

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
Bid Receiving Public Works and Government  
Services Canada/Réception des soumissions Travaux  
publics et Services gouvernementaux Canada  
800 Burrard Street, 12th floor  
800, rue Burrard, 12e étage  
Vancouver  
British Columbia  
V6Z 2V8  
Bid Fax: (604) 775-9381

**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

**Vendor/Firm Name and Address**  
**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**  
Public Works and Government Services Canada -  
Pacific Region  
800 Burrard Street, 12th floor  
800, rue Burrard, 12e étage  
Vancouver  
British C  
V6Z 2V8

<b>Title - Sujet</b> Airport Erosion Protection	
<b>Solicitation No. - N° de l'invitation</b> EZ899-130257/A	<b>Amendment No. - N° modif.</b> 002
<b>Client Reference No. - N° de référence du client</b>	<b>Date</b> 2012-06-07
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$PWY-019-6694	
<b>File No. - N° de dossier</b> PWY-2-35034 (019)