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February 6, 2008

BY HAND DELIVERY AND U.S. MAIL

DOCKET
07-AFC-6
DATE FEB 06 2008
RECD. FEB 06 2008

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California Energy Commission, Siting Division
1516 Ninth Street, MS-15
Sacramento, CA 95814

Mr. Joe Garuba, Sr. Analyst
City of Carlsbad
1200 Carlsbad Village Drive
Carlsbad, CA 92008

Re: Carlsbad Energy Center Project (07-AFC-6)
Responses to City of Carlsbad's Data Requests, Set 1A (#49 – 61)

Dear Messrs. Monasmith and Garuba:

On behalf of Carlsbad Energy Center LLC ("CECP"), please find enclosed herewith responses to the City of Carlsbad's December 20, 2007 Data Requests, Set 1A (#49-61). CECP is providing copies of the responses to all parties identified on the current proof of service list (see attached).

Should you have any questions regarding this submittal, please contact me at (916) 447-0700.

Respectfully submitted,

John McKinsey / kjh

John A. McKinsey

JAM:kjh
cc: See Proof of Service List Attached

Oregon
Washington
California
Utah
Idaho
Colorado
Minnesota

Carlsbad Energy Center Project

(07-AFC-6)

City Data Responses, Set 1A

(Response to City Data Requests 49 though 61)

Submitted to

California Energy Commission
and
City of Carlsbad

Submitted by

Carlsbad Energy Center LLC

February 2008

With Assistance from

CH2MHILL
2485 Natomas Park Drive
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Sacramento, CA 95833

Shaw™ Stone & Webster, Inc.

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Introduction

Attached are Carlsbad Energy Center LLC's (Applicant) responses to the City of Carlsbad's (City) data requests numbers 49 through 61 regarding the Carlsbad Energy Center Project (CECP) (07-AFC-6). The City submitted these data requests to the California Energy Commission (CEC) on December 20, 2007. The responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as the City presented them and are keyed to the Data Request numbers (49 through 61) used by the City. New or revised graphics or tables are numbered in reference to the Data Request number. For example, the first figure used in response to City Data Request 60 is designated as Figure City DR60-1, and so on.

Additional tables, figures, or documents submitted in response to a data request (supporting data, stand-alone documents such as plans, folding graphics, etc.) are found at the end of a discipline-specific section and are not sequentially page-numbered consistently with the remainder of the document, though they may have their own internal page numbering system.

The Applicant looks forward to working cooperatively with CEC Staff and the City as the CECP proceeds through the CEC siting process. We trust that these responses address the City's questions.

Air Quality (City Data Requests 49 – 50)

Background

Due to several different project annual operating hours contained in the AFC, the City is unclear as to what the actual operating hours will be.

City Data Request

49. Please identify project annual hours of plant operation, including anticipated number of starts and stops.

Response: The expected annual operating profile for the CECP, including the number of gas turbine startups/shutdowns, is shown on Tables 5.1B-3 and 5.1B-4 of the AFC. As shown on these tables, during a maximum operating year there will be approximately 300 hours per year with a gas turbine startup, 300 hours per year with a gas turbine shutdown, and 3,500 hours per year of normal gas turbine operation. The resulting annual total of 4,100 hours per year of operation is the maximum estimated total per gas turbine for the CECP.

50. In light of the passage of AB 32, please provide the projected carbon footprint for the proposed Carlsbad Energy Center. Please identify and explain proposed mitigation measures.

Response: The Greenhouse gas (GHG) emissions for the CECP along with the mitigation associated with the shutdown of the existing boiler Units 1-3 at the Encina Power Station are discussed in Section 5.1.8.2 of the AFC. As discussed in this section of the AFC, with the shutdown of the existing boilers there will be a net increase in GHG emissions of approximately 2.08×10^5 metric tons per year of carbon dioxide equivalent GHGs associated with the proposed project. However, this number does not account for the reduction in operation of less efficient electric generation units that is expected to occur regionally once the new more efficient units are available at CECP. For example, the GHG performance of the new more efficient units will be approximately 20% better than the California's GHG emission performance standard of 1,100 pounds of CO_2 per megawatt-hour adopted by the California Public Utilities Commission on January 25, 2007 and approximately 30% better than the GHG emission performance of existing Encina Power Station Units 1-3 they will replace. Because of this improved efficiency to the fleet of California's power generating resources, there will be an overall reduction in GHG emissions produced to meet the local and regional power demand needs. While the exact level of regional GHG emissions reductions attributed to the CECP's more efficient units is difficult to calculate, this benefit is expected to occur nevertheless.

Land Use (City Data Requests 51 – 54)

Background

There are numerous indications from the applicant, both written and verbal, on a perceived future change in land use for the land west of the train tracks (current location of existing Encina Power Station). Based on this representation,

City Data Request

51. Please re-evaluate the environmental impacts (including all applicable sections of the AFC) with that changed land use contemplated (either Tourist-Serving Commercial or Open Space for purposes of evaluation).

Response: The potential future changes for the west side of the existing Encina Power Station are not part of the CECP. While existing Units 1 through 3 will be retired as part of the CECP and development of the CECP could eventually facilitate the retirement of Units 4 and 5, retirement of Units 4 and 5 and any change in land use on the west side of the Encina Power Station is not part of the CECP. The timing, nature and extent of changes in land use after the retirement of Units 4 and 5 is not known or defined at this time and, as such, conducting a re-evaluation of environmental impacts for a future speculative change that is independent and separate from the CECP is not necessary or required under the CEC licensing process for the CECP.

City Data Request

52. Please explain the process for retiring Encina Generation Units 4 & 5. Please identify demolition costs, probable demolition schedule, costs associated with relocating San Diego Gas and Electric's switchyard to a conforming location (east of the rail line) and the appropriate site layout for the relocation. Please provide a reclamation plan for the existing Encina power station site which includes the removal of the existing ocean-based fuel supply lines.

Response: As discussed above in City Data Response 51, the future retirement of Units 4 and 5 and any change in land use on the west side of the Encina Power Station is not part of the CECP. The timing, nature and extent of changes in land use after the retirement of Units 4 and 5 are not known or defined at this time, and is independent and separate from the CECP. Therefore, providing information regarding the demolition and reclamation of the Encina Power Station is neither necessary nor required under the CEC licensing process for the CECP, and it is premature for a reclamation plan to be prepared for the eventual retirement of the existing Encina Power Station. The existing San Diego Gas & Electric (SDG&E) switchyard on the Encina Power Station site is owned and operated by SDG&E and neither Cabrillo Power I LLC or Carlsbad Energy Center LLC have control over if or when SDG&E may consider and implement a relocation of the existing switchyard.

Background

The City of Carlsbad has historically not permitted structures above 45 feet. This includes the development of the Four Seasons Aviara and Legoland Amusement Park.

