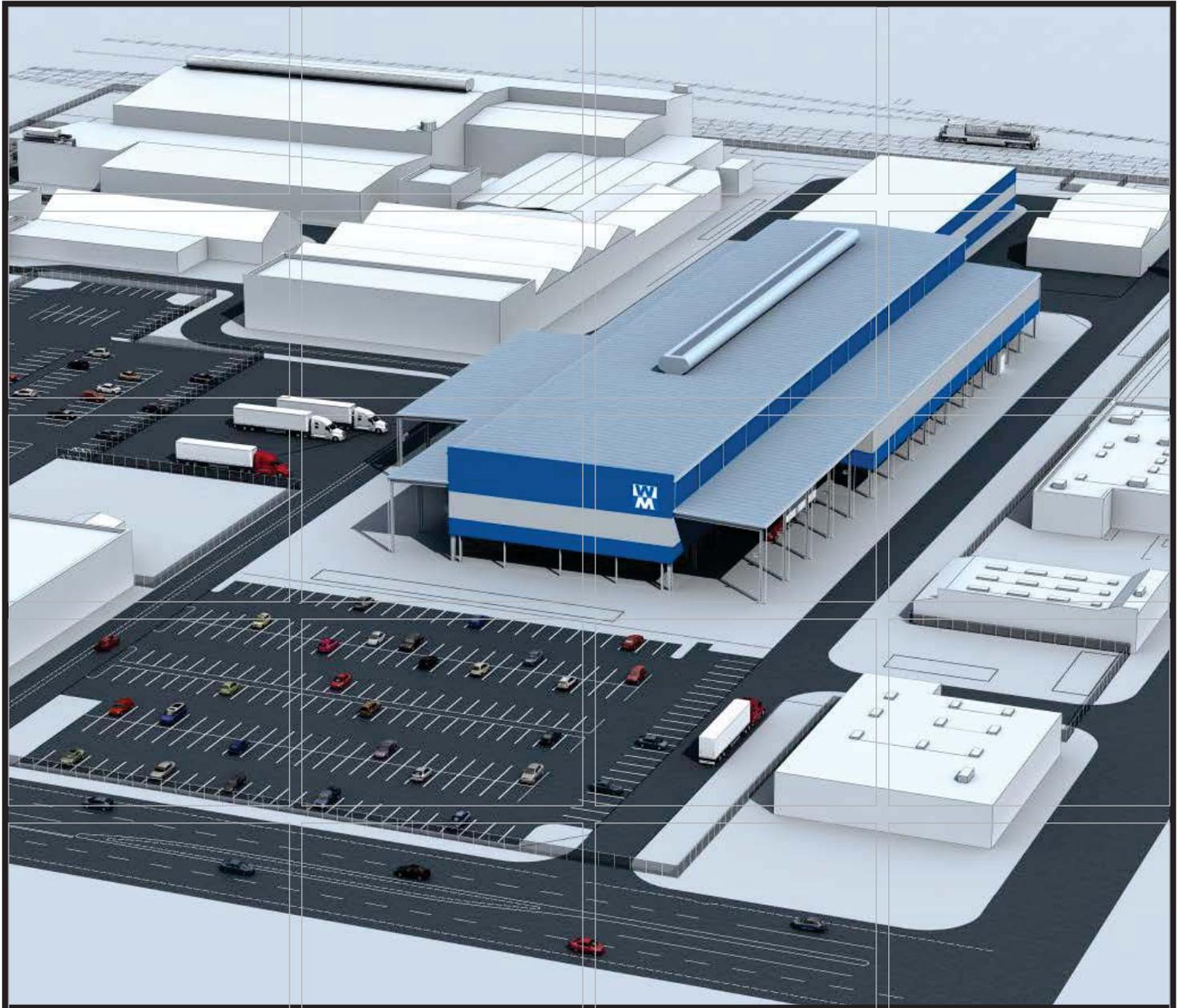


**Appendix A**  
*Energy Study*





# Energy Technical Supplement Large Press Expansion Project

**Prepared for:**  
City of Long Beach  
Planning Department

**Weber Metals Facility**  
Long Beach and Paramount, California

February 2015

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## *LIST OF ACRONYMS*

kV	Kilovolt
MW	Megawatt
MWh/yr	Megawatt hours per year
MVA	Mega volt amperes
Project	Large Press Expansion Project
SCE	Southern California Edison

