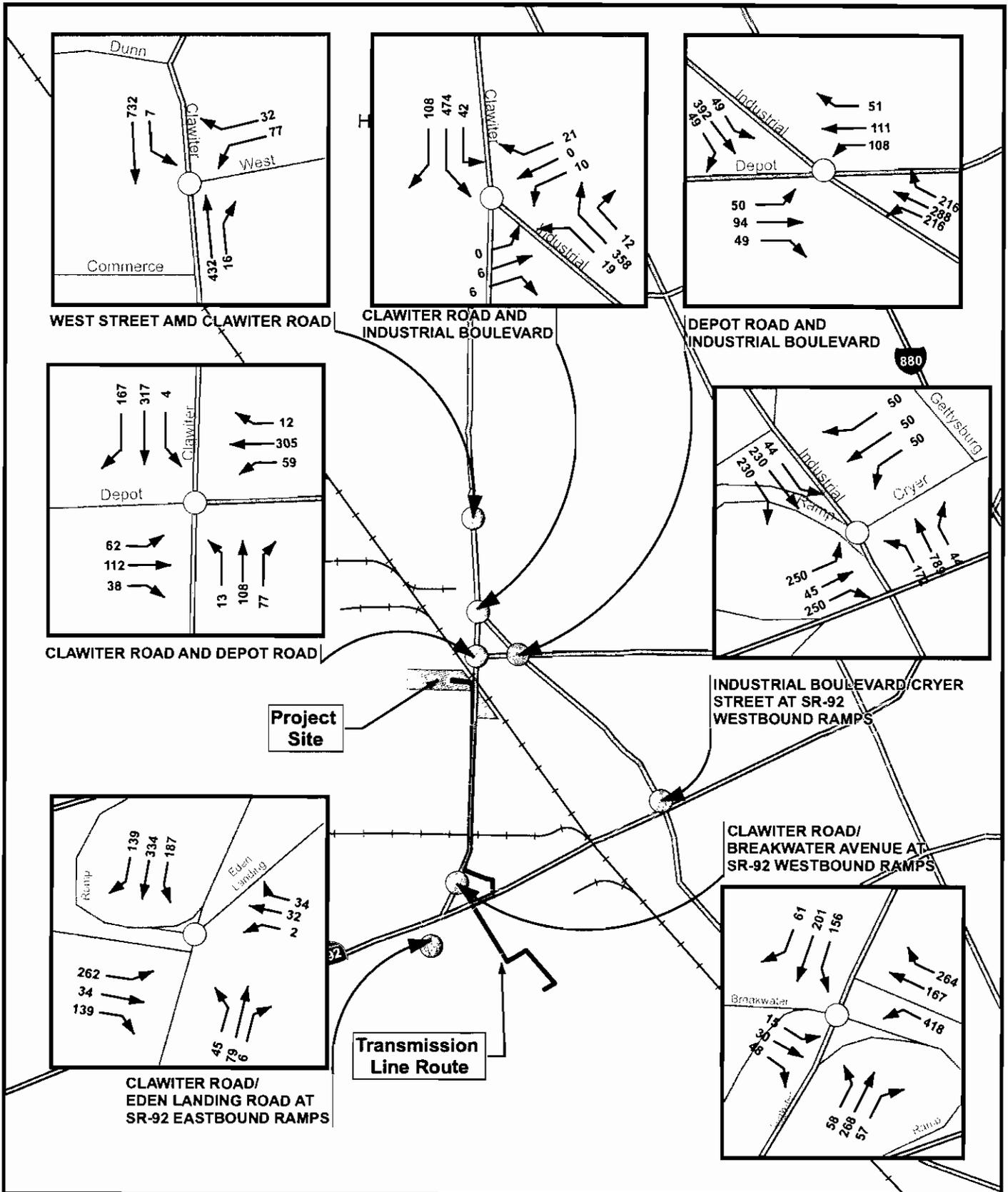


LEGEND

- | | | | |
|---|-------------------------|---|------------|
|  | Site Location |  | Highway |
|  | Transmission Line Route |  | Major Road |
|  | Railroad |  | Airport |



**FIGURE 8.10-2
LOCAL TRANSPORTATION
FACILITIES**
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA



LEGEND

- Site Location
- Transmission Line Route
- Railroad
- Highway
- Major Road
- Streets

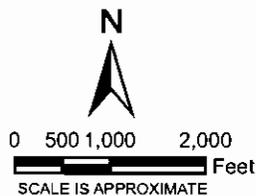
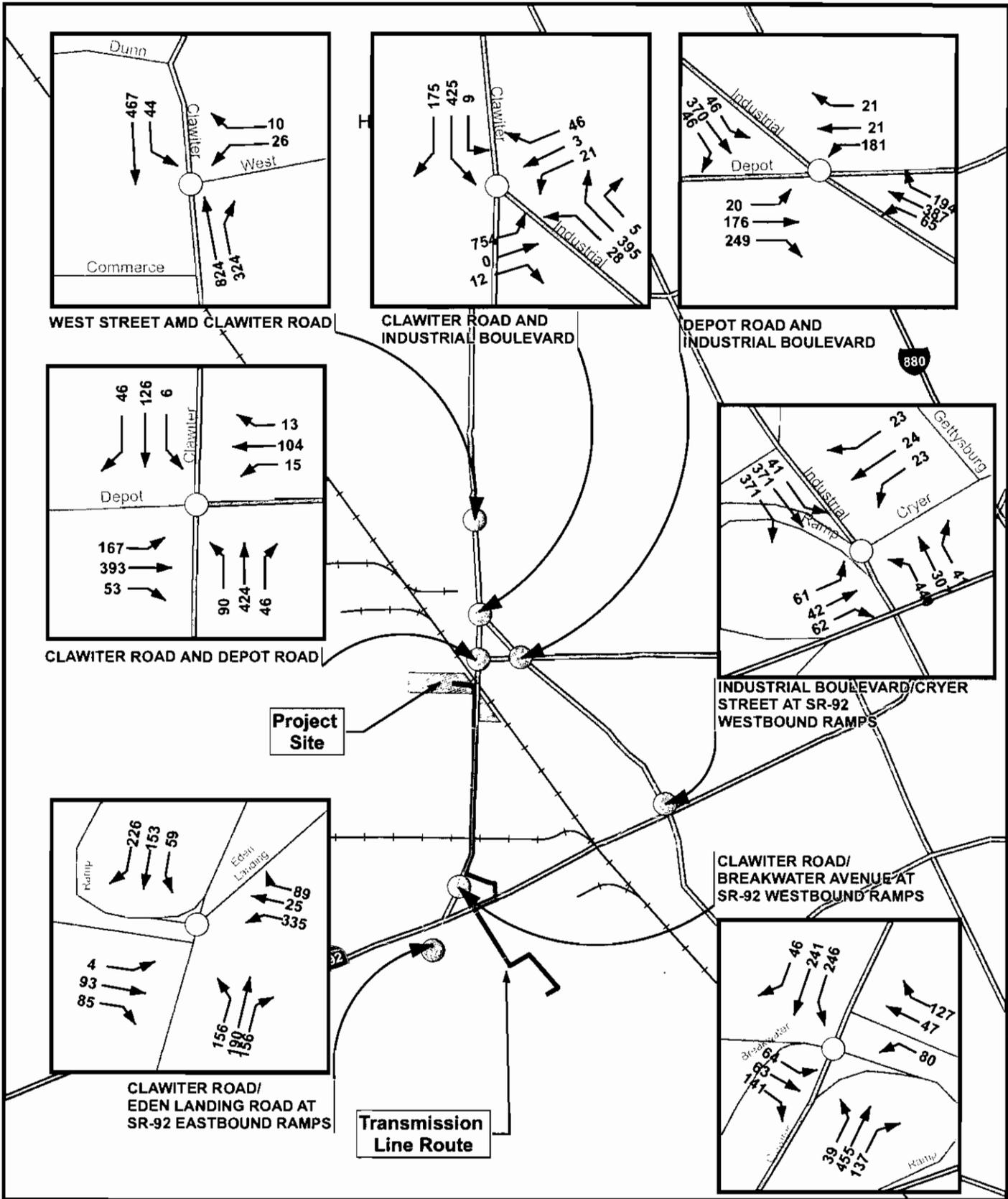


FIGURE 8.10-3
EXISTING
MORNING PEAK-HOUR
TURNING MOVEMENT
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA



LEGEND

- Site Location
- Highway
- Major Road
- Railroad
- Streets
- Transmission Line Route

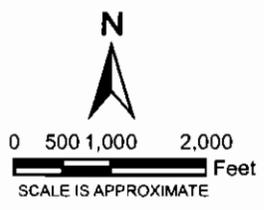


FIGURE 8.10-4
EXISTING
AFTERNOON PEAK-HOUR
TURNING MOVEMENT
 EASTSHORE ENERGY CENTER
 HAYWARD, CALIFORNIA



Photo 1: View looking southwest toward the power plant site from the mailbox at the nearest residence, 2765 Depot Road.



Photo 2: View looking northwest toward the existing building at the power plant site from the Fremont Bank Operations Center parking lot located adjacent to, and on the south side of, the power plant site.

FIGURE 8.11-2a
LANDSCAPE CHARACTER PHOTOS
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

CH2MHILL



Photo 3: View looking south toward the existing building at the power plant site (the building that would be demolished as part of the project), from Depot Road.

