Haines Airport Rehabilitation

Construction Safety and Phasing Plan

Prepared On Behalf of the Sponsor:

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Department of Transportation and Public Facilities
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INTRODUCTION

This Construction Safety and Phasing Plan (CSPP) is for use during the Haines Airport Rehabilitation construction project in Haines, Alaska. It has been prepared in conformance with the Alaska Department of Transportation and Public Facilities (DOT&PF) Aviation Preconstruction Manual, FAA Standard of Practice 2.0 (SOP 2.0), and Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5370-2G *Operational Safety on Airports During Construction* (Safety AC). The Safety AC may be downloaded from: http://www.faa.gov/airports/resources/advisory_circulars/

The purpose of this CSPP is to present information needed for construction to maintain airport safety, minimize disruption to the operations of air and ground traffic, and to allow the project to be completed quickly. The designated work area for this project includes Taxiways A, B, C, D, and E; the taxilane; the new SREB building site; the new beacon location; and the runway. The Contractor shall control his operations and the operations of his subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in areas that are not under construction.

This CSPP provides information on some of the coordination, limitations, and restrictions that will be required to accomplish this project. Some details have been left for the Contractor to provide, so that they may accomplish the work according to their means and methods, as much as practical. The Contractor's plans to complete the work are subject to approval by the Engineer and will require coordination and review by the Airport Manager, Federal Aviation Administration (FAA), and possibly other organizations or individuals. The Contractor is required to submit a Safety Plan Compliance Document (SPCD) to the Project Engineer (Engineer) describing how they will perform the work in compliance with this CSPP and the requirements set forth in FAA AC 150/5370-2G. The Contractor's work schedule (including a critical path method schedule) shall be included in Section 2 *Phasing* of the SPCD. See the Safety AC for more information. The SPCD must be submitted to the Engineer for approval prior to the commencement of any construction activities and prior to the preconstruction conference.

The Safety AC mandates the format and content of the CSPP and SPCD. All references to construction safety plans, security plans, and construction phasing or staging plans in the Alaska Standard Specifications for Airport Construction and the Project Manual refer to this CSPP and the Contractor's approved SPCD.

The FAA requires the CSPP and the SPCD to be "stand-alone" documents that can be circulated to the relevant sections of the FAA for review and approval. The CSPP and SPCD are both enforceable parts of the contract documents.

The Safety Plan sheets and Construction Phasing Plan sheets within the project plans are referred to in the CSPP and SPCD as the Construction Safety and Phasing Plan Drawings. The FAA requires that the CSPP include those plans as an appendix. The Contractor can find these sheets within the project plans.

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Table of Contents

Section 1. Coordination 1
A. Contractor Progress Meetings 2
B. Scope or Schedule Changes 2
C. FAA Air Traffic Organization (ATO) Coordination 3
Section 2. Phasing 3
A. Phasing Elements 3
B. Construction Phasing and Safety Plan Drawings 7
Section 3. Areas and Operations Affected by the Construction Activity 7
A. Identification of Affected Areas 7
Section 4. Protection of NAVAIDs 11
Section 5. Contractor Access 11
A. Location of Stockpiled Construction Materials 11
B. Vehicle and Pedestrian Operations 11
C. Authorization to Operate Contractor Vehicles 12
D. Area of Authorization 13
E. Construction Employee Parking Areas 13
F. Construction Vehicle and Equipment Parking 13
G. Two-Way Radio Communications 13
H. Airport Security 14
Section 6. Wildlife Management 14
Section 7. Foreign Object Debris (FOD) Management 14
A. Inspections 15
B. Hauling 15
Section 8. Hazardous Materials (HAZMAT) Management 15
Section 9. Notification of Construction Activities 17
A. Responsible Representatives / Points of Contact 17
B. Operational Safety Emergencies 18
C. Notices to Airmen (NOTAMs) 18
D. Emergency Notification Procedures 19
E. Notification to the FAA 19
Section 10. Inspection Requirements 20
A. Daily (Or More Frequent) Inspections 20
B. Final Inspections 20
Section 11. Underground Utilities 21
Section 12. Penalties 21

Section 13. Special Conditions 22
A. Emergency Landings 22
B. Special Equipment 22
C. Water for Dust Control 22
D. Temporary Relocation of Runway Thresholds 23
E. Temporary Half-Width Runway 23
F. Temporary Runway Edge and Threshold Lighting 23
G. Runway Markings and Runway Designations 23
H. Visual Aids 23
I. NOTAMs 23
J. Work Zone Lighting for Nighttime Construction 24
Section 14. Runway and Taxiway Visual Aids 24
A. General 24
B. Markings and Runway Designations 24
C. Lighting, Visual NAVAIDs, and ASOS 25
D. Signs 26
Section 15. Markings and Signs for Access Routes 26
Section 16. Hazard Marking and Lighting 26
Section 17. Protection of Runway and Taxiway Safety Areas 26
A. Runway Safety Area (RSA) 26
B. Runway Object Free Area (ROFA) 27
C. Taxiway Safety Area (TSA) 27
D. Taxiway Object Free Area (TOFA) 28
E. Obstacle Free Zone (OFZ) 28
F. Runway Approach/Departure Surfaces 28
Section 18. Other Limitations on Construction 29

List of Tables

Table 1: Runway Edge Protection 8
Table 2: Runway Threshold Protection 8
Table 3: Emergency Contact Information 17
Table 4: Utility Contact Information 21
Table 5: Runway and Taxiway Protection Areas 29

APPENDICES

Appendix A: Construction Phasing and Safety Plan Drawings as Shown in the Plan Set

LIST OF ACRONYMS

AC	Advisory Circular
AOA	Air Operations Area
AP&T	Alaska Power and Telephone
ARC	Airport Reference Code
ASOS	Automated Surface Observation Systems
ATO	Air Traffic Organization
CFR	Code of Federal Regulations
CSPP	Construction Safety Phasing Plan
CTAF	Common Traffic Advisory Frequencies
DOT&PF	State of Alaska Department of Transportation and Public Facilities
Engineer	Project Engineer
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FOD	Foreign Object Debris
HAZMAT	Hazardous Materials Management
HMCP	Hazardous Materials Control Plan
MSDS	Material Safety Data Sheets
MUTCD	Manual on Uniform Traffic Control Devices
NAVAID	Navigational Aids
NOTAM	Notice to Airmen
OFA	Object Free Area
OFZ	Obstacle Free Zone
OSHA	Occupational Safety and Health Administration
PAPI	Precision Approach Path Indicator
RSA	Runway Safety Area
ROFA	Runway Object Free Area
SPCC	Spill Prevention Control and Countermeasure
SPCD	Safety Plan Compliance Document
SREB	Snow Removal Equipment Building
SWPPP	Storm Water Pollution Prevention Plan
TSA	Taxiway Safety Area
TLOFA	Taxilane Object Free Area
TOFA	Taxiway Object Free Area

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Section 1. Coordination

The Airport Manager holds the primary responsibility for all aspects of the airport's operation, safety, and security. The Contractor's point of contact with the Airport Manager is through the Engineer. The Airport Manager will provide the Contractor and subcontractors training for proper access, airport security, radio communication, vehicle operation, and any safety procedures or precautions. This training will be held at the Airport Manager's office. Prior to preparing the Safety Plan Compliance Document (SPCD) and the Construction Safety and Phasing Plan (CSPP), the Contractor shall coordinate with the Engineer to schedule the first meeting with the Airport Manager. The above-mentioned training will usually occur after the preconstruction conference, but always before any work begins on airport property.

Coordination Through the Engineer: Whenever the project documents call for coordination, notification, contact, or other interaction with FAA; airport management; maintenance and operations; airport tenants; airport users; any local, state, or federal agency, group, or association; or the general public, such activity shall be done through, in the presence of, or with the written approval of the Engineer. The Contractor shall allow sufficient time for coordination and approvals within the proposed work schedules.

The Contractor shall plan work activities ahead of when they are to be performed. The Airport Manager cannot accommodate last-minute requests to allow access or close portions of the active Air Operations Area (AOA), except in emergencies. The inability of the Airport Manager, or other entities, to meet these requests shall not constitute a delay to the Contractor's work effort or entitlement to further compensation.

