



**COMMISSION  
AGENDA MEMORANDUM**

**Item No.** 8c

**ACTION ITEM**

**Date of Meeting** March 10, 2020

**DATE:** March 3, 2020

**TO:** Stephen P. Metruck, Executive Director

**FROM:** Wayne Grotheer, Director Aviation Project Management Group  
Laurel Dunphy, Director Airport Operations  
Jeffrey Brown, Aviation Chief Operating Officer

**SUBJECT:** North Satellite (NSAT) Modernization Project Budget Increase

**Amount of this request:** \$40,000,000

**Total estimated project cost:** \$712,125,232

**ACTION REQUESTED**

Request Commission authorization for the Executive Director to increase the North Satellite Modernization Project budget by \$40,000,000 (\$32 million capital and \$8 million expense) for a total project authorization of \$712,125,232.

**EXECUTIVE SUMMARY**

The NSAT Modernization project helps meet the needs of our growing airline customers by making a deliberate and significant step to improve Seattle-Tacoma International Airport's capacity, customer level of service and competitive ranking among peer airports.

The current NSAT Modernization project estimate at completion spending forecast is greater than the budget authorized by the Commission. This request allows the NSAT Modernization project to proceed to completion by providing the budget for scope changes, additional soft costs, unforeseen conditions, and to respond to the fast-changing dynamics of the airport.

The budget increase includes \$5 million for the project's management reserve, which will only be utilized with approval of the Executive Director.

**JUSTIFICATION**

Approval of the increased budget will provide sufficient construction contingencies for construction completion and fund remediation efforts and support costs associated with the construction. The need for additional funding results from differing site conditions found during construction, additional contaminated and unsuitable soils discovered during excavation, added scope through Phase 1 and Phase 2 to meet airline, customer service, environmental, and code compliance needs and expectations, and an increased level of

Meeting Date: March 10, 2020

passenger service to mitigate passenger impacts during construction. These factors have all drawn down the construction contingencies and Project Reserves. As a result, we request to augment our authorization and funding to deliver the project.

***Diversity in Contracting***

HP was contracted in July 2017 to achieve Small Contractor and Supplier participation of 5.5%. There were also two aspirational goals that HP was expected to attain: Small Business Enterprise participation of 16%, and Disadvantaged, Disabled Veteran, Minority, Women’s Business Enterprise participation of 3.6%. The contractor is tracking to meet or exceed these goals and requirements. Project metrics are included in the table below in the Background section. Staff has updated and will continue to update the Commission on progress.

**DETAILS*****PROGRESS TO DATE***

We have completed Phase 1, opened the Alaska Lounge, opened to operations the renovated Concourse C STS station, and are more than halfway through the overall project construction. We continue to show project turnover for final operational readiness activities to be Q3 2021, on schedule as projected in August 2017. As of December 31, 2019, the total construction contract is \$470.5 million capital construction cost and \$15 million expense. The \$485.5 million current HP contract cost includes the preconstruction services completed by our contractor for a value of \$5.5 million.

***LOOKING FORWARD***

The project team continues to adjust our project completion schedule and spending forecast based upon current data and progress metrics observed. We completed Phase 1 construction and began a rigorous lessons-learned process to deliver Phase 2 with even better passenger service. The team evaluated all current expenditures, risks and trends and has projected an estimated total cost at completion of the project. Our estimate includes an increase in the following key elements:

**Capital**

- (1) Finalized Design Development Cost (previously reported as exceeding allowance)
- (2) Differing site conditions (e.g., existing building out of plumb, existing floor conditions requiring complete terrazzo replacement, buried utilities)
- (3) Settlement of change orders in process (e.g., negotiation of construction labor costs due to critical trade worker shortages)
- (4) Added Scope:
  - a. Restroom redesign
  - b. Nursing suite
  - c. Baggage Handling System revisions

Meeting Date: March 10, 2020

- d. Elevator/Escalator changes required by Washington State Department of Labor and Industry, including a code revision
- e. Added mobile stairway equipment for ground boarding aircraft (Phase 2 gate mitigation for construction)
- f. Rainwater flushing system expansion

**Expense**

- (1) Contaminated and unsuitable soils continue to exceed predictions.
- (2) Incorporating activities directed towards delivering an enhanced customer level of service; a feature of the Port's change in project priority from delivery of new gates to maintenance of customer level of service standards through construction. This work has helped the project identify operational challenges, engage stakeholders, and employ measures prior to and during the turnover of the facility from construction to operational use. We have included this work in the project through completion.
- (3) Additional construction barricade mitigation efforts for critical passenger circulation paths using escalators, stairs, and elevators. The number of passenger escalators and elevators needed to be reduced to complete the construction, creating single points of failure for access to the Concourse. We have deployed customer service personnel, increased passenger wayfinding, improved the aesthetics of barricades separating the public from the construction areas, and provided for better operational activation activities to provide a better customer experience through the STS station up to the gates

**KEY POINTS**

Alaska Airlines has expressed verbally to Port that they concur with the budget increase and moving forward with completion of this project.

