

## Terminal Plan

**Pier F, Port of Long Beach; Terminal Operator and Responsible Official: SSA Pacific Inc, Bill Fitz**  
*on behalf of the two Pier F lessees (Crescent Terminals, Inc. and CSA Equipment Company, LLC)*

Pier F is a 22-acre (8.9 hectare) breakbulk cargo terminal with four contiguous berths (designated 204, 205, 206 and 207) totaling 2,400 linear feet (732 meters) operated by SSA Pacific.

**Pier F Strategy:** *Provide shore power to Pier F allowing for two simultaneously berthed roll-on/roll-off (RoRo) vessels and accommodate vessel operators’ use of CARB-approved innovative solutions when vessels aren’t equipped to plug in to shore power*

The proposed new shore power infrastructure investments will take significant time and resources to implement and RoRo vessel owners calling Pier F will need to retrofit or build new vessels with vessel-side shore power-capable connections. As such, to augment our strategy within the near-term compliance timeline, we encourage and embrace third-party vendors that can achieve CARB approvals for their innovative concept solutions (see Item “H” below) to provide services to vessel operators when shore power is not feasible at the berth.

### A. Identification and Description of all Necessary Equipment

Outside of the Pier F terminal (Utility Provider and Port Authority responsibility), equipment required to extend shore power to the terminal includes:

Item/Description	Location			
	Vessel	Wharf	Shore	Elsewhere
High-Voltage (HV) supply system				✓
HV distribution (right-of-way, overhead or underground lines) from supply to Shore Power Vault System				✓

Within the Pier F terminal (Terminal Operator responsibility), equipment to extend shore power to the berths includes:

Item/Description	Location			
	Vessel	Wharf	Shore	Elsewhere
Shore Power Substation			✓	
Electrical Controls to comply with IEC/IEEE 80005-1 and SEC regulations			✓	
Medium Voltage Conduit and Wiring		✓	✓	
Shore Power Vaults		✓		
Cable Management System		✓		
Vessel-side infrastructure to connect to shore power system ( <i>provided by vessel owner, retrofit or newbuild vessels, shore power capable</i> )	✓			

## B. Forecasted Vessel Volume

Pier F's 5-year vessel call forecast horizon (2022-2027) anticipates 95-100 vessels per year:

- 35-40 WWL (26-hour call, berth 204-205)
- 60 pure RoRo (12-hour call, berth 206-207)

Note: due to the typical RoRo vessel length overall (LOA), the combined 204-205 berths are considered one RoRo berthing position and the combined 206-207 berths are considered one RoRo berth position, allowing Pier F to berth and operate two RoRo vessels simultaneously.

## C. List of Each Berth with Coordinates

Pier F, Port of Long Beach, California



#### D. Berth Location

Compliance equipment will be used at the Port of Long Beach’s Pier F, Berths 204-205 and 206-207.

#### E. Terminal/Port-Specific Berthing Restrictions

Pier F anticipates no Terminal or Port-specific berthing restrictions.

#### F. Implementation Schedule

New on-terminal shore power equipment installations will be required at the berths to serve up to two RoRo ships simultaneously. Upon plan approval, we expect the design, permitting, bid, construction, and commissioning of the shore power infrastructure to take up to four years.


<b>RoRo Shore Power Element</b>	<b>Responsibility</b>	<b>Planning, Permitting and Design Duration</b>	<b>Construction and Commissioning Duration</b>	<b>Total Duration</b>
On-Terminal and Berth Infrastructure (at berths 206-207 and 204-205)	Terminal Operator	Up to 2 Years	Up to 2 Years	Less than 4 Years <i>Allows for overlap of Planning/Design/Permitting with Construction</i>

G. Division of Responsibilities: Terminal Operator and the Port

Considerations for implementing shore power stemming from CARB’s At-Berth Regulations has been specifically incorporated into the “Third Amendment to Preferential Assignment Agreement HD-6517”, the lease and operating agreement for the use of the Port of Long Beach Pier F marine terminal facility by Crescent Terminals, Inc. and CSA Equipment Company LLC, whom collectively has assigned SSA Pacific as the Terminal Operator.