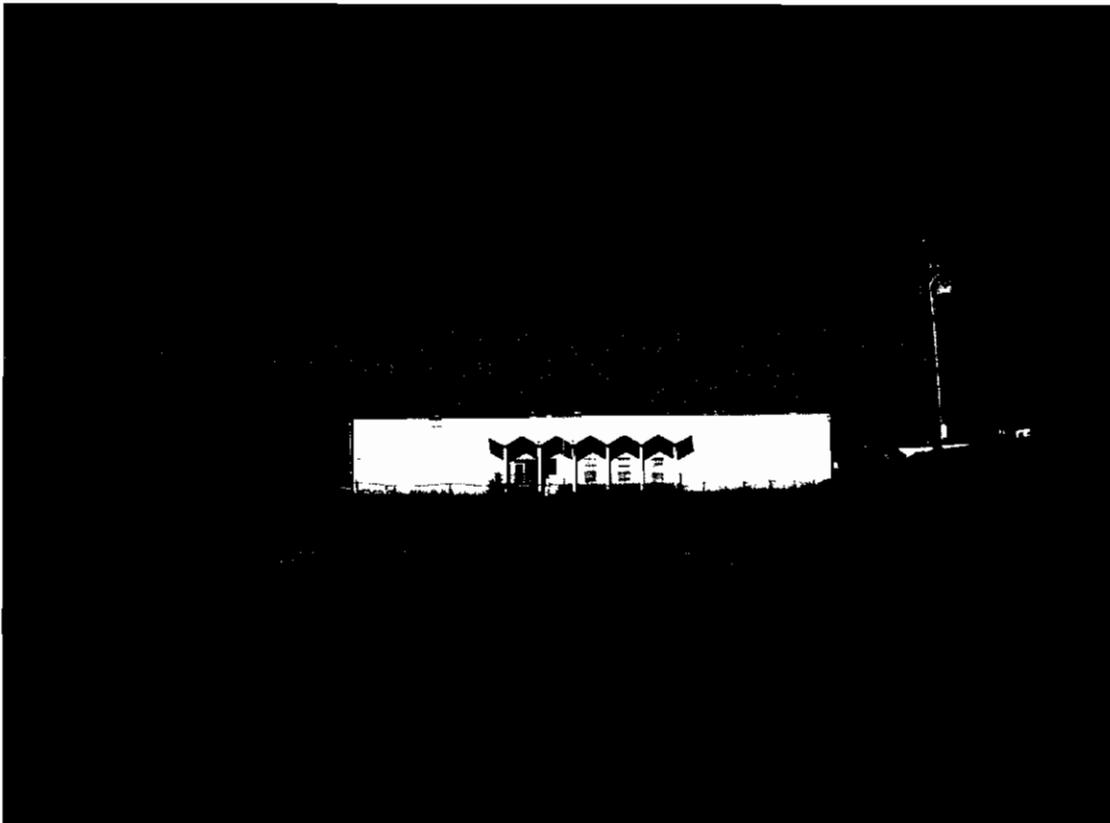


Photo 4: View looking west toward the existing building at the power plant site (the building that would be demolished as part of the project), from the east side of Clawiter Road.

FIGURE 8.11-2b
LANDSCAPE CHARACTER PHOTOS
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

CH2MHILL



Photo 5: View looking east along Depot Road from the south side of the road from a location east of Viking Street.

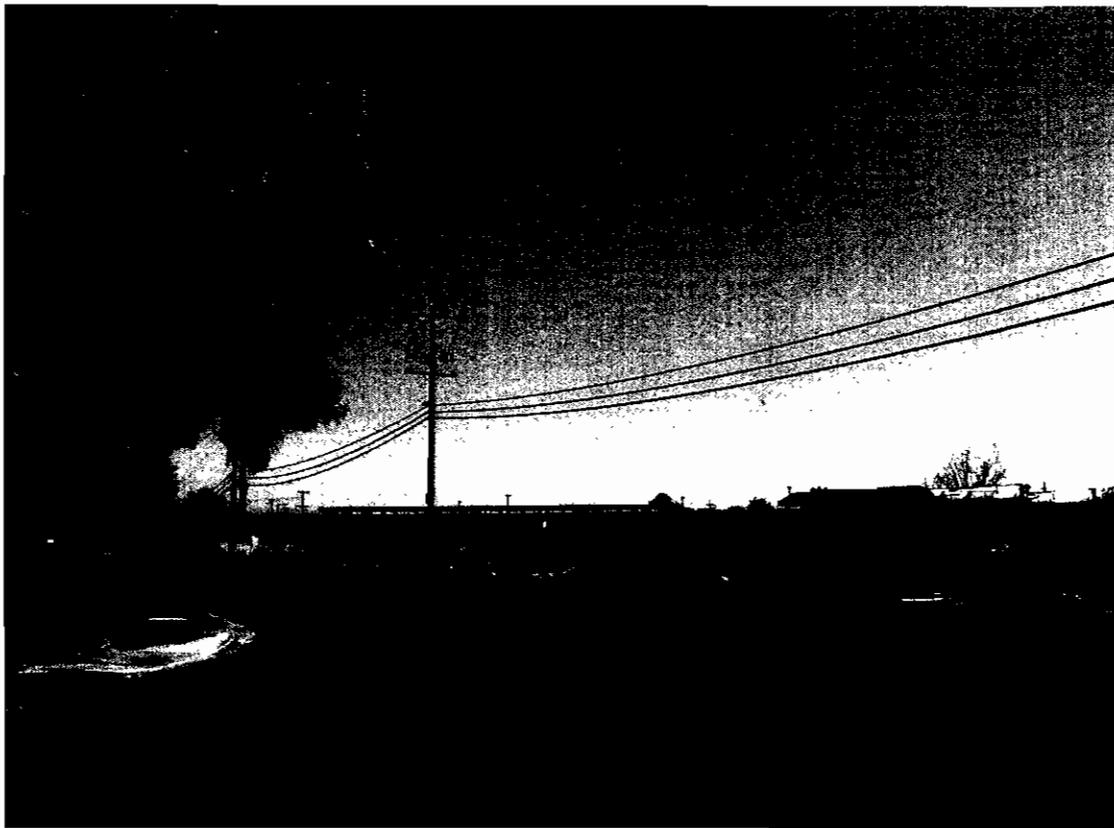


Photo 6: View looking northeast toward the construction laydown area from Diablo Industrial Park at the Clawiter Road/Diablo Avenue intersection.

FIGURE 8.11-2c
LANDSCAPE CHARACTER PHOTOS
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

CH2MHILL



Photo 7: View looking west toward the Fremont Bank Operations Center (the building adjacent to, and on the south side of, the project site), from the proposed project construction laydown area.



Photo 8: View looking north from along the west side of Clawiter Road from Alameda Electrical Distributors, Inc., 25823 Clawiter Road (south of Enterprise Avenue).

FIGURE 8.11-2d
LANDSCAPE CHARACTER PHOTOS
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

CH2MHILL



Photo 9: View looking south along Clawiter Road from the southwest corner of the Clawiter Road/Diablo Avenue intersection.

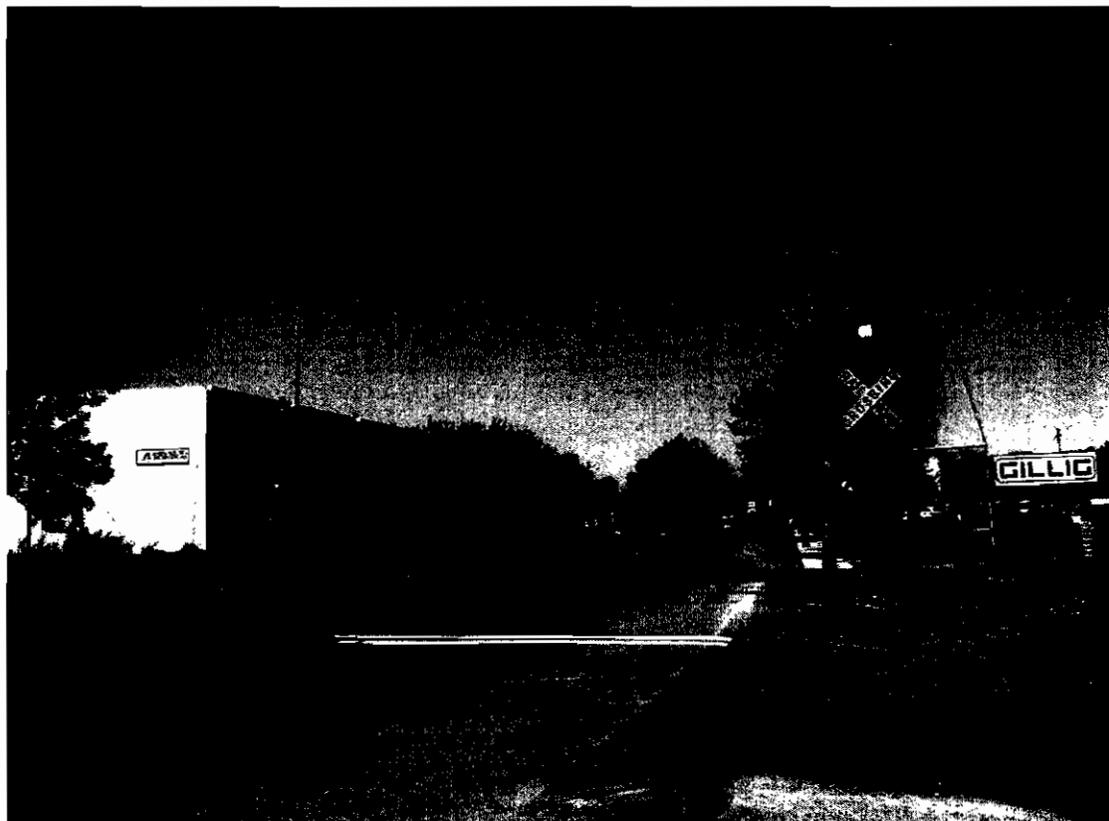


Photo 10: View looking north along Clawiter Road from Galaxy Tire and Wheel, Inc., 25858 Clawiter Road, located on the east side of the road.