- The Airlines were briefed on December 5, 2019 about the current status of the project.
- Another Majority-in-Interest (MII) approval from the Airlines is not required as the project is under construction

The team has refined the phasing to better address customer and operational service, gate capacity and the passenger experience to ensure there is no significant degradation in level of service during construction. The team is employing lessons learned on turning over the facility for operational use. We have successfully maintained Alaska's operations and are providing 10 gates during Phase 2.

***Scope of Work***

Approval of this request will enable the project team to proceed with the following four actions:

- (1) Amend the Hensel Phelps (HP) contract to complete the project including executing all pending and future change orders to the HP contract. The team requests to continue

Meeting Date: March 10, 2020

the practice of executing all change orders and amending the contract within authorized budget to complete the construction in a timely manner and maintain contract and labor harmony.

- (2) Include \$5 million to replenish the project’s Management Reserve in the budget increase. The reserve will only be utilized with approval of the Executive Director.
- (3) Amend consulting contracts for design/construction support services and project management services as may be necessary to complete the project.
- (4) Use Port crews in support of the NSAT construction in addition to utilizing small works contractors to accommodate unforeseen/changed conditions and install equipment.

**Schedule**

The NSAT Modernization project remains on schedule for opening the overall facility in the summer of 2021. The complexities of constructing this project while maintaining Alaska’s active operations and maintaining a high level of customer experience has been a continuous challenge and remains one of the highest risks.

**Activity**

Commission design authorization	2012 Quarter 2
Design start	2012 Quarter 2
Commission construction authorization	2012 Quarter 4
Construction start	2013 Quarter 4
In-use date	2021 Quarter 3

**Cost Breakdown**

	This Request	Total Project
Design	\$4,891,341	\$87,250,347
Construction	\$35,108,659	\$624,874,885
Total	\$40,000,000	\$712,125,232

**FINANCIAL IMPLICATIONS**

**Cost Estimate/Authorization Summary**

	Capital	Expense	Total
<b>COST ESTIMATE</b>			
Previous estimate	\$659,825,232	\$12,300,000	\$672,125,232
Current change	\$32,090,895	\$7,909,105	\$40,000,000
Revised estimate	\$691,916,127	\$20,209,105	\$712,125,232
<b>AUTHORIZATION</b>			
Previous authorizations	\$659,825,232	\$12,300,000	\$672,125,232
Current request for authorization	\$32,090,895	\$7,909,105	\$40,000,000
Total authorizations, including this request	\$691,916,127	\$20,209,105	\$712,125,232
Remaining amount to be authorized	\$0	\$0	\$0

Meeting Date: March 10, 2020

**Annual Budget Status and Source of Funds**

This project is included in the 2020-2024 capital budget and plan of finance with a budget of \$659.8 million. The capital budget increase of \$32,090,895 will be transferred from the Aeronautical Reserve CIP (C800753) resulting in zero net change to the Aviation capital budget. The funding sources will include the Airport Development Fund, revenue bonds and Passenger Facility Charge revenue (PFCs).

**Financial Analysis and Summary**

Project cost for analysis	\$712,125,232
Business Unit (BU)	Terminal Building
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase due to inclusion of capital (and operating) costs in airline rate base. Increasing use of PFCs reduces Port revenue as capital costs are excluded from airline rate base.
IRR/NPV (if relevant)	N/A
CPE Impact	\$0.34-\$1.79 depending on amounts of PFCs applied to ongoing revenue bond debt service.

The funding plan includes approximately \$126 million of PFCs to fund construction costs. Capital costs funded with PFCs are excluded from the airline rate base and therefore do not impact passenger airline cost per enplaned passenger (CPE). The funding plan also includes the use of PFCs to pay some level of ongoing PFC-eligible revenue bonds debt service. Debt service paid by PFCs is also excluded from the airline rate base.

**Future Revenues and Expenses (Total cost of ownership)**

Maintenance staff will be increased to support the activation of the facility in a phased approach through 2021. A key objective of the project is installing sustainable materials and to maximize the maintainability of the new equipment. The complete renovation/replacement of the mechanical, electrical, lighting, communications, pre-conditioned air, 400 Hz, baggage and other major systems provides an opportunity to achieve life cycle cost efficiencies and savings.

