

SeaTac International Airport



NorthSTAR Program

**Program Commission Third Quarter 2015 Update
and North Satellite Project Update**



NorthSTAR Program

The **North Sea-Tac Airport Renovation** (NorthSTAR) Program is being planned and delivered in collaboration with Alaska Airlines to better serve passengers and improve operational efficiency. This program consists of renovating and expanding the north satellite, improving the north main terminal, refurbishing the north satellite baggage system, and new exterior walkways, stairs and elevators at Concourse C.

Purpose:

- Improve the travel experience from airport drop-off to flight departure and working environment for employees

Outcome:

- Facility modernization; seismic reinforcement; enhanced traveler amenities; new contact gates; long-term energy savings; and operational efficiencies

Mission Statement

ACTIVE PROJECTS

●	C800554	WP 104802	NS NorthSTAR Program Management	George England, Program Mgr
▲	C800556	WP 104791	NS NSAT Renovation NSTS Lobbies	Joe Nessel, Project Mgr
●	"	WP U00019	NS NSAT STS Roof Leak Repairs	Joe Nessel, Project Mgr
●	"	WP U00209	NS NSAT Art Program	Colleen McPoland, Project Mgr
●	"	WP U00221	NS STS Train Display	Doug Honeyman, Project Mgr
◆	C800547	WP 104784	NS Conc C Vertical Circulation	Joe Nessel, Project Mgr
▲	C800545	WP U00042	NS Main Terminal Improvements	Joe Nessel, Project Mgr
▲	C800555	WP 104792	NS Refurbish Baggage System	Ken Warren, Project Mgr

EXPENSE PROJECTS

	WP 104656	Alaska NSAT & Conc C (CLOSED)	
●	WP U00072	NorthSTAR TI Work	Doug Honeyman, Project Mgr
●	WP U00094	PLB Relocation at C14	Joe Nessel, Project Mgr
●	WP U00095	eGSE Relocation at Concourse C	Doug Honeyman, Project Mgr
	WP U00129	CM Office (Retired)	Joe Nessel, Project Mgr
●	WP U00130	BHS RMM	Ken Warren, Project Mgr
●	WP U00137	Project Activation	Doug Honeyman, Project Mgr
	WP U00148	MCP Expansion Tenant Move (CLOSED)	Ken Warren, Project Mgr
●	WP U00167	Misc Expense - NSAT	Joe Nessel, Project Mgr
●	WP U00207	NSAT RMM - Contaminated Soils	Joe Nessel, Project Mgr
●	WP U00208	NSAT RMM - Asbestos Removal	Joe Nessel, Project Mgr