City Data Request

53. Please identify how the proposed power plant will conform to City regulations.

Response: A comprehensive review of the City's Plans and policies was conducted as part of the AFC and the findings of this review are included in Section 5.6 – Land Use of the AFC. Based on this comprehensive review, there are no specific height limits for power generating buildings or transmission line towers applicable to the Encina Power Station or the CECP. However, there is specific information related to the future development/redevelopment of the area containing the Encina Power Station. Table 5.6-1 of the CECP AFC outlined the applicable City of Carlsbad plans and policies, including:

- City of Carlsbad General Plan
- City of Carlsbad Specific Plan 144
- City of Carlsbad Municipal Code Zoning Section
- City of Carlsbad Encina Power Station Precise Development Plan (PDP 00-02)
- City of Carlsbad Local Coastal Program (LCP) and Agua Hedionda Land Use Plan (LUP)
- South Carlsbad Coastal Redevelopment Plan

The following discussion is based on the discussion included in Section 5.6 – Land Use of the AFC and re-emphasizes the conformity of the CECP with City of Carlsbad's plans and policies.

City of Carlsbad General Plan/City of Carlsbad Specific Plan 144

Generally, the development standards and land use designations in Specific Plan 144H are the same as the standards contained in the City of Carlsbad General Plan. Specific Plan 144H incorporates the General Plan land use designations for the area covered by Specific Plan 144H. The Specific Plan is therefore consistent with the General Plan.

Specific Plan 144 was originally adopted by the City of Carlsbad in Ordinance 9279 on August 3, 1971. The purpose of the Specific Plan was to provide rules and regulations for the development of 680 acres of land located east of the Pacific Ocean, south of Agua Hedionda Lagoon, and north of what is now Cannon Road. Specific Plan 144 also provides design and development guidelines for the operation and expansion of the Encina Power Station, which in 1971 was owned by SDG&E. As originally adopted, the Specific Plan placed 13 conditions of development on the power plant property and provided for methods of enforcement. Since 1977, the Specific Plan has undergone multiple amendments, and is currently documented as Specific Plan 144H. Specific Plan 144H incorporates the Agua Hedionda Lagoon on the west and east sides of I-5 and includes agricultural land in the southeast, and the Encina Power Station in the west.

Specific Plan 144H authorizes no new development in the Specific Plan area over and above that allowed by the Encina Power Station Precise Development Plan (PDP 00-02). The City of Carlsbad has implemented zoning regulations for the area covered by Specific Plan 144H.

The General Plan for the City of Carlsbad designates the land contained in the Specific Plan 144H area as RH "Residential High Density," U "Public Utility," OS "Open Space," and T-R "Travel/Recreation Commercial." The Encina Power Station is designated U and the majority of the remaining Specific Plan area is designated OS. The Public Utility General Plan designation on the Encina Power Station site allows for the generation of electrical energy, treatment of waste water, and operating facilities, or other primary utility functions designed to serve all or a substantial portion of the community.

The Specific Plan provides regulations for the development of the Encina Power Station, allows for the generation of electrical energy, and incorporates the Encina Power Station PDP. The PDP allows for the generation of electrical energy at the Encina Power Station to serve all or a substantial portion of the community. Thus, the Encina Power Station is consistent with the Specific Plan and with the underlying provisions of the General Plan. In addition to the generation of electricity, the only other allowed development is the proposed Carlsbad Desalination Plant. While the proposed Desalination Plant is located within the boundaries of the Encina Power Station and is proposed to use the existing sea water in-take, the desalination project would not be part of the Encina Power Station's current operations or the future operations of the CECP.

Specific Plan Amendments 144(A-G) established the following standards and requirements, (some of which have been satisfied as of the date of Specific Plan 144(H) and included in Section III Development Standards (subsection 5),

> *"The heights of future power generating buildings and transmission line tower structures shall be of heights and of a configuration similar to existing facilities. All storage tanks shall be screened from view. No other structure or building shall exceed thirty five (35') feet in height unless a specific plan is approved at a public hearing".*

While the Specific Plan includes language related to height and configuration, as noted above, the applicable specific height standard and requirement for the CECP and supporting structures, such as the transmission line towers is that they ..."shall be of heights and of a configuration similar to existing facilities..."at the Encina Power Station. The existing facilities at the Encina Power Station include a boiler/turbine building that is approximately 190 feet in height and a stack that reaches a maximum height of 400 feet. As shown on Table 5.13-2 of the AFC, the highest structures for the CECP will be two 100-foot tall stacks and all other significant structures will be less than 100 feet tall. As concluded in Section 5.6 of the AFC, the CECP is consistent with the Specific Plan requirements and will comply with the requirements including the height requirements as noted above. Specific Plan 144H will need to be amended to accommodate a revised PDP. The Applicant filed a Specific Plan amendment application and a PDP amendment application to the City of Carlsbad in September 2007 as part of the CECP proceeding.

City of Carlsbad Municipal Code, Zoning Section/City of Carlsbad Encina Power Station Precise Development Plan (PDP 00-02)

Page 13 of SP 144H states that "The P-U zoning district, Zoning Ordinance Chapter 21.36, is the primary source of the standards and conditions established within PDP 00-02. Other standards and conditions in PDP 00-02 originate from related regulations and documents discussed in Chapter III of PDP 00-02." As discussed in Section 5.6 – Land Use of the CECP AFC, the Encina Power Station and the CECP are located within the Public Utility (P-U) Zone as defined in Chapter 21.36 of the Carlsbad Municipal Code, Zoning Section. The P-U Zone implements the corresponding City of Carlsbad General Plan Public Utility (U) designation for this area. Subsection 21.36.030 Precise Development Plan of the City of Carlsbad Zoning Section, states,

> *"No building permit or other entitlement for any use in the P-U zone shall be issued until a precise development plan has been approved for the property. The precise development plan may include provisions for any accessory use necessary to conduct any permitted use".*

As part of the CECP proceeding, the Applicant submitted an amendment to PDP 00-02 to the City of Carlsbad in September 2007.

South Carlsbad Coastal Redevelopment Plan

One of the South Carlsbad Redevelopment Plan Goals, states that the City of Carlsbad, through this Plan shall,

> *"Facilitate the redevelopment of the Encina Power Generating Facility to a physically smaller, more efficient power generating plant."*

The CECP is fully consistent with the Redevelopment Plan's vision of a physically smaller and more efficient power generating facility that includes the retirement of Units 1 through 3; further, the CECP will facilitate the eventual retirement of Units 4 and 5.

City of Carlsbad Local Coastal Program (LCP) and Agua Hedionda Land Use Plan (LUP)

The City of Carlsbad's Local Coastal Program (LCP), includes the City's land use plans, policies, and standards and an implementing ordinance (City of Carlsbad Municipal Code Section 21, Zoning) for those portions of the City that lie within the coastal zone. The LCP meets the requirements, and implement the provisions and policies of the California Coastal Act and each segment had been previously approved by the California Coastal Commission. The City's LCP includes multiple planning areas or segments that cover approximately one-third of the City, as does the Coastal Zone. The CECP is located within the 1,100-acre Agua Hedionda Land Use Plan (LUP) segment which was originally adopted by the City of Carlsbad in 1982 and amended several times since then, all with the approval of the California Coastal Commission. In addition to the area within the CECP and other lands covered under the Agua Hedionda LUP, the Agua Hedionda LUP segment consists

of three distinct areas; the Outer Lagoon, Middle Lagoon, and Inner Lagoon. These areas are shown on Figure 5.6-1 of the AFC.