The project is pursuing Leadership in Energy and Environmental Design (LEED) certification, gained United States Green Building Council (USGBC) approval for the design and is tracking to LEED Silver status to date. Rigorous studies and evaluation of options for 30-year life cycle cost have resulted in more holistic decision making throughout the design process, balancing first cost, energy consumption, replacement cost of infrastructure, construction materials and methods, and maintenance over the life of the facility. The resulting facility champions total cost of ownership for the Port.

Meeting Date: March 10, 2020

**BACKGROUND**

***Project Metrics***

	Budget/Planned	Utilization to Date
Cumulative Spent Against Authorization	\$672.1 M	\$425.8 M
Overall Work Complete	60%	60%
Cash flow for Reporting Period (Q1 2019)	\$43.7 M	\$37.1 M
Net Construction Contingency	\$24.7 M	\$17.0 M
Management Reserve *	\$14.7 M	\$6.9 M
Small Contractor Supplier (SCS) Design	6.4%	6.2%
SBE Participation (Construction)	16.0%	19.08%
SCS Participation (Construction)	5.5%	5.55%
WMBE Participation (Construction)	3.6%	3.77%
Apprenticeship Utilization to date	15.0%	18.61%
Minority Utilization to date (% of apprenticeship)	15.0%	32.9%
Women Utilization to date (% of apprenticeship)	10.0%	10%
* Requires Commission Notification M = million		

***Total Construction Contract Metrics***

	Budget/Planned	Percent
Original Contract Sum	\$445.9 M	
Executed Change Orders	\$24.2 M	5.42%
Current Contract Sum	\$470.1 M	
Net Construction Contingency	\$33.7 M	
Contingency Expended/Authorized	\$24.2 M	71.7%
Remaining Construction Contingency	\$9.5 M	28.3%
Negotiated Support Services (NSS)		
NSS Original Budget Value	\$40.1 M	
NSS Current Budget Value	\$39.3 M	
NSS Authorized Amount	\$19.8 M	50.5%
NSS Remaining Amount	\$19.5 M	49.6%

Meeting Date: March 10, 2020

***Change Orders executed over \$300,000 (since last report):***

Number	Summary Description	Cost
544 & 590	Increase Contaminated Soil Allowance	\$2.1 M
634	Concourse topping slab removal	\$960,000
641 & 684	Concourse C steel and vertical core revision	\$946,000
631	Mother’s Room modifications	\$415,000
549	Additional GC’s for estimator	\$447,000

**ATTACHMENTS TO THIS BRIEFING**

- (1) Presentation slides

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

**North Sea-Tac Airport Renovations (NorthSTAR) (CIP #C800544)**

- February 26, 2019 – NorthSTAR Program status update
- November 13, 2018 – NorthSTAR Program status update
- July 31, 2018 – NorthSTAR Program status update
- May 22, 2018 – NorthSTAR Program status update
- Jan 30, 2018 – NorthSTAR Program status update
- Oct 24, 2017 – NorthSTAR Program status update
- July 25, 2017 – NorthSTAR Program status update
- April 25, 2017 – NorthSTAR Program status update
- January 24, 2017 – NorthSTAR Program status update
- September 13, 2016 – Request Commission authorization for the Chief Executive Officer to (1) increase the North Satellite Renovation & North Satellite Transit Station Lobbies (NSAT) project scope and budget; (2) increase authorization for project design; (3) amend design service agreement with URS that exceeds 50% of the value of the original contract; and (4) increase authorization for Preliminary Work Package #2 (PWP #2) construction.
- August 9, 2016 – NorthSTAR Program Status Update
- May 24, 2016 – Commission authorized Chief Executive Officer to 1) increase the North Satellite project scope and budget; 2) increase authorization for NSAT design and overall project support; 3) amend service agreements with Jacobs Project Management Company and AECOM; and 4) authorize the use of port crews and small works contactors to perform work for the project.
- February 23, 2016 – NorthSTAR Program status update
- November 24, 2015 – NorthSTAR Program status update
- July 14, 2015 – NorthSTAR Program status update
- April 28, 2015 – NorthSTAR Program status update
- January 27, 2015 – NorthSTAR Program status update
- October 28, 2014 - NorthSTAR Program status update
- August 19, 2014 - NorthSTAR Program status update
- May 27, 2014 – NorthSTAR Program status update

Meeting Date: March 10, 2020

January 14, 2014 – NorthSTAR Program status update

September 24, 2013 – NorthSTAR Program status update

June 25, 2013 – NorthSTAR Program status update

April 9, 2013 – The Commission authorized the Chief Executive Officer to enter into a project labor agreement covering the NorthSTAR program's five major construction projects.