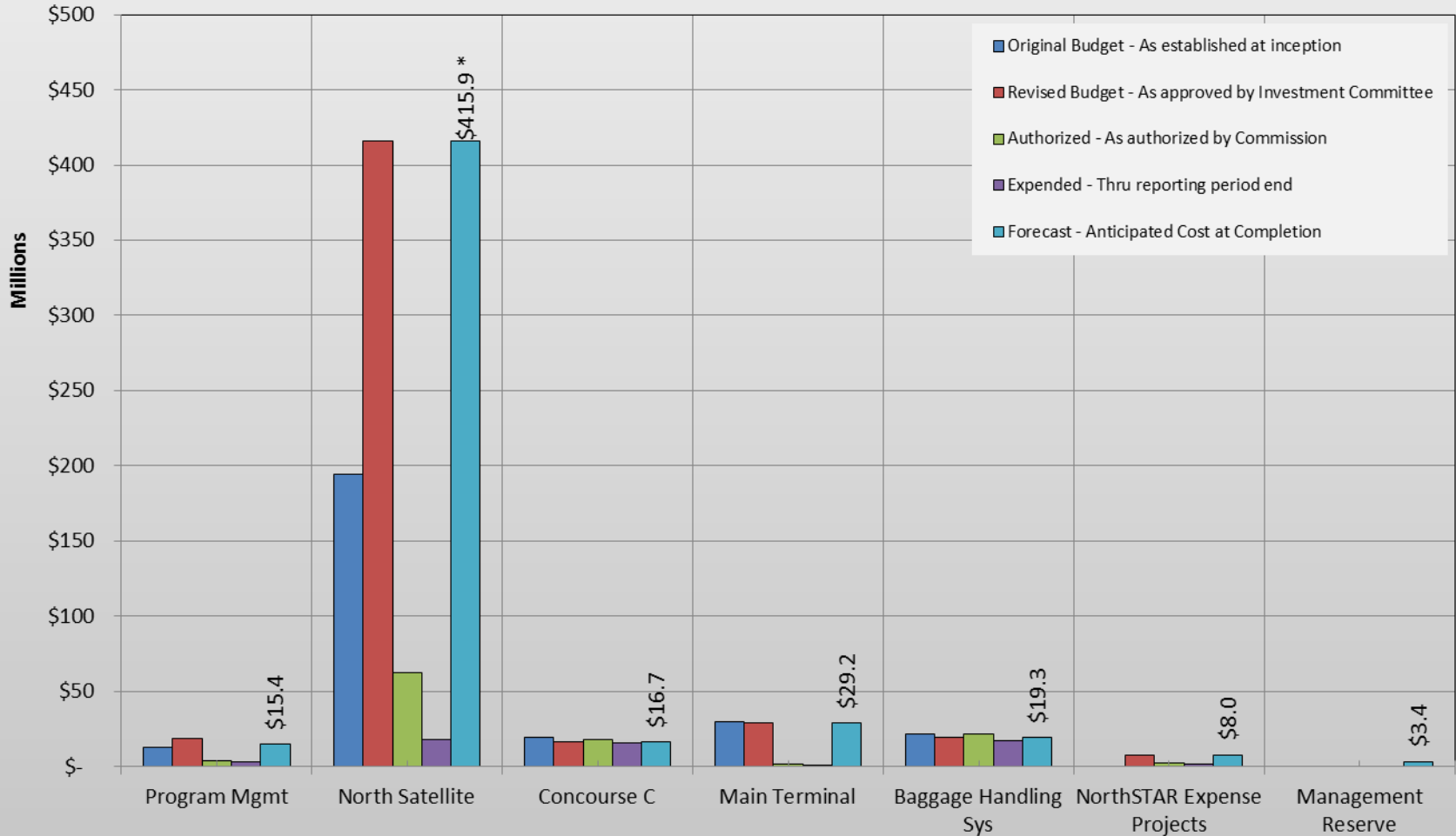
Legend:

- ◆ - Reflects Additional Budget Required or Behind Schedule
- ▲ - Reflects concern on Budget or No Float remaining on Schedule
- - Reflects Good Status on Budget and Schedule

