City of Carson
Report to Mayor and City Council

Decemeber 17, 2013
New Business Discussion

SUBJECT: CONSIDER AUTHORIZING STAFF TO ADVERTISE FOR BIDS FOR EITHER A DOLPHIN PARK LIGHTING PROJECT OR A DOMINGUEZ PARK LIGHTING PROJECT

Submitted by Massoud Ghiam, P.E.
Acting Director of Public Works/City Engineer

Approved by Jacquelyn Acosta
Acting City Manager

I. SUMMARY

The City of Carson has two parks that currently have inefficient and antiquated lighting systems that are costly to operate: Dolphin Park and Dominguez Park (Exhibit Nos. 1, 2, 3, and 4). Lighting improvements have been identified by staff, with the assistance of Southern California Edison (SCE), that would rectify the lighting problems and result in substantial cost reductions for the City. It is requested that City Council select one of these projects for implementation and authorize staff to advertise for bids to proceed with the lighting improvement project.

II. RECOMMENDATION

TAKE one the following actions:

1. AUTHORIZE staff to advertise for bids for the Dolphin Park lighting project.

   OR

2. AUTHORIZE staff to advertise for bids for the Dominguez Park lighting project.

III. ALTERNATIVES

1. DENY the request for staff to advertise for bids for one of these projects.
2. TAKE another action the City Council deems appropriate.

IV. BACKGROUND

Over the past year, staff, with the assistance of SCE, conducted inspections and audits of the exterior lighting facilities at 11 City parks (Anderson, Calas, Carriage Crest, Del Amo, Dolphin, Dominguez, Hemingway, Mills, Scott, Stevenson, and Veterans). Cost savings and energy efficiency opportunities were identified at all of the parks; however, two parks (Dolphin Park and Dominguez Park) were identified as high priority lighting projects for the

reasons identified below.

Dolphin Park Lighting Project

Dolphin Park is a 12-acre facility that is located at 21205 S. Water Street. It features two lighted ball diamonds, two multi-purpose rooms, a play area, a wading pool, two lighted tennis courts, one multi-purpose game court, a picnic area, a snack-bar building, and a parking lot. The proposed project was developed by staff to improve lighting levels at the park while reducing maintenance and utility costs. The focus of this project is the exterior areas of the park; which includes lights for the sports fields, parking lots, basketball courts, tennis courts, concession stands, and the outside building areas. The project would replace older, inefficient metal halide (MH) and high pressure sodium (HPS) lamps with newer Light Emitting Diode (LED) or Pulse-Start Metal Halide (PSMH) lamps. The new fixtures are a proven alternative to HPS and MH lighting because they are more efficient, have much longer life spans, and produce higher quality light that renders truer colors.

For the basketball and tennis court areas, the plan is to replace the existing MH lamps with PSMH lamps. Compared to the conventional MH lamps, the PSMH lamps offer reduced warm-up and re-strike times, longer lamp life, improved lumen maintenance, and better start-up behavior at cold temperatures. The lamps in the remaining areas would be replaced with LED lamps. This project is anticipated to save the City approximately $26,388.00 per year in energy costs, resulting in a less than 3-year payback period for the project. This project was deemed a high-priority project because it has the shortest payback period and it has the potential to save the City the most money when compared to the other park lighting projects.

Dominguez Park Lighting Project

Dominguez Park is a 10-acre facility that is located at 21330 S. Santa Fe Avenue. It features two lighted tennis courts, basketball courts, two lighted multi-purpose game courts, an aquatic center, a multi-purpose room, a playground area, a picnic area, a lighted baseball diamond / soccer field, a Frisbee Golf area, one practice baseball diamond, a snack bar building, a jogging path, and a parking lot. The scope of work for this lighting project is similar to Dolphin Park, whereas it will focus on the exterior areas of the park (baseball/soccer field, playground area, parking lot, basketball courts, tennis courts, snack bar building, an area around the aquatic center, and the multi-purpose room building).

The plan at this park would be to replace older, inefficient, MH and HPS lamps with newer LED, PSMH, or Compact Fluorescent Lamps (CFL). It should also be noted that the park's staff has received numerous complaints from residents

and the Sheriff's Department regarding the lighting output/quality at this park, especially the baseball/soccer field lights. The complaints include, but are not limited to, increased vandalism issues (graffiti), safety and security problems, and the baseball players' complaints that the lighting is so dim (on the baseball diamonds) that they cannot see the ball when it is hit into the air. Based on the above reasons, this park project was deemed to be a high-priority lighting project and if City Council selects this park for improvements, the issues highlighted above will be corrected. This project is anticipated to save the City approximately $9,904.00 per year in energy costs, resulting in a less than 8-year payback period for the project.