March 26, 2013 – NorthSTAR Program status update

June 26, 2012 – The Commission received a briefing on the status of the Airline Realignment Program and budget restructuring in association with the NorthSTAR Program.

April 10, 2012 – Authorizations for the North Sea-Tac Airport Renovations program for: 1) preliminary project funding; 2) execution of consulting contracts for design/construction support services and project management services; and 3) use of Port crews and consultants to conduct regulated materials management surveys and field support services for preliminary project planning tasks.

**North Satellite Renovation & North Satellite Transit Station Lobbies (CIP #C800556)**

August 15, 2017 – The Commission authorized

Increase the authorized budget by \$107,000,000 capital and \$500,000 expense and authorize the remaining \$261,547,392 capital and \$8,800,000 expense, amending the Hensel Phelps (HP) contract by \$161,563,526 for the final MACC to complete the project in Q3 2021. Authorize execution of all pending and future change orders to the HP contract within the authorized budget and project scope to avoid potential delays. Authorize Port crews to support NSAT construction and authorize Port staff to enter into a TRA with AS for the reimbursement of AS and Port responsible design efforts and improvements.

June 27, 2017 – The Commission authorized four NSAT related items:

increase project authorization for the North Satellite Renovation & North Satellite Transit Station Lobbies Project by \$200,000,000; execute Preliminary Work Amendment #3 (PWA #3) with Hensel Phelps (HP) for up to \$200,000,000; authorize Port staff to execute all change orders to the HP contract within authorized budget and project scope without returning for additional Commission authorization; and authorize Port Construction Services (PCS) to execute small works contracts and use Port crews to support NSAT construction

September 13, 2016 – The Commission authorized four NSAT related items:

the increase of project scope and budget (capital) by \$7,000,000 for the revised third floor layout to better accommodate the signature restaurant, provide 3,000 additional square feet of future airport related leasable space, and increase AS premium traveler lounge as requested by 4,850 square feet.

Increase authorization by \$1,000,000 for project design.

Amend design service agreements with AECOM that exceed 50% value of the original contract.



Meeting Date: March 10, 2020

Increase authorization by \$30,000,000 to accommodate Preliminary Work Package #2 construction.

May 24, 2016 - The Commission authorized four NSAT related items:

Increase of project scope and budget (capital and expense) by \$121,219,098 for 30% & 60% design scope additions and risk contingencies

Increased authorization of \$11,000,000 for continued NorthSTAR Program/Project Management services and NSAT design and overall project support.

Amend service agreements with Jacobs Project Management Co. and AECOM.

Authorize the use of port crews and small works contractors.

December 8, 2015 – The Commission authorized \$98,100,000 for the following:

Additional Pre-Construction services (\$1,200,000)

Construction auditing services

Preliminary Construction work

March 24, 2015 – The Commission authorized three NSAT related items:

Expand the baggage handling system increasing the project scope for \$14,400,000 and \$1,954,000 to complete the design.

Entering into a developer agreement with Puget Sound Energy and \$200,000 in reimbursement for the design and construction of underground gas infrastructure.

\$5,300,000 to Prepare four locations to accommodate temporary passenger loading bridges, to construct temporary construction offices; To complete construction of a Satellite Transit System (STS) North loop Dynamic Display system; \$600,000 in expense funds for regulated materials management for AS's tenant improvement project; and Approval to use Port crew labor and small works contractors to complete early project work.

August 5, 2014 – The Commission authorized expansion of the NSAT, \$191,323,143 budget increase, \$15,717,800 to complete the design, execute amendments to existing consulting contracts; execute future consulting contracts and use of and to advertise for General Contractor/Construction Manager (GC/CM) alternative public works contractor.

July 22, 2014 - NSAT Expansion Briefing

April 22, 2014 – Seattle-Tacoma International Airport Capital Program - Briefing

January 14, 2014 – NSAT expansion briefing.

May 28, 2013, Commission authorized the execution of separate service agreements for Construction Management Services and Commissioning Services, of approximate values of \$10 million and \$1.5 million.

December 11, 2012 – The Commission was briefed on the Vertical Conveyance Modernization Project Aero Phases 1 and 2 and the possibility of adding the specified elevators and escalators to the NorthSTAR program.

July 24, 2012 - Commission authorized \$32,000,000 for the design of the NorthSTAR NSAT Renovation and NSTS Lobbies project.

April 10, 2012 - The Commission authorized the execution of consultant contracts for design and construction support services; program management services; and the completion of site surveys for regulated materials management, for \$1,200,000.