NorthSTAR Projects & Status

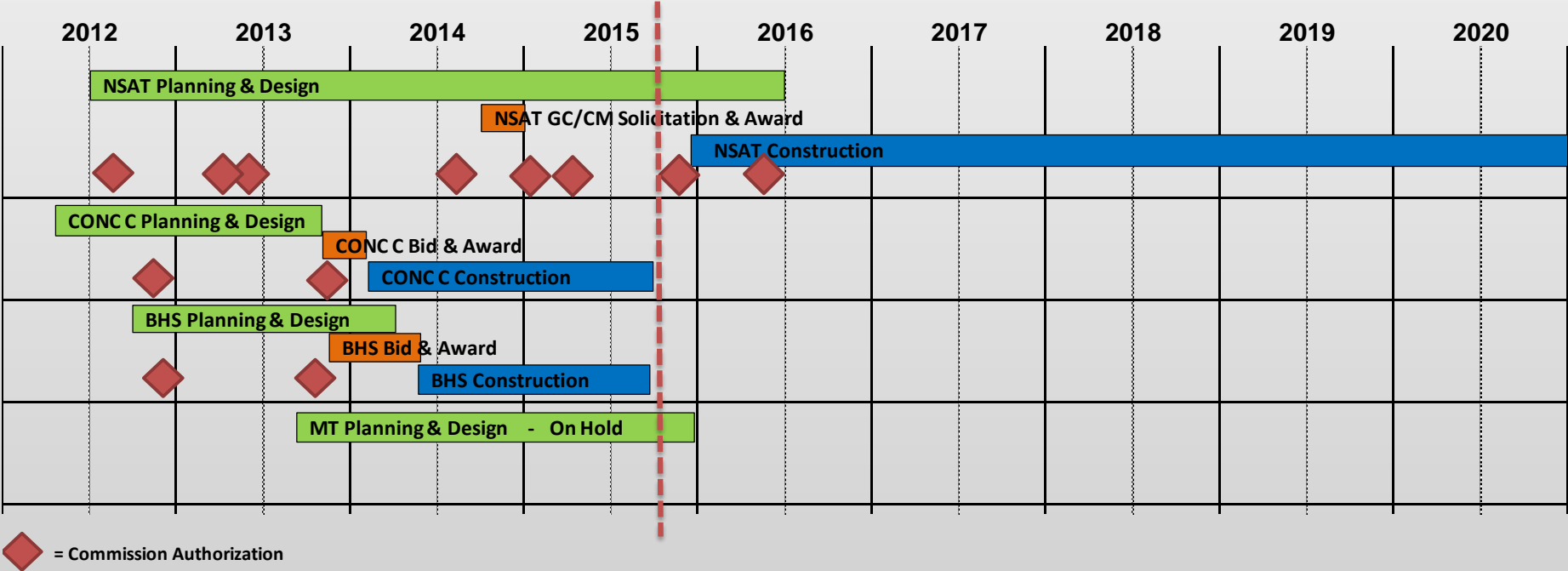
Approved Program: \$508M

NorthSTAR Program Overall Budget



Q3 2015 – North Satellite conducting Value Engineering

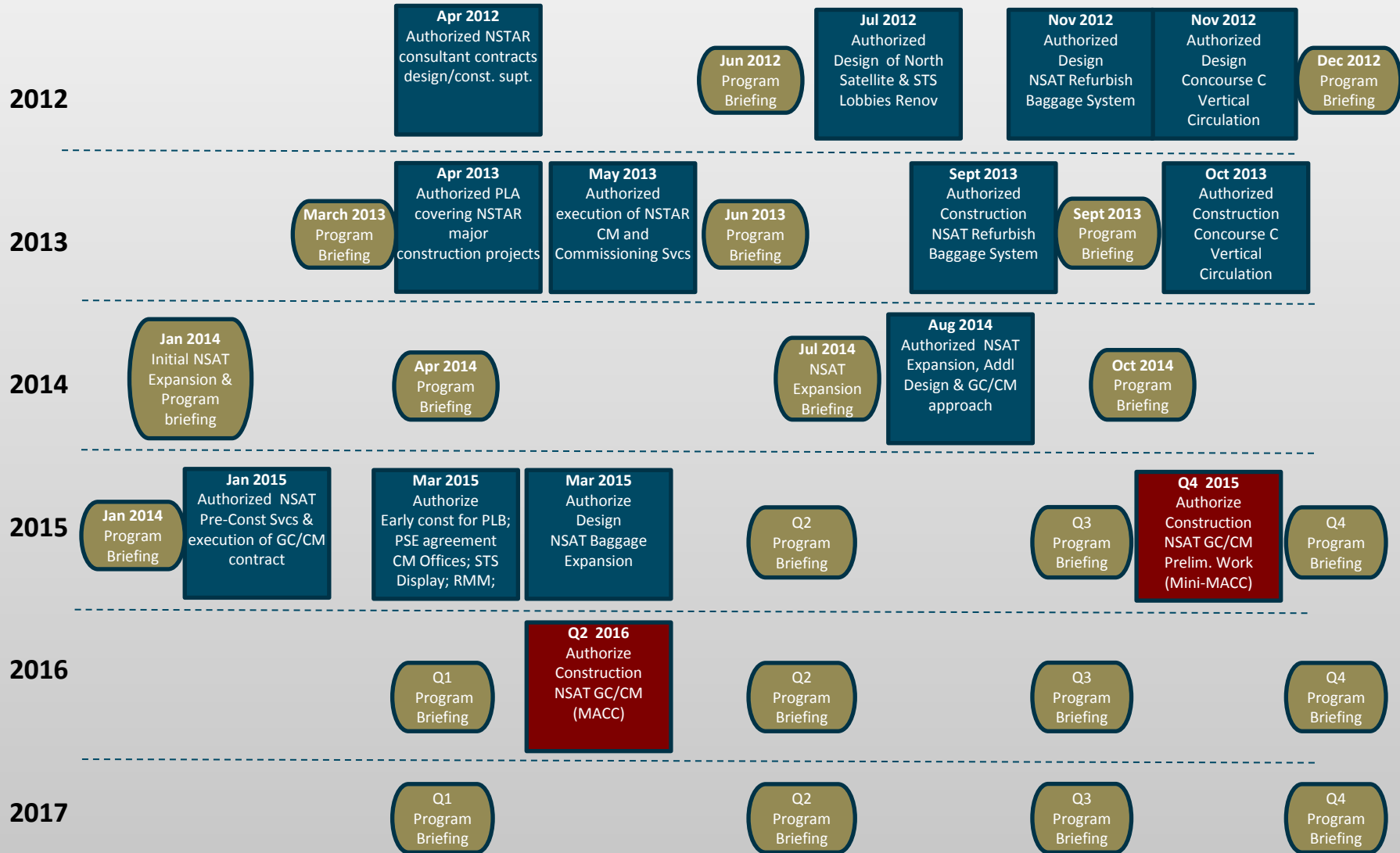
NorthSTAR Program Overall Schedule



NorthSTAR Program Progress						
	Design		Construction		Overall	
	Plan	Actual	Plan	Actual	Plan	Actual
North Satellite/STS Renovation	86%	62%	0%	0%	8%	4%
Concourse C Vertical Circulation	100%	100%	100%	100%	100%	100%
Refurbish Baggage Handling Sys	100%	100%	100%	100%	100%	100%
Main Terminal Improvements	6%	3%	0%	0%	1%	1%

Q3 2015-Schedules & %Progress-Concourse C & Baggage Refurbishment Completed

NorthSTAR Program Commission Action



Commission Schedule – Past & Future

NorthSTAR Program Management

 Project Status Good

Purpose:

- Overall management of the program; programmatic oversight, coordination and controls for consistency; support between stakeholders and projects; and efficient and successful execution of the entire program's objectives.

Accomplishments:

- Updated NorthSTAR webpage in conjunction with Port Public Affairs
- Coordinated NorthSTAR Airside capacity impacts of airport-wide off-gate planning forecast
- Removed Concourse C/D Exterior Stairs project from NorthSTAR Program.
- AAG Program Leader changing; replacement began end of September; transition underway.

Progress:

- Continuing to update Program Master Schedule with changes to project schedules in design/construction.

Issues:

- Budget implications of AAG's decisions are being refined as part of the ongoing 60% cost estimate validation

Q3 2015 Status – Program Management

NorthSTAR Program Management

Metrics:

Project Metrics	Budget/ Planned	Actual
Overall Schedule Progress	48%	40%
SCS Participation (Program Management)	27.0%	18.4%*

* denotes % of Prime Contractor Budget to date.

Financial Metrics	Budget/ Planned	Actual	Remaining
Estimated Total Costs *	\$18.8M	\$3.4M	\$15.4M
Estimated Contingency (including Mgmt Reserve)	\$0.94M		\$5.2M
Q3 Cashflow	\$238k	\$168k	

* Contingency included


Risks:

- Communication and coordination between multiple teams, stakeholders and people
- Maintain baseline schedule agreed to by all stakeholders
- Further budget implications and schedule delays due to AAG decisions

Q3 2015 Metrics/Risks – Metrics within tolerance

NSAT Renovation & NSTS Lobbies

CIP: C800556 - NSAT Renovation & NSTS Lobbies

 Project has Budget Concerns

Purpose:

- Renovate and expand the satellite, including infrastructure, seismic reinforcement, gate relocations, north loop STS stations, and new penthouse shell
- Provide improved travel experience for customers, improved working environment for employees and long-term energy savings and operational efficiencies


Accomplishments:

- 60% design review complete. Key comments include scope additions and construction phasing challenges.
- Port has validated the designer's 60% cost estimate which currently exceeds budget.
- Port reconciling Hensel Phelps, General Contractor/Construction Manager, 60% cost estimate.
- Preliminary Work Package 90% design submitted for review and permitting; prepares building and ramp for the expansion (Phase I).
- Designer submitted Baggage Handling System Expansion 60% design for review.
- Completed RMM removal for AAG temporary boardroom and NSAT construction offices.