Project Comparisons

A summary of the projects' financial indicators is outlined in the table below:

	Annual Baseline Energy Usage (kWh)	Annual Energy Savings (kWh)	Annual Cost Savings	Total Estimated Project Costs ($)	Total Cash Incentives paid by SCE
Dolphin Park Lighting Project	175,092	96,907 (55%)	$26,388.00	$86,000.00 (Includes 10% contingencies)	$12,490.00
Dominguez Park Lighting Project	259,931	123,804 (48%)	$9,904.00	$103,000.00 (Includes 10% contingencies)	$19,561.00

Both of the park lighting projects identified above are good projects that meet several City goals. Both projects have the following benefits:

- Reduced energy utilization and costs.
- The cost savings would continue after the payback period.
- Improved lighting quality.
- Longer life spans for the lamps.
- Reduced maintenance costs.
- Assist City in reaching Energy Leader Partnerships program gold level.

In summary, City Council is being asked to decide on which project they would prefer to proceed. From a financial standpoint, the Dolphin Park lighting project is more beneficial; however, from a security and safety perspective and

community benefit perspective, the Dominguez Park project would be the better choice. The project that is not selected will be included in the recent Request for Qualifications that the City Council authorized staff to issue.

V. FISCAL IMPACT

If the City Council elects to proceed with the Dominguez Park lighting project, the estimated cost is $103,000.00. If, however, the City Council selects the Dolphin Park lighting project, the cost is estimated at $86,000.00. The City received money from past energy efficiency and solar projects (rebates, incentives, etc.) in the amount of $114,865.55 and the money was deposited into the City's general fund in account no. 01-00-999-000-4933. These funds could be used for either one of the projects.

VI. EXHIBITS

1. Dolphin Park Location Map. (pg. 5)
2. Dolphin Park photos of existing conditions. (pg. 6)
3. Dominguez Park Location Map. (pg. 7)
4. Dominguez Park photos of existing conditions. (Pg. 8)

Prepared by: Reata Kulcsar, Senior Engineering Technician

\\Carson_nas\devsvrs\ENGINEERING DIVISION\Agenda1\2013\12-17-13 CC Park Lighting Project

TO:Rev11-25-2013

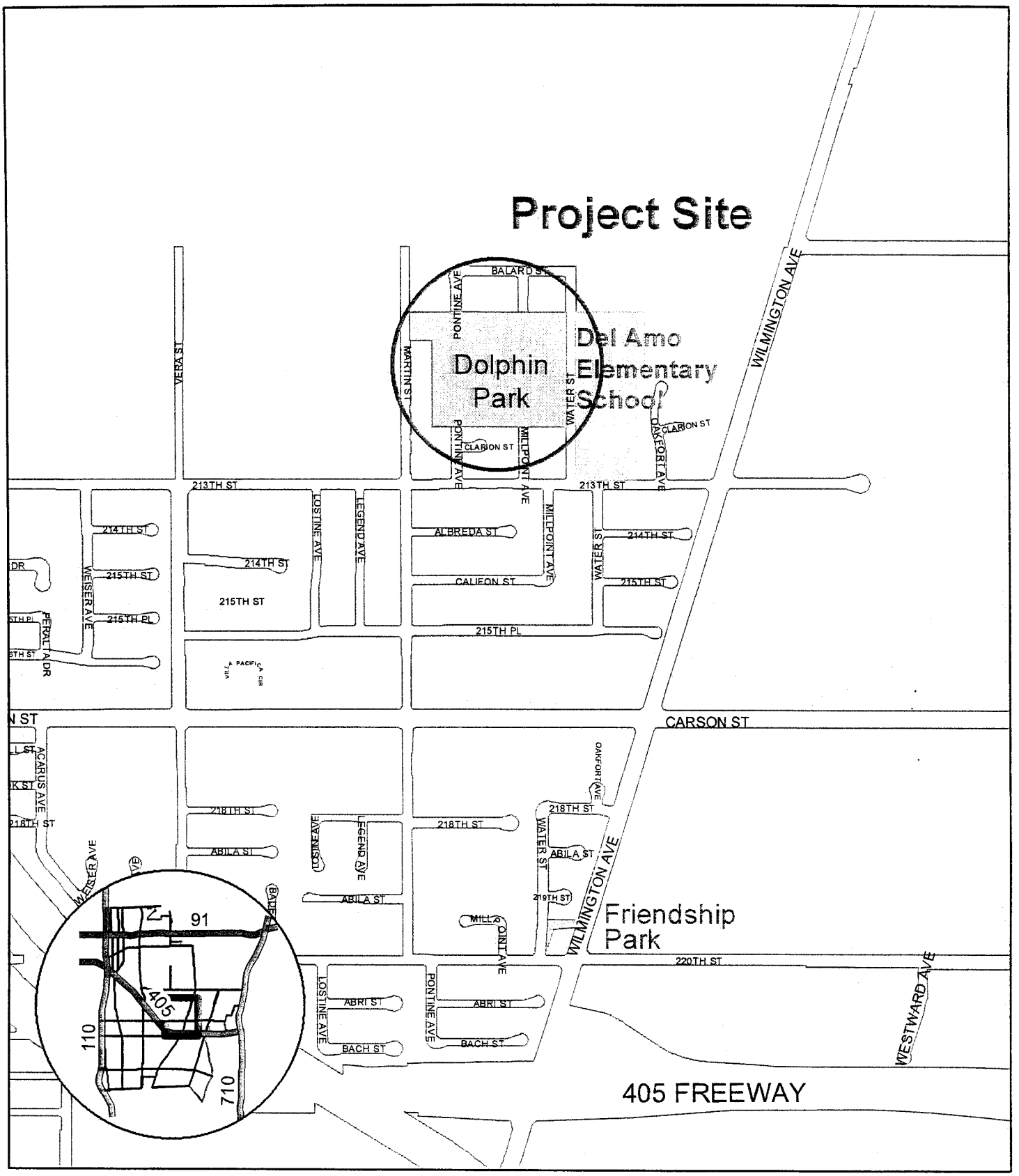
Reviewed by:

City Clerk	City Treasurer
Administrative Services	Public Works
Community Development	Community Services

Action taken by City Council

Date_____ Action_____

_____

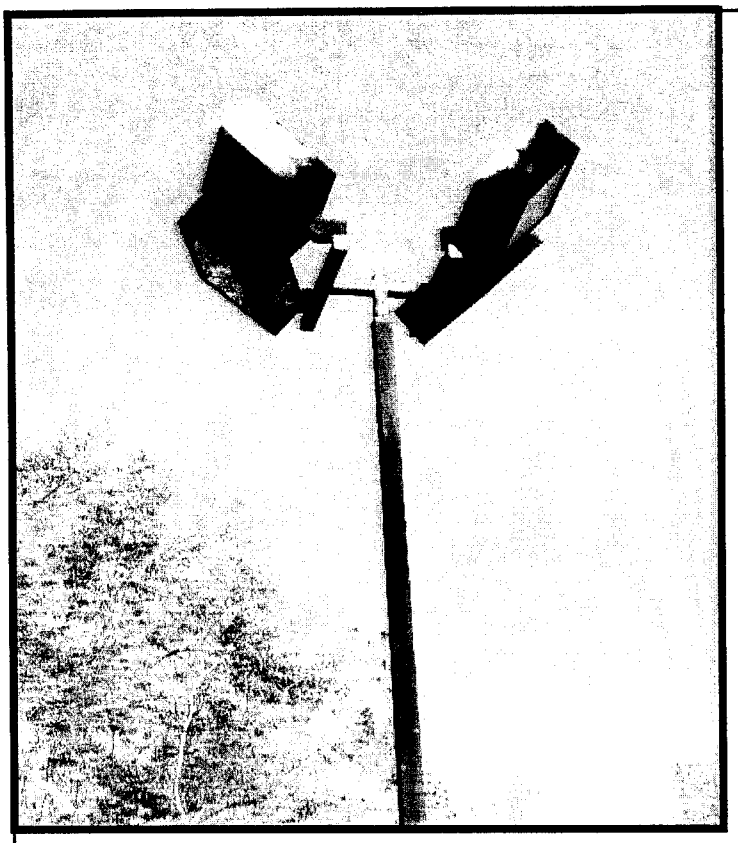


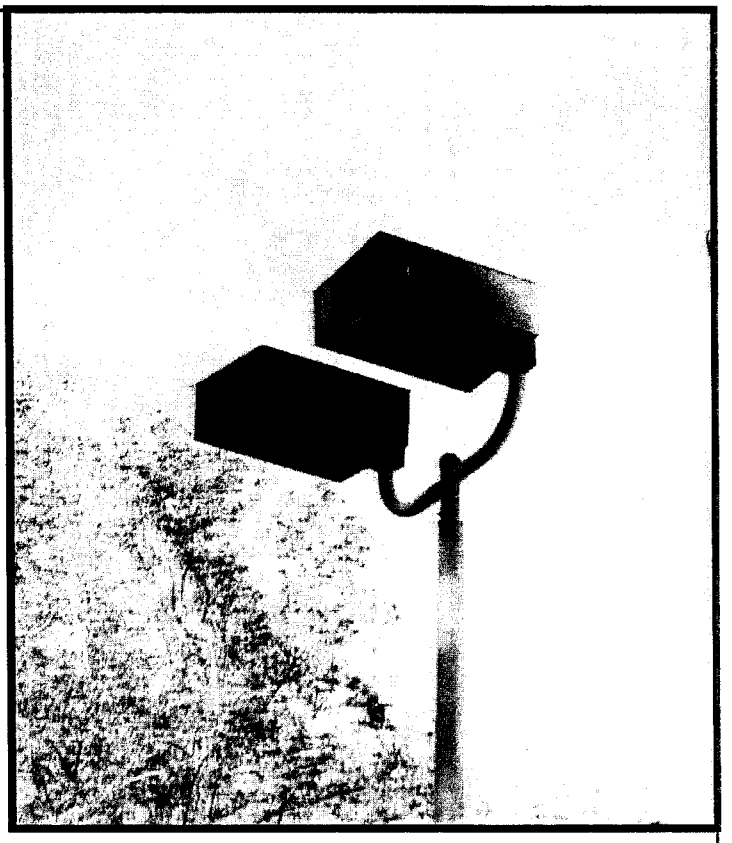