Consistent with the CEC Siting Regulations, the California Coastal Commission has provided input on the CECP as part of the CEC licensing process.

Summary of Conformance of the CECP with the City of Carlsbad Plans and Policies

As discussed in Section 5.6 – Land Use of the AFC and as reiterated above, the CECP conforms to the applicable City of Carlsbad plans and policies, including those policies that apply to height restrictions. As discussed in the AFC and in this response, the CECP complies with the plans and policies, as these plans and policies anticipated future electric power generation development within the Encina Power Station site. While the City of Carlsbad has stated it has historically not permitted structures above 45 feet, which includes the development of the Four Seasons Aviara and Legoland Amusement Park, these commercial and tourist serving uses are outside of the Encina Power Station. This comment from the City is more relevant to considerations of the potential redevelopment of the west side of the Encina Power Station at some time in the future when Units 4 and 5 can be fully retired. All of the City plans and policies that apply to the Encina Power Station and its repowering, including the height restrictions for power generation facilities are not relevant or applicable to the CECP. Further, the existing facilities at the Encina Power Station include a boiler/turbine building that is approximately 190 feet in height and a stack that reaches a maximum height of 400 feet. As shown on Table 5.13-2 of the AFC, the highest structures for the CECP will be two stacks that will be 100-feet tall and all other significant structures will be less than 100 feet tall. The CECP facilities comply with the applicable height requirements for Encina Power Station property that are included within Specific Plan Amendment 144H, which as noted above requires that power generation facilities at the Encina Power Station "shall be of heights and of a configuration similar to existing facilities."

Background

There is a number of significant construction projects scheduled to occur in the vicinity of the proposed Carlsbad Energy Center in approximately the same time frame (Interstate 5 widening and Poseidon Resources Desalination Plant).

City Data Request

54. Please evaluate potential cumulative impacts from overlapping construction schedules of the I-5 widening, the desalination plant, and the proposed power plant.

Response: As discussed in the AFC, construction of the CECP is expected to begin in late 2008 or early 2009 with both of the generating units having a commercial online date in the early summer or 2010, or one unit may have a commercial online date in the early summer of 2010 and the second unit may have a commercial online date in the spring of 2011.

Regarding the potential for overlapping construction schedules for CECP, the Caltrans I-5 widening project, and the Poseideon desalination plant, it is the

Applicant's understanding that no specific construction start date has been established by Caltrans for the I-5 widening project. As of January 2008, Caltrans has not yet started the CEQA/NEPA environmental analysis process for the I-5 widening project and it is the Applicant's understanding that construction of the I-5 widening project is not expected to start until 2014 or 2015. Therefore, it is not expected that they will be an overlap of the CECP and I-5 widening project.

Regarding the construction of the Poseidon desalination plant, the Applicant is not aware that a specific construction start date has been established for the project. It is the Applicant's understanding that several key approval/permits required for the Carlsbad desalination project have not yet been acquired. Therefore, whether there will be an overlap of the construction of the CECP and the desalination plant, and the nature and extent of such a construction overlap, if it should occur, cannot be determined at this time.

Noise (City Data Request 55)

Background

Contained in the AFC is a proposed power plant construction schedule that includes uses a 24/7 work schedule. This proposal does not conform to the City's regulations. Furthermore, the City wants to make clear that it has never approved a 24/7 work schedule for construction projects other than those required by emergencies.

City Data Request

55. Submit a construction schedule that complies with City ordinances (7 a.m. – dusk Monday – Friday; 8 a.m. – Dusk Saturday, no work Sunday)

Response: The need for construction activities to occur up 24 hours per day/7 days per week will depend on situations that arise during the construction/commissioning of the CECP, which could included, but are not limited to: large concrete pours that need to be completed during a single continuous period; to make up for construction delays due to weather or other unforeseen events; the setting/installation of a large component, such as a turbine or generator set; or during commissioning and testing of the units. There could be three or four of these periods during construction/commissioning of the CECP, with each of these periods lasting from a day or two, to up to one to two weeks. Such events do not affect the overall construction schedule included in the AFC; therefore, a revised construction schedule is not required.

Regarding the statement in the City's background section for this data request, that a 24/7 work schedule "...does not conform to City's regulations...", the following is an excerpt from the City's Noise Ordinance.

8.48.010 Limitation of hours for construction.

The erection, demolition, alteration, or repair of any building or structure or the grading or excavation of land in such manner as to create disturbing, excessive or offensive noise during the following hours, except as hereinafter provided, is a violation of this code:

(1) After sunset on any day, and before seven a.m., Monday through Friday, and before eight a.m. on Saturday;

(2) All day on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and Christmas Day. (Ord. 3109 § 1 (part), 1978)

8.48.020 Exceptions.

(1) [Does not apply to the CECP – but provided for completeness] An owner/occupant or resident/tenant of residential property may engage in a home

improvement or home construction project involving the erection, demolition, alteration or repair of a building or structure or the grading or excavation of land on any weekday between the hours of seven a.m. and sunset and on weekends between the hours of eight a.m. and sunset, provided such project is for the benefit of said residential property and is personally carried out by said owner/occupant or resident/tenant.

(2) The city manager may grant exceptions to Section 8.48.010 by issuing a permit in the following circumstances:

(A) When emergency repairs are required to protect the health and safety of any member of the community;

(B) In nonresidential zones, provided there are no inhabited dwellings within one thousand feet of the building or structure being erected, demolished, altered or repaired or the exterior boundaries of the site being graded or excavated. (Ord. 3109 § 1 (part), 1978)

It is the Applicant's interpretation of Sections 8.48.010 and 8.48.020 (2) that construction activities that do not create "...disturbing, excessive or offensive noise..." are not limited to the days and hours set forth in Section 8.48.010 (1) and/or 8.48.010 (2); and that, in accordance with Section 8.48.020 (2)(B), as the CECP site is located in a nonresidential zone and there are no inhabited dwellings within 1,000 feet of the CECP site, even if noisy construction activities needed to occur beyond the hours and days set forth in Section 8.48.010 (1) and/or (2), that an exception may be granted under Section 8.48.020 (2).

As discussed in Section 5.7.5.2.2 - Plant Construction Noise of the AFC, during the construction of the CECP there will be various construction and commissioning activities that will not create "disturbing, excessive or offensive noise" and under Section 8.48.010 these activities may occur, if need be, on a 24/7 basis without the need for an exception under Section 8.48.020 (2) and will be in full conformance with Sections 8.48.010 and 8.48.020; and, as the CECP site is located in a nonresidential zone and over 1,000 feet from inhabited dwellings, should noisy construction activities need to occur beyond the hours and days set forth in Section 8.48.010 (1) and/or (2), the Project would qualify for an exception under 8.48.020 (2) (B).