North Satellite – 60% design complete, 60% cost estimate over budget

NSAT Renovation & NSTS Lobbies

Progress:

 Project has Budget Concerns

- Conducting Value Engineering to reduce 60% cost estimate.
- Port & Hensel Phelps reconciling their respective 60% estimates to finalize forecasted construction cost.
- Preliminary Work Package 90% design to be revised due to optimizing construction phasing.
- AAG's Interim Boardroom construction nearing completion.
- Resolving AAG's concerns about capacity and level of service (LOS) of blended holdrooms – how passengers will use adjacent concessions and seating arrangement.
- Continuing to refine multiple phasing options during 90% design, seeking to optimize:
 - Number of gates during each construction phase including contact gates and ground-level boarding relative to the overall airport-wide gate capacity and off-gate operations
 - Benefits/impacts of relocating/establishing temporary gates including impacts on ramp operations/fueling
 - Constructability impacts
 - Passenger experience considerations of each option
 - Feasibility of dual taxilane during construction
- Refinement of the window wall system enclosure system and features

90% design underway, refining construction phasing, 100% Prelim Work design started

NSAT Renovation & NSTS Lobbies

60% Design – Key Elements

- Function
 - 20-gate terminal with a balance of holdrooms, concessions and circulation space crafted to significantly improving passenger experience
 - Increased number of concessions blended into holdrooms and circulation space, including destination mezzanine level restaurant
 - Roof-top Alaska Airlines boardroom
 - Improved vertical circulation to STS station
- Key Design Elements - Appearance
 - Creates signature design statement along airport main approach road
 - Bright, high bay ceiling, daylight spaces
 - High bay, open main public central area, similar to CTE
 - Maintainable, durable interior materials and finishes
 - Overall level of finish comparable to Concourse A
 - Comparable to high level, state of the art facilities at other airports
 - Uses sustainable and locally sourced materials
- Value Engineering may modify some of these elements

Key Design Elements – Function and Appearance

NSAT Renovation & NSTS Lobbies



North Satellite – Interior Perspective of High Bay Central Core

NSAT Renovation & NSTS Lobbies



North Satellite – Interior perspective of Circulation Corridor

NSAT Renovation & NSTS Lobbies

Preliminary Work Package Construction

- Work involves modifications to the north end of the building in preparation for the expansion. Project components include:
 - Relocation of Passenger Loading Bridges (PLB's) and aircraft positions
 - Selective demolition and construction of weatherproof building enclosures
 - Relocation of existing site utilities and fuel hydrant pits
 - Construction of stairs and walkways to ground board aircraft
 - Purchase of structural steel, vertical circulation components, major electrical & mechanical equipment, fuel hydrants and other long-lead items
- 90% design submittal in for review and permitting with 100% design submittal delayed till end of January 2016 and construction starting end of Q1 2016
- Working with Alaska Airlines to achieve optimal phasing strategy and plan for temporary relocation of gates and aircraft position relocations

Phase 1 Base Building Construction

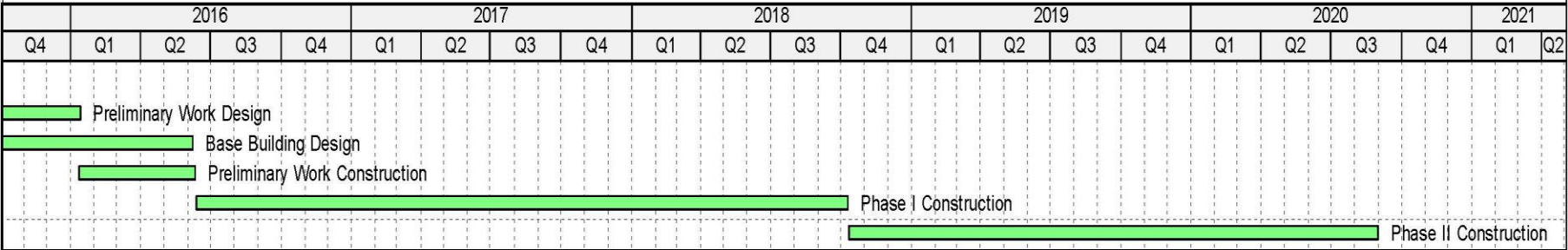
- Construction of the building expansion portion

Phase 2 Base Building Construction

- Renovation of existing building portion

Construction Packages – Phases and Scopes

NSAT Renovation & NSTS Lobbies



Project Schedule by Phase – Completion in Q3 2020

NSAT Renovation & NSTS Lobbies

	Current Budget	60% Estimate	Cost Growth
Design Phase	\$62.1 M	\$66.1 M	\$4.0 M
Construction Phase	\$325.0 M	\$388.4 M	\$63.4 M
Sales Tax	\$28.8 M	\$34.9 M	\$6.1 M
Subtotal (Capital)	\$415.9 M	\$489.4 M	\$73.5 M
Expense (RMM)	\$5.8 M	\$11.8 M	\$6.0 M
Total	\$421.7 M	\$501.2 M	\$79.5 M