Location Map
Dolphin Park

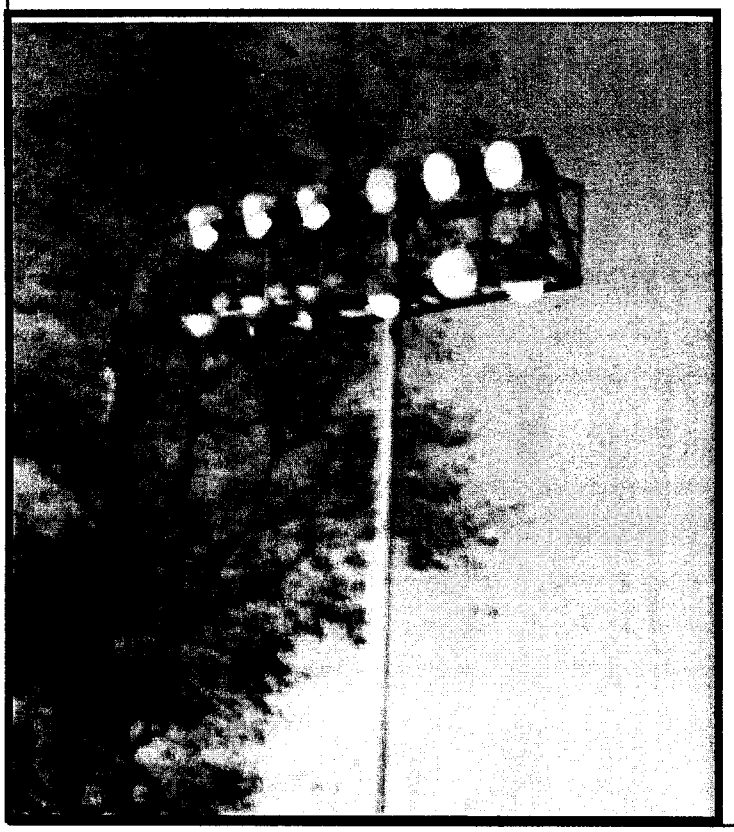
EXHIBIT NO. 1

5

Date Printed: Tuesday, December 10, 2013
MXD: G:\ENGINEERING DIVISION\Location Maps\MXDs\DophinParkEx.1.mxd
PDF: G:\ENGINEERING DIVISION\Location Maps\DophinParkEx.1.pdf