FIGURE 8.11-2e
LANDSCAPE CHARACTER PHOTOS
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

CH2MHILL



Photo 11: View looking northwest along Production Avenue from its intersection with Investment Boulevard.



Photo 12: View looking southeast from between two buildings located on the south side of Investment Boulevard toward the existing PG&E Eastshore electrical substation that would be the southern terminus of the project.

FIGURE 8.11-2f
LANDSCAPE CHARACTER PHOTOS
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

CH2MHILL

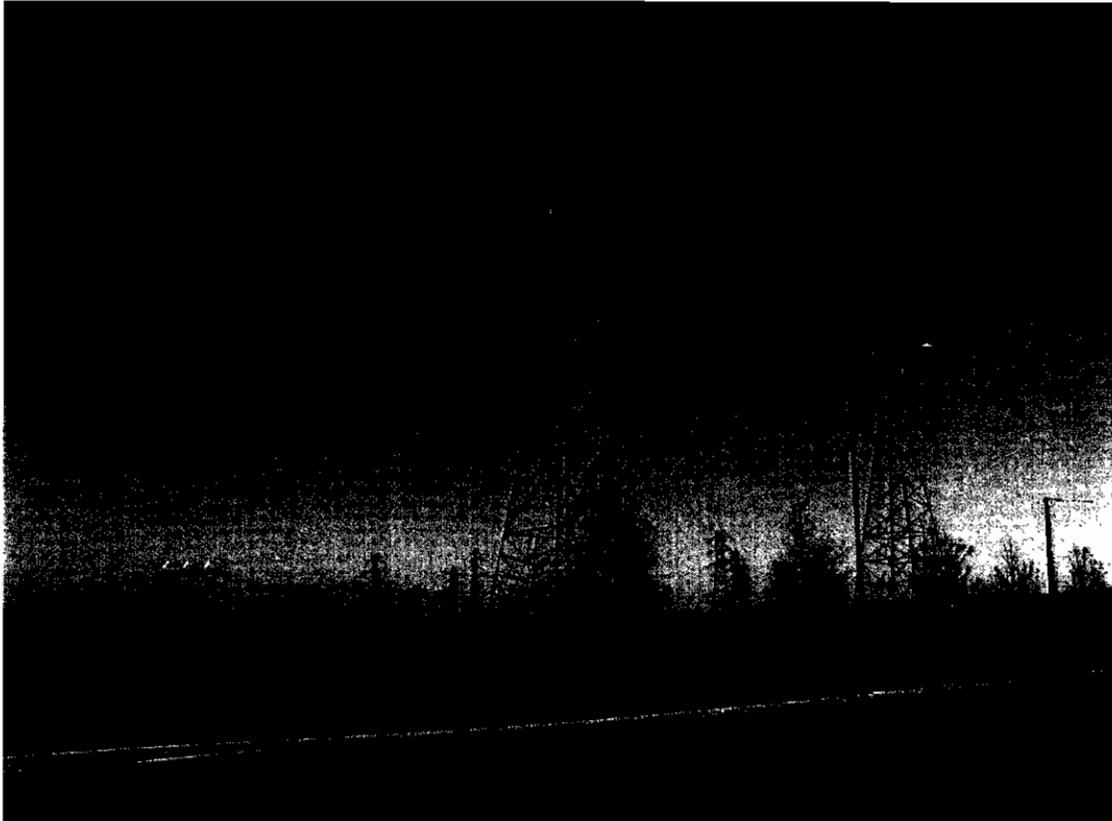


Photo 13: View looking northeast from Arden Road toward the existing PG&E Eastshore electrical substation.

FIGURE 8.11-2g
LANDSCAPE CHARACTER PHOTOS
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

CH2MHILL

CITY OF HAYWARD
DEVELOPMENT PERMIT APPLICATION

Section 2.2 Grading, Utility and Drainage Plan

1. On sloping sites, show existing and proposed grades (i.e., topographical and spot elevations), including grades of abutting properties. Contours may be used. Contours for steep slope are to be drawn at a minimum of 2-foot intervals.

Refer to Figure 916-C-101, Rev C for the Paving and Drainage Plan. Refer to Figure 916-C-102, Rev A for the Laydown Area – Drainage Plan.

Refer to Volume 2, Appendix 8.14 of the AFC for Storm Drain Calculations and the SWPPP Overview.

2. Drainage - show by arrows the direction of storm drainage runoff and the existing drainage facility that will receive the runoff, e.g., channel, creek, storm drain, or gutter.

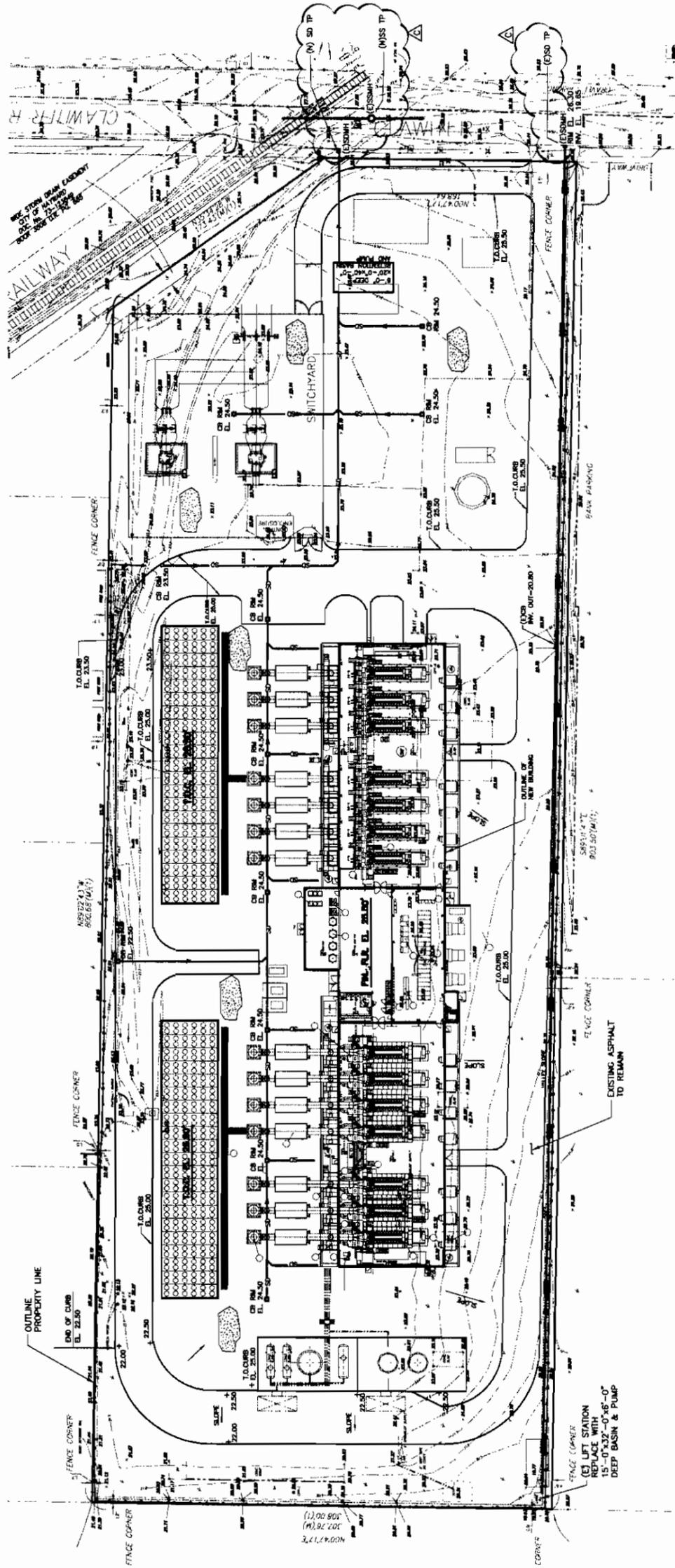
Refer to Figure 916-C-101, Rev C for the Paving and Drainage Plan. Refer to Figure 916-C-102, Rev A for the Laydown Area – Drainage Plan.

Refer to Volume 2, Appendix 8.14 of the AFC for Storm Drain Calculations and the SWPPP Overview.

3. Utilities – show the location of transformers, water connections, sanitary sewer, storm lines, telephone/cable television equipment room and service entrance locations, and street and parking lot lighting.

Refer to Figure 916-C-101, Rev C for the Paving and Drainage Plan. Refer to Figure 916-C-102, Rev A for the Laydown Area – Drainage Plan.

Refer to Volume 2, Appendix 8.14 of the AFC for Storm Drain Calculations and the SWPPP Overview.



NOTE:
 PIPING AND DRAINAGE PIPING SHOWN IS
 CONCEPTUAL. SPECIFIC DETAILS AND LAYOUT
 TO BE DETERMINED AT THE
 FINAL DESIGN.