Overall growth at 60% attributed to:

- 30% added scope items (13) incorporated into the design, as noted in prior 2014/15 Commission briefings - cost impact to be identified at 60%
- 60% estimated growth primarily market driven
- Increased costs associated with design refinement from 30% to 60%
- Increased asbestos abatement effort mainly due to fireproofing overspray removal
- Reconciliation with GCCM (HP) estimate reflects further unit costs adjustments and updated subcontractor pricing
- Forecasted budget range \$470-490 million

MII Approval: \$399 million – over 10% change requires MII approval or use SLOA

Management Reserve; note \$16.4 million for Baggage Expansion not included in MII ballot.

Project Cost Growth Summary – Added scope from 30% design largest impact

NSAT Renovation & NSTS Lobbies

Value Engineering Efforts

- Evaluating over 50 items that could potentially reduce the increased cost
 - 43 items have manageable cost and delay impacts
 - 3 items have moderate cost and delay impacts
 - 8 items have significant cost and delay impacts that affect the program
- Evaluation matrix considered multiple factors
 - Construction cost savings and feasibility/impacts
 - Maintenance/life cycle cost impacts
 - Passenger experience & operational impacts
 - Design fee and schedule impacts
- Significant areas being evaluated:
 - Architectural – simplify building structure/appearance, alternate finishes and architectural features, eliminate north loop STS station renovations,
 - Mechanical – utilize greater efficiencies in mechanical/HVAC equipment and function
 - Electrical – lighting controls, alternative fixtures, more efficient electrical/communication routings
 - Eliminate expansion of NSAT STS station to accommodate 4-car trains
 - Eliminate LEED certification/sustainability requirements
- Challenge: Identify sufficient savings that still maintain Port standards in appearance, functionality, maintainability, retain program requirements and meet AAG needs.