The following are required lead times for coordination with certain groups:

Entity/Group/Agency/Organization	**Lead Time For Coordination**
FAA – navigational aid (NAVAID) (PAPI, REILs) outages*	45 days
Airport Manager**	7 days
Airport Tenants/Users***	
• 1st Notice Describing Planned Construction Impacts	45 days
• 2nd Notice Detailing Temporary Access	15 business days
• 3rd Notice Notifying of Temporary Access	Same Day
Air Carriers	90 days

* FAA Contacts are listed in Section 1(C). Other Notifications to the FAA requiring different lead times are shown in Section 9(E).

** Any airport safety or security issue, and all emergencies or accidents require immediate notification.

***The 1st and 2nd notices shall be provided via mail, e-mail, and phone. The 3rd notice shall be via e-mail and phone. The 1st notice shall establish a point of contact for tenants to call with questions and scheduling concerns. The Contractor shall expect that continuous coordination will be required with tenants.

Predesign, Pre-Bid, and Pre-Construction conferences will be conducted by the Project Engineer in accordance with AC 150/5370-12.

Throughout the design of the project, airport operational safety was considered. Airport operators and/or tenants impacted during construction have been, or will be, given the opportunity to provide comments and pose questions throughout the design process. Airport operational safety will also be addressed at the Pre-Bid and Pre-Construction conferences to introduce the issues specific to the construction of the Project.

A. Contractor Progress Meetings

The Contractor shall administer and hold progress meetings with the Engineer at the time and place agreed to at the Pre-Construction conference. Ongoing coordination will be addressed at the progress meetings, which will include the Project Engineer, the Contractor, and possibly representatives from the following groups/agencies/organizations:

- Alaska Department of Transportation & Public Facilities (DOT&PF) Construction
- Local FAA Maintenance and Operations
- Airport Manager
- Airport Maintenance
- Parties expressing interest from the Airport Stakeholders List

These meetings will include discussion of specific safety issues associated with work planned for the upcoming week and will address potential impacts to air operations. Airport safety and security shall be a standing agenda item for the meetings. The Contractor shall: (1) keep all parties informed of status and changes of airport surfaces in relation to aircraft and ground traffic, (2) provide detailed drawings indicating routes for aircraft and ground traffic movement and areas closed for construction, and (3) provide updated drawings as required.

The Contractor shall provide facilities so that people may attend the meetings by telephone and distribute approved drawings by mail, fax, or email when required.

To ensure that proper airport operational safety guidelines are adhered to throughout construction activities, the Contractor, Engineer, and Airport Manager will perform on-site inspections. Any deficiencies noted during these inspections, whether caused by negligence, oversight, or project scope change, shall be immediately remediated.

B. Scope or Schedule Changes

Changes in the scope and/or duration of the project may necessitate revisions to this CSPP. The FAA Airports Regional office shall be promptly notified of any proposed changes to this CSPP. The scope and schedule changes must be approved in writing by the Engineer. Changes to scope or schedule may require additional coordination with DOT&PF; airport stakeholders; other local, state, or federal agencies; or the public. Do not begin work that will result in a change in scope or schedule without coordinating with the Engineer and obtaining written approval.

C. FAA Air Traffic Organization (ATO) Coordination

Before commencing construction activity, parking vehicles, or storing construction equipment and materials near FAA-owned and maintained equipment and navigational aids (NAVAID), coordination with the appropriate FAA Air Traffic Organization (ATO) is required to evaluate the effects of construction activity and the required distances and direction from the NAVAID. The Contractor shall provide all required support, including meeting attendance, scheduling, and project documentation required to conduct this coordination. The following NAVAIDS will be affected during construction: Runway End Identifier Light (REIL), Precision Approach Path Indicator (PAPI), and Airport Beacon.

All coordination with the FAA ATO will be conducted through the Engineer. Coordination with FAA ATO will be required 45 days prior to closing a runway or removing any NAVAIDs from service. The Contractor shall request notification to the FAA's ATO Planning and Requirements (P&R) Western Service Area a minimum of 45 days prior to the "physical construction start date" for this project. The Contractor shall provide the Engineer with a completed FAA Form entitled *Airport Sponsor Strategic Event Submission* including all date, time, and/or duration changes. The Contractor shall complete the form, submit it to the Engineer, and request that the Engineer notify the ATO Contact of upcoming work a minimum of 45 days prior to the physical construction start date. The Engineer will submit the form to the FAA via email at 9-AJV-SEC-WSA@faa.gov.

The FAA owns an Automated Surface Observing Systems (ASOS) at the airport that is operated by the National Weather Service. Monitor construction dust and smoke in the vicinity of the ASOS and implement appropriate measures to prohibit significant dust or smoke from intruding upon the ASOS facility. If not possible, request a Notice to Airmen (NOTAM), through the Engineer, warning pilots of the potential for inaccurate or unreliable ASOS data. The ASOS may require extra maintenance, calibration, and/or general cleaning, particularly the visibility sensors and the Motor Aspirated Radiation Shield (MARS) unit. The Contractor shall request that the Engineer contact the Network Enterprise Management Center System Operations Center (NEMC SOC) at 855-322-6362 prior to the start of the project to schedule any necessary service outages and/or maintenance. Once the call is placed, select Option #1 for NEMC and then Option #3 for a Team Lead.

Section 2. Phasing

A. Phasing Elements

This project consists of rehabilitation of the runway and taxiways, construction of a taxilane, demolishing the existing airport beacon, constructing the new airport beacon, East Pond mitigation, drainage improvements, construction of a snow removal equipment building (SREB), and replacement of the airfield lighting system. Construction activities are scheduled to begin in 2027.

The work will be performed in five (5) phases to minimize disruption of air operations and accommodate existing users. Each phase is defined on the CSPP drawings AC1-AC14. The construction shall be completed by the Contractor in accordance with safety and sequencing notes for each phase. Multiple work items may be performed at the same time.

Portions of the runway and taxiways will be temporarily closed during construction to allow for rehabilitation, drainage improvements, and lighting replacement. Each closure will be scheduled as specified in the safety and sequencing notes for each phase. Outside of the full runway closures as defined, daytime access between the open portions of the runway and aprons will be maintained through each phase of the work.

The runway shall remain open to air traffic for the maximum extent possible. During Phase 3, the runway will be closed to install runway markings and lighting. During Phases 1 and 2, the runway will be closed for short durations to establish the temporary half-width runways, and then the runway shall be opened and available for daytime half-width operations, as shown on the CSPP Drawings. The runway and all taxiways may be closed between 6:00 PM and 6:00 AM during Phases 1 and 2. Taxiways D and E and the eastern portion of Taxiway A will be closed during Phase 4.

Taxiway A was evaluated for use as a temporary runway. The evaluation determined that additional obstructions would penetrate the Part 77 surfaces including the ASOS, trees, and surrounding terrain. In addition, use of Taxiway A as a temporary runway would extend the duration of the helipad closure and reduce or eliminate access to Lease Lots 4 through 7, as the temporary runway OFA would not provide sufficient width between the lease lot lines to accommodate a temporary taxilane.

Based on these constraints, Taxiway A is not suitable for use as a temporary runway during construction. Graphical exhibits specifically indicating operational safety procedures and methods in areas affected by construction activities associated with this project (by phase) are provided with this CSPP and incorporated into the project drawing set. See Section 3 below for affected operations due to construction.

The safety and sequencing notes associated with each phase are generally as described below:

1. Phase 1

Phase 1 includes rehabilitating the south half of the runway; demolishing the existing lighting system; installing new conduit, conductors, and light cans; and all other work south of the runway centerline. Upon commencement of this phase, one closure not exceeding 24 hours will be allowed to establish the temporary runway. The remaining work in this phase will be performed at night, between 6:00 PM and 6:00 AM.

During the initial closure, the runway designation will change from Runway 08/26 to Runway 09/27. This change will be coordinated by NOTAM and in the Airport Master Record.

See CSPP Drawing AC3 for safety requirements and construction sequencing restrictions during this phase.

During closures of existing runway the airfield lighting system, NAVAIDs, and visual aids will be disconnected, and lighted runway closure markers will be placed on each end. Obliterate existing pavement markings and decommission existing runway lighting prior to establishing the temporary runway. Construction activities shall be scheduled to minimize the closure of the runway.

Once the temporary half-width runway is established, the north half of the runway shall be opened between 6:00 AM and 6:00 PM for the duration of this phase. During half-width operations, the airfield lighting system shall be disconnected, and a temporary edge lighting system, markers, and markings shall be installed on the active portion of the runway. No work shall be performed in this phase when the runway is open for operations. No work shall be performed in Phases 2 and 3 for the duration of this phase.