LEGEND

- CB CATCH BASIN
- SD STORM DRAIN
- X SLOPE OF THE DRAIN
- + EXISTING ELEVATION
- + NEW FINISHED ELEVATION
- 1" SAND FRESH ROCK
- SS SANDY SILT
- TE-M PUMP



PREPARED FOR: TERRA ENERGY		TITLE: EASTSHORE ENERGY CENTER HAYWARD, CALIFORNIA PAVING & DRAINAGE PLAN	
PROJECT: WALNUT CREEK, CALIFORNIA (REV) 943-1460		SCALE: 1"=30'-0"	
PROJECT NUMBER: 20100916		DRAWING NUMBER: 916-C-101	
PROJECT DATE: 11/11/09		REV: C	
NO	REV	DATE	DESCRIPTION
1	A	11/11/09	ISSUED FOR PERMITS
2	B	11/11/09	ISSUED FOR PERMITS
3	C	11/11/09	ISSUED FOR PERMITS



NO	REV	DATE	DESCRIPTION
1	A	11/11/09	ISSUED FOR PERMITS
2	B	11/11/09	ISSUED FOR PERMITS
3	C	11/11/09	ISSUED FOR PERMITS

NO	REV	DATE	DESCRIPTION
1	A	11/11/09	ISSUED FOR PERMITS
2	B	11/11/09	ISSUED FOR PERMITS
3	C	11/11/09	ISSUED FOR PERMITS

NO	REV	DATE	DESCRIPTION
1	A	11/11/09	ISSUED FOR PERMITS
2	B	11/11/09	ISSUED FOR PERMITS
3	C	11/11/09	ISSUED FOR PERMITS

NO	REV	DATE	DESCRIPTION
1	A	11/11/09	ISSUED FOR PERMITS
2	B	11/11/09	ISSUED FOR PERMITS
3	C	11/11/09	ISSUED FOR PERMITS

NO	REV	DATE	DESCRIPTION
1	A	11/11/09	ISSUED FOR PERMITS
2	B	11/11/09	ISSUED FOR PERMITS
3	C	11/11/09	ISSUED FOR PERMITS

NO	REV	DATE	DESCRIPTION
1	A	11/11/09	ISSUED FOR PERMITS
2	B	11/11/09	ISSUED FOR PERMITS
3	C	11/11/09	ISSUED FOR PERMITS

EASTSHORE ENERGY CENTER

STORM DRAIN CALCULATIONS



Stantec

**370 NORTH WIGET LANE, SUITE 210
WALNUT CREEK, CA 94598
(925) 941-1400 FAX: (925) 941-1401**

Job No. 2010091600



CALCULATION SHEET

Stantec

FILE _____ SHEET _____ OF _____

PROCESS	JOB#	CALC#	PROJECT
CIVIL			EAST SHORE ENERGY CENTER
MECHAN.	MADE BY	DATE	SUBJECT STORM WATER RUN-OFF
ELECT.	ES		
INSTR.	CHK BY	DATE	
ARCH.			
	APP. BY	DATE	

DESIGN CRITERIA (TO BE VERIFIED IN FINAL DESIGN)

1. USE RATIONAL METHOD.
2. RAINFALL INTENSITY $2.4''/\text{HOUR}$ FOR TIME OF CONCENTRATION = 10 MINUTES.
3. RUNOFF COEFF. = 0.2 (ASPHALT & ROOF AREAS)
= 0.6 (MAINLY GRAVEL AREAS)
4. FLOW NOMOGRAPH FOR MANNING FORMULA FOR CIRCULAR PIPES FLOWING FULL.



CALCULATION SHEET

Stantec

FILE _____ SHEET 1 OF _____

PROCESS	JOB#	CALC#	PROJECT
CIVIL			EASTSHORE ENERGY CENTER
MECHAN.	MADE BY	DATE	SUBJECT
ELECT.	CS	JULY '06	
INSTR.	CHK BY	DATE	
ARCH.			
	APP. BY	DATE	STORM WATER RUN-OFF

CHECK EXISTING 12" ϕ GRAVITY LINE FOR SITE STORM WATER RUN-OFF.

DESIGN FLOW

12" ϕ

$$\text{SLOPE} = 20.8' - 19.65' = 1.15'$$

$$\text{DISTANCE} = 334'$$

$$S = 0.3\%$$

FROM NOMOGRAPH

$$Q = 1.95 \text{ CFS} = 879 \text{ GALLS/MIN.}$$

$$V = 2.5 \text{ FT/SEC.}$$

FLOWING FULL.

ACTUAL FLOW

USING RATIONAL METHOD,

$$Q = C \lambda A$$

$$C = \text{RUNOFF COEFF.} = 0.8.$$

$$Q = \text{FLOW RATE IN FT}^3/\text{SEC.}$$

$$\lambda = \text{RAINFALL INTENSITY} = 2.4''/\text{HOUR FOR } T_c$$



CALCULATION SHEET

Stantec

FILE _____ SHEET 3 OF _____

PROCESS	JOB#	CALC#	PROJECT
CIVIL			EASTSHORE ENERGY CENTER
MECHAN.	MADE BY	DATE	SUBJECT
ELECT.	<u>LS</u>		STORM WATER RUN-OFF
INSTR.	CHK BY	DATE	
ARCH.			
	APP. BY	DATE	

CONSIDER AREA DRAINING TO NEW SYSTEM

$$= 160' \times 570' = 91,200$$

$$310' \times 260' = 80,600$$

$$207' \times 30' = 6,210$$

178,010 SF

$$\text{LESS } 125 \times \frac{92}{2} = 5,750$$

172,260 SF

$$= 3.95 \text{ ACRES}$$

AREA DRAINING TO EXISTING SYSTEM

$$= 6.22 \text{ ACRES} - 3.95 \text{ ACRES}$$

$$= 2.27 \text{ ACRES.}$$



CALCULATION SHEET

Stantec

FILE _____ SHEET 4 OF _____

PROCESS	JOB#	CALC#	PROJECT
CIVIL			EAST SHORE ENERGY CENTER
MECHAN.	MADE BY	DATE	SUBJECT
ELECT.	CS		
INSTR.	CHK BY	DATE	STORM WATER RUN-OFF
ARCH.			
	APP. BY	DATE	

NEW SYSTEM RUN-OFF

USE C = RUN-OFF COEFF.
= 0.6

(LARGE GRAVEL FINISH AREAS)

$$\begin{aligned}
Q &= C \lambda A \\
&= 0.6 \times 2.4 \times 3.95 \\
&= 5.69 \text{ CFS} \\
&= 2553 \text{ GALL/MIN.}
\end{aligned}$$

ASSUME GRAVITY FLOW TO CITY SEWER
= 875 GALL/MIN.

RETENTION BASIN CAPACITY FOR 20 MIN. STORM

$$\begin{aligned}
&= (2553 - 875) \times 20 \\
&= 33,553 \text{ GALL.}
\end{aligned}$$

$$\begin{aligned}
\text{VOLUME} &= 33,553 \times 0.1337 \\
&= 4486 \text{ CF}
\end{aligned}$$

USE BASIN 20' x 40' x 6'-0" DEEP

VERAGE

sewage backing up and sur-
ed to run full, the hydraulic
junction, and surcharging
drop is made.

at consideration in sewer
Experience indicates that a
quired in sanitary sewers in
lids. The minimum allow-
give this velocity when the
ld be used if they are prac-
ations of state health depart-
slopes for sewers of various
ity in the pipes of 2 ft.
nder special conditions
opes slightly less than those
ut in this case the engineer
pth of the sewage at design
eter.

e required than in sanitary
which will be washed into
2.5 ft. per sec., and 3 ft. per
haracter of the solids, exces-
ft. per sec. being considered
t limit, large and important
ions with vitrified-tile blocks

y in obtaining the minimum
pipes because they will pro-
es. It should be recognized,
er sec. will be reached only
l be noted in Fig. 15-5, pipes
less than when full or half
w flows may make matters
s anticipated should be con-
actual velocity that will be
s that are too low for cleaning
be made for convenient and
to remove them should they
w far toward preventing

15-3 are nomograms for the
ous ranges of quantities and
of the diagrams can best be

FLOW IN SEWERS

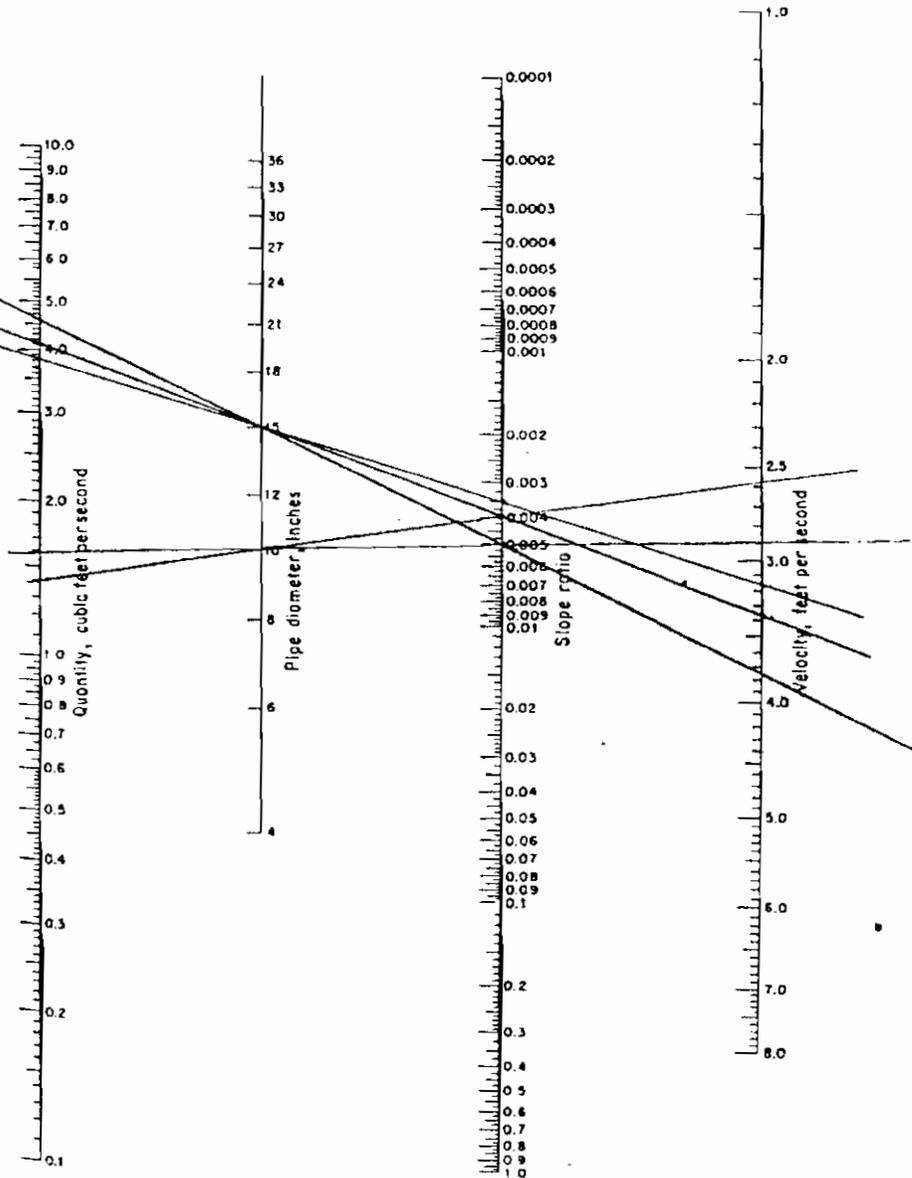


FIG. 15-1. Diagram for solution of Manning formula for circular pipes flowing full.
 $n = 0.013$.

