

**PLAN OF CONSTRUCTION OPERATIONS**

**PENTICTON AIRPORT, PENTICTON, BRITISH COLUMBIA.**

**Appendix 1**

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**Plan of Construction Operations**

**PCO (OPS PLAN)**

**Runway 16-34, Taxi A, and Airside  
Roads Rehabilitation**

**Penticton Airport**

**Penticton, British Columbia**

# PLAN OF CONSTRUCTION OPERATIONS

## PENTICTON AIRPORT, PENTICTON, BRITISH COLUMBIA.

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# PLAN OF CONSTRUCTION OPERATIONS

## PENTICTON AIRPORT, PENTICTON, BRITISH COLUMBIA.

# Project Summary

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## 1 BACKGROUND

- 1.1 The intent of this project is to Rehabilitate Runway 16-34, Taxi A, and Various Airside Roads.
- 1.2 The following is a list of major work items required for the project.
  - 1.2.1 Cold milling asphalt surface of Runway 16-34, Taxi A, and Airside Roads.
  - 1.2.2 Removing full depth asphalt concrete from Runway 16-34 edges ( 6.0m each side) and small areas on airside roads.
  - 1.2.3 Common excavation of existing materials from an airside road area requiring full depth Hot Mix Asphalt Concrete.
  - 1.2.4 Compacting sub-grade of an existing airside road requiring full depth Hot Mix Asphalt concrete construction.
  - 1.2.5 Compacting sub-grade of Runway 16-34 edges (6.0m each side).
  - 1.2.6 Placing, grading, and compacting new base material on an existing airside road area requiring full depth Hot mix Asphalt Construction.
  - 1.2.7 Crack sealing, and major crack repairs.
  - 1.2.8 Placing new Hot Mix Asphalt Concrete( including Prime or Tack Coats) on Runway 16-34, Taxi A, and Airside Roads.
  - 1.2.9 Adjusting height of Runway 16-34, and Taxi A lights.
  - 1.2.10 Pavement Markings.
  - 1.2.11 Placing common fill on Runway 16-34 edges( 6.0 each side)
  - 1.2.12 Topsoil, Hydro seeding and fertilizing Runway 16-34, Taxi A, graded areas and airside roads' shoulders.

## 2 THE AIRPORT ENVIRONMENT

- 2.1 The airport operational environment is extremely dynamic and involves various stakeholders including Transport Canada, the users, airlines, Nav Canada, airport staff, and security. In addition, the airport environment is highly regulated in the interest of public safety. Therefore, any deviation from standard operating procedures are considered carefully and are subject to review and input from the stakeholders and regulators.
- 2.2 The proposed construction project is very important to Transport Canada to ensure the safe operation of the facility. The construction will temporarily impact the normal operation of the facility and will require temporary operational changes. The cooperation of all parties including the contractor will be important to successfully implement the project.

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### **3 PURPOSE OF THE PLAN OF CONSTRUCTION**

- 3.1 The Penticton Airport is a certified airport and must comply with Aerodrome Standards and Recommended Practices TP312 and a number of other regulations and standards. This Plan of Construction Operation (PCO) has been prepared based on recommended practices to accommodate temporary deviations to airport operation manual(AOM) and certification criteria to permit the proposed construction activity.
  - 3.2 The objective of the PCO is to plan the coordination required to implement the construction with a minimum of interruption and conflict with airport operations and ensure that airport security and flight safety are not compromised by the construction operations.
  - 3.3 The plan also informs all airport users, tenants, Transport Canada, Nav. Canada and air carriers about the project in order that they can plan for the potential implications on their operations.
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# Construction Staging and Schedule