In the event of an emergency or Medevac flight during full closure, the Contractor may be directed by the Engineer to open the runway temporarily and vacate the work area of all personnel, equipment, and materials. Runway shall be opened for emergency or Medevac operation within 15-minutes of notification. During the closure, minimize equipment and materials staged within work area to minimize time required to open runway.

2. Phase 2

Phase 2 includes rehabilitating the north half of Runway 09/27, the portions of Taxiways D and E within the Runway 09/27 OFZ, and Taxiway B and C approaches; demolishing the existing lighting system; installing new conduit, conductors, and light cans; and all other work within the ROFZ on the north half of Runway 09/27. Upon commencement of Phase 2, one closure not exceeding 24 hours will be allowed to establish the temporary runway. The remaining work in this phase will be performed at night, between 6:00 PM and 6:00 AM.

See CSPP Drawing AC4 for safety requirements and construction sequencing restrictions during this phase.

During closures of existing Runway 09/27, the airfield lighting system, NAVAIDs, and visual aids will be disconnected, and lighted runway closure markers will be placed on each end. Obliterate existing pavement markings and decommission existing runway lighting prior to establishing the temporary runway. Construction activities shall be scheduled to minimize the closure of the runway.

Once the temporary half-width runway is established, the south half of the runway shall be opened between 6:00 AM and 6:00 PM for the duration of this phase. During half-width operations, the airfield lighting system shall be disconnected, and a temporary edge lighting system, markers, and markings shall be installed on the active portion of the runway. No work shall be performed in this phase when the runway is open for operations. No work shall be performed in Phases 1 and 3 for the duration of this phase. The Contractor shall provide continuous aircraft and vehicle access through this phase between 6:00 AM and 6:00 PM. Provide a temporary taxiway through the work area on Taxiway B to maintain

access to the apron when the temporary runway is open. Provide temporary hold line markings and striping, at existing hold line locations.

In the event of an emergency or Medevac flight during full closure, the Contractor may be directed by the Engineer to open the runway temporarily and vacate the work area of all personnel, equipment, and materials. Runway shall be opened for emergency or Medevac operation within 15-minutes of notification. During the closure, minimize equipment and materials staged within work area to minimize time required to open runway.

3. Phase 3

Phase 3 includes installing markings and edge lights for Runway 09/27, Taxiways B and C, and portions of Taxiways D and E located inside the OFZ of Runway 09/27. Runway 09/27 will be closed for a maximum of 48 hours in this phase.

See CSPP Drawing AC5 for safety requirements and construction sequencing restrictions during this phase.

During full closure of Runway 09/27, the airfield lighting system, NAVAIDs, and visual aids will be disconnected, and lighted runway closure markers will be placed on each end. Construction activities shall be scheduled to minimize the closure of the runway and outages.

No work shall be performed on Phases 1 and 2 for the duration of this phase.

In the event of an emergency or Medevac flight during full closure, the Contractor may be directed by the Engineer to open the runway temporarily and vacate the work area of all personnel, equipment, and materials. Runway shall be opened for emergency or Medevac operation within 15-minutes of notification. During the closure, minimize equipment and materials staged within work area to minimize time required to open runway.

4. Phase 4

Phase 4 work includes rehabilitating and replacing the edge lighting of Taxiway A east of the apron and Taxiways D and E outside the runway OFZ; constructing Taxilane F; rehabilitating the helipad; and modifying East Pond.

See CSPP Drawing AC6 for safety requirements and construction sequencing restrictions during this phase.

During this phase, the helipad, Taxilane F, and Taxiways A, D, and E will be closed.

During periods when the helipad is closed, no temporary helipad will be designated. Rotor-wing aircraft may utilize the western portion of the apron, clear of the Contractor's Haul route, for operations at the pilot's discretion. To minimize the impact of construction activities on the apron traffic, flagger(s) will be located along the haul route at Taxiway B and C. No impacts to NAVIADs are anticipated for this phase of work.

Contractor shall provide access to the lease lots adjacent to Taxilane F by providing a temporary taxilane to the apron between 6:00 AM and 8:00 PM. Temporary taxilane, TSA, and TLOFA shall match the widths shown in Table 6.

Work for this phase may be performed concurrently with all other phases.

5. Phase 5

Phase 5 work includes constructing the new airport beacon, demolishing the existing airport beacon, constructing the SREB with its foundation pad, parking, and utilities, and replacement PAPI and REIL conduit and cable.

During this phase, access to vehicle parking adjacent to the Alaska Seaplanes terminal will be reduced. Work during this phase will be outside of the AOA except for the perimeter fence improvements at the SREB lot. Work to remove and replace sections of the perimeter fence will require equipment and workers to utilize approximately 1500 square feet of the adjacent apron.

See CSPP Drawing AC7 for safety requirements and construction sequencing restrictions during this phase.

The beacon, PAPIs, REILs, and lighted wind cones will be non-operational during this phase of work.

Work for this phase may be performed concurrently with all other phases.

B. Construction Phasing and Safety Plan Drawings

Construction phasing and safety drawings are included in the construction plans and as Appendix A of this document. The drawings are available through the Engineer in Autodesk (*.dwg) and in Adobe (*.pdf) formats. The Contractor can propose modifications to these drawings to fit their preferred means and methods to complete the project. The Contractor will submit the CSPP drawings and any revisions, along with a work schedule and SPCD, for approval 21 days prior to the Pre-Construction conference.

Requirements and details for the SPCD can be found in Advisory Circular (AC) 150/5370-2 *Operational Safety on Airports During Construction*. The latest edition of this AC and most others can be obtained free of charge from the FAA on the internet at http://www.faa.gov/airports/resources/advisory circulars/.

This CSPP is also available through the Engineer in either Microsoft Word (*.docx) or Adobe (*.pdf) formats.

Section 3. Areas and Operations Affected by the Construction Activity

A. Identification of Affected Areas

The Airport Reference Code (ARC) category will not change due to construction activities. Known affected areas are shown on the CSPP drawings in the construction plans. If other affected areas become known during the construction process, the Contractor shall revise and submit the drawings to the Engineer for

approval. Work in other affected areas is prohibited until the written approval of the revised SPCD and CSPP drawings is received from the Engineer.

1. Closing Runways, Taxiways, Helipads, and Aprons

Portions of the runway, taxiways, apron, and helipad will be closed at different times during construction. Runway closure markers, helipad closure markers, hazard marker barriers, and temporary runway and taxiway marker cones must be placed to limit access to the runway, taxiway, apron, and helipad construction areas. The hazard marker barriers must be lighted when dark to prevent aircraft from inadvertently entering the closed runway, taxiway, or apron. See GCP 70-09 for more information.

Runway 09/27 shall be temporarily closed while work is performed in Phases 1, 2, and 3 as described above and shown on the CSPP drawings. A 24-hour full runway closure will be permitted at the beginning of Phase 1 to construct the Phase 1 temporary half-width runway. A 24-hour full runway closure will be allowed at the beginning of Phase 2 to construct the Phase 2 temporary half-width runway. A full closure of Runway 09/27 will be permitted for 48 hours to perform work associated with Phase 3. The runway will be marked closed with illuminated temporary closure markers (lighted Xs) at each threshold. At a minimum, the runway shall be reopened for half-width operations between 6:00 AM and 6:00 PM in Phases 1 and 2. Temporary runway edge lights and markers (18" cones with white retro-reflective sheeting) will be placed 2 feet from the temporary runway edge in Phases 1 and 2. Temporary threshold lights and markers (18" cones with red and green retro-reflective sheeting) will be placed at the threshold. Temporary runway painting will be used to mark the runway centerline, edges, and thresholds markings for Phases 1 & 2 work. When the temporary runway is open, all surfaces within the temporary RSA shall be smooth and traversable by aircraft, with transverse gradients not exceeding 5 percent.

The table below shows the area to be protected along the runway edges for each phase. See the CSPP Plans for the location of the runway for each phase.

Table 1: Runway Edge Protection

Phases	Location	Aircraft Approach Category	Airplane Design Group	Temporary RSA Width
1 & 2	09/27	A	II	75

The table below shows the area to be protected before the runway threshold for each phase. See the CSPP Plans for the runway layouts for each phase.

Table 2: Runway Threshold Protection

Phases	Runway	Aircraft Approach Category	Airplane Design Group	Min RSA Before Threshold	Minimum Distance of 25-Foot Tall Object From Threshold*
ALL	09/27	A	II	300	1050

*Based on Required Approach Slope

Taxiway rehabilitation will be sequenced to minimize impact to operations and maintain access to open portions of the runway to the greatest extent practical. Where temporary taxiways are required to access open portions of the runway, the taxiways will operate at a 35-foot width while taxiway work is occurring. Temporary taxiway markers (18" cones with blue retro-reflective sheeting) will be placed at 20-foot intervals to define the active taxiways. See the CSPP Plans for more information.