Requirements for Preparation of Eastshore's Construction and Industrial SWPPPs

8.14B.1 Introduction

This section addresses the Storm water Pollution Prevention Plan (SWPPP) and the Monitoring and Reporting Plan (MRP) that will be developed for the Eastshore Energy Center (Eastshore) located at 25101 Clawiter Road, in the City of Hayward, Alameda County, to meet the requirements of the California General Permit for Storm water Discharges Associated with Industrial Activities (General Permit). The project will submit a Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) to comply with the General Permit at a future date.

The approximate 6.22-acre site is located in a densely developed industrial and commercial area approximately 14 miles southeast of downtown Oakland. The project site is zoned Industrial and is currently occupied by a vacant warehouse building and parking lot. The warehouse building will be demolished as part of Eastshore construction. Surrounding land uses include industrial/commercial uses (large, tilt-up warehouses). Berkeley Farms operates its central milk products processing facility directly southeast of the site. The proposed 4.65-acres construction laydown area is on the northernmost portion of Berkeley Farms' property. A proposed 1.3-mile 115 kV transmission line traveling south along the eastern shoulder of Clawiter Road and over-crossing State Route (SR) 92 will interconnect the project to PG&E's Eastshore Substation. A Union Pacific rail corridor crosses Clawiter just north of the site boundary. A rail spur is available to the site. There are residential areas approximately ¼ mile away, with the nearest residence at 2765 Depot Road. No public schools are located within 1000 feet of the site.

8.14B.2 Laws, Ordinances, Regulations, and Standards

In 1972 the Federal Water Pollution Control Act (known as the Clean Water Act) was amended to effectively prohibit discharge of pollutants to "waters of the United States" from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The U.S. Environmental Protection Agency (EPA) has delegated administration of the NPDES program within California to the State of California. California's Porter Cologne Act gives the SWRCB and the nine Regional Water Quality Control Boards (Regional Boards) the authority to administer the NPDES program.

The 1987 amendments of the Clean Water Act added Section 402(p), which established the framework for regulating discharges of storm water from industrial activities and municipal separate storm sewer systems. The EPA's enacting regulations require operators of certain

categories of industry¹ including manufacturing facilities, especially if materials or activities are exposed to storm water, to obtain coverage under an NPDES permit for runoff from their facilities to a storm water drainage system or directly to surface waters.

The SWRCB adopted the General Permit on April 17, 1997 (Order No. 97-03-DWQ). Although often referred to "storm water regulations" what is actually being regulated by the General Permit is the discharge of pollutants into a storm water drainage system or a surface water body, whether those pollutants are transported by storm water runoff or some other flow (a non-storm water discharge).

The surface water runoff without regulated controls can cause the erosion of topsoil, increase sediment load of surface water bodies, increased temperature, and deteriorate water quality. These impacts are mitigated by the requirements of construction and facility operation permits. The following discussion names the permits required to control surface waters during construction and during operation. Specific downstream impacts that are controlled by the permit requirements are discussed.

The discharge of stormwater runoff from the Eastshore Project is regulated by the SWRCB through its stormwater pollution control program. This program is based on federal regulations adopted to implement Section 402(p) of the Federal Clean Water Act and CEQA.

The goal of the stormwater program is to reduce or eliminate stormwater pollution from municipal and industrial point sources, by requiring the implementation of technology based Stormwater Pollution Prevention Plans (SWPPP) and to eliminate surface water quality standards violations caused by stormwater. Industrial facilities and construction activities resulting in disturbance of five acres or more of land are required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge general permits for stormwater discharges (Stormwater General Permit).

Eastshore will require a construction SWPPP because it will disturb more than five acres of land. The Eastshore Project may be exempt from the requirement to obtain coverage under the Stormwater General Permit for Industrial Activities because the project does not consist of any steam turbines and, therefore, it may not meet the definition of a "steam electric power generating facility" under 40 C.F.R. §122.26(b)(14). Under an abundance of caution, however, the Applicant anticipates filing a notice of intent to obtain coverage under the Stormwater General Permit for Industrial Facilities unless it is instructed by CEC or SWRCB that it is not necessary to do so. Even if coverage under this general permit is not required, the Applicant proposes to design and implement the same best management practices to prevent and minimize the discharge of pollutants in its stormwater runoff, and to prepare a SWPPP for the operation of the Eastshore Project in substantially the same form and content.

The final design of SWPPP will be based on the 24 hour, 100 year rainfall event. Should it be necessary, the facility will incorporate pumps to convey the stored water to the municipal rainwater system.

¹ These general categories of industry are defined by Standard Industrial Classification (SIC) code in 40 Code of Federal Regulations Section 122.26(b)(14).

Application for coverage under the Stormwater General Permits is made by completing a notice of intent (NOI), filing it with SWRCB, and publishing it in a newspaper of general circulation in the area of the project.

The NOI for construction activities will be filed with the CEC (or SWRCB, if designated by the CEC as the responsible agency for this permit) at least 38 days prior to the start of construction. A SWPPP meeting the conditions of the Stormwater General Permit for Construction Activities must also be prepared and implemented prior to the start of construction activities. The expected general BMPs for the Eastshore construction SWPPP are discussed in Section 4.

The NOI for Industrial Activities will be filed with CEC (or SWRCB, if designated by CEC as the responsible agency for this permit) at least 38 days prior to the start of industrial operations at the Eastshore Project. A SWPPP meeting the conditions of the Stormwater General Permit for Industrial Activities must also be prepared and implemented prior to the start of operations. The general design approach that would support, and the expected BMPs for, the industrial SWPPP are addressed in Section 6.

8.14B.3 Stormwater Erosion Control During Construction

This section cites specific procedures and requirements, which will be implemented at the construction site to reduce the discharge of contaminated stormwater runoff. It includes information on the erosion control practices to be followed during construction at the site (Section 4), and along the off-site utility routes (Section 5). Site specific erosion control plans will be submitted to CEC prior to construction and concurrent with the submittal and review of construction permits.

The main categories of information to be included in the SWPPP are construction Best Management Practices (BMPs), operating BMPs, construction phase enforcement, and establishment of the Eastshore Project's Stormwater Pollution Prevention Team for operation of the permanent BMPs. BMPs are the practices, procedures, policies, prohibitions, schedules of activities, structures or devices that are implemented to prevent or minimize pollutants coming in contact with precipitation, storm water runoff, or non-storm water flows. BMPs are also structures or devices that remove pollutants from storm water runoff before the runoff enters a storm water drainage system or surface water. Therefore, BMPs are often categorized as either "source control" BMPs or "treatment control" BMPs.

Source control BMPs include all types of measures designed to prevent pollution at the source, that is, to keep storm water from contacting pollutants in the first place. Source control BMPs are generally simple, low-maintenance, cost-effective and are broadly applicable. They may be categorized as either non-structural or structural. Good housekeeping is an example of a non-structural source control BMP; a canopy is an example of a structural source control BMP.

Treatment control BMPs are methods of treating storm water runoff to remove pollutants and are frequently more costly to design, install, and operate than source control BMPs. More importantly, treatment control BMPs are typically not as effective as source control BMPs, and the ineffectiveness is highly dependent on regular maintenance. Nevertheless,

they can be appropriate and effective under certain conditions. However, treatment control BMPs typically do not remove all pollutants from storm water runoff and should not be regarded as disposal systems.

The Stormwater Pollution Prevention Plan (SWPPP) is most appropriately prepared when design-level topographic surveying and mapping is available, and the final configuration of proposed improvements is overlaid on the existing topo. The civil engineer will establish the locations and types of construction BMPs to be required of the construction contractor, and will include these on an overall map of the site. A narrative section of the SWPPP will describe the intended installation sequence and function of the selected BMPs, and present the sizing calculations. The report will also identify the selected minimum standard to which each of the BMPs are to be constructed or installed. When prepared at this level of detail, the document meets the requirements of the Stormwater Construction Activity NPDES permit system, and also accurately describes, to the construction contractor, the improvements and actions to be required of him or her during construction. When complete and submitted to CEC, the SWPPP is then included in the construction bid and contract documents. Implementation of the construction BMPs is carried out by the site work contractor, with enforcement supervised by Eastshore Energy, LLC's resident inspector.

8.14B.4 Site Construction

Site-specific Best Management Practices for temporary erosion and sedimentation control during construction will be identified on the construction plans and construction permit applications submitted to the CEC. BMPs will be selected from the Stormwater Management Manual, as appropriate for the site slopes, the construction activities, weather conditions, and vegetative buffers.