A 1,000-foot radius from the perimeters of the project site (to assess applicability of the noise exception) primarily contains Public Utility (P-U), Transportation Corridor (T-C) and Open Space (O-S) zoning districts. The 1,000-foot radius primarily covers existing power plant uses and property (P-U zone), the I-5 and Railroad right of way (T-C zones), and open lagoon waters of Agua Hedionda Lagoon (O-S zone), with no impacts to residential units as no 'inhabited dwellings' exist within the code-mandated distance of 1,000 feet. The subject site, current zoning and proposed project allows for a reasonable application of the code-allowed noise exception.

Regarding the authority to grant an exception under Section 8.48.020 (2), under the Warren-Alquist Act, the CEC has the sole responsibility and authority to grant approval and permits for the construction of thermal power plants that generate 50 MW or more. Under this authority, the CEC will appoint a Chief Building Official

(CBO) that will have the authority to issue construction related permits, and in the case of Section 8.48.020 (2), it will be the CBO that will have the responsibility and authority to enforce Sections 8.48.010 and 8.48.020, and it will be the CBO that has the authority to consider and grant an exception under Section 8.48.020 (2).

Socioeconomics (City Data Request 56)

Background

The anticipated lifespan of the proposed power plant is 40 years. The applicant has made reference to the potential economic benefits to the City, but has only included the financial impacts for the first year of operation.

City Data Request

56. Provide a comprehensive 20-year financial forecast of the economic benefits to the City (property tax, franchise fees, business license, etc.).

Response: As shown on page 5.10-22 of Section 5.10, Socioeconomics, of the AFC, the CECP is expected to generate between $3.56 million and $4.58 million in property taxes annually (calculated in constant 2007 dollars). This value is derived on the basis of the capital cost of the CECP ($350M to $450M) and the parcel's property tax rate of 1.0185 percent. These annual property tax revenues are in constant 2007 dollars and thus do not take into account inflation or changes in the property or its value. Based strictly on the projected property taxes in constant 2007 dollars, the CECP is expected to generate between $71.3 million to $91.6 million in property tax revenues during a 20-year period.

Since the CECP is in a redevelopment area and the formula used by the City to allocate the property taxes that go to various entities is based on a series of complex tax increment allocation agreements and formulas not known by applicant, but certainly known by the City, the ultimate proportion of the CECP property taxes that will go directly to the City is unknown at this time.

As shown on page 5.10-22 of the Socioeconomics section of the AFC, CECP is expected to generate about $2.4 million in gas franchise fees per year. This value assumes that annual natural gas purchases are $111 million in constant 2007 dollars and that the plant's consumption of gas and the price paid for that gas does not change from the 2007 estimate. Thus, this value does not take into account inflation or any other changes in the natural gas market. Based strictly on the projected gas franchise fee in constant 2007 dollars, it is estimated that the CECP will generate $48 million in gas franchise fees during a 20-year period.

In addition to the above revenues, the City of Carlsbad is expected to receive a portion of the sale tax revenues generated during the operation phase of the CECP. As shown on page 5.10-22, during the operation of the CECP, it is estimated that on an annual basis sales tax on local goods and services purchased in the County of San Diego will be approximately $56,250 in constant 2007 dollars. While it is not possible to estimate the portion of goods and services that will be purchased in the City of Carlsbad, some portion of annual sales tax will be for services purchased in Carlsbad. Over a 20 year period, it is estimated that the CECP will generate

approximately $1.125 million dollars in sales tax revenue, a portion of which will be generated from purchased of goods and services in Carlsbad.

As part of the CECP, Carlsbad Energy Center LLC will pay the City of Carlsbad an estimated $17,000 per year in constant 2012 dollars through the City's business license fee program. Assuming no change in the business license fee structure or inflation, and based on constant 2012 dollars, it is estimated that CECP will pay approximately $340,000 in business license fees to the City over a 20-year period.

Based on the above revenue projections, the CECP could result in approximately $121 million to $141 million or more (in constant 2007 dollars) of direct revenue for the City of Carlsbad over a 20-year period.

Traffic and Transportation (City Data Request 57)

Background

The AFC was unclear regarding the proposed haul routes for construction as well as ongoing operations for the Carlsbad Energy Center. Considering the above mentioned adjacent construction, including the I-5 widening project, the City is uncertain about the traffic impacts caused by this plant.

City Data Request

57. Please identify proposed haul routes (including traffic control plans and general times of delivery) for construction as well as ongoing operations.

Response: As discussed in Section 5.12 – Traffic and Transportation of the AFC, the haul route for construction and operation of the CECP are shown on Figures 5.12-2 and 5.12-3 and will be via existing streets and highways. As discussed in Section 5.12.4.2.2, most truck trips will originate from the south and will arrive via I-5, to Cannon Road and using Avenida Encinas to access the site. The majority of workers are expected to travel from the south on I-5, exiting to Cannon Road and entering the site from Carlsbad Blvd., as depicted in Figure 5.12-4. The use of the existing rail spur and associated equipment lay down area, as shown on Figure 2.1-1 of the AFC, will be optimized for the transport of heavy haul and modular designed equipment and assemblies. It is premature to define a detailed traffic control plan for construction. As noted in Section 5.12 of the AFC, as part of a Condition of Certification, a construction Traffic Control Plan will be prepared for the project and submitted to the CEC for approval prior to the start of construction.

Visual Resources (City Data Requests 58 – 60)

Background

Visual impacts from the proposed Carlsbad Energy Center continue to pose numerous questions for the City. In the AFC, a number of visual references were provided, however these all portray the existing site conditions, not what the site will look like in the next 5-10 years based on the widening of I-5, the removal of the various existing oil tanks, and the removal of the current Encina Power Station. Furthermore, anticipated re-use of the existing Encina power station as some other type of land use would require that the applicant study the visual impacts from the property immediately west of the railroad tracks at the time of the future application.

City Data Request

58. Provide visual site depictions of the proposed power plant without the existing oil tanks and Encina Power Station. This includes visual representation from the west side of the railroad tracks looking east at the proposed plant.

Response: While the future redevelopment of the Encina Power Station in accordance with the goals and objectives of the South Carlsbad Coastal Redevelopment Plan is likely to occur upon the retirement and demolition of Units 1 through 5 of the Encina Power Station, it is speculative at this time as to what type of redevelopment (uses, size, scale bulk, orientation) that would result and speculative what public uses and public viewpoints might be developed. Therefore, a specific proposed or anticipated public use area/viewpoint from the site of the existing Encina Power Station westerly of the railroad tracks has not been included.