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## 1 GENERAL

- 1.1 The project is scheduled to commence on 03 July, 2014, tentative to contractor mobilization, and should be completed approximately by 30 September 2014.
- 1.2 Runway 16-34 construction will be done only at night, and it will be opened completely during the day. The night shift hours for construction of Runway 16-34 will be 10:00 PM every night to 06:00 AM next morning. The Runway 16-34, Taxiways A,B,C,D, and Apron will be closed completely from 10:00 PM to 06:00 A.M. by issuing NOTAM(**Hard Closure**) and no air traffic will be accommodated during this period. The night runway work will include any Taxiways construction up to hold lines. The "**Hard Closure**" NOTAM will be issued by the APM (Airport Manager) for the duration of the project prior to project commencement and well in advance of construction. NO changes will be permitted to the NOTAM without the APM approval.
  - 1.2.1 For Runway work, every night, prior to construction crew access to closed Airport areas at 22:00 hours, the APM or delegate will confirm with local FSS that the airport is now closed at 22:00 hours and will then advise the PWGSC - Project manager that access to closed area can commence.
  - 1.2.2 For Runway work, every morning prior to 06:00 airport opening ,the PWGSC - Project manager will confirm to the APM or delegate that the new constructed area is serviceable, all Runway, Taxiways, and Apron edge lights, and navigational systems are operational and safe for aircraft traffic and operations. All surfaces will be hard finished with no gravel areas permitted. The APM or delegate will conduct an immediate runway inspection for visual FOD or any noticeable safety issues or concerns and then confirm with FSS that the Airport is now open.
- 1.3 Taxi A and airside roads construction will be done during day time core hours. Each phase of Taxi A construction area will be closed via NOTAM issued by the APM for the duration of the construction. The NOTAM will be issued prior to and well in advance of construction.
  - 1.3.1 All access to daily taxiway closure areas will be directly via ground side roads. PWGSC - Project manager will control groundside access. No access to airside restricted areas outside closed areas will be permitted without approval by APM and qualified escort.
  - 1.3.2 For Taxi A, for each construction stage work, prior to opening the newly constructed area, the PWGSC - Project manager will confirm to the APM or delegate that the newly constructed area is serviceable, all Taxiway A edge lights are operational and safe for aircraft traffic and operations. All surfaces will be hard finished with no gravel areas permitted. The APM or delegate will conduct an immediate inspection for visual FOD or any noticeable safety issues or concerns and then confirm with FSS that the newly constructed area is now open.

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- 1.4 During the project construction, all runway and taxiway closures to aircraft movements will be kept to a minimum.
- 1.5 Core hours for construction will be the hours of 08:00 to 16:00 local time, Monday to Friday, excluding holidays. Any work undertaken outside of these core hours must be coordinated through the PWGSC Project Manager and with the approval of Penticton Airport Manager.
- 1.6 The following is the recommended construction methodology and staging. Note that runway 16-34 restoration is the first priority and all asphalt work on runway 16-34, and Taxiway A will be done before any asphalt paving of any roads. The closed portions of the facilities will be marked appropriately with signs, barricades, and lights in Accordance with TP312 requirements.
- 1.7 The construction equipment and contractor's employee access to various stages work areas will be as shown on drawing C01.
- 1.8 The proposed rehabilitation work will be carried out through the following stages. See Drawing C01 for various stages' work areas.
  - 1.8.1 Stage 1 - Rehabilitation of Runway 16-34 including Taxi A area from the Runway edge to hold-line.,
  - 1.8.2 Stage 2 - Rehabilitation of Taxiway A from Station 10+075 to Station 10+370, Service Road, and Silverdart Road.
  - 1.8.3 Stage 3 - Rehabilitation of Taxiway A from Station 10+ 370 to 10+635.50, and Dakota Av.1, and Dakota 2 Road.
- 1.9 For all Runway 16-34 construction work at night , lockout and turn off power to all Runway 16-34 and Taxiway B, C, and D lighting systems ( see Drawing E01). Keep Taxi A lights on from Station 10+075(Hold Line) to Station 10+653.50. Every morning, unlock and turn on Runway 16-34 and Taxiway B, C, and D lighting systems ( see Drawing E01).
- 1.10 For all Taxiway A construction work phases isolate, disconnect and lockout power to all lighting system within the closed portions of the Taxiway A to keep closed portion lights off (see Drawing E01). Keep Runway 16-34, Taxi B,C,D, and the remaining portions of Taxiway A lights on.

## **2 STAGE 1- REHABILITATION OF RUNWAY 16-34 INCLUDING TAXI A AREA FROM THE RUNWAY EDGE TO HOLD-LINE(10+075).**

- 2.1 Taxiways A, B, C, D, Airside Apron, and Runway 16-34 will be closed during night construction. Lit barriers will be placed at all intersections of taxiways to runway 16-34 during the night construction work and removed every morning. The lit barriers will be in accordance with TP 312 requirements.