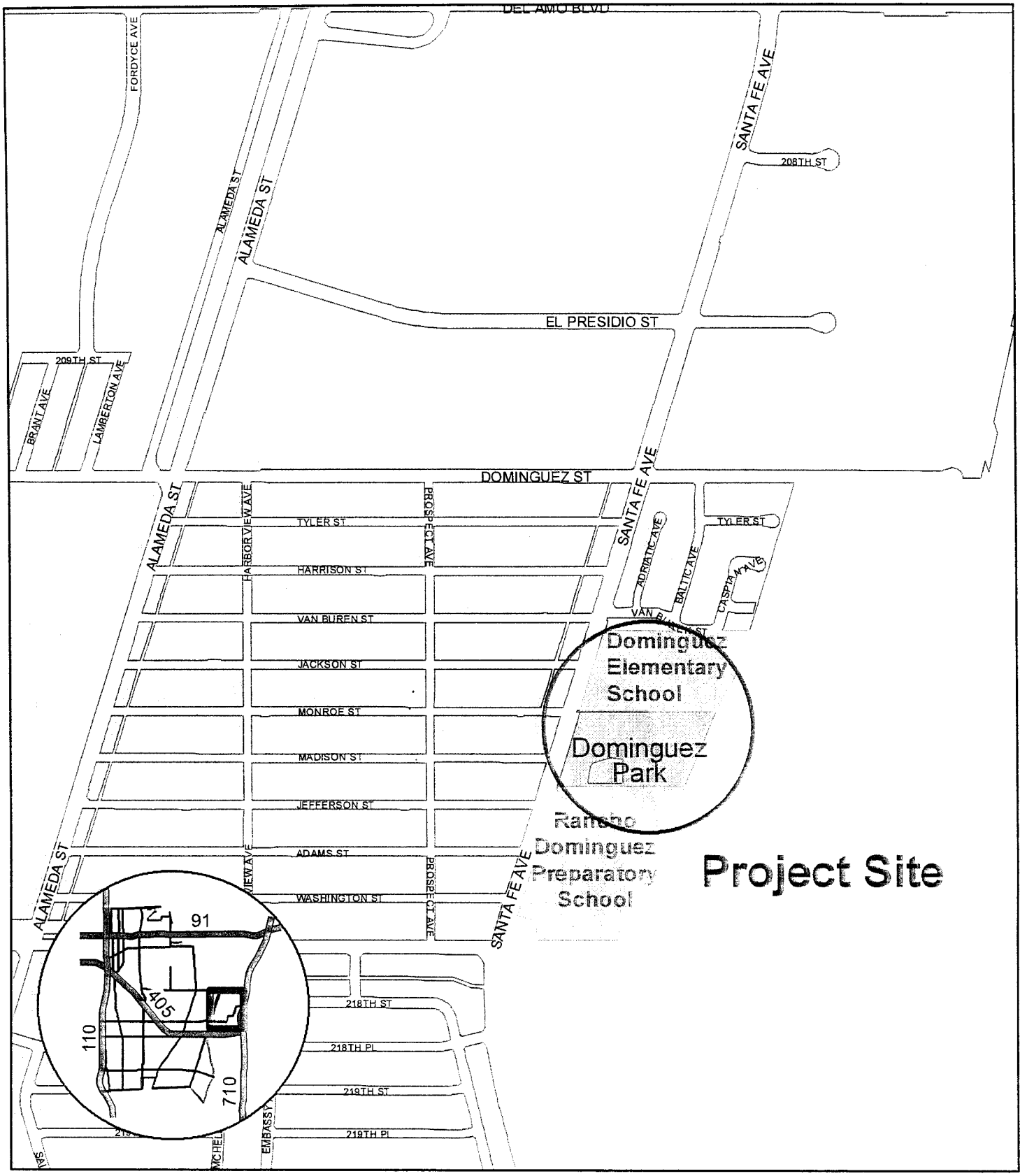


Dolphin Park
Photos of Existing Conditions

6

EXHIBIT NO. 2

Date Printed: Tuesday, December 10, 2013
MXD: G:\ENGINEERING DIVISION\Location Maps\MXDs\DophinParkEx.2.mxd
PDF: G:\ENGINEERING DIVISION\Location Maps\DophinParkEx.2.pdf

