



COMMISSION
AGENDA MEMORANDUM

Item No. 6e

ACTION ITEM

Date of Meeting November 14, 2017

DATE: November 7, 2017

TO: Dave Soike, Interim Executive Director

FROM: Michael Ehl, Director, Airport Operations
Wayne Grotheer, Director, Aviation Project Management Group
Clare Gallagher, Director, Capital Project Delivery/Public Affairs

SUBJECT: Flight Corridor Safety Program – Phase 1

Amount of this request: \$2,600,000

Total estimated project cost: \$5,806,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) increase the project budget for the Flight Corridor Safety Program – Phase 1 by \$2,600,000 for a new total of \$5,806,000 (2) execute change order(s) in excess of \$300,000 as necessary to complete the tree removal work and (3) advertise and execute a major works construction contract to remove invasive species and complete revegetation for Flight Corridor Safety Program Phase 1 at Seattle-Tacoma International Airport.

EXECUTIVE SUMMARY

Based upon additional community input, the plan and methodology for the removal of trees and replanting of trees and shrubs at Sites P-4 and P-5 has been modified to selectively remove current obstructions in the flight corridor. In addition, again based on community input, a site located to the immediate south of Site P-5 has been identified for additional planting with tall-growing conifers. Obstruction removal on Site P-4 is being completed in the current contract.

Staff recommends completing the tree removal work on Site P-5 as part of the existing contract so that all obstructions are removed in a timely manner. The remaining work of invasive species removal, revegetation of Sites P-4 and P-5, and planting of tall growing trees at the additional site will be included in a subsequent contract. Additional funds are needed to complete the removal of obstructions, remove invasive species, and provide the additional planting on Port property. The proposed change order raises the current contract value to approximately 146% of the initial award of \$1,671,037.50.

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JUSTIFICATION

This project is part of a multi-year program approved in November 2016 by the Commission to manage obstructions consisting of trees and other vegetation at and around Seattle-Tacoma International Airport, and replant lower-height vegetation on or near the removal sites. Work in two sites (P-4 and P-5) along South 200th Street was deferred at the request of the Commission to allow for additional public input and for Port staff to further evaluate the removal and replanting approach for these sites based upon the input received. Staff briefed Commission on the outcome of the additional public input and a recommended approach for the two sites plus an additional planting of an off-site location just south of Site P-5 on July 25, 2017. Subsequent to the Commission briefing, the project team developed detailed plans and specifications for tree removal work, invasive species removal and extensive replanting work (on-site replanting, vegetation barriers and off-site replanting). The tree removal work will be accomplished by selectively removing the trees in a systematic manner in order to protect as much native understory vegetation as possible. The change in approach to tree removal and replanting as well as the additional off-site planting area have increased the cost from the original scope of work.

Staff recommends that the deferred tree removal be performed by change order to the existing contract. This will result in the early removal of obstructions, to facilitate safe aircraft operations. The invasive species removal work and revegetation will be completed in a subsequent major works construction contract. It will also allow the work to be performed outside of annual constraints for tree removal and replanting. The Migratory Bird Act prohibits tree removal between March 1 and July 15. The window for planting non-irrigated tree and shrubs is October 1 to February 28.

Project Objectives

Program objectives are as follows:

- (1) Remove obstructions to facilitate safe aircraft operations
- (2) Communicate with transparency to the surrounding communities
- (3) Comply with local, state, and federal regulatory requirements
- (4) Revegetate with native low-growth vegetation and re-plant native trees in appropriate locations
- (5) Prevent any net loss of vegetation

DETAILS***Scope of Work***

Scope of work for Phase 1 of the program, which is exclusive to Port-owned property, includes removing trees/vegetation on and around the Airport and replanting tree and shrub vegetation. This scope also includes environmental review and permitting in compliance with applicable federal and state requirements. The work includes installation of temporary erosion and sediment control devices, removal of trees/vegetation, removal of invasive species, extensive

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tree replanting, and extensive shrub replanting and restoration. This request is to complete Phase 1 work and to accommodate the changes to removal and replanting specific to Sites P-4 and P-5, and planting taller growing conifers in the additional off-site location.