Notwithstanding the speculative nature of future west side redevelopment, a visual simulation was developed in response to a previous Data Request from the CEC (CEC Data Request 67). In response to CEC Data Request 67, Figure DR67c-1 was developed and included in the Applicant's Data Response Set 1A docketed with the CEC on December 20, 2007. Figure DR67c-1 is provided herein as part of the Applicant's response to this City Data Request 58 (see Attachment City DR58-1). Figure DR67c-1, depicts a "before" and "after" view of the CECP as seen from an internal Encina Power Station road located about 150 feet east of the existing Encina Power Station's administration building (see Figure DR67a-2, provided herein as Attachment City DR58-2, also previously docketed by the Applicant as part of the December 20, 2007 Data Response Set 1A, for the location of this photo viewpoint). The tank shown on the left side of the photograph and simulation on Figure DR67c-1 is Tank No. 3 that would be replaced by the proposed Desalination Plant. While the proposed Desalination Plant will not look the same as Tank No. 3, it will have relatively the same mass and height as Tank No. 3. Therefore, the visual simulation provided on Figure DR67c-1 is representative of the view from this internal Encina Power Station vantage point after construction of the proposed Desalination Project and after construction of the CECP. The simulation on Figure 67c-1 indicates that

from this internal Encina Power Station vantage point, existing Tank No. 3 and the intervening topography and mature vegetation will largely screen the lower elements of the CECP. Taller elements of the CECP, including the 100-foot-tall stacks and 88-foot-tall HRSGs will be partially visible beyond the existing mature trees that are found just west of the railroad corridor that bisects the Encina Power Station property. Because access to the Encina Power Station is and will continue to specifically restricted for public safety and security reasons until such time as the Encina Power Station is demolished, the view presented in Figure DR67c-1 is not currently seen by the public.

City Data Request

59. Provide visuals from freeway looking west which incorporates the proposed alignment of the I-5 freeway. Incorporate preliminary plans obtained from Caltrans for the I-5 widening in the vicinity of the proposed power plant. Please provide cross-sections from Caltrans throughout the power plant project site. Cross sections should delineate the existing improvements (freeway, slope, containment berm, storage tanks, etc.) as well as indicate the proposed improvements (new pavement, retaining wall, cut-fill slopes). The location of the screening trees should also be shown. Upon these cross sections, the proposed power plant should be shown to provide a graphical representation of the proximity and visibility of the power plants to/from the freeway.

Response: While Caltrans has publicly provided preliminary draft general plan-view maps of four conceptual potential alignments of the proposed I-5 widening project in the vicinity of the CECP site, based on currently available information, the degree of encroachment, if any, that might occur to the CECP property (including the existing vegetation and topographic pattern), as a result of widening the I-5 corridor, is a matter of speculation as the specific alignment has not been selected by Caltrans. Generally, for most of the preliminary re-alignments, it is expected that the area located within the existing Caltrans ROW would be the area most likely affected by the I-5 widening project.

A CEQA/NEPA environmental analysis of the Caltrans I-5 widening project by Caltrans has yet to be prepared, including alternative considerations of the impacts of the four preliminary re-alignments, but it is expected that it will include a detailed environmental impact analysis of the I-5 widening alternatives. It is this CEQA/NEPA environmental analysis by Caltrans that is the appropriate mechanism for the visual analysis of the I-5 widening project selected by Caltrans that is requested by this City data request, as it is the Caltrans I-5 widening project that will create and set the impacts, if any. Based on the preliminary and conceptual nature of the information publicly available at this time regarding the I-5 widening project, there is not sufficient information to prepare the visual simulation requested by the City here. Nor is the Applicant in the position to make the critical judgments necessary to develop representative visual simulations based on the publicly available information.

The City of Carlsbad, in a June 15, 2006 memorandum from the Deputy City Transportation Engineering (see Attachment DR67a-1 provided in response to CEC Data Request 67, docketed by Applicant on December 20, 2007 as part of Data Response Set 1A, and provided herein as Attachment City DR59-1) including the following key goals and objectives of the City regarding the I-5 widening project.

- "Respect existing visual resources and minimize negative impacts.
- Minimize ROW expansion
- Maximize the visual experience for freeway users.
- Minimize grading."

Based on these City environmental goals and objectives for the I-5 widening project and in accordance with the requirements of CEQA, NEPA and the Federal Highway Administration, it is expected that Caltrans' comprehensive environmental analysis of the I-5 widening project will include a detailed, site-specific analysis of potential impacts of the potential loss of the vegetative perimeter berm along the eastern CECP property boundary as well as topographic changes that will occur as a result of Caltrans proposed I-5 widening project in the vicinity of the CECP. The Applicant will coordinate and cooperate with the City of Carlsbad during the I-5 widening project environmental review process to provide input to Caltrans regarding the need for feasible and effective mitigation with respect to minimizing topographic changes and the removal of existing visual screening of the CECP site and the planting of new landscaping on the perimeter vegetative berm on the eastern and northern boundary of the CECP site.

City Data Request

60. Provide lighting plan, including visual depictions, of construction and ongoing operational lighting for proposed power plant, including those contained on the exhaust stacks.

Response: As discussed in Section 5.13.3.2.3 – Visual Resources: Lighting, operation of the CECP will require onsite nighttime lighting for safety and security. Nighttime lighting will be designed to meet security, operation and maintenance, and safety requirements. The lighting will be directed downward and will be downshielded or capped to reduce glare and light trespass. For areas where lighting is not required for normal operation, safety, or security, switched lighting circuits of motion detectors will be provided, thus allowing these areas to remain unilluminated (dark) at most times, minimizing the amount of lighting or glare potentially visible offsite.

As discussed in Section 5.13.3.2.3 of the AFC, during some construction periods and during the startup phase of the project, some activities will continue 24 hours a day, 7 days a week. During periods when nighttime construction or startup activities take place, temporary construction lighting will be provided to meet state and federal worker safety regulations. To the extent practicable, the nighttime construction lighting will be erected pointing towards the center of the site where activities are occurring and will be shielded. Task-specific lighting will be used to the extent practical, while complying with worker safety regulations.

CECP operational lighting design will incorporate the criteria of Section 2.2.13.1 and components of the National Fire Protection Association (NFPA) 70. The primary requirement for each areas lighting design is safety and human factors in both construction and operation environments. A conceptual construction security and lighting plan is shown on Figure City DR60-1 and includes both the specific construction area for the CECP facilities and construction support areas such as equipment and materials laydown areas, rail spur unloading area, rail crossing and temporary south access road areas. The lighting for cranes and other normal high profile construction equipment will include appropriate safety warning lighting.

The conceptual CECP operation lighting plan is shown on Figure City DR60-2 and depicts lighting for operations. The south access temporary road construction lighting and the temporary construction and security lighting around the laydown areas, rail crossing and rail spur will be removed after construction and will return to the existing configuration.