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- 2.2 The night shift hours for construction of Runway 16-34 will be 10:00 PM every night to 06:00 AM next morning. The Runway 16-34 will be closed completely during these hours. No air traffic will be accommodated.
- 2.3 All of the runway edge asphalt removal areas will be filled and graded same night, no holes or lips will be left.
- 2.4 Every morning, the new constructed higher surface will be transitioned to existing lower surface using Hot Mix Asphalt Concrete (or Cold mix asphalt in case of emergency e.g. Hot mix plan breakdown) as shown in detail 01 Drawing C02. In case of asphalt plant breakdown or other reasons milled surface is not paved, the aircrafts will need to use milled surface. Airport Manager will be informed immediately for such rare situation.
- 2.5 Every morning, apply temporary Runway Centre line Pavement Paint Marking on the paved area. The centre line to be in accordance with TP312 and SD-701. Use same paint material as for permanent pavement marking.
- 2.6 Every morning Airport Manager, contractor and PWGSC Departmental representative will inspect the work area and ensure that there is no loose material, tool, or equipment on the runway, and the runway edge lights are working.
- 2.7 Declared Distances: Declared Distances for Runway 16-34.
  - 2.7.1 The Runway 16-34 will be completely closed during the night construction time. During day time from 06:00 A.M. to 10:00 P.M. the declared distances will be as published in pilot book.

### **3 STAGE 2 - REHABILITATION OF TAXIWAY A FROM STATION 10+075 TO STATION 10+370, SERVICE ROAD, AND SILVERDART ROAD.**

- 3.1 Taxi A and airside roads construction will be done during day time core hours.
- 3.2 Close and construct Taxiway 'A' from Station 10+075 to Station 10+370, Service Road, and Silverdart Road. The barriers will be in accordance with TP 312 requirements.
- 3.3 Keep Runway 16-34, Taxiway A from Station 10+370 to Station 10+653.50, and Taxiways B, C, and D open to air traffic.
- 3.4 Keep Access to all airside roads open, except roads connecting to area under construction.
- 3.5 Keep closures to aircraft movements from Taxi A to Silverdart road to maximum 3 days.
- 3.6 Declared Distances: Declared Distances for Runway 16-34.
  - 3.6.1 The declared distances will be as published in pilot book.

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3.6.2

### **4 STAGE 3 - REHABILITATION OF TAXIWAY A FROM STATION 10+ 370 TO 10+653.50, DAKOTA AV.1, AND DAKOTA 2 ROAD.**

- 4.1 Taxi A and airside roads construction will be done during day time core hours.
- 4.2 Close and construct Taxiway 'A" from Station 10+370 to Station 10+653.50, Dakota Av.1, and Dakota2 Road. The barriers will be in accordance with TP 312 requirements.
- 4.3 Keep Runway 16-34; Taxiway A from Station 10+000 to Station 10+370 and Taxiways B,C, and D open to air traffic.
- 4.4 Keep Access to all airside roads open, except roads connecting to area under construction.
- 4.5 Keep closures to aircraft movements from Taxi A to Dakota Av.1, and Dakota 2 road to maximum 3 days.
- 4.6 Declared Distances: Declared Distances for Runway 16-34.
  - 4.6.1 The declared distances will be as published in pilot book.