Schedule

Execute Construction Contract	4 th Quarter	2016
Construction Completion	4 th Quarter	2018

Activity

Commission design authorization	2016 Quarter 1
Design start	2016 Quarter 2
Commission construction authorization	2016 Quarter 3
Additional Funds Authorization	2017 Quarter 4

Cost Breakdown

	This Request	Total Project
Design	\$664,000	\$1,533,914
Construction	\$1,936,000	\$4,272,086
Total	\$2,600,000	\$5,806,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Constrain the project to the current authorized budget

Cost Implications: ~\$250,000 remaining budget

Pros:

- (1) Under this option there is no near-term use of additional 2017 expense funds

Cons:

- (1) Doesn't adhere to communications made to the Public regarding additional planting and selective removal for site P-5.
- (2) Site P-5 obstructions removal and off-site replanting would need to be authorized, funded and completed in subsequent phases
- (3) FAA could consider the Airport to be non-compliant with Federal rules and regulations due to additional delay. The FAA would have a number of options on how to address the non-compliance. The FAA's options would include:
 - (a) Consider approach and/or departure procedures to be unsafe, and limit their use;
 - (b) Consider approach and/or departure procedures to be unsafe, and potentially affect operations;
 - (c) Limit or eliminate FAA grant funding until the obstructions are removed. FAA entitlement grant funding is estimated to be ~\$6.6 million in 2016 and up to ~\$7.1 million in 2021.
 - (d) Require airlines to take weight penalties.
- (4) Does not meet the Airport's strategic goal of ensuring safe and secure operations.

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This is not the recommended alternative.

Alternative 2 – Terminate portions of the existing contract and procure a new contract to perform the work for site P-5 and the additional off-site location.

Cost Implications: ~\$2,500,000

Pros:

- (1) Complies with RCW 39.04.010, which requires “public works” projects of this nature to be competitively bid out.
- (2) Revegetation follows shortly after tree removal.

Cons:

- (1) Conflicts with the Port’s previous communications to the Public regarding timeline for performance of the work.
- (2) Delayed Phase 1 work would likely be accomplished in 2018-2019, in addition to Phase 2 work
- (3) FAA could consider the Airport to be non-compliant with Federal rules and regulations. The FAA would have a number of options on how to address the non-compliance, as noted in Alternative 1 description.
- (4) Does not meet the Airport’s strategic goal of ensuring safe and secure operations.

This is not the recommended alternative.

Alternative 3 – Increase project budget to issue change orders to the existing contract and complete the project

Cost Implications: \$1,900,000

Pros:

- (1) Honor’s the Port’s commitment to the Public to re-establish a low-growing forest
- (2) Allows more time for taller growing conifers to begin establishing themselves in an off-site location
- (3) Revegetation best management practices will be met with border trees planted immediately following tree removal and infill revegetation occurring in Q4 2014
- (4) All Port property exiting obstructions will be removed
- (5) Increases the SCS subcontractor’s work by approximately 82%

Cons:

- (1) Does not comply with RCW 39.04.010, which requires “public works” projects of this nature to be competitively bid out.
- (2) Requires additional expense funds
- (3) Extends contract duration

This is not the recommended alternative.

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Alternative 4 – Increase project budget to issue change order to the existing contract and complete the tree removal work on P-5. Design, advertise and execute a separate contract to complete the invasive species removal and revegetation work.

Cost Implications: \$2,600,000

Pros:

- (1) All Port property existing obstructions will be removed, addressing FAA safety issues.
- (2) Complies with RCW 39.04.010, which requires “public works” projects of this nature to be competitively bid out.

Cons:

- (1) Revegetation will not occur immediately following the tree removal work. Revegetation will be included in a subsequent contract and this work will occur in Q4 2018.
- (2) Requires additional expense funds
- (3) Potential for claims from current contractor
- (4) Removes approximately 20% of work from the current SCS subcontractor

This is the recommended alternative.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$0	\$2,731,000	\$2,731,000
Previous changes – net	0	\$475,000	\$475,000
Current change	0	\$2,600,000	\$2,600,000
Revised estimate	0	\$5,806,000	\$5,806,000
AUTHORIZATION			
Previous authorizations	0	\$3,206,000	\$3,206,000
Current request for authorization	0	\$2,600,000	\$2,600,000
Total authorizations, including this request	0	\$5,806,000	\$5,806,000
Remaining amount to be authorized	\$0	\$0	\$0

Annual Budget Status and Source of Funds

The Flight Corridor Safety Program costs are accounted for as expense costs. The costs are charged to the Airfield Movement Area cost center and recovered through landing fees charged

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to airlines. As such, all costs will be paid for out of the Airport Development Fund. The additional \$2.6 million will be spread between 2017 and 2018. At this time, staff anticipates that these costs can be absorbed within existing annual budgets. The \$2.6 million increase, if incurred in one year, would cause CPE to increase by \$0.08.