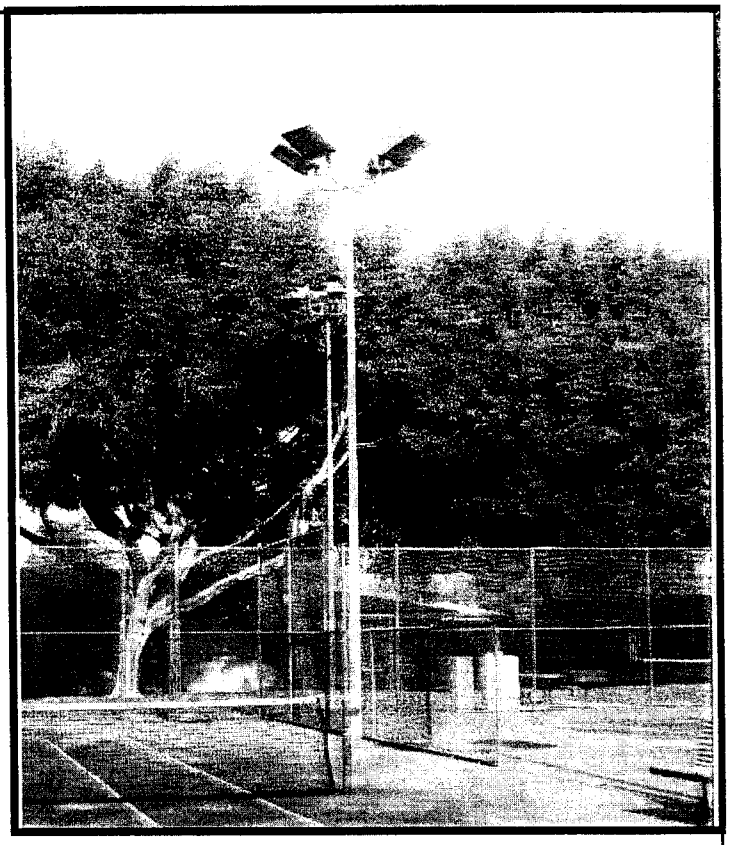


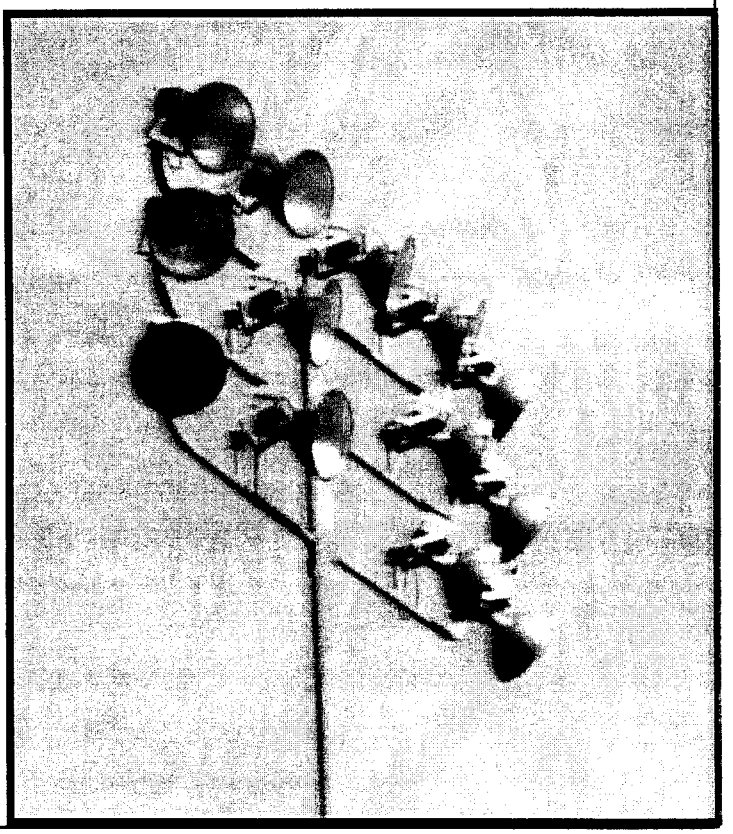
Location Map
Dominguez Park

7

EXHIBIT NO. 3

Date Printed: Tuesday, December 10, 2013
MXD: G:\ENGINEERING DIVISION\Location Maps\MXDs\DominguezParkEx.3.mxd
PDF: G:\ENGINEERING DIVISION\Location Maps\DominguezParkEx.3.pdf





Dominquez Park
Photos of Existing Conditions

8

EXHIBIT NO. 4

Date Printed: Tuesday, December 10, 2013
MXD: G:\ENGINEERING DIVISION\Location Maps\MXDs\DominguezParkEx.4.mxd
PDF: G:\ENGINEERING DIVISION\Location Maps\DominguezParkEx.4.pd