The sequence and methods of construction activities will be controlled to limit erosion. Clearing, excavation, and grading will be limited to the minimum areas necessary for construction of the project, and will not be done far in advance of facility construction. Ground surface restoration shall be completed as soon after final disturbance of an area as is reasonably possible given the constraints of remaining construction and/or startup/testing needs. Interim surface protection measures, such as erosion control blankets or straw matting, may also be required prior to final disturbance and restoration if the potential for erosion is high.

Sediment control measures will be based on a 10 year design storm. Runoff-control or detention measures will consider the 2 year, 10 year and 100 year design storms. Water quality measures (other than sediment removal) will be based on the 6-month, 24 hour duration storm.

All construction practices will emphasize erosion control over sediment control through such non-quantitative activities as:

- straw mulching and vegetating disturbed surfaces,
- retaining original vegetation wherever possible,
- directing surface runoff away from denuded areas,
- keeping runoff velocities low through minimization of slope steepness and length, and
- providing and maintaining stabilized construction entrances.

To effectively drain the work during filling and construction, the predominantly level site will require construction of temporary swales or ditches, to direct flow. Temporary erosion and sedimentation control measures must be implemented upstream of the storm sewer to reduce loss of sediment from the site. A combination of the following measures will be used.

8.14B.4.1 Sediment Traps

Sediment traps are temporary or permanent basins used to intercept and detain stormwater runoff and allow sediment to settle, thereby minimizing the amount of sediment flowing off-site. Sizing criteria for the traps include inflow and sediment load. Sediment traps will be sized for the specific disturbed area, for bare soil conditions, and typically for a 75% removal efficiency of sediment.

8.14B.4.2 Silt Fences

Slopes less than 3H:1V will be protected with silt fencing as appropriate. Silt fences will be installed in locations where they will trap silt eroded from slopes during construction and prior to reestablishing vegetation. The maximum flow path to each silt fence will be approximately 100 feet. No concentrated flows greater than 1 cfs will be directed toward any fence for the 25-year storm. Silt fences will be maintained throughout the construction period, and beyond until disturbed surfaces have been stabilized with vegetation. Silt fence construction specifications including fabric equivalent open size, support spacing, and total length will be determined by local construction conditions during final design of the facilities.

8.14B.4.3 Check Structures and Slope Ditches

Check structures, such as rock dams, hay bale check dams, dikes, and swales, will be used where appropriate to reduce runoff velocity as well as to direct surface runoff around and away from cut-and-fill slopes. Swales and dikes will also be used to direct surface water toward sediment traps.

8.14B.4.4 Matting and Erosion Control Blankets

Depending upon weather conditions during the construction period, straw or jute matting or other suitable erosion control blankets will be used on the pad slopes and the drainage channel slopes if direct rainfall on the slopes would result in erosion prior to stabilization.

8.14B.4.5 Rock Crusher Fines Plated Construction Entrances

Appropriately sized rock will be applied to all construction entrances to reduce migration of construction dirt to adjacent public streets. Rock will also be periodically replenished as they become dirty and/or migrate into the subgrade.

All construction traffic will be directed to use the crusher fines plated construction entrances.

In addition to erosion and sedimentation control on the site, it is also important to reduce potential for chemical pollution of surface waters during construction. Since source control is the most effective method of preventing chemical water pollution, careful control must be exercised over potentially polluting chemicals used onsite during construction. A

Stormwater Pollution Prevention Team established by Eastshore will be responsible for planning, implementing, and maintaining Best Management Practices (BMPs) for:

- Neat and orderly storage of construction chemicals and spent containers in lined, bermed areas
- Prompt clean up of construction phase spills
- Regular disposal of construction garbage and debris
- Regular sweeping of streets leading from the construction site

8.14B.5 Off-site Utility Route Construction

Eastshore Energy, LLC expects that PG&E will use similar temporary erosion and sedimentation control measures for their off-site construction of their natural gas pipeline and power transmission line.

In addition to the silt fences, straw bale and rock check dams described in Section 4 above, on-site utility route construction BMPs will also include:

- Weather protection of stockpiled bedding and backfill materials and topsoil
- Careful placement of trench excavation spoils so as to minimize impact to drainage courses
- Rock crusher fines plated entrances to materials storage sites and field offices
- Surface restoration that immediately follows trench backfill

8.14B.6 Permanent (Industrial) Stormwater Management

Permanent (industrial) stormwater management will include the construction of appropriate stormwater hydraulic and treatment facilities, routine maintenance thereof, and prevention of chemical pollution through source control. As described above, Eastshore will identify a Stormwater Pollution Prevention Team, which will be responsible for developing, implementing, maintaining, and modifying the Industrial Stormwater Pollution Prevention Plan (SWPPP).

The SWPPP will contain appropriate detail for the permanent stormwater treatment and detention BMPs, and will establish Eastshore Energy, LLC's permanent operations Stormwater Pollution Prevention Team from appropriate employee categories. Final design for the permanent BMPs will be incorporated into the final construction plans and specifications prepared by the civil engineer. An operations manual for the permanent BMPs will be prepared by the civil engineer and the Eastshore Energy, LLC's SWPPP team members.

The constructed permanent stormwater BMPs will include:

- An onsite stormwater collection system of inlets, catch basins and pipes
- Permanent erosion and sedimentation control through site landscaping, grass, and other vegetative cover

Final designs for these permanent BMPs will conform to the SWRCB Storm Water Management Manual (SWMM) for Eastshore

Constructed source control BMPs will also be consistent with the SWMM. Secondary containment areas consisting of pavement curbs and berms, non-porous pavement, sumps, and outlet valves, will be employed as necessary in the design of fueling stations (if any), loading and unloading areas for chemicals, aboveground chemical storage tank systems, container storage facilities, outside storage areas and outside maintenance areas. Oil or hazardous substances collected within these containment areas will be isolated for proper cleanup and disposal according to local, state, and federal regulations.

Operational BMPs will be adopted as part of the SWPPP to implement good housekeeping, preventive, and corrective maintenance procedures, steps for spill prevention and emergency cleanup, employee training programs, and inspection and record keeping practices as necessary to prevent stormwater pollution.

Examples of good operational housekeeping practices which will be employed by Eastshore include:

- Neat and orderly storage of chemicals
- Prompt cleanup and removal of spillage
- Regular pickup and disposal of garbage and rubbish
- Regular sweeping of floors and parking lots
- Proper storage of containers
- Prevention of accumulations of liquid or solid chemicals on the ground or the floor

During periods of heavy rainfall and after primary chemical storage tanks have been filled or emptied, secondary containment areas will be inspected for accumulations of water containing any oil sheen indicating the presence of pollution. If oil sheen is not detected, the rainwater may be drained. If pollution is detected, the contaminated water must be isolated and removed, either with absorbents or by pumping to the dirty water tank for site removal.

At least annually, facility operators will receive spill response training, training in the applicable pollution control laws and regulations, and training in the specific features of the Eastshore Project which are intended to prevent releases of oil, petroleum products, or other chemicals. Additional support staff will also be trained in the following spill response procedures:

- Recognizing areas that may be affected by a spill and potential drainage routes
- Reporting of spills to appropriate individuals
- Employing appropriate material handling and storage procedures
- Implementing spill response procedures

Stormwater catch basins will be inspected at least annually as part of the site preventive maintenance program. Stormwater catch basins will be cleaned if the collected deposits fill more than one-third of the sump volume below the lowest pipe invert. The sediments will be removed annually, to restore the necessary design settling and storage volumes of the pond. Material removed from catch basins will be disposed of in accordance with local, state, and federal regulations. If disposed of at any location other than the grit and sludge

handling facilities of a Publicly Owned Treatment Works (POTW), the sediments from the catch basins should first be analyzed to demonstrate the absence of toxic compounds.

Eastshore operators will periodically review the Stormwater Pollution Prevention Plan against actual practice. They will ascertain that the controls identified in the plan are adequate, and that all employees are following them. They must further confirm that non-permitted discharges to the stormwater system are not occurring. A summary of these in-house compliance inspections shall be kept with the SWPPP, along with any notifications of non-compliance and reports on incidents such as spills. If the SWPPP has been followed but still proved inadequate to prevent stormwater pollution, the Team must amend the plan and seek CEC and/or SWRCB concurrence with the improvements.

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Section 2.3 Floor Plans

Show all interior improvements and indicate use of each room (minimum scale 1' = 1/4").

Not applicable.

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Section 2.4 Elevations

Show all exterior building elevations (all sides), fences, walls, trash enclosures, and signs. Show lighting, external building materials and colors, and building height dimensions (minimum scale = 1' = 1/8" except for ground level commercial elevations which must be 1' = 1/4").

Refer to Figures 1.2-3, 1.2-4A, and 1.2-4B for the site general arrangement and site elevations.

Section 3.0 Environmental Impact Analysis

Sixteen areas of possible environmental impact from the proposed project were investigated during preparation of the Eastshore AFC (attached to this application). Detailed descriptions and analyses of these areas are presented in Sections 8.1 through 8.16 of the AFC and summarized below. With the implementation of reasonable and feasible mitigation measures, it is expected that there will be no significant environmental effects.

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Air Quality

The Eastshore site is located in an area designated as attainment for state and federal nitrogen dioxide (NO₂), CO, and sulfur dioxide (SO₂) ambient air quality standards. The area is currently designated as nonattainment for ozone and fine particulate matter (PM₁₀ and PM_{2.5}).

An assessment of the impact to air quality was performed using detailed air dispersion modeling. Potential air quality impacts from Eastshore will be mitigated by the state-of-the-art combustion and post-combustion emission control technologies summarized in Table 3-1 that will comply with the Bay Area Air Quality Management District BACT requirements.