Attachment City DR58-1

Existing View from Encina Power Plant Site

Visual Simulation of Proposed Project

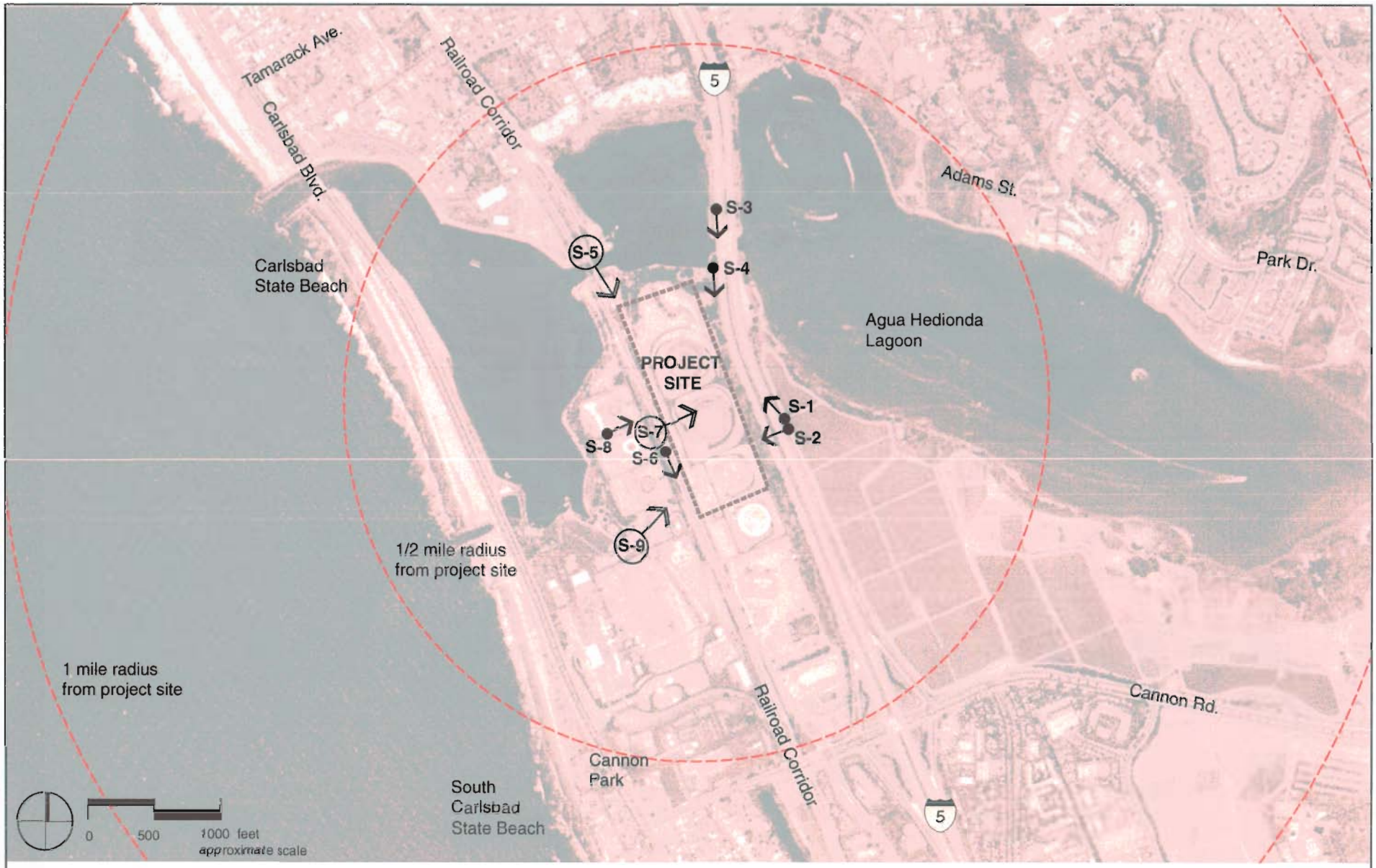
For viewpoint location refer to
Figure DR67a-2 Viewpoint S-9

FIGURE DR67c-1
ENCINA POWER PLANT SITE
INTERNAL ROADWAY
EXISTING VIEW AND VISUAL SIMULATION
CARSLBAD ENERGY CENTER PROJECT

ENVIRONMENTAL VISION
121107

CH2MHILL

Attachment City DR58-2



This figure shows viewpoint locations for 9 new photos presented in Data Response 67 & 68. These photos supplement a set of 31 photos presented in the AFC (Figures 5.13-4 and 5.13-5). This map is an enlarged portion of the AFC Figure 5.13-3 basemap.

(S-7) → Supplemental Simulation Viewpoint

S-1 → Photo Viewpoint

ENVIRONMENTAL VISION

FIGURE DR67a-2
PHOTO VIEWPOINT LOCATIONS
CARLSBAD ENERGY CENTER PROJECT

CH2MHILL

121107

Attachment City DR59-1

ATTACHMENT DR67a-1

June 15, 2006

TO: CITIZENS' COMMITTEE TO STUDY THE FLOWER FIELDS AND STRAWBERRY FIELDS AREA

FROM: Deputy City Engineer, Transportation

INTERSTATE HIGHWAY 5 WIDENING

Attached are bullet points condensed from preliminary information obtained from Caltrans for the referenced project. Over the next several months, Caltrans staff will be scheduling presentations to the Carlsbad City Council and asking for a decision regarding aspects of:

1. Freeway widening
2. Freeway enhancements
3. Direct Access Ramp (DAR) location at Cannon Road
4. Construction of soundwalls (if Carlsbad meets FHWA requirements)

Also attached are exhibits obtained from Caltrans that depict the three alternate alignments of the potential direct access ramp (DAR) and a visual simulation of the DAR concept. The DAR concept is for illustrative purposes only, and is not intended to convey that development of the SDG&E parcel will take place.

ROBERT T. JOHNSON, JR., P.E.
Deputy City Engineer, Transportation

RTJ:jb

Attachments

NORTH COAST INTERSTATE 5 CORRIDOR

- Caltrans has initiated preliminary engineering and environmental studies (EIR/EIS) for the I-5 widening.

- Freeway widening begins in the City of San Diego and continues into the City of Oceanside (28 miles).

- Providing "managed lanes" (HOV lanes) in the center median is an integral part of the project.

- Interstate Highway 5 will be widened to a cross-section consisting of 10 lanes plus four HOV lanes ("10 + 4" alternative) or eight lanes will remain and four HOV lanes will be added ("8 + 4" alternative).

- Tentative schedule completes environmental studies and environmental document certification in 2008 with construction to begin in 2009. Concurrent construction in several segments of the corridor will take place.