The Contractor shall place flaggers at locations where construction haul routes intersect with active aircraft movement areas, stopping construction traffic whenever aircraft are taxiing nearby or in the direction of a haul route. The Contractor must ensure that equipment, materials, and the construction crew remain in areas indicated for staging, hauling, or closed for construction. During construction, no temporary electrical outage will be allowed to the runway lighting circuits, except those related to the closure of runways.

The helipad shall be closed during Phase 4 for the rehabilitation of the helipad, construction of the taxilane, mitigation of East Pond, and the rehabilitation of Taxiway A. The helipad will be marked with a helipad closure marker centered on the helipad marking.

The Contractor shall develop phase-specific safety drawings showing the areas closed for construction, along with approved aircraft parking and taxi routes, and distribute them to airport users, the Airport Manager, and all others concerned, prior to beginning work and according to required lead times shown in Section 1.

The Contractor shall ensure that no construction operations or electrical outages affect the FAA ASOS equipment.

The Contractor shall coordinate with the Engineer and Airport Manager to assure that NOTAMs, including Flight Data Center (FDC) NOTAMs, will be put into effect prior to closure of any portion of the airport or half-width runway operations. The airport will otherwise remain open to operations.

2. Interruption of Utilities, Including Water Supplies for Firefighting

No interruptions to the water supply lines within the work areas are anticipated. Airfield underground electric will be impacted as described in the specific phasing. Contractor shall notify leaseholders, FAA (FSS), and the Engineer prior to utility outages.

3. Approach/Departure Surfaces Affected by Heights of Objects

No work will be allowed within or immediately adjacent to an approach/departure surface of an active runway. See Section 17.F. A 34:1 approach allows an equipment height of 25 feet, 1050 feet from the thresholds of Runway 09 and 27. The 34:1 approach is based on the threshold elevation; the vehicle height may be reduced if the ground elevation increases beyond the threshold. See detail in the CSPP Plans. Since taller equipment could still obstruct the approach, the Engineer and the Contractor must remain aware of the equipment operating in this sensitive area, and calculate and enforce the ceiling beneath which equipment can operate safely without evacuating upon aircraft approach.

4. Staging Areas, and Haul Routes Near Air Operations Areas (AOAs)

The AOA is an area on the airport which is primarily used or intended to be used for landing, takeoff, or surface maneuvering of aircraft, and related activities. This area consists of runways, taxiways, and aprons. Staging areas on the airport property are shown on the CSPP drawings. Staging of equipment and materials is not permitted within runway and taxiway OFAs. See Section 17 for a description of runway and taxiway OFAs. It is advised that the Contractor investigate these available staging areas. If it proves unsatisfactory, the Contractor will need to secure an off-property staging area for their operations. Staging areas on the apron shall be delineated using low profile barricades and shall not prohibit access to adjacent lease lots and taxiways. Hauling across active AOAs is prohibited unless otherwise noted. All staging areas and haul routes will be kept away from active AOAs to the extent practicable. Haul routes that approach active AOAs must be marked and manned by airport flaggers to prevent incursion into OFAs or other restricted areas during aircraft operations.

Aircraft have right of way. All hauling operations and other ground vehicle traffic must yield to taxiing aircraft.

Other access may be authorized but limited by the operational needs of the airport, and as approved by the Engineer. See Section 7(B) below for control of foreign object debris (FOD) during hauling operations.

5. Mitigation of Effects

Closures of the runway and half-width operations of the runway, taxiways, and helipad are required as described above. Coordination with airport users through the Engineer must begin at least 90 days prior to the first closure. All construction-related activities within or adjacent to the AOAs will be coordinated with the airport users prior to beginning work.

The Contractor will appoint a Safety Officer to serve as the primary point of contact for all safety issues, including worker and airfield safety. The Safety Officer will have the authority to immediately direct Contractor and subcontractor personnel and equipment to evacuate an area or otherwise address a potentially unsafe situation. The Safety Officer will inspect the jobsite daily for compliance with safety requirements. All State, Contractor, and subcontractor personnel must be instructed to remain alert for situations that could negatively impact the safety of air operations, personnel, or the public. When an unsafe situation or condition is identified, regardless of the source, immediate action must be taken to create a safe and healthy environment. The Safety Officer shall be available 24 hours a day for safety issues that arise requiring immediate attention. This duty may be shared by more than one person as long as the personnel are identified to the Engineer in writing. These personnel must have the power to immediately take action regarding Contractor personnel and equipment.

Temporary runway and taxiway closures along with daytime half-width runway operations will be required during construction. The temporary changes to the runway and taxiway will be mitigated by the use of runway closure markers, temporary runway edge lighting, temporary runway markers, temporary taxiway markers, temporary runway marking, hazard marker barriers, NOTAMs, and an airport flagger (if required).

All lighting systems, telecommunications, and control cables shall remain in operation continuously throughout the construction period except as noted in the plans and specifications. Facilities that are directly related to work items for this project may be placed out of service only as long as necessary to make the alterations shown in the plans.

Section 4. Protection of NAVAIDs

NAVAIDs for the Haines Airport consist of the PAPIs and REILs. Visual aids consist of the airport beacon, primary wind cone, supplemental wind cone, and airport lighting system. There is also a FAA-owned ASOS. The Contractor will make every effort to not disturb, damage, or obstruct operational NAVAIDs, visual aids, and ASOS. When the runway is open full length and width, all airport lighting system components, NAVAIDs, and visual aids shall be fully activated and in use. See Section 1(C) regarding ATO coordination for ASOS procedures. See Section 9 regarding procedures for issuing NOTAMs during NAVAIDs and visual aid outages. See Section 11 regarding the location and protection of utilities servicing NAVAIDs.

Section 5. Contractor Access

This CSPP details those areas to which the Contractor must have access, and how Contractor personnel will access those project work areas. These points of access and access routes will be subject to change as construction of this project progresses. When required, the Engineer will communicate these changes at construction coordination meetings.

A. Location of Stockpiled Construction Materials

Space is limited at the airport. Stockpile areas will be limited to the identified stockpile and staging area and the active work areas, unless otherwise approved by the Engineer. Stockpiles may not be placed within a taxiway object free area (TOFA) or runway object free area (ROFA) at any time. See Section 17 for TOFA and ROFA descriptions and dimensions.

See Section 16 regarding hazard marking for the staging area. See Section 7 regarding provisions preventing staged material from becoming Foreign Object Debris (FOD).

B. Vehicle and Pedestrian Operations

Contractor vehicle and personnel access routes for construction must be controlled to prevent inadvertent or unauthorized entry of persons, vehicles, or animals onto the AOA. The Airport Manager will coordinate requirements for vehicle operations with the Contractor.

Aircraft have right of way. All hauling operations and other ground vehicle traffic must yield to taxiing aircraft.

All construction vehicles and personnel shall be restricted to the immediate work areas. These areas include the haul routes into the work area and the work area currently under construction. Haul routes used by the Contractor must be clearly marked to prevent inadvertent entry to areas open to air operations. Construction traffic must remain on these designated routes and never stray from the

approved paths. Maintenance and upkeep of the haul routes is the responsibility of the Contractor. The Contractor shall provide a proposed haul route plan as part of the SPCD for approval by the Engineer. Upon completion of work, the Contractor shall return roads and haul route surfaces to their prior condition or better.

When hauling on or across an active taxiway or taxilane indicated on drawings, the Contractor shall provide a flagger, whose duty is to ensure that no construction equipment is located within these zones during aircraft taxi along the taxiway or taxilane concerned. At all times, aircraft shall have the right-of-way over construction equipment.

All vehicles and equipment operating on airport property must be marked with flashing amber/yellow beacons at all times. Beacons must be maintained to standards and in good working condition at all times. Beacons must be located on the uppermost part of the vehicle structure, be visible from any direction, and flash 75 +/- 15 flashes per minute. Vehicles and equipment shall also be equipped with orange and white flags. Flags shall be 3’ x 3’ with alternating 1’ x 1’ international orange and white squares. In the event that flags become faded, they shall be immediately replaced by the Contractor.

All waste material shall be removed by the Contractor and disposed of off airport property unless otherwise directed by the Project Engineer.