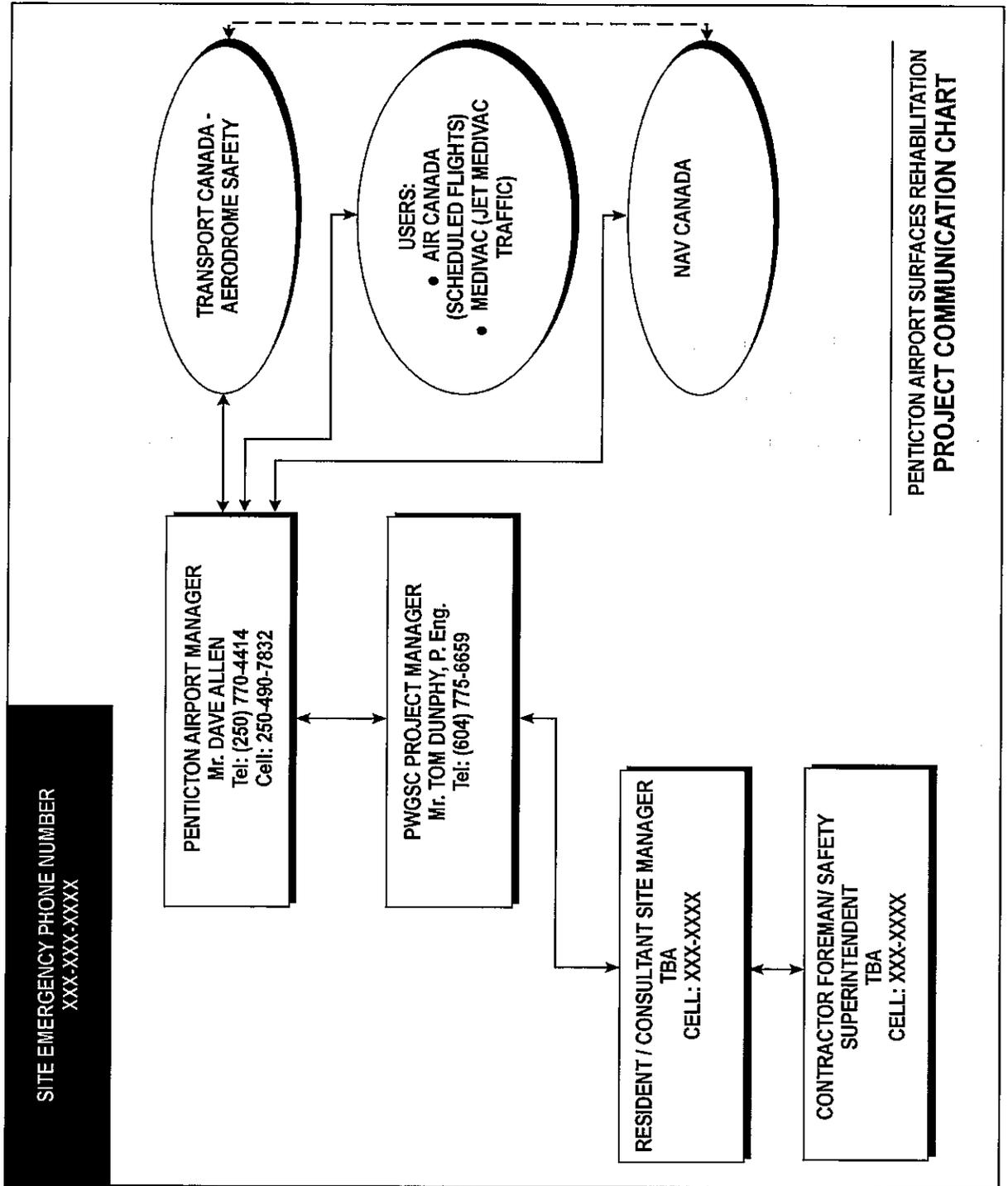
## Airport Operations and Procedures

### **1 COORDINATION OF WORK**

- 1.1 The Contractor will liaise directly with the Public Works Government Services Canada Project Manager or his designate. The PWGSC Project Manager is Tom Dunphy. Ph: 1 604 775 6659.
- 1.2 Penticton Airport is a Transport Canada airport and requires specific procedures for communicating with airport users and tenants. The Penticton Airport Manager will liaise with airport users and tenants and with PWGSC Project Manager. The Penticton Airport Manager is Mr. Dave Allen and may be contacted at Ph: 1 250 770 4414 or Cell: 1 250- 490 7832.
- 1.3 Also see Project Communication Chart next page.

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### 2 AIRCRAFT OPERATIONS

- 2.1 Time schedules indicating any construction activity affecting the runway or taxiway availability will be provided by the PWGSC Project Manager to the Penticton Airport Manager, who will provide this information to the airline operators. Cooperation with airlines will be maintained to permit scheduled service to the maximum extent possible. Under emergency situations, contractor will move all personnel and equipment to pre-designated staging area. Major airlines operating scheduled flights has been briefed by Airport Manager and have agreed to construction schedule and staging.