- Major project goals include:

  - *Community*

    - Retain existing community character
    - Provide amenities
    - Minimize impacts to residences and businesses

  - *Environmental*

    - Minimize encroachment in adjacent sensitive habitat areas
    - Respect existing visual resources and minimize negative impacts
    - Minimize noise impacts to adjacent residential areas
    - Minimize drainage/storm water impacts

  - *Circulation*

    - Encourage use of public transit and other modes
    - Minimize vehicle/pedestrian conflicts
    - Provide connections between the east and west sides of the freeway
    - Improve pedestrian circulation

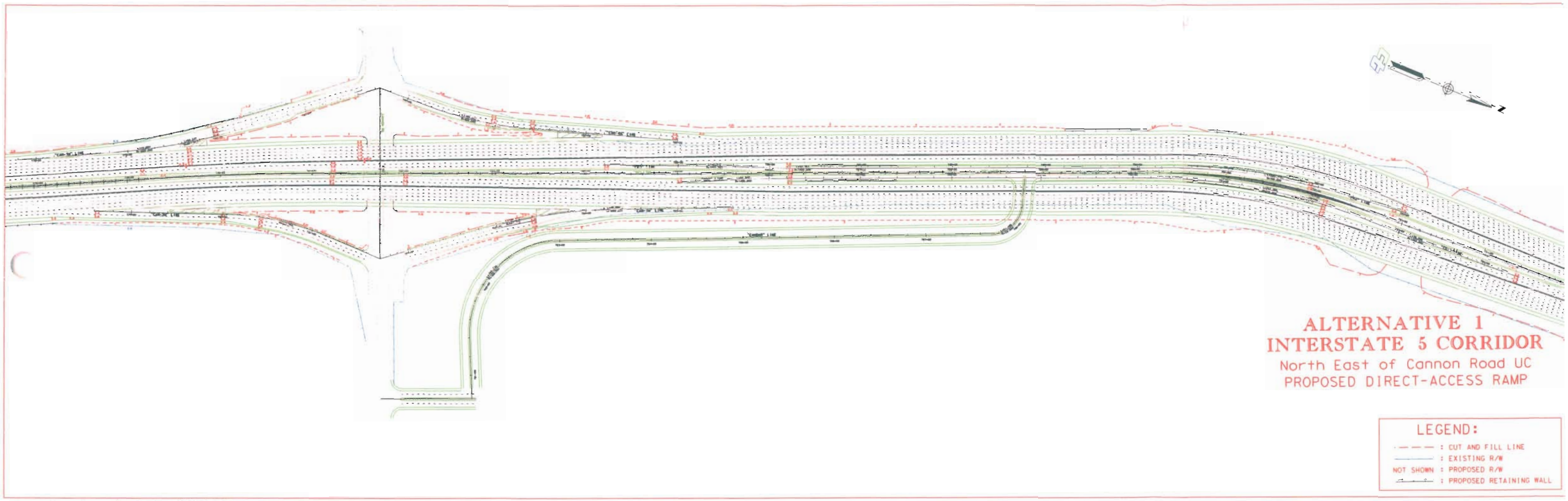
  - *Physical/Aesthetic*

    - Minimize right-of-way width expansion
    - Minimize construction costs
    - Maximize the visual experience for the freeway users
    - Integrate public art into the project, where possible
    - Minimize grading

- Construct a Direct Access Ramp (DAR) from the Cannon Road/Paseo del Norte intersection to the center of the freeway northerly of Cannon Road by constructing a bridge over the northbound lanes. Three potential alignments for the DAR are shown on the attached exhibits. A DAR provides access for high occupancy vehicles and buses from the surface street directly into the managed lanes that will be located in the center of the freeway. An example of the DAR concept is provided on the attached exhibit. This conceptual drawing is not intended to assume that there will be development on the SDG&E parcel immediately east of the freeway. This DAR exhibit is a generic conceptual Caltrans drawing used to convey the DAR concept.

- 74 feet of right-of-way is needed for a DAR. This amount of right-of-way will provide for the construction of four 12-foot lanes, a 10-foot median, and two 8-foot shoulder.

- The widening of the freeway will require about 58 feet from the edge of the existing freeway on the east side of Interstate Highway 5 between Cannon Road and the Agua Hedionda Lagoon to accommodate the "10 + 4" alternative without a DAR. If a DAR is constructed, additional width will be required (undetermined at this time by Caltrans).



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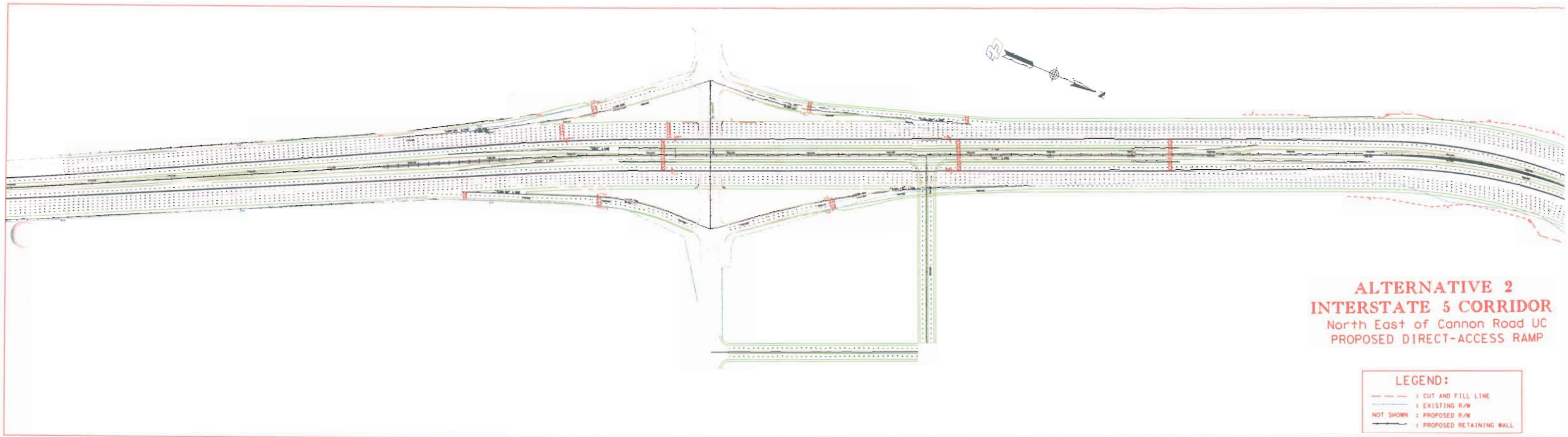

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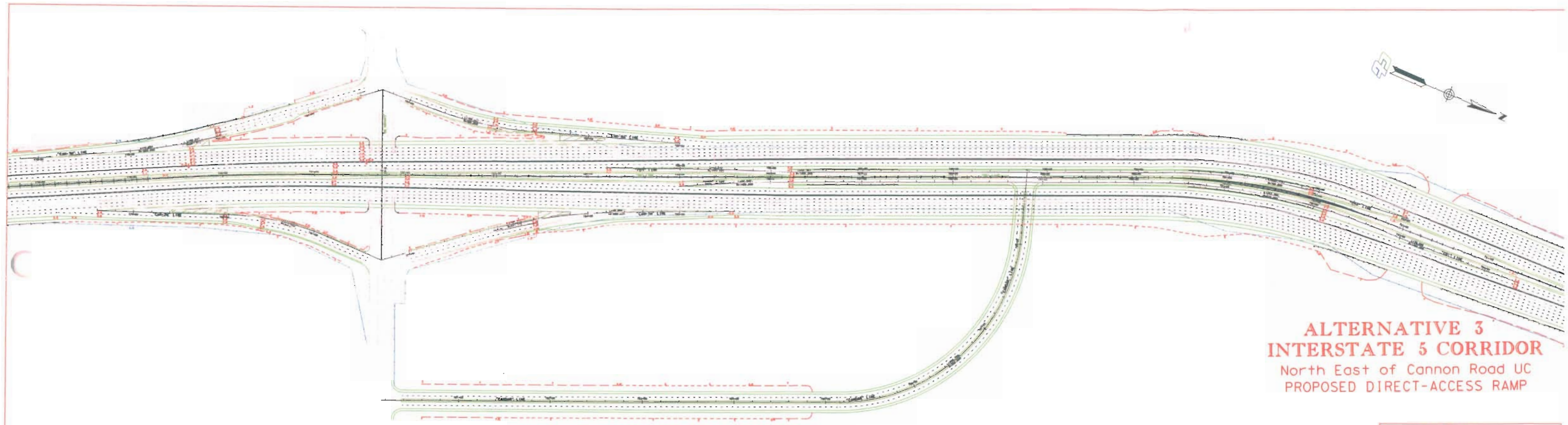