Value Engineering Process – Balance savings against impact

NSAT Renovation & NSTS Lobbies

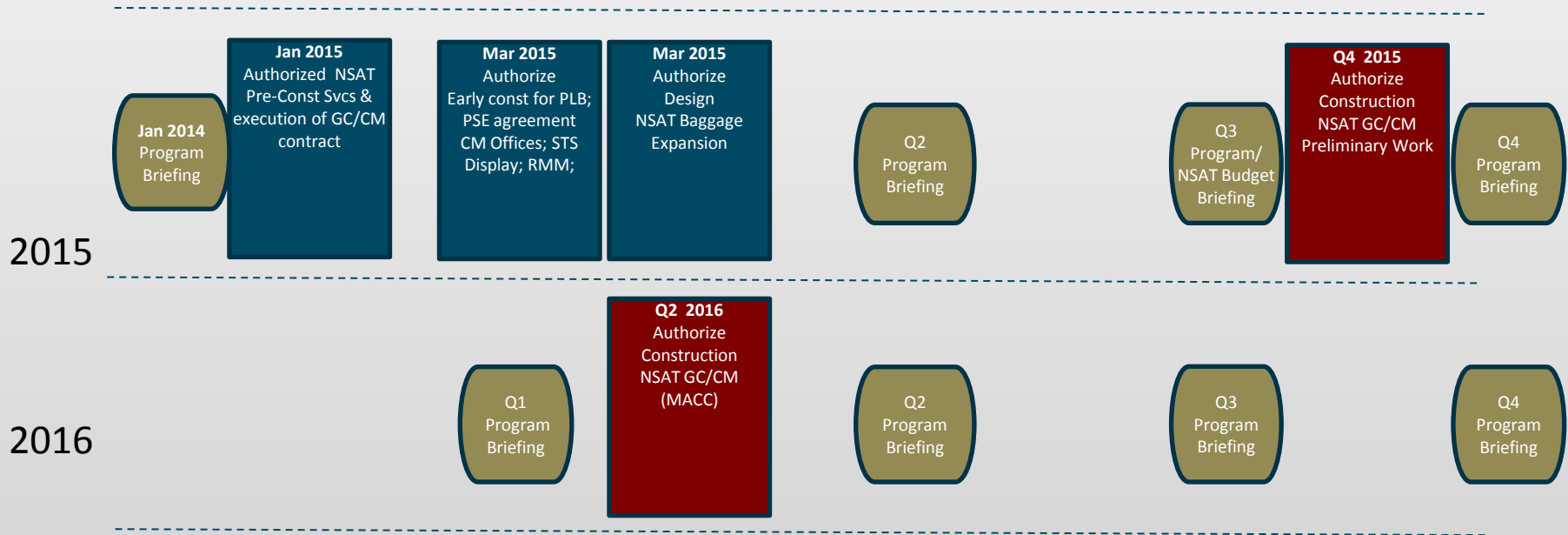
Value Engineering Efforts

Discipline	No Design Cost / No schedule delay	Design Cost Impact / No Schedule delay	Potential Programmatic Impacts - Design Cost Impact PLUS Schedule delay
Architectural / Structural	25 items for \$15.5 M (i.e. Terrazzo overlay; STS station Vert Conveyance Only	\$2.5 M	\$5.0M (i.e. Eliminate Boardroom Mezzanine; Change curtain wall; Eliminate LEED)
Mechanical	None	\$1.5 M	\$5M (i.e., Eliminate LEED, Smoke Control)
Electrical	7 items for \$4.5 M	\$1.0M	None
TOTAL	\$20.0 M	\$5.0 M	\$10.0M

Current Budget Variance	\$79.7M
Implementation of VE items	(\$20M - \$35M)
NET Budget Variance	\$45M - \$60M

Value Engineering – Potential \$20 - \$35 million savings

NSAT Renovation & NSTS Lobbies



November 24, 2015 Commission Meeting

- Combined Q3 2015 NorthSTAR & NSAT Budget briefing

December 8, 2015 Commission Meeting

- Request authorization for preliminary construction, additional preconstruction services & construction audit services

Commission Schedule and Actions

NSAT Renovation & NSTS Lobbies

Issues:

- Resolution of increased project cost. Aggressively pursuing VE to reduce cost increase.
- Airline MII vote required if project budget >10% of \$399M approved amount or use SLOA management reserve funds
- AAG’s construction phasing concurrence per Port/AAG MOU
- Final definition and agreement required of AAG “betterments” (cost sharing items), including budget quantification

Metrics:

Project Metrics	Budget/ Planned	Actual
Overall Schedule Progress	8%	4%
SCS Participation (Design)	3.3%	1.0%
SCS Participation (Const)	0.0% *	0.0% *
Apprenticeship Utilization	15.0%	0.0% *
Minority Utilization	15.0%	0.0% *
Women Utilization	10.0%	0.0% *
Preferred Entry Apprentices	1 in 5	0 *

* No Information available yet – Too early to report

Financial Metrics	Budget/ Planned	Actual	Remaining
Estimated Total Costs (including Contingency)	\$415.9M	\$19.1M	\$396.8M
Estimated Contingency	\$40.7M		\$35.6M
Q3 Cashflow	\$3.8M	\$5.1M	

Q3 2015 Issues/Metrics – Metrics show delay & cost risk

NSAT Renovation & NSTS Lobbies

Risks:

- Resolution of new project cost estimate increase in consideration of overall project objectives, value engineering cost reduction efforts, and schedule impacts
- Resolution of a final construction phasing plan that minimizes impacts to Customer's level of service and maintains consistency balanced against viable operating gates, operational effectiveness, schedule impacts and construction cost
- Delayed AAG concurrence for construction phasing and project budget will impact the design schedule and subsequent Preliminary Work Package construction
- Final reconciliation of the 60% cost estimate with the GC/CM assuming the GC/CM costs remain unreasonably high, and whether to pursue the alternative to switch to a design/bid/build procurement process
- Impact of aggressive construction market on cost and availability of materials & work force

Risks – Cost increase, AAG concurrence, and GC/CM cost estimate

Concourse C Vertical Circulation

CIP: C800547 - Concourse C Vertical Circulation

◆ Project is behind schedule

Purpose:

- Install 1:20 sloped walkways and elevators at C2, C10 and C16 to improve vertical circulation.
- Increase operational efficiency and improve customer experience and safety.