## 1.0

### *INTRODUCTION*

This report serves as a technical supplement to the Conceptual Site Review application submitted to the City of Long Beach for the proposed Large Press Expansion Project (Project) at the Weber Metals facility located in the cities of Long Beach and Paramount, California. This technical report describes:

- The existing electrical system that provides energy to meet the demands of current operations, and the current energy usage patterns at the Weber Metals facility (Section 2);
- The anticipated energy demand after installation of the proposed large press (Section 3); and
- Proposed substation modifications to fulfill the energy demands of the Project (Section 4).

## 2.0

### ***CURRENT ELECTRICAL SYSTEM AND ENERGY DEMAND***

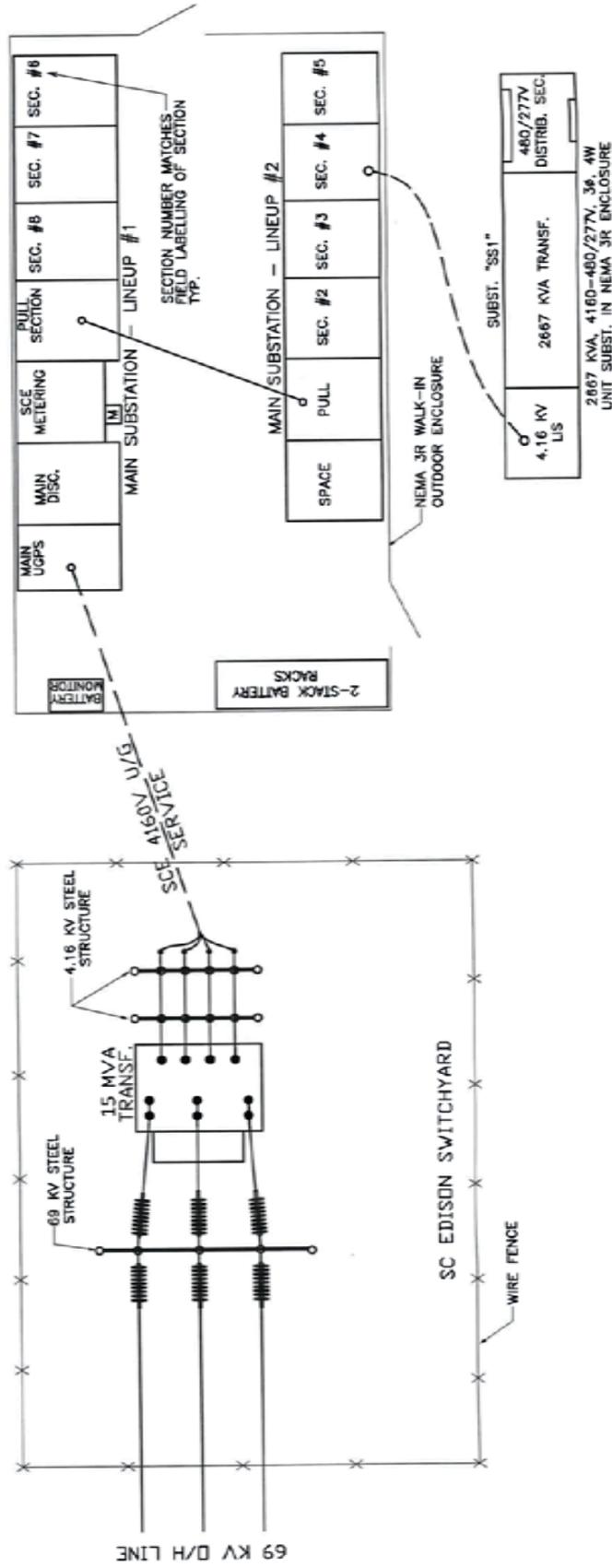
This section summarizes the existing system used to provide energy for the Weber Metals facility, and summarizes the current energy demand (pre-Project).