ALTERNATIVE 3
INTERSTATE 5 CORRIDOR

North East of Cannon Road UC
PROPOSED DIRECT-ACCESS RAMP

LEGEND:

- : CUT AND FILL LINE
- : EXISTING R/W
- NOT SHOWN : PROPOSED R/W
- : PROPOSED RETAINING WALL

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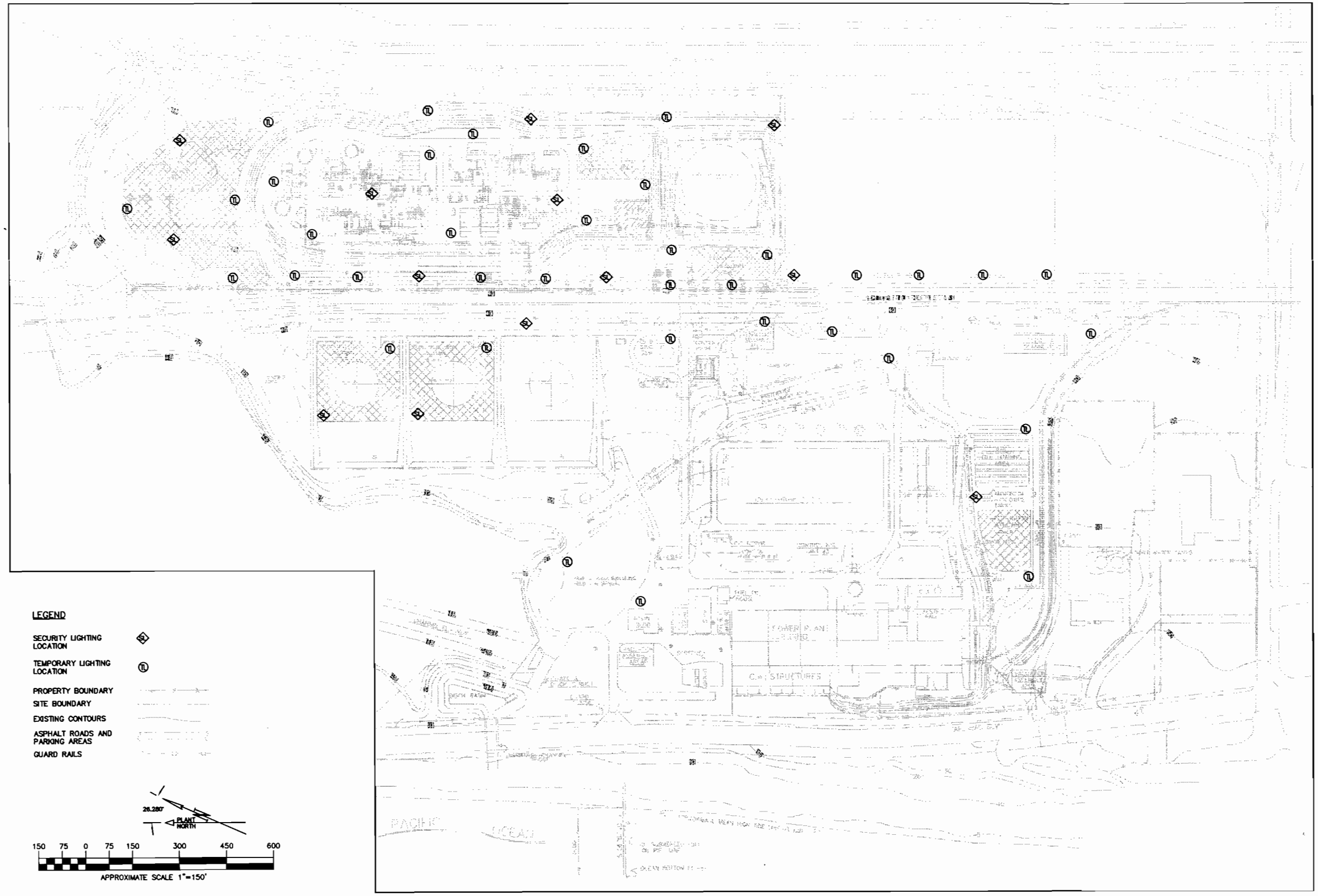

FIGURE CITY DR 60-1
CONCEPTUAL OPERATION LIGHTING PLAN
CARLSBAD ENERGY CENTER PROJECT
CARLSBAD, CA

CH2MHILL

EY072007001SAC Figure_City_DR60-1.ai 2/5/08 afint

FIGURE CITY DR 60-2
CONCEPTUAL OPERATION LIGHTING PLAN
CARLSBAD ENERGY CENTER PROJECT
CARLSBAD, CA

CH2MHILL

EY072007001SAC Figure_City_DR60-2.ai 2/5/08 afint

Hazardous Materials (City Data Request 61)

Background

The AFC was silent regarding the use of a secondary fuel source. However, on a number of occasions, representatives from NRG have made public statements that jet fuel will be available as a backup fuel supply.

City Data Request

61. Please identify any fuel source other than natural gas. If one exists, now or contemplated for the future, please explain the type, delivery mechanism, storage location, and proposed quantity.

Response: As described in Section 2.0 – Project Description, the CECP will use only natural gas to fire the two combine-cycle electrical generation units. No other fuel is contemplated now or in the future.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

Application for Certification for the ***CARLSBAD ENERGY CENTER PROJECT***	**Docket No. 07-AFC-6** **PROOF OF SERVICE** **(As of 2/5/2008)**

DECLARATION OF SERVICE

I, Kimberly J. Hellwig, declare that on February 6, 2008, I caused to be transmitted via electronic mail or U.S. Postal Service consistent with the requirements of the California Code of Regulations, Title 20, sections 1209, 1209.5, and 1210, the following documents to the below listed entities:

CARLSBAD ENERGY CENTER LLC'S RESPONSES TO THE CITY OF CARLSBAD'S DATA REQUESTS SET 1A (#49-61)

CALIFORNIA ENERGY COMMISSION
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I declare under penalty of perjury that the foregoing is true and correct.

Kimberly J. Hellwig