Accomplishments:

- Remaining two elevators began service in July. Substantial completion issued August 13.
- Excellent construction management effort by Port & AAG teams. No flight delays and minimal customer complaints during construction.
- Thirty-eight (38) remaining eGSE chargers at Gates C10 – C16 are now in use.
- Port agreed to install overhangs above concourse level entry/exit doors to the walkways to provide added protection from the weather for passengers.

Progress:

- Construction project in close-out
- Design initiated for overhangs above doors

Issues:

- Last report on this project.

Q3 2015–Concourse C–Remaining elevators opened. Substantial Completion

Concourse C Vertical Circulation

Metrics:

Project Metrics	Budget/ Planned	Actual
Overall Schedule Progress	100%	100%
Delayed Outbound Bags	0	0
Delayed Outbound Flights	0	0
Safety Hazard Reports (Level 2+)	0	0
Customer Complaints Rec'd	<5/mo	0/mo
Construction Change Orders processed	0	47
SCS Participation (Design)	33.4%	29.6%
SCS Participation (Construction)	6.0%	20.8%
Apprenticeship Utilization	15.0%	16.3%
Minority/Women Utilization	25.0%	5.4%
First Year Apprentices	25.0%	55.8%

- Customer complaint associated with construction signage.

Risks:

- None


Financial Metrics	Budget/ Planned	Actual	Remaining
Estimated Total Costs (including Contingency)	\$16.7M	\$14.7M	\$2.0M
Estimated Contingency	\$2.0M		\$0.8M**
Q3 Cashflow	\$1.3M	\$0.9M	

**Projected savings to be transferred to NorthSTAR Program Management Reserve

Q3 2015 Concourse C Metrics/Risks – Const. complete, no delays, few complaints

Main Terminal Improvements

CIP: C800545 - Main Terminal Improvements

 Project is on Hold

Purpose:

- Renovate the north portion of the Main Terminal improving curbside, ticket lobby area, Checkpoint (#5), signage and dynamic messaging
- Improve the customer experience, operating efficiencies and overall aesthetics of the North Main Terminal

Accomplishments:

- Final design analysis determined there is insufficient space to accommodate security checkpoint and passenger check-in/circulation requirements.
- Final report issued in September

Progress:

- Project on hold pending possible terminal expansion recommendations from the Sustainable Airport Master Plan
- Analysis shows expanding the terminal to the north is required to create checkpoint space needs.

Issues:

- Coordination with upcoming Sustainable Airport Master Plan terminal expansion recommendations


Risks:

- Developing final scope that minimizes investment anticipating the Sustainable Airport Master Plan and AAG's changing ticketing operations

Q3 2015 – Main Terminal – Projected security checkpoint & passenger check-in space requirements exceed available space, on hold pending SAMP recommendations

Refurbish Baggage System

CIP: C800555 – Refurbish Baggage System

 Project has no float remaining on the Schedule

Purpose:

- Refurbish existing baggage system to support Alaska Airlines operations on the North Satellite and Concourse D
- Extend the service life of C88 at satellite and in tunnel and a portion of C92 in Concourse D

Accomplishments:

- C88 and C92 conveyor system contract work is complete, commissioned, and operating.
- Completed C92 Automated Bag Tag Reader (ATR) replacements and C92 doghouse.

Progress:

- Follow up work to coordinate with other projects that occurred at end of this project include demolish 2 ATR's on C92, conveyor access to be provided for C92 doghouse, and additional power turn replacements on C92. This work will be completed by PCS.

Issues:

- None.
- Last report for this project.

Q3 2015 – Baggage – Project complete

Refurbish Baggage System

Metrics:

Project Metrics	Budget/ Planned	Actual
Overall Schedule Progress	100%	100%
System Shutdowns	10	9
Operational Impacts	0	5
Unplanned System downtime > 15 min.	0	0
Construction Change Orders processed	0	57
SCS Participation (Design)	14.3%	12.7%
SCS Participation (Construction)	5.0%	5.2%
Apprenticeship Utilization	15.0%	18.3%
Minority/Women Utilization	33.0%	27.6%
First Year Apprentices	50.0%	54.3%

Financial Metrics	Budget/ Planned	Actual	Remaining
Estimated Total Costs (including Contingency)	\$19.4M	\$17.1M	\$2.3M
Estimated Contingency	\$1.3M		\$.0M
Q3 Cashflow	\$2.6M	\$1.2M	

Risks:

Pending claim resolution

Q3 2015 – Baggage – Metrics/Risk – Pending Claim Resolution