COMMISSION
AGENDA MEMORANDUM **Item No.** 8e

ACTION ITEM **Date of Meeting** May 28, 2024

DATE: May 16, 2024

TO: Stephen P. Metruck, Executive Director

FROM: Cox, Sarah, Director, Aviation Environmental
Francisco, Eileen, Director, Aviation Project Management

SUBJECT: **Electric Vehicle Chargers for the Aviation Fleet Design and Construction Authorization (C801232)**

Amount of this request:	$2,698,000
Total estimated project cost:	$2,947,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) authorize design and prepare construction bid documents; (2) advertise, award, and execute a major works construction contract; (3) execute related project change orders, amendments, work authorizations, purchases, contracts, and take other actions necessary to support and deliver the Electric Vehicle (EV) Chargers for Aviation Fleet project within the approved budget; and (4) authorize use of Port of Seattle crews and small and major works on-call contracts to support the design and construction activities. This request is for $2,698,000 of a total estimated cost of $2,947,000.

EXECUTIVE SUMMARY

The Aviation Fleet Manager is working to transition Seattle-Tacoma International Airport's (SEA) vehicle fleet to electric per the Port's Sustainable Fleet Plan. This project supports that effort by installing 15 Level 2 chargers at fleet parking spots on the first floor of the Parking Garage, and a mix of Level 2 and Level 3 chargers for 7 spots on the airfield near Concourse D. By enabling the conversion of these high-use vehicles to electric, the Aviation Division can reduce both greenhouse gas emissions and total lifetime cost to own and operate vehicles in comparison with internal combustion engine vehicles.

JUSTIFICATION

This project will support the electrification of high-use Aviation fleet vehicles. The Level 3 chargers on Concourse D will allow Aviation Operations to use electric trucks for a range of tasks across SEA locations. These Level 3 chargers will be able to charge vehicles in 1-2 hours, dramatically reducing charging time when compared to the Level 2 chargers that take 8-10 hours.

The Level 3 chargers are needed on the airfield as these vehicles are used continuously, especially during emergency response situations and snow events. Chargers in the Parking Garage are planned to be Level 2 as the vehicles that will use these chargers have more regular downtime and can charge overnight or between shifts.

This project will reduce greenhouse gas emissions of the Aviation fleet by at least 175 metric tons of CO_2 per year. This is nearly 20% of the current annual CO_2 emissions from the Aviation fleet. This will help the Port meet its Century Agenda goal to reduce greenhouse gases by 50% by 2030. Electrifying the vehicle to be supported by these chargers will also save at least $85,000 per year in fuel costs.

Diversity in Contracting

This project will use an existing IDIQ contract for design that was established in 2022. The contract includes a 16% women-and-minority-owned business enterprise (WMBE) participation utilization requirement. The project team will work with Diversity in Contracting Department to determine participation opportunities and appropriate aspirational goals for WMBE for the construction phase of the project.

DETAILS

Project is installing 15 Level 2 chargers in the Parking Garage; and a mix of Level 2 and Level 3 chargers on Concourse D to support 7 parking spots. These chargers will support electric charging for at least 22 high-use fleet vehicles.

Scope of Work

Work involves installing the infrastructure required to support the new EV chargers. This will include:

(1) Electrical power and conduit from electrical panels to charging equipment;
(2) Signage as required by code;
(3) Striping for parking stalls and as needed for movement of drive lanes;
(4) Bollards to protect the charging equipment;
(5) Foundations for charging pedestals;
(6) Charging equipment; and
(7) All other necessary work to ensure the chargers work as intended.

Schedule

Activity	
Design start	2024 Quarter 2
Construction start	2024 Quarter 4
In-use date	2025 Quarter 2

Cost Breakdown	This Request	Total Project
Design	$879,000	$1,128,000
Construction	$1,819,000	$1,819,000
Total	$2,698,000	$2,947,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Status Quo – Don't install the EV Chargers

Cost Implications: Expense $240,000 spent to date

Pros:

(1) Reduces the capital expenditure

Cons:

(1) Does not allow for electrification of high-use vehicles on the ramp of the Airport
(2) Requires expensing the cost of work to date

This is not the recommended alternative.

Alternative 2 – Install only the chargers on the ramp of Concourse D to support 7 parking spots.

Cost Implications: $1,874,000

Pros:

(1) Reduces the capital expenditure
(2) Allows for electrification of 7 high-use vehicles on the ramp of the Airport

Cons:

(1) Does not allow for electrification of 15 high-use vehicles in the Aviation Fleet

This is not the recommended alternative.

Alternative 3 – Install 15 chargers on in the fleet area of the Parking Garage and chargers on Concourse D for 7 parking spots to support electrification of high-use vehicles.

Cost Implications: $2,947,000

Pros:

(1) Supports electrification of 22 high-use Aviation fleet vehicles
(2) Reduces greenhouse gas emissions by an estimated 175 tons of CO2 per year

Cons:

(1) Highest capital expenditure

This is the recommended alternative.

FINANCIAL IMPLICATIONS

Cost Estimate/Authorization Summary	Capital	Expense	Total
COST ESTIMATE			
Original estimate	$932,000	$0	$932,000
Previous changes – net	$1,705,000	0	1,705,000
Current change	$310,000	0	$310,000
Revised estimate	$2,947,000	0	$2,947,000
AUTHORIZATION			
Previous authorizations	$249,000	0	$249,000
Current request for authorization	$2,698,000	0	$2,698,000
Total authorizations, including this request	$2,947,000	0	$2,947,000
Remaining amount to be authorized	$0	$0	$0

Annual Budget Status and Source of Funds

This project (CIP #C801232) was included in the 2024-2028 capital budget and plan of finance with a total capital budget of $2,637,000. The additional $310,000 was transferred from the Aeronautical reserve. The funding sources will be the Airport Development Fund (ADF) and revenue bonds.

Financial Analysis and Summary

Project cost for analysis	$2,947,000
Business Unit (BU)	Division wide, 69.2% airlines cost recovery
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase due to inclusion of capital (and operating) costs in airline rate base.
IRR/NPV (if relevant)	N/A
CPE Impact	$0.01 in 2026

Future Revenues and Expenses (Total cost of ownership)

This project will allow for replacement of high-use vehicles with electric vehicles. This will save approximately $85,000 a year in fuel costs. The chargers will be supported by Aviation Maintenance.

ATTACHMENTS TO THIS REQUEST

(1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None