TABLE 3-1
Summary of Proposed Air Pollution Control Technology

Pollutant	Proposed BACT	Emission Concentration ppm by volume at 15% O ₂
NO _x	Lean Burn Combustion, Selective Catalytic Reduction	5
POC	Lean Burn Combustion, Oxidation Catalyst	25
CO	Lean Burn Combustion, Oxidation Catalyst	13
SO ₂	PUC-regulated Natural Gas	<0.153 grains per 100 scf sulfur in natural gas
PM ₁₀ /PM _{2.5}	Lean Burn Combustion	2.426 lb/hr

Emission reduction credits will be obtained to offset increases in emissions of nonattainment pollutants or their precursors, including POC and NO₂. Any SO₂ and PM₁₀/PM_{2.5} emissions that could create a significant adverse impact will be mitigated consistent with CEC practice and CEQA requirements to reduce these impacts to less than significant levels. With the use of advanced lean-burn combustion control technology, post-combustion pollution control systems, and emission offsets, Eastshore will cause no significant adverse air quality impacts.

Refer to Section 8.1 of the Eastshore Energy Center AFC for additional air quality information.

Biological Resources

The Eastshore site is located in an industrial area of Alameda County. Preliminary surveys, habitat evaluations, and aerial photographs indicate that the site is not located in a sensitive area. Land uses within 1 mile of the Eastshore site are largely industrial, with some commercial and residential uses. The highly developed nature of the Eastshore site vicinity

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would not support most special-status species except a few plant species, other transient uses by migratory birds, and mammals.

Because the area around the Eastshore site is highly developed, no direct impacts to sensitive biological resources are expected to occur from construction. Impacts during operation are expected to be less than significant. Therefore, no significant impacts to biological resources are expected to occur.

Refer to Section 8.2 of the Eastshore Energy Center AFC for additional biological resources information.

Cultural Resources

A survey of the proposed Eastshore site and appurtenant linear facilities was conducted. The surveyed area is located in a heavily industrial and commercial area. The Eastshore site was previously covered by asphalt, buildings and parking areas. The linear natural gas supply and 115-kV transmission line routes are contained entirely in existing disturbed city streets, asphalted parking areas, or previously disturbed areas. No undisturbed ground or vegetation was visible within the Eastshore site or transmission line route during the survey.

Given the amount of previous ground disturbance in the area for buildings, utilities, and other infrastructure, it is likely that resources in the area would have been disturbed or destroyed. The archaeological sensitivity of the Eastshore site and linear facility routes is considered low.

The gas, sanitary sewer, and potable water, and transmission lines will be constructed entirely in previously disturbed areas, and entirely in the existing disturbed city streets. Further, both the CHRIS literature search and CH2M HILL's survey failed to identify significant archaeological sites. There are no historic architectural resources within 0.5 mile of the Eastshore site and 0.25 mile of the linear features. No impacts on architectural resources are expected to occur from construction and operation of Eastshore.

Although significant archaeological and historic archeological sites were not found during the field survey, subsurface construction could encounter buried archaeological remains. For this reason, Eastshore Energy, LLC, proposes to implement measures to mitigate potential adverse impacts that could occur if there were an unexpected discovery of buried culturally or historically significant resources.

Refer to Section 8.3 of the Eastshore Energy Center AFC for additional cultural resources information.

Land Use

The Eastshore site and all linear project components are located in the City and are subject to policies stipulated in Hayward General Plan. Specifically, the land use element of the General Plan defines planning areas and establishes the descriptions, limits, and directions for growth. All Eastshore components are located in areas designated as Industrial Corridor

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under the General Plan, and are zoned for industrial use. The Eastshore project will comply with the Zoning Ordinance land use designation and the General Plan policies for the City.

The Eastshore site is immediately west of the Union Pacific Railroad (UPRR) tracks at the western edge of Hayward Area Shoreline Planning Agency jurisdiction, and more than 1 mile from the lands considered to be San Francisco Bay shoreline. Eastshore is consistent with the relevant key Hayward Area Shoreline Planning Agency objective of promoting industrial infill development in designated industrial areas.

The proposed electric transmission line route from the switchyard to the PG&E Eastshore Substation is designated and zoned for industrial use. The areas covered by the natural gas, water, and sewer lines are all designated in the General Plan and Zoning Ordinance as industrial use.

Eastshore would be constructed in an existing industrial area and compatible with adjacent land uses. The transmission line would be installed in an industrial area in the City, and would be compatible with adjacent land uses. It is anticipated that Eastshore would not contribute to a significant impact to land use in the project vicinity. Therefore, Eastshore, as proposed, would not result in a significant cumulative land use impact.

Refer to Section 8.4 of the Eastshore Energy Center AFC for additional land use information.

Noise

The Eastshore project, as proposed, will produce noticeable noise during operations, but the noise levels will comply with City's requirements for industrial and residential uses. Noise will also be produced at the Eastshore site during construction.

The closest residential receptor to the Eastshore site is located at 2765 Depot Road, approximately 1,100 feet away. Adjacent parcels are industrial or commercial in nature.

Construction will occur during an 18-month period. General construction noise levels projected at 1,500 feet from the Eastshore site are estimated to be between 48 and 59 decibels, A-weighted (dBA). These results are conservative because the only attenuating mechanism considered was divergence of the sound waves in open air. Shielding effects of intervening structures were not included in the calculations. Construction noise might be audible at the nearest residences, but is not anticipated to exceed current exposure levels, and the noisiest construction activities will be confined to the daytime hours.

Ambient noise measurements determined that the noise level that is exceeded during 90 percent of the measurement period (L_{90}) nighttime noise level at the nearest residence (i.e., sensitive receptor) is 45 dBA. Noise modeling was used to determine the contribution to the nighttime ambient levels Eastshore would make during operation. Noise from operations is predicted not to exceed 50 dBA at the closest residential receptor. This is consistent with CEC's 5-dBA-over-background significance criterion and complies with the City criterion of 3 dBA above the existing L_{dn} . Ground and airborne vibration are not expected to be perceptible offsite.

No significant noise impacts are expected to occur from construction and operation of Eastshore Energy Center.

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Refer to Section 8.5 of the Eastshore Energy Center AFC for additional noise information.

Public Health

Potential impacts associated with emissions of chemical substances of potential concern into the air from the Eastshore project were addressed in a health risk assessment. Health risks potentially associated with the estimated concentrations of chemical substances in ambient air were characterized in terms of excess lifetime cancer risks (for substances listed by the California Office of Environmental Health and Hazard Assessment [OEHHA] as cancer causing) or comparison with reference exposure levels for non-cancer health effects (for substances listed by the California Office of Environmental Health and Hazard Assessment as non-cancer causing).

The maximum exposed individual resident excess lifetime cancer risk was estimated to be 8.5 in 1 million, less than the 10 in 1 million significance threshold above which public health impacts require additional emission controls.

No significant public health impacts are expected to occur from the construction and operation of Eastshore.

Refer to Section 8.6 of the Eastshore Energy Center AFC for additional public health information.

Worker Health and Safety

During construction, workers will be exposed to construction hazards, and during plant operation, operators will be exposed to operation safety hazards. To evaluate these hazards and control measures, a hazard analysis was performed. The analysis identifies the hazards anticipated during construction and operation, and indicates which safety programs should be developed and implemented to mitigate and appropriately manage those hazards. Programs are overall plans that set forth the method or methods that will be followed to achieve particular health and safety objectives. For example, the Fire Protection and Prevention Program will describe procedures to protect against and prevent fires. Each program or plan will contain training requirements that are translated into detailed training courses. Upon completion of construction and commencement of operations at the Eastshore project, the construction health and safety program will transition into an operations-oriented program that reflects safety hazards and necessary controls during operation. As a consequence of the development and implementation of these plans and programs, workplace accidents would be minimized in both severity and frequency so that there would not be a significant impact to worker health and safety from the construction and operation of Eastshore.

Refer to Section 8.7 of the Eastshore Energy Center AFC for additional worker health information.

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Socioeconomics

Total construction personnel requirements for the Eastshore project and the linear facilities will average 125 workers per month for 18 months, with a peak total work force of 235 during month 12. This translates into 2,246 person-months. The construction payroll is estimated at \$33.8 million. The estimated indirect and induced employment within Alameda County would be 17 and 90 jobs, respectively. Indirect and induced income impacts are estimated at \$733,300 and \$3,828,200, respectively. The total local sales tax expected to be generated during construction is \$166,250 (i.e., 8.75 percent of local sales). During construction, there would be no significant adverse impacts to population, housing, schools, or public services and utilities.

The Eastshore project will be operated by 13 full-time employees. Estimated indirect and induced employment in Alameda County would be 4 and 7 permanent jobs, respectively. The Eastshore project will bring \$2,366,100 in operational payroll to the region. During operations, additional sales tax revenues of approximately \$116,480 will be obtained by the City and Alameda County. During operation, there would be no significant adverse impacts to population, housing, schools, or public services and utilities. Therefore, the Eastshore project would benefit the local economy.

Potential environmental justice impacts were also analyzed in accordance with Executive Order (EO) 12898 (Appendix 8.8A). As reported in the series of environmental analyses prepared for Eastshore, and further confirmed through discussions with the environmental professionals who prepared those sections, no significant adverse impacts are expected after proposed mitigation measures are implemented. Consequently, none of the impacts of the Eastshore project can be described as high and adverse in the context of EO 12898. Because no high and adverse impacts are expected to result from the construction and operation of the Eastshore project, no high and adverse human health or environmental effects of the Eastshore project are expected to fall disproportionately on minority or low-income populations. The Eastshore project can, therefore, be considered consistent with the policy established in EO 12898.

Refer to Section 8.8 of the Eastshore Energy Center AFC for additional socioeconomic information.