Energy for current operations at the Weber Metals facility is provided by an electrical substation known as the WebCo substation. The substation is located on the northeastern portion of the facility. Incoming overhead 66 kilovolt (kV) Southern California Edison (SCE) power lines feed into a 15-megavolt-amperes 66 kV/4kV transformer. Based on historical aerial photographs and information from the Los Angeles County Assessor, the WebCo substation was installed in approximately 1972. A photograph of the WebCo substation is provided in Figure 1, and the substation layout is provided in Figure 2.

***Figure 1***      ***Photograph of Existing Electrical Substation***



Figure 2 Existing Electrical Substation Layout



The current power demand at the Weber Metals facility is approximately 5 megawatts (MW). Under the current operational schedule (17 shifts per week—three shifts per weekday and two shifts on the weekend), annual electricity usage for 2014 was approximately 23,380 megawatt hours per year (MWh/yr).

While adequate to meet the current operational needs of the Weber Metals facility, Weber and SCE have determined that the aging infrastructure and safety systems of the existing substation should be upgraded as part of the Large Press Expansion project.

### 3.0

## ANTICIPATED ENERGY DEMAND

The major equipment associated with the new hydraulic press and their power demands have been provided by the proposed manufacturer and are listed in Table 1.

*Table 1 Power Loads of New Large Press Components*

60K Press Building Major Equipment	Quantity	Power Input (KW)	Total Power (KW)
Main Motor VFD	15	700	10500
Boost Motor VFD	10	112	1120
Cooling Motor VFD	2	112	224
Holding Pressure VFD	2	362	724
Control Pressure VFD	2	230	460
Filter Motor	2	22.4	44.8
Control Power	1	100	100
Die Preheating Furnace	4	46	184
Large Titanium Furnace	1	30	30
Small Titanium Furnace	2	30	60
Aluminum Furnace	2	120	240
Blasting Machine	1	42	42
Cooling Tower	2	50	100
Compressors	2	110	220
Freezers	3	65	195
Cranes (multiple)	5	97.6	488
Manipulators (on rails)	2	75	150
<b>Total</b>	<b>58</b>	<b>2304</b>	<b>14,882</b>

After completing the Large Press Expansion Project, Weber plans to expand its operations to include three work shifts each day of the week, including weekends, for a total of 21 shifts per week. The total electrical usage for that level of operation is projected to be approximately 15,330 MWh/yr. This represents an increase over current usage.

Factoring in the total connected load of the new press, ancillary press operation functions, building loads for the New Press Facility, and loads

associated with expansion in other areas of the Weber Metals facility, the anticipated additional power demand at the Weber Metals facility would be approximately 15 MW. As such, the existing WebCo substation will not provide adequate power to operate the planned New Press.

#### 4.0

#### *DESCRIPTION OF PROPOSED NEW SUBSTATION*

To accommodate the additional energy demand, the Project includes construction and operation of a new SCE electrical substation. This substation would provide services to the facility to support the proposed expansion and would replace the aging infrastructure and outdated safety systems of the current dedicated substation. The substation design is being developed in coordination with SCE and will be reviewed and approved by the City of Paramount during the permitting process.

The proposed substation (known as WebCo Two) would be constructed on an approximately 26,600-square-foot portion of the existing industrial site located in the northern portion of the property. The property is bounded to the north by Harrison Avenue in the city of Paramount, and all adjoining properties are industrial and commercial in nature. The WebCo Two substation would include various aboveground transformers, switch gear, surge arrestors, voltage regulators, and associated equipment. The equipment would be stationed in outdoor areas and within on-site structures.

The substation facilities would be secured from public access and reduced from public view by an 8-foot-high block wall installed around the perimeter.

A drawing detailing the design of the proposed WebCo Two substation was submitted with the Conceptual Site Review application on 12 January 2015.