Responsibility	Port	Terminal Operator
Submission of Terminal Plan per Section 93130.14(a)		✓
Submission of Port Plan per Section 93130.14(b)	✓	
Initiation of on-terminal terminal shore power design, permitting and construction (from substation to berth)		✓
Responsibility to provide shore power equipment or necessary shore power infrastructure inside of the terminal		✓
Responsibility to maintain shore power infrastructure inside of the terminal		✓
Responsibility of uncontrolled emissions at berth due to incomplete shore power infrastructure construction (from substation to vessel connection)		✓
Communicate and coordinate with vessel prior to arrival		✓
Ensure proper positioning of vessel		✓
Connect vessels to shore power when called by a commissioned shore power-enabled vessel		✓
Submit vessel visit information and wharfing data to CARB per regulation requirements	✓	✓
Responsibility of uncontrolled emissions from repair of shore power infrastructure/equipment		✓


*Note: this plan does not amend or modify the terms and/or the conditions of SSA Pacific’s preferential assignment agreement and other agreements with the Port, including without limitation expiration dates, nor does it amend or modify the terms and/or conditions of any agreements of the Port of Long Beach and/or of SSA Pacific with other entities nor does it modify or diminish any other obligations of other entities to the Port of Long Beach and/or SSA Pacific.*

<b>Port approval of responsibilities:</b>	
Set forth in Section G of this At Berth Terminal Plan, the Port’s responsible official confirms by signing below that he/she has reviewed the division of responsibilities and agrees to them under penalty of perjury. The Port does not make any representations about the accuracy, feasibility, or legality of SSA Pacific’s proposed compliance strategy set forth in this At Berth Terminal Plan.	
Name: <b>MARIO CORDERO</b>	Title: <b>Executive Director</b>
Port:	
Signature: 	Date: <b>Nov 17, 2021</b>

## H. Other Emission Control Options

As a Terminal Operator, our primary concern is providing safe and efficient operations compliant with all regulatory requirements. **We do not assert that a physical and/or operational constraint will delay our ability to implement our preferred shore power strategy.** However, the time required to design, permit and construct the solution by the January 1, 2025 Compliance Start Date will be challenging. As such we remain fully supportive and enthusiastic that third-party providers will respond to market demand and develop CARB-approved emission control solutions providing on-demand services to Vessel Operators when calling Pier F, for example:

- Fuel Cell Technology – Vessel-side or shore-based modular, self-contained and portable zero-emission fuel cell systems connecting to vessels in much the same manner as grid-based shore-power solutions. Fuel cell solutions would require vessel retrofit. The terminal operator would accommodate space requirements for the fuel cell arrays and potentially their associated hydrogen production and storage facilities.
- Capture and Control Systems – Barge-based or shore-based technology configurations designed to capture and treat exhaust emissions from ocean-going RoRo vessels while at berth, regardless of that vessel’s stack design or funnel characteristics. Capture and Control vendors would coordinate services directly with the vessel’s agent and vessel operator. The Terminal Operator would accommodate the vendor’s services while the vessel is at berth.

Terminal Responsible Official Signature	
<i>By signing below, SSA Pacific’s Responsible Official confirms under penalty of perjury that he has reviewed this Terminal Plan and is submitting this Terminal Plan as SSA Pacific’s compliance strategy for the At Berth Regulation on behalf of SSA Pacific Inc and the two lessees of Pier F (Crescent Terminals, Inc and CSA Equipment Company, LLC). SSA Pacific understands this plan is subject to verification by CARB staff.</i>	
Name: Bill Fltz	Title: Regional Vice President, SSA Pacific Inc.
Signature: 	Date: 11-10-2021