ADDITIONAL BACKGROUND

Obstructions are any objects penetrating FAA-designated approach and departure paths at or around an airport posing a potential risk to safe aircraft operations. Obstruction studies and the related publication of obstruction charts were completed every ten years by the FAA until approximately 1994. In preparing for the activation of the Third Runway, the FAA performed an obstruction analysis in 2005 that led to the removal of trees in 2006-2008. An aerial obstruction analysis was conducted by the Port in 2015 that identified approximately 1,600 obstruction data points consisting of trees and other vegetation. Subsequent field work was performed by a third party to verify the aerial obstruction analysis data. The field verification of the aerial obstruction data resulted in identifying approximately 2,800 tree obstructions at or around the airport.

The Port has developed a comprehensive Flight Corridor Safety Program that will address the removal of obstructions in several phases and span multiple years:

- Phase 1: 2016 - 2018 - Port-Owned property
- Phase 2: 2018/2019 – Public agency-owned properties including Highline Public School District, Washington State Department of Transportation, Seattle Public Utilities and public right of way within the cities of Burien, Des Moines and SeaTac.
- Phase 3: 2019/2020 - Residential and Commercial properties

Community Engagement

The Port hosted a Public Workshop on June 5, 2017 to seek public input on the removal and replanting approaches for sites P-4 and P-5. The preferred alternative by the majority of the attendees was:

(1) Recommended Removal Approach

- Remove existing obstructions only (protect potential obstructions and protect understory to the maximum extent feasible)

(2) Recommended Replanting Approach

- Replant on-site at a 1:1 minimum replacement ratio with higher densities as needed to re-establish a low-growing forest, replant in off-site location with taller growing conifers, provide vegetation barrier adjacent to residential properties and road frontage

In conjunction with the June 5 workshop at McMicken Heights Elementary School, the Port also initiated an online open house workshop to engage members of the community who were

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unable to attend the live meeting and allowed for comments and feedback to be submitted to the Port.

Port staff also visited, in person, the approximately 65 homes immediately adjacent to site P-5, to talk with homeowners, gather feedback and leave information.

The project team updated the Commission on July 25 regarding the public workshop and other engagement, and confirmed the updated approach for the work on Sites P-4 and P-5. Since then, the full scale of work has commenced on P-4. Planting on the off-site location is partially funded with the existing appropriation and has been planned. Substantive work on P-5 and off-site planting will commence when the additional funds are authorized.

ATTACHMENTS TO THIS REQUEST

- (1) Site Map

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

July 25, 2017 – Commission briefing on Flight Corridor Safety Program Sites P-4 and P-5. The briefing provided a summary of the public engagement workshop that was held on June 5, 2017 to identify a preferred removal and replanting approach with the communities input.

February 21, 2017 – Commission authorized for the Chief Executive Officer to prepare environmental, design and contract bid documents for the Flight Corridor Safety Program now-combined Phase 2 and Phase 3 at Seattle-Tacoma International Airport for \$2,373,000. The total estimated project cost is \$7,227,000.

November 22, 2016 – Commission authorized (1) to award and execute a major works construction contract to the lowest responsible bidder, notwithstanding the low bid exceeding the engineer's estimate by more than 10 percent; (2) change the contract duration as necessary and include additional scope that may be identified, including deferral of work on selected sites; (3) increase the project budget by an amount not to exceed \$475,000 for a total new project cost of \$3,206,000.

November 1, 2016 – Commission public meeting and briefing on the Flight Corridor Safety Obstruction Management program. The briefing provided an overview of state and federal laws/requirements, and staff's recommendation of options to modify the current program. The public meeting also included an extensive public comment period.

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October 25, 2016 – Commission considered authorization to award the irregular bid exceeding 10 percent of the engineer’s estimate to the lowest responsible bidder but took no action.

October 11, 2016 – Commission considered authorization to award the irregular bid exceeding 10 percent of the engineer’s estimate to the lowest responsible bidder but took no action.

August 23, 2016 – A special announcement to Commission by Aviation Operations Director, Michael Ehl, in regards to the Port issuing the final environmental Mitigated Determination of Non-Significance (MDNS) for tree removal and replanting as part of the Flight Corridor Safety Program in Phase One.

August 9, 2016 – Commission authorized to advertise and execute a major works construction contract in the amount of \$1,831,000 for a total project cost of \$2,731,000.

February 9, 2016 – Commission authorized to design, advertise and execute a major works construction contract in the amount of \$750,000 for a total estimate project cost of \$900,000.

November 24, 2015 – Commission briefed on the Flight Corridor Safety Obstruction Management program. The briefing provided an overview of state and federal laws/requirements, and staff’s recommendation of a phased delivery approach to complete the program.