### 3 AIRFIELD OPERATIONS

- 3.1 The Drawing C01 shows construction equipment access for various construction stages. This is intended to minimize disruption of the airport operation. These routes may be updated, as required, in future meetings. Site operational requirements **WILL** take precedence.
- 3.2 Where existing access roads are to be used, the Contractor is required to maintain these roads in existing condition. Flag persons will be provided by the Contractor to control movements through any security gate which is left open for the convenience of the Contractor for hauling materials to and from the site. The contractor will be responsible to lock these gates during non working hours. The Penticton Airport Manager shall have discretion in this matter.

### 4 OPERATIONAL RESTRICTIONS

- 4.1 The Contractor's supply vehicles will not be permitted on airside service roads except as indicated on drawing C01. A staging area for the Contractor's supply vehicles will be determined by the Project Manager to the satisfaction of the Penticton Airport Manager.
- 4.2 Employee parking will be provided on site at no charge. The location for parking of the Contractor's employee and construction vehicles will be designated by the Project Manager to the satisfaction of the Penticton Airport Manager.
- 4.3 Any impacts or restrictions on aircraft taxiing or parking operation will be kept to a minimum.

### 5 WORK RESTRICTIONS

- 5.1 Fire and Safety

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- 5.1.1 All safety and fire standards of Transport Canada, Labor Canada, the Province of British Columbia, and all other authorities having jurisdiction must be met at all times. The Contractor's supervisor or escort personnel are to be briefed on airport safety regulations, common terminology, and general airport operating procedures by the Penticton Airport Manager.
- 5.1.2 The Contractor's supervisor is responsible to provide the site representative (Penticton Airport Manager) with Material Safety Data Sheets (MSDS) for all materials which require the Workplace Hazardous Materials Information Systems (WHMIS) labels.
- 5.1.3 The Penticton Airport Manager shall have the exclusive right to disallow any of the Contractor's personnel on to the construction site if it is found that any unsafe practices are observed and appropriate warnings and instructions are not followed.
- 5.1.4 The Penticton Airport Manager is to be contacted immediately should there be any operational or environmental incidents or accidents.

### 5.2 Vehicle Operation

- 5.2.1 Access to unrestricted area will be controlled by the PWGSC project manager and contractor. No access will be permitted to the airport's restricted aircraft operating areas when the airport is not closed. Any access, if required, beyond the established closure times will be requested by the PWGSC Project Manager in advance and approved by the APM. All access of this nature will require an approved airport escort.
- 5.2.2 All vehicles operating on airport property must do so in a safe fashion, in accordance with posted signs, traffic regulations and established airport operating procedure. Due consideration must be given to airport related vehicles, aircraft and pedestrian traffic. Maximum equipment height is restricted to 5.0 m. Any equipment, fence, and materials shall be below 40 to 1 ratio from ends of the Runway strip and below 7 to 1 ratio from sides of the runway strip. Mark tops with red lights as directed by Engineer.
- 5.2.3 All vehicles to be operated on airport maneuvering areas must be equipped with a two-way radio for communication, 360 degree rotating beacon, and valid Identification ID (e.g. drivers license).
- 5.2.4 All persons entering airside will need a valid ID. Vehicles and personnel not meeting these requirements must be escorted by authorized vehicles and personnel.
- 5.2.5

### 5.3 Security

- 5.3.1 All airport security will remain in effect throughout the construction project. All of the Contractor's staff will be required to adhere to security procedures as identified by the Penticton Airport Manager. The Penticton Airport Manager is to be supplied with a list of all the Contractor's personnel and vehicles to be working on airside.

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### 5.4 Potential Foreign Object Damage

- 5.4.1 It is operationally critical that all potential foreign object damage (FOD) be removed from active aircraft operational areas and safety areas. Materials and debris which can be tracked or blown on to the airfield areas can pose a risk to aircraft safety. Removal of potential FOD is a primary responsibility of the Contractor and will be closely monitored to ensure compliance. Use power sweepers to clean and loose materials from the pavement surface. Appropriate waste containers must be supplied and used to contain the debris and emptied on a regular basis. All clean-up must be to the satisfaction of the Project Manager and the Penticton Airport Manager. Failure of the Contractor to perform this requirement will result in the Penticton Airport Manager initiating the required clean-up and all costs incurred by the Penticton Airport Manager will be recovered from the Contractor.