The Contractor must perform all service on construction vehicles and equipment offsite or within the limits of the work area. Parked construction vehicles and equipment must be within the active work areas or off airport property.

C. Authorization to Operate Contractor Vehicles

Vehicles are not allowed to operate on active aircraft movement areas (apron, taxiway, and runway) unless authorized by the Engineer. All vehicles operating on active aircraft movement surfaces shall be in good operating condition and free of fluid leaks. The Engineer may refuse to permit access or direct the removal of any vehicles not meeting these requirements.

When any vehicle must travel over any portion of an aircraft movement or non-movement area, other than properly closed and marked areas, the vehicle shall be driven by a vehicle operator who has received radio communication training and airport driver training from the Airport Manager, and has a working aviation-band, two-way radio. The driver is required to monitor Common Traffic Advisory Frequencies (CTAF) on 122.9 MHz and visually monitor for unscheduled flights and flights not equipped with communications radios. The vehicle shall be properly marked, lighted, and permitted with prior approval from the Engineer.

All Contractor vehicle operators must present a valid driver's license to the Airport Manager to receive authorization to operate a vehicle on airport property.

All Contractor employees who operate vehicles must complete the training required by the Airport Manager. The training must be repeated annually for each season of construction. Training records will be maintained by the Airport Manager for each authorized driver.

Contractor vehicle operators at airports face conditions that are not normally encountered during highway driving. Therefore, those persons who have vehicular access to the ramp or movement areas of the airport must have an appropriate level of knowledge of airport rules and regulations. Any person expected to operate in the movement area must demonstrate a functional knowledge of the English language.

D. Area of Authorization

Contractor personnel and vehicles are only authorized in the areas where contract work is being performed and on the designated access routes to and from that area.

E. Construction Employee Parking Areas

In addition to information included elsewhere in the CSPP, the following provisions apply:

- Coordinate vehicle-parking areas for Contractor employees with the Engineer and designate parking areas in advance to prevent damage to airport or private property and prevent unsafe conditions.
- Do not park or operate motorized vehicles on vegetated unimproved surfaces.
- Do not park vehicles within 15 feet of any roadway open to traffic.
- Do not park vehicles within 6 feet of any airport perimeter fencing.

F. Construction Vehicle and Equipment Parking

Contractor staging areas for work on the project are available within the work area and as shown on the plans, subject to the conditions cited in this Section. Before occupying a temporary use/staging area, mark the staging area limits with lath and flagging or other measures and then arrange a joint inspection with the Engineer to record the area's original condition. Do not stage motorized equipment on dirt surfaces in the staging area without a drip pan. Equipment not actively employed in the work is to be parked within the approved staging area or removed from airport property. When the area is no longer needed, arrange a joint inspection with the Engineer to ensure you have returned the area to an acceptable condition. See Section 70-11 of the General Contract Provisions.

G. Two-Way Radio Communications

The Contractor’s Safety Manager, additional safety personnel, and Superintendent shall continuously monitor CTAF 122.9 at and visually monitor for unscheduled flights and flights not equipped with communications radios .all times to be aware of incoming flights. Only one person shall be responsible for communicating with aircraft on the CTAF. This person shall be the Airport Flagger, if the flagger is onsite. If the flagger is not on site, the Contractor’s Safety Manager shall be responsible for communicating on

the CTAF. If radio communication is disabled, the Contractor shall vacate the AOA and contact the Airport Manager immediately for further instructions.

All persons and equipment working within the airport property shall remain in constant radio contact with the Contractor's Safety Manager using a radio frequency other than the aviation radio band approved for use by the Federal Communications Commission (FCC).

H. Airport Security

There is no formal airport security system at this airport. The Contractor shall maintain the current level of airport security by closing access gates upon entering the site or providing a flagger to prevent unauthorized access. Construction vehicles and personnel should be clearly identifiable to avoid any misconceptions about their reason for being on airport property.

Section 6. Wildlife Management

The Contractor must control and continuously remove waste or loose materials that have the potential to attract wildlife. These items include, but are not limited to:

- Trash – Food scraps, etc., from construction personnel must be collected and removed daily.
- Standing water – Standing water is not allowed in construction areas. Provide adequate drainage, and erosion and sediment control measures to prevent attracting birds and other wildlife.
- Tall grass and seeds – The project is composed of gravel and previously disturbed areas. If restoration of other areas disturbed by the Contractor is required, seeding or restoration shall be performed in accordance with Section 70.11 General Contract Provisions. Submit the seed mix to the Engineer for approval. The seed mix must not act as a wildlife or bird attractant.
- Poorly maintained fencing and gates – Fences or gates that are damaged by construction activities or by Contractor negligence must be repaired at no cost to the DOT&PF. All repairs are subject to the approval of the Engineer. Report gate and fence damage or deficiencies to the Engineer, whether caused by Contractor activities or otherwise observed.
- Disruption of existing wildlife habitat – Disturbance of ground or wildlife habitat beyond the project footprint is prohibited.

The Contractor shall immediately report any sighting of wildlife on airport property to the Engineer, who will notify the Airport Manager.

Section 7. Foreign Object Debris (FOD) Management

Special care and measures shall be taken to prevent FOD when working in an airport environment. The Contractor shall be held responsible for implementing an approved FOD Management Plan as a part of the SPCD. The FOD Management Plan will include procedures for prevention, regular cleanup, and containment of construction material and debris. The Contractor will ensure that all vehicles related to the construction project in the AOA shall be free of any debris that could create a FOD hazard. The taxiways, apron, and runway must remain clean. Waste containers with attached lids shall be required at

construction sites. Special attention shall be given to securing lightweight construction material. Any runway, taxiways, and apron that has been closed for construction activities shall be kept clean of all FOD and approved by the Engineer prior to opening the surface to aircraft traffic. The Contractor will provide their own equipment for vehicle and equipment washing and clean up.

A. Inspections

The Contractor will participate in daily safety and final inspections as required in Section 10 below. Take immediate action as required to clean up and prevent FOD on operational surfaces upon discovery or notification.

B. Hauling

Stay on approved and marked haul routes. Ensure all vehicles that must cross AOAs, including those used to perform hauling, inspections, temporary marking maintenance, or other required activities, are kept clean and checked for loose materials, equipment, tools, or other objects that may become FOD.

The Engineer may suspend work at any time that operational surfaces cannot be adequately cleaned and maintained, including conditions of inclement weather, and improper, inadequate, or non-use of Contractor cleaning equipment. No adjustment to contract time will be made, regardless of the cause of such work suspensions.

Coordinate with any lease holders adjacent to haul routes prior to hauling operations. Ensure lease holders have access to lease lots at all times during hauling operations.

Section 8. Hazardous Materials (HAZMAT) Management

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean up spills resulting from fuel, hydraulic fluid, or other chemical fluid leaks. Transport and handling of other hazardous materials on an airport also requires special procedures. To that end, the Contractor is required to develop and implement spill prevention and response procedures for vehicle operations.

The Contractor shall develop a Hazardous Materials Control Plan (HMCP), and a Spill Prevention, Control and Countermeasure (SPCC) Plan as required by the standard specification P-641 as quoted below:

> *Prepare the HMCP using the DOT&PF template located at the following DOT&PF link; http://www.dot.state.ak.us/stwddes/dcspubs/forms.shtml for prevention of pollution from storage, use, containment, cleanup, and disposal of all hazardous material, including petroleum products related to construction activities and equipment. Include the HMCP as an appendix to the SWPPP. Compile Material Safety Data Sheets in one location and reference that location in the HMCP.*

The Contractor shall designate a Spill Response Field Representative with 24-hour contact information. Designate a Subcontractor Spill Response Coordinator for each subcontractor. The Superintendent and

Contractor's Spill Response Field Representative must have 24-hour contact information for each Subcontractor Spill Response Coordinator and the Utility Spill Response Coordinator.

The Contractor shall list and give the location and estimated quantities of HAZMAT (including materials or substances listed in 40 Code of Federal Regulations [CFR 117 and 302, and petroleum products]) to be used or stored on the project. HAZMAT must be stored in covered storage areas. Include secondary containment for all HAZMAT storage areas.

Identify the locations where fueling and maintenance activities will take place, describe the activities, and list controls to prevent the accidental spillage of petroleum products and other HAZMAT. Controls include placing absorbent pads or other suitable containment under fill ports while fueling, under equipment during maintenance or repairs, and under leaky equipment.

List the types and approximate quantities of response equipment and cleanup materials available on the project. Include a list and location map of cleanup materials at each different work site and readily available off-site (materials sources, material processing sites, disposal sites, staging areas, etc.). Spill response materials must be stored in sufficient quantity at each work location, appropriate to the hazards associated with that site.

Describe procedures for containment and cleanup of HAZMAT. Describe a plan for the prevention, containment, cleanup, and disposal of soil and water contaminated by spills. Describe a plan for dealing with contaminated soil and water encountered during construction. Clean up spills or contaminated surfaces immediately.

Describe methods of disposing of waste petroleum products and other HAZMAT generated by the Project, including routine maintenance. Identify haul methods and final disposal areas. Assure final disposal areas are permitted for HAZMAT disposal.

Describe methods of complying with the requirements of AS 46.04.010-900, Oil Hazardous Substances Pollution Control, and 18 AAC 75. Include contact information for reporting HAZMAT and petroleum product spills to the Engineer and for reporting to federal, state and local agencies.

Prepare and implement a SPCC Plan when required by 40 CFR 112; when both of the following conditions are present on the Project:

- Oil or petroleum products from a spill may reach navigable waters (as defined in 40 CFR 112); and
- Total above-ground storage capacity for oil and any petroleum product is greater than 1,320 gallons (not including onboard tanks for fuel or hydraulic fluid used primarily to power the movement of a motor vehicle or ancillary onboard oil-filled operational equipment, and not including containers with a storage capacity of less than 55 gallons)

Reference the SPCC Plan in the HMCP and Storm Water Pollution Prevention Plan (SWPPP). The Contractor shall incorporate these procedures into the SPCD. This includes maintenance of appropriate material safety data sheets (MSDS) data and appropriate prevention and response equipment on site.

Section 9. Notification of Construction Activities

A. Responsible Representatives / Points of Contact

The Contractor shall develop a list of contacts consisting of both Contractor personnel and project stakeholders. Although the primary contacts for all matters involving safety and security remain the Airport Manager, Engineer, and Contractor's Superintendent, certain issues may warrant the delegation of response to individuals capable of immediately taking action. These contacts may be required to be available 24 hours a day, as specified to address the following issues:

- For emergencies (dial 9-1-1)
- HAZMAT Spill Response
- Maintenance of temporary airport markings and lighting
- Repair of erosion sediment control measures
- FOD cleanup
- Repair of damaged fence, gates, or locks
- Other points of contact, as specified, or as directed by the Engineer

The list shall also contain the contacts below:

Table 3: Emergency Contact Information

Name	Title	Telephone Number
Matt Boron	DOT&PF Airport Manager	(907) 766-2340
Haines Fire Department	First Responders	(907) 766-6441
Haines Police Department	Public Safety	(907) 766-2121
National Poison Control Hotline	Poison Control	(800) 222-1222
Haines Heath Center	Medical	(907) 766-6300

The Contractor shall designate a Superintendent or foreman of the company to act as Safety Manager for this project. The Safety Manager shall have full authority to direct the Contractor's activities including stopping work, to ensure a safe worksite. The Safety Manager shall be involved with all phases of construction including bidding, preconstruction conference, training of personnel, weekly meetings, daily construction status reports, and final inspections. The Safety Manager shall have an understanding of airport airspace and the local traffic control procedures. The Safety Manager shall be available 24 hours a day during the construction phase to respond to all safety needs. The following information shall be provided:

Safety Manager's Name: _____
Title: _____
Residence Address: _____
Day Telephone: _____
Day Fax: _____
Evening Telephone: _____

The Contractor shall provide not less than two additional persons and phone numbers where they can be reached by the Engineer at any time, day or night. The listed persons shall have access to and be capable of installing new batteries, flashers, cones, or other items required to keep the airport marking system operational.

B. Operational Safety Emergencies

In the event of an occurrence that might adversely affect the operational safety of the airport, such as interrupted visual aid service, the Contractor shall contact the Project Engineer, who will advise appropriate action and notify the Airport Manager to issue a NOTAM.

For all non-airport related emergencies Dial 9-1-1. This includes required medical, fire, or police response on or off airport property. Emergency conditions involving immediate loss of human life, or threat to wellbeing, Contractor personnel may allow access to airport property by uniformed emergency services. Maintain airfield security in all other respects. Notify the Engineer and the Airport Manager immediately following any 9-1-1 emergency call.

C. Notices to Airmen (NOTAMs)

The Airport Manager, or his designated representative, is the operating authority of the airport and has the sole authority to close a runway or the airport to aircraft operations until, in the opinion of the Airport Manager, the safety hazards no longer exist. The Airport Manager, or his designated representative, has the sole authority to file NOTAMs with the FAA and will issue any required NOTAMs for the airport.

The Contractor shall coordinate the duration, requirements, and cancellations of NOTAMs with the Engineer. The Engineer will then coordinate the NOTAM with the Airport Manager. All changes of the status of operations need to be included in the NOTAMs. **Provide information to the Engineer to enable the Airport Manager to issue NOTAMs at least 5 business days in advance.** In addition, provide a weekly

written update of the construction work and the impact on current airport operational patterns to regularly scheduled air carriers and to those providing emergency services. Coordinate with the Engineer and Airport Manager to verify air carriers.

FDC NOTAMS are required prior to beginning construction. Request FDC NOTAMs through the Engineer. The Engineer will then coordinate with the Airport Manager. The Airport Manager, or his designated representative, will generate the NOTAM request through the OE/AAA portal or contact the Western Flight Procedures Team at (206) 231-2270.

D. Emergency Notification Procedures

In the event of an emergency, the Contractor shall notify the Airport Manager and Engineer. If necessary, the Contractor shall contact emergency services by calling 9-1-1.

In the event of an aircraft emergency, severe weather conditions, or any issue as determined by the Airport Manager that may affect aircraft operations, the Contractor's personnel and/or equipment may be required to immediately vacate the area(s) affected. Points of contact for the various parties involved with the project shall be identified and shared among the various parties at the pre-construction meeting. Specific emergency notification procedures shall be incorporated into the Contractor's SPCD.

E. Notification to the FAA

CFR 14 Part 77 requires that any person proposing construction or alteration on an airport must notify the FAA at least 45 days prior to initiating the construction or alteration. This includes construction equipment and proposed parking areas for this equipment (i.e. cranes, graders, other equipment) on airports. This notification can be made electronically at: *https://oeaaa.faa.gov/oeaaa/external/portal.jsp*, or by submitting an FAA Form 7460-1, Notice of Proposed Construction or Alteration to the Alaskan Region FAA, Airports Division, 222 West 7th Ave, #14, Anchorage, AK 99513-7587. Provide all notifications to the FAA through the Engineer.

Unplanned outages of FAA navigational aids shall be immediately reported to the FAA Juneau Flight Service Station at 907-586-7380.

Section 10. Inspection Requirements

A. Daily (Or More Frequent) Inspections

Inspections shall be conducted daily, or more frequently, if necessary to ensure conformance with this document. The checklist provided in the AC 150-5370-2G Appendix D, Construction Project Daily Safety and Inspection Checklist, shall be used and completed by the Contractor's Safety Representative.

Conduct safety and security inspections at least daily during the project. Schedule inspections to avoid conflict with the active RSA, ROFA, OFZ, TSA, TOFA, and areas detailed in Section 17 below. No work is allowed inside any active runway or taxiway movement areas.

Notify the Airport Manager, through the Engineer, at least 30 minutes before the end of each day's shift for a safety inspection of the work site. Safety and security inspections will be attended by the Engineer and the Airport Manager, or their representatives. Immediately repair or remedy all safety and security issues. Do not wait until an inspection to address issues. Inspections are to be carried out to verify that all required maintenance is being performed in a timely manner.

Notify the Engineer and the Airport Manager regarding any safety or security issues found during the inspections, regardless of whether they are caused by negligence, oversight, or project scope change. Include at least the following items in the inspections; other items may be added at the direction of the Engineer, or as approved:

- Inspect surface of active runways (full or half-width), taxiways, and apron areas.
- Inspect each required crossing of any active surface for the presence of FOD.
- Inspect haul routes for proper markings and barricades. Ensure that vehicles are using only designated haul routes.

B. Final Inspections

Final inspections shall be conducted after construction is complete. The checklist provided in the Advisory Circular 150-5370-2G Appendix D, Construction Project Daily Safety Inspection Checklist, shall be completed by the Contractor to the Engineer's satisfaction.

Verify that all airfield lighting within the work area is serviceable and correct. Remove all FOD as directed, and any other construction-related materials not allowed to remain on airport property. The final safety inspection may become part of the project completion final inspection detailed under the General Contract Provisions Section 50-15, at the discretion of the Engineer.

Section 11. Underground Utilities

Special attention shall be given to preventing unscheduled interruption of utility services and facilities. The Contractor must request locates from all utilities having facilities in the area prior to any work being performed in this area. Where required due to construction purposes, the FAA shall locate all of their underground cables. Associated telephone numbers are as follows:

Table 4: Utility Contact Information

Title	Telephone Number
AP&T	(907) 766-6500
DOT&PF Airport Manager	(907) 766-2340
Alaska Dig Line	(907) 278-3121
FAA Utilities	(907) 230-9606

The Contractor shall arrange for the location of all the underground cables. The Contractor shall be responsible for the protection of all existing utilities, cables, wires, pipelines, and other underground facilities throughout project construction. When an underground cable or utility is damaged due to the Contractor's negligence, the Contractor shall immediately notify the Engineer and repair the cable at his or her own expense. Full coordination between the DOT&PF staff, the Engineer, and the Contractor will be performed prior to the commencement of construction activities to verify the location of known airport power and control cables in the work area.

DOT&PF recommends that utility locates be coordinated with the DOT&PF Airport Manager, FAA, and local utility companies prior to commencing construction. Note that it is possible that airport specific underground utilities `such as runway lighting circuits cannot be located.

Section 12. Penalties

The Contractor shall be responsible for payment of any fines assessed to the DOT&PF due to the Contractor's violation of FAA or Transportation Security Administration operation, safety or security requirements.

Failure on the part of the Contractor to adhere to prescribed requirements may have consequences that jeopardize the health, safety or lives of community members. DOT&PF may issue warnings on the first offense based on the circumstances of the incident. Individuals involved in non-compliance violations may be prohibited from working at the airport, pending an investigation of the matter.

All Contractor and subcontractor personnel must abide by the CSPP and other contract requirements. Failure to comply with the safety rules of this CSPP, the SPCD, the General Contract Provisions, Occupational Safety and Health Administration (OSHA) regulations, or any other federal, state, or local laws may result in the suspension of construction activities or imposition of fines or other legal action. Suspension of work for failure to comply with these safety rules is not eligible for additional compensation for standby time. Penalties can include payment by the Contractor of any fines levied by any federal, state,

or local agency having authority; suspension of the contract; and individual workers that are subject to removal from the project as stated in General Contract Provisions Section 80-05, third paragraph:

> *The Contractor shall comply with any written order by the Engineer to remove workers, who, in the opinion of the Engineer, violate operational regulations, violate CSPP requirements, violate SPCD requirements, perform the work in an unskilled manner, create risk of imminent harm for the traveling public, who are intemperate or disorderly, or who fail to perform the work in accordance with the Contract and any and all applicable federal, state, and local laws, rules, regulations, and ordinances. The Contractor shall allow removed workers to return to the project only with the Engineer's written permission. The Engineer may suspend the work if the Contractor fails to furnish suitable and sufficient personnel necessary to perform the work, or fails to remove any worker at the Engineer's order.*

Note: Project shutdown or misdemeanor citations may be issued on a first offense. When construction operations are suspended, activity shall not resume until all deficiencies are rectified.

Section 13. Special Conditions

Air operations take precedence over all other work, especially if a question of safety is involved. Special conditions such as low visibility, snow removal, aircraft in distress, aircraft accident, medevac, or work being completed by others may require suspension or rescheduling of project construction to accomplish airport safety. In the event of an emergency, Contractor personnel and/or equipment may be required to immediately vacate the work area. The Contractor will receive notification from the Engineer and/or the Airport Manager when a special condition requires vacation of the work area, as applicable. In any event, construction personnel must be aware at all times and give the right of way to any emergency vehicles displaying emergency lights.

A. Emergency Landings

Aircraft declaring an emergency including medevac operations will be allowed to land on the runway even when the runway is closed. The work area may need to be cleared of people and equipment on extremely short notice (15 minutes or less). Workers and equipment must clear the OFZ, including the full length and width of the active runway (half-width during Phases 1 & 2, full width during all other phases) and the active RSA, when directed by the Engineer or other authorities.

B. Special Equipment

Use of tall equipment, such as cranes or drilling rigs, must be submitted on Form 7460-1 and approved by the FAA. See coordination with the FAA, and notifications above.

C. Water for Dust Control

The Contractor shall provide water for dust control as required and as directed. Dust, smoke, steam, or other airborne particulates caused by Contractor activities may be considered a safety violation as determined by the Engineer.

D. Temporary Relocation of Runway Thresholds

No temporary relocations of runway thresholds (temporary shortening of a runway) are anticipated as part of this project. If the Contractor proposes a temporary threshold, the relocation must adhere to the requirements of the AC 150/5370-2, be coordinated with all airport users and the FAA, and be approved by the Engineer.

E. Temporary Half-Width Runway

Temporary half-width runway operations will be required during Phase 1 and Phase 2 construction. Half-width operations shall occur between 6:00 AM and 6:00 PM. Half-width operations shall adhere to the requirements of the CSPP drawings and the FAA's Alaska Region Airports Division – Half Width Operation and Construction Guidance memo dated April 05, 2012.

F. Temporary Runway Edge and Threshold Lighting

Temporary runway edge and threshold lighting will be required during half-width runway operations. During half-width operations, cover, remove, or disable existing runway edge and threshold lighting on the closed portion of the runway. Provide temporary edge and threshold lighting properly anchored to withstand propeller wash. All temporary lighting must meet the requirements of AC 150/5340-30 Design and Installation Details for Airport Visual Aids. Wireless runway edge and threshold lighting options may be used if approved by the Engineer and meet all requirements of AC 150/5340-30.

G. Runway Markings and Runway Designations

Temporary markings as shown on the CSPP Drawings will be required on the active portion of the runway during half-width operations.

H. Visual Aids

Visual aids will be affected by this project, including the airport beacon, lighted primary wind cone and segmented circle, supplemental wind cone, REIL, PAPI, and the runway and taxiway medium intensity lighting system. The airfield lighting system and visual aids will be periodically out of service during construction. NOTAMs shall be requested to describe outages, and construction activities shall be scheduled to minimize outages.

I. NOTAMs

Coordinate with the Engineer and Airport Manager to provide information required for NOTAMs to be issued.

J. Work Zone Lighting for Nighttime Construction

Lighting equipment must adequately illuminate the work area if work is to be performed during nighttime hours in accordance with AC 150/5370-2G Section 2.21. It is recommended that all support equipment, except haul trucks, be equipped with artificial illumination to safely illuminate the area immediately surrounding their work areas. The lights should be positioned to minimize shadows.

Section 14. Runway and Taxiway Visual Aids

A. General

Electrical outages are necessary to facilitate construction and ensure that the runway and taxiway lighting are off when the runway and taxiways are closed or operating at a reduced width. These outages shall not affect the ASOS systems. Outside of these occurrences, there shall be no disturbances to the lighting, signs, and visual NAVAIDs. Upon completion of the temporary closures, Contractor shall ensure that airfield lighting and NAVAIDS are fully operational.

All temporary markings, lighting, or signs must be clearly visible and secured in place to prevent movement and constructed of materials that would minimize damage to an aircraft in the event of inadvertent contact. Items used to secure markings must be of a color similar to the marking.

B. Markings and Runway Designations

The runway designations will change from 08/26 to 09/27 when temporary runway marking begins. The Contractor shall notify the Engineer no less than 10 days before beginning temporary markings, and the Engineer will coordinate with the Airport Manager to notify the FAA and request NOTAMs and publication of the new runway designations.

Temporary markings must comply with FAA AC 150/5340-1, Standards for Airport Markings. If unable to paint temporary markings, construct them from fabric, colored plastic, or similar materials. They must be properly configured and secured.

- Temporary Full Runway Closures: Place illuminated temporary runway closure markers (lighted X's) at each runway end.
- Temporary Half-Width Runway Operations:
    - Obliterate existing markings.
    - Install temporary runway edge lights and runway markers (18-inch cones with white retro-reflective sheeting) placed at a 10.5-foot offset and 52-foot offset from the existing runway centerline during Phase 1 and 16.75-foot offset and 58.25-foot offset from the existing runway centerline during Phase 2. Install temporary threshold lights and markers (18-inch cones with red and green retro-reflective sheeting) at threshold locations, as shown on the CSPP drawings.
    - Temporary markings for the open half of the runway consist of threshold markings, runway centerline striping, runway edge striping, and runway designation marking to identify areas unsuitable for takeoff or landing. No displaced thresholds are being used.
    - Place runway closure markers (X's) at the ends and at 500-foot intervals along the non-operational half of the runway.
- Temporary Taxiway: Temporary taxiway markers (18-inch cones with blue retro-reflective sheeting) will be placed at a 35-foot width and spaced 20 feet on center to define the active taxiways.

It may be necessary to remove or cover runway markings depending on the length of construction and the type of airport activity. When removing runway markings, apply the same treatment to areas between stripes, as the cleaned area will appear to pilots as a marking in the shape of the treated area.

The application rate of paint to mark short-term, temporary runways and taxiways may deviate from the standard, but the dimensions must meet the existing standards.

C. Lighting, Visual NAVAIDs, and ASOS

Prior to construction, the Contractor, Airport Manager, and Engineer shall inspect the existing lighting and visual NAVAIDs to document their functioning state. During any temporary electrical outage, the Contractor shall "lockout" the lighting circuits or secure switches to prevent inadvertent activation of the affected circuits. Upon completion of the temporary closure, the Contractor is responsible for ensuring that the lighting, visual NAVAIDs, and PAPI systems are fully operational.

Dust, smoke, and steam from construction activities may impact the ASOS. Engineer shall issue a NOTAM warning pilots of the potential of inaccurate or unreliable ASOS readings. Additionally, the Engineer shall notify the Network Enterprise Management Center System Operations Center prior to the start of the project in order to schedule any necessary service outages and maintenance at (855)-322-6362 option #1 then option #3.

D. Signs

This project will replace runway and taxiway signage. During construction, temporary runway and taxiway configurations shall be marked in accordance with CSPP drawings.

Phase sign removal to ensure active taxiways and runways include all required signage per AC 150/5340-18.

Section 15. Markings and Signs for Access Routes

The Contractor is responsible for supplying and installing all necessary markings and signage for all access routes to and from the site to be used by Contractor personnel, subcontractor personnel, or delivery operations. All signage in the AOA must be on frangible mounts. Markings and signs for construction personnel shall conform to AC 150/5340-18 and, to the extent practicable, with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD). Markings and signs within the AOA must not exceed 3 inches in height above existing grade or meet the frangibility requirements of AC 150/5220-23.

Section 16. Hazard Marking and Lighting

Temporary runway, taxiway, and taxilane operations should be marked and delineated in accordance with Section 14B, above. Lighted runway closure markers shall be placed at both ends of the full width closed runway. Hazard marker barriers shall be used to delineate limits of construction on the apron as shown on the CSPP Drawings. Hazard marker barriers shall be marked with flashing beacons outside daylight hours.

The Contractor must have a person on call 24 hours a day for emergency maintenance of airport markings, hazard lighting, and barricades. The Contractor must file the contact person's information with the Airport Manager and the Engineer. Lighting should be checked at least once a day, preferably at dusk.

Section 17. Protection of Runway and Taxiway Safety Areas

A. Runway Safety Area (RSA)

The RSA dimensions for each phase of construction are shown in Table 6 below. The dimensions of the RSA for Phases 1 & 2 govern whether work performed in these phases is concurrent with work in other phases. Work will only occur inside the RSA when the runway has been closed by issuance of a NOTAM

and marked in accordance with Section 16 above. The RSA is centered on the centerline of the active runway. No equipment, vehicles, or personnel will be allowed within the RSA of the active runway during aircraft operations. No material stockpiles will be allowed in the RSA at any time. See Section 5 of this CSPP for details regarding vehicle and personnel movement within safety areas and material stockpiling restrictions.

See Section 16 of this CSPP for details regarding the hazard marking and lighting devices used to identify open excavations. Construction activities within the existing RSA are subject to the following conditions:

- Open trenches or excavations are not permitted within the RSA while the runway is open. If possible, back-fill trenches before the runway is opened. If the runway must be opened before excavations are backfilled, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft.
- Soil erosion must be controlled to maintain RSA standards. The RSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting the passage of aircraft, without causing structural damage to the aircraft.

B. Runway Object Free Area (ROFA)

The ROFA dimensions for each phase of construction are shown in Table 6 below. The dimensions of the ROFA for Phases 1 & 2 govern if work performed in these phases is concurrent with work in other phases. The ROFA is centered on the active runway centerline. Construction is not permitted in the ROFA of the half-width runway under Phase 1 and Phase 2, unless specifically approved by the Engineer. Materials and equipment will not be stored within the ROFA unless they are actively being used for construction. Equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA if not necessary. No equipment or vehicles are to be parked or left unattended in the ROFA at any time.

C. Taxiway Safety Area (TSA)

The TSA dimensions for each phase of construction is shown in Table 6 below. Construction activities within the TSA are subject to the following conditions:

- No work will occur inside a TSA except when the taxiway has been closed by issuance of a NOTAM and marked in accordance with Section 16 above. No work will be allowed within any active TSA. See the CSPP Plans for details.
- Open trenches or excavations are not permitted within the TSA while the taxiway is open. If possible, back-fill trenches before the taxiway is opened. If the taxiway must be opened before excavations are backfilled, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft.
- Soil erosion must be controlled to maintain TSA standards. The TSA must be cleared and graded

and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting the passage of aircraft without causing structural damage to the aircraft.

D. Taxiway Object Free Area (TOFA)

The TOFA dimensions for each phase of construction are shown in Table 6 below. Construction activities shall not occur within an active TOFA.

E. Obstacle Free Zone (OFZ)

The OFZ dimensions for each phase of construction are shown in Table 6 below. Personnel, material, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations. No work will occur inside an OFZ, except when the runway has been closed by issuance of a NOTAM and marked in accordance with Section 16 above.

F. Runway Approach/Departure Surfaces

The approach surface is a trapezoidal surface, centered on the extended runway centerline, and sloping away from the runway ends that shall remain clear of all obstructions. The approach surfaces for Runway 09/27 start 200 feet beyond each runway threshold, with an internal width of 500 feet (closest to the runway threshold), and rise upward from the threshold elevation and outward for 10,000 feet at a 34:1 slope to an external width of 3,500 feet (farthest from the runway).

All personnel, materials, and/or equipment must remain clear of the approach and departure surfaces when the runway is not closed. Objects that do not penetrate these surfaces may still be obstructions to air navigation. Obstacles 25 feet or greater must be set back 1,050 feet from the thresholds. A detail in the CSPP plans establishes safe zones with a 34:1 surface based on the threshold elevation. The vehicle height may be reduced if the ground elevation increases beyond the threshold.

The departure surface is defined in accordance with AC 150/5300-13B, Section 3.6.2.1. However, the approach surface combined with the OFZ is more restrictive than the departure surface. As a result, the approach surface and OFZ govern allowable work activities and equipment heights within the vicinity of the runway.

No work will occur inside of the Runway Approach/Departure Surfaces except when the Runway has been closed by issuance of a NOTAM and marked in accordance with Section 16 above.

Table 5: Runway and Taxiway Protection Areas

Phases	Design Element	Width	Length Beyond Runway End
1 & 2	RSA	75	300
	ROFA	500	300
	ROFZ	250	200
	TSA	79*	N/A
	TOFA	124*	N/A
3 (RWY 09/27 Closed)	RSA	150	300
	ROFA	500	300
	ROFZ	400	200
	TSA	79	N/A
	TOFA	124	N/A
4 & 5	TSA	79	N/A
	TOFA	124	N/A
	TLOFA	110	N/A

* Taxiway B width may be temporarily reduced during Phase 2 and Taxilane F width may be temporarily reduced in Phase 4 but no reductions in TSA, TOFA, or TLOFA width shall occur.

Section 18. Other Limitations on Construction

Prohibitions include:

- No use of tall equipment (cranes, concrete pumps, and so on) is allowed unless a 7460-1 determination letter is issued for such equipment.
- No use of open flame welding torches is permitted unless fire safety precautions are provided and the Engineer has approved their use.
- No use of electrical blasting caps or explosives of any kind on or within 1,000 feet of the airport property.
- No use of flare pots on airport property.
- No temporary signs not approved by the airport operator.
- No grades changes that could result in unplanned effects on NAVAIDs.

Restrictions as set forth in the project construction contract, permits, and the CSPP plans appendix Sheets AC1 through AC14 include:

- Construction suspension required during specific airport operations.
- Areas that cannot be worked on simultaneously.
- Day or night construction restrictions.
- Seasonal construction restrictions.