Agriculture and Soils

Based on review of aerial photographs and documentation from a nearby project (Calpine/Bechtel, 2001), there are no commercial agricultural land uses in the area of the proposed Eastshore site (includes a 1-mile buffer of all facilities). There are no important farmlands (as defined for the Farmland Mapping and Monitoring Program) mapped in the same area (CDC, 2004). The proposed gas and electrical corridors will follow existing roadway or railroad ROW through urban areas. The potable water supply and sanitary sewer pipeline connection already exist on the Eastshore site.

The soils found in the Eastshore site, laydown area, and along the linear features are nearly level (or very slightly sloped). Construction activities could affect soil resources by increasing soil erosion and soil compaction. However, best management practices will be

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used to minimize erosion at the site during construction. Therefore, Eastshore will not cause adverse impacts to agricultural production or soil loss.

Refer to Section 8.9 the Eastshore Energy Center AFC for additional soils and agriculture information.

Traffic and Transportation

During the peak construction period, approximately 212 daily construction worker round trips are expected. To analyze the worst-case scenario, a focused assessment of the impacts on the surrounding roadways – an Intersection Capacity Utilization analysis – was conducted for the seven intersections that would be most directly affected by Eastshore construction traffic. In general, the addition of the forecasted peak project traffic (424 daily vehicles) is not anticipated to result in a significant change to roadway operations throughout the day. Therefore, the construction of Eastshore is not expected to have significant impacts on roadway intersections.

Three segments are predicted to have unacceptable LOS E and LOS F operations during the peak hour: I-880 between Winton Avenue and SR-92, I-880 between SR-92 and Tennyson Road, and Clawiter Road between Industrial Boulevard and SR-92 westbound ramps. Because these roadways are over capacity, anything that adds a significant number of trips may be considered an impact. The assumed worst-case overlap of construction of the nearby Russell City Energy Center would further exacerbate this impact.

To mitigate the potential impacts, a traffic control plan will be prepared in accordance with the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook. After construction is complete, no permanent alterations to the area roadways are proposed. Implementation of a traffic control plan for the affected area for the short duration of construction in that area is adequate to minimize the traffic impacts to an acceptable level. Therefore, with the implementation of a traffic control plan, the construction of Eastshore is not expected to have significant impacts on roadway intersections.

The addition of traffic associated with Eastshore operations during the peak commuter morning and afternoon hours will not result in an Intersection Capacity Utilization value significantly higher than without Eastshore. Therefore, the operation of Eastshore will not have significant impacts on roadway intersections.

Refer to Section 8.10 the Eastshore Energy Center AFC for additional traffic and transportation information.

Visual Resources

The landscape surrounding the Eastshore site is composed almost exclusively of industrial and commercial facilities. The site is flat and open, and contains no features considered to be scenic resources. Several industrial and commercial facilities throughout the area are tall rectangular buildings that generally block views toward the Eastshore site. The Eastshore project features will include a power house (including control room) that will be approximately 417 feet long, 71 feet wide and 36 feet high. The engine stacks will be 70 feet

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tall and 4 feet in diameter. There will be two radiator banks on the northern portion of the Eastshore site. Each bank will be approximately 185 feet long, 33 feet wide, and 20 feet high to the top of the fan shrouds. The exteriors of all major equipment will be the shades of off-white, beige, tan, and gray used on the adjacent buildings. This color treatment will optimize Eastshore's visual integration with the surrounding environment.

There are no residences in close proximity to the Eastshore site. The nearest residence is approximately 1,100 feet away on Depot Road. The nearest residential neighborhood is approximately 0.6 mile away, east of Industrial Boulevard. A key observation point (KOP1) toward the site was selected in consultation with CEC Visual Resources staff and evaluated. A computer simulation determined that the Eastshore project would not be visible from this view and, therefore, would have no impact on the overall quality of the view. In general, to the extent to which they would be visible, the elements of Eastshore would be consistent with the existing components of the view. They would have very little effect on the character of the views, and would not alter the view's existing low level of visual quality. The lighting associated with Eastshore would be limited, and would not pose a hazard or adversely affect day- or nighttime views toward the site. Eastshore is in general conformance with the LORS related to visual resources in the City plans and zoning ordinance provisions that pertain to this area. Therefore, the Eastshore project will not cause any significant impacts to visual resources.

Refer to Section 8.11 the Eastshore Energy Center AFC for additional visual information.

Hazardous Materials Handling

Hazardous materials to be used during construction and operation were evaluated for hazard characteristics. Hazardous materials to be used during construction of the Eastshore project (and its associated linear facilities) will include gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, and paint thinner. The quantities of hazardous materials that will be onsite during construction will be small, relative to the quantities used during operation. Several hazardous materials, including one regulated substance, will be stored at Eastshore during operation. Only aqueous ammonia will be stored in amounts above the threshold quantity during the operations phase, and a risk management plan will be prepared that is consistent with the California's Accidental Release Prevention Program requirements. Sufficient monitoring will be performed during construction and operation to ensure that the proposed mitigation measures are satisfied and effective in mitigating potential environmental effects.

An offsite consequence analysis will be performed to assess the impact to humans if a spill or rupture of the aqueous ammonia storage tank were to occur. The results of this analysis will be compiled and submitted during discovery. Based on prior experience with similar facilities, the general public is not expected to be exposed to ammonia concentrations above levels considered to represent a significant impact during a worst-case release scenario. Eastshore will confirm that the facility will not pose a significant risk to the public during discovery.

Refer to Section 8.12 of the Eastshore Energy Center AFC for additional hazardous materials and handling information.

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Waste Management

During construction, the primary waste generated will be solid nonhazardous waste. However, some nonhazardous liquid waste and hazardous waste (solid and liquid) will also be generated. Most of the hazardous wastes will be generated at the Eastshore site, but a limited quantity of hazardous waste may be generated during construction of the Eastshore project linear. The types of waste and their estimated quantities are described in the waste management section of the AFC. The primary waste generated during operation will be nonhazardous wastewater. Other nonhazardous solid waste will also be generated, as well as varying quantities of liquid and solid hazardous waste. Handling and mitigation of these wastes is also described in the waste management section of the AFC.

The handling and management of waste generated by the Eastshore project will follow the hierarchical approach of source reduction, recycling, treatment, and disposal. The first priority will be to reduce the quantity of waste generated through pollution prevention methods (e.g., high-efficiency cleaning methods). The next level of waste management will involve the reuse or recycling of wastes (e.g., used oil recycling). For wastes that cannot be recycled, treatment will be used, if possible, to make the waste nonhazardous (e.g., neutralization). Residual wastes that cannot be reused, recycled, or treated will be disposed of offsite.

Refer to Section 8.13 of the Eastshore Energy Center AFC for additional waste management information.

Water Resources

The Eastshore project will use an extremely small quantity of water, approximately 1.6 acre-feet of potable water per year. This water consumption is comparable to only 2 – 3 single family households. Potable water will be supplied to the site by the City. Potable water uses at Eastshore will include maintenance (fire fighting systems and engine closed-loop cooling); service (turbo washing, power house and plant uses, and personnel uses); and miscellaneous uses, such as equipment washing and irrigation. Wastewater, also in very small quantities, will be collected and discharged to the City sanitary sewer.

Proposed mitigation measures are prescribed by stormwater and erosion control management programs mandated under the National Pollutant Discharge Elimination System (NPDES). These programs have been in place for a number of years and the prescribed measures have proven effective. Under the General NPDES Permit for Construction, for example, various specific measures are prescribed, and a program of monitoring is required. Compliance with these programs will ensure that all residual impacts associated with Eastshore are mitigated to a level of less than significant.

Refer to Section 8.14 of the Eastshore Energy Center AFC for additional water resources information.

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Geologic Hazards and Resources

Five principal faults lie within a 25-mile radius of the Eastshore site. Ground shaking presents the most significant geologic hazard to Eastshore and its linear facilities. Liquefaction might also affect linear facilities as a result of ground shaking. The Eastshore site and the linear facilities will need to be designed and constructed to withstand strong earthquake shaking as specified in the 2001 California Building Code for Seismic Zone 4 in accordance with City requirements. Proposed mitigation measures will be implemented in the design of the facilities to reduce risk associated with these hazards.

Refer to Section 8.15 of the Eastshore Energy Center AFC for additional geological resources information.

Paleontological Resources

Paleontological resources (fossils) are the remains or traces of prehistoric animals and plants. The literature review, archival searches, and field survey conducted for this inventory documented only three previously recorded fossil sites within 3 to 5 miles of the Eastshore site. The occurrence of fossils near the Eastshore site in similar geologic environments indicates a potential for additional similar, scientifically important fossil remains to be encountered by earth-moving activities during construction. The Eastshore site lies on alluvial deposits that are at least in part equivalent to the Temescal Formation. The potential of encountering sediments of high paleontological sensitivity is likely when these activities extend to a depth sufficient to encounter undisturbed sediment of Rancholabrean age. Although excavation at the site will generally be shallow (less than 6 feet below ground surface), the possibility exists that disturbance would uncover resources of high paleontological sensitivity.

Mitigation measures have been proposed to reduce or mitigate potential project-related adverse impacts to significant paleontological resources. These mitigation measures are described in the paleontological resources section of the AFC. No impact to paleontological resources would occur as a consequence of operation, so no mitigation is proposed during operation of Eastshore.

Refer to Section 8.16 of the Eastshore Energy Center AFC for additional paleontological resources information.

Section 4.0 Additional Materials/Information

Consistent with the direction provided for the inclusion of additional materials/information in the Application, a color rendering has been included to address these requirements. The simulated color rendering of the Eastshore Energy Center is provided as Figure 1.2-2B included in Section 2.0 of this submittal.