### 5.5 Contractor Compounds

- 5.5.1 The Contractor will establish a material and equipment storage compound area outside of the restricted airport operating areas with no access to restricted areas when airport is not closed. No equipment or material will be stored outside of this storage compound area. The Contractor will arrange for an appropriate designated storage compound, and employee parking area with the approval of the Penticton Airport Manager. All Contractor equipment is to be fully secured if stored within the compound site while not in use or after hours. All hazardous products must be stored according to provincial regulatory requirements.
- 5.5.2 All contents of storage areas will be made known to the site representative to ensure precautions that may need to be taken are addressed.
- 5.5.3 The final decision concerning any storage area location lies with the Penticton Airport Manager.

## **6 COMMUNICATIONS/NAVIGATION**

- 6.1 All construction activity and airport disruptions will be NOTAMed (Notice To Airmen) by the Penticton Airport Manager in advance to minimize disruption to aircraft. All NOTAMs and construction procedures will be clearly understood between PWGSC, Transport Canada and the Contractor. All electronic navigational equipment will remain operational and available during published operating hours. All NOTAMs will be issued by the Penticton Airport Manager.
- 6.2 NOTAM Action
  - 6.2.1 The first NOTAM will be required 7 days prior to commencement of construction. For any further NOTAM change, contractor will provide minimum 48 hours notice.

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### **7 MEDIA**

The official Programs Group media spokesperson for this project is Mr. Rod Nelson, Ph: 1-604-666-1675.

### **8 INSPECTIONS**

- 8.1 All formal inspections will be coordinated by the PWGSC Project Manager with the Programs Group Site Representative or designate as a member of all interim and final acceptance inspections. Inspections by a Programs Group Site Representative may be undertaken at any time.
- 8.2 All projects being implemented on airport property are subject to inspection by the site representative at any time. Any resulting issues will be resolved between the Contractor and the Project Manager.

### **9 CONTRACTOR LIABILITY**

- 9.1 Any damage to airfield systems or equipment directly resulting from the Contractor's actions will be corrected immediately by the Contractor under the direct supervision of the PWGSC, Project Manager and to Transport Canada's satisfaction. These costs shall be the Contractor's responsibility, should it be a result of the Contractor's negligence. The Contractor will be responsible to rectify any environmental damage resulting from their works or operations.

### **10 CONSTRUCTION MEETINGS**

- 10.1 Site meetings between the PWGSC Project Manager, Contractor and the Penticton Airport Manager will be arranged on a weekly basis to review project progress and upcoming work.

### **11 REMOVAL AND SALVAGE OF MATERIAL**

- 11.1 Milled asphalt will be disposed off of site.. All materials which are considered non-recyclable will be removed from the airport property and be disposed of in a dump site arranged for by the Contractor with the Town of Penticton. All waste and waste products must be disposed of according to provincial regulatory requirements.
- 11.2 Reusable material will be placed in an area designated by the Project Manager to the satisfaction of the Penticton Airport Manager.
- 11.3 Arrangements for disposal of any contaminated material will be the responsibility of the Contractor, in accordance with direction from the Town of Penticton.

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### **12 SITE CONDITIONS**

- 12.1 Upon completion of the project, the Contractor will be responsible for returning the area to its pre-project condition to the satisfaction of the Penticton Airport Manager or his designate. This will include repairing any roadway damage or fencing damage caused by the contractor during project implementation as well as the clean-up and removal of all debris and garbage.

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## PENTICTON AIRPORT, PENTICTON, BRITISH COLUMBIA.

### Sign Off Sheet

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Stakeholders	Signature	Date
<b>TC Project Leader</b> Name: Wayne Marston Ph: 604 666 5459		
<b>TC Programs Implementation Manager.</b> Name: TBA		
<b>Airport Manager</b> Name: Dave Allen Ph: 1 250 770 4414 Cell: 250- 902-9080		
<b>PWGSC Project Manager</b> Name : Tom Dunphy Ph: 1 604 775 6659		
<b>Grant Youngson.</b> Civil Aviation Safety Inspector, Flight Operations. Ph: 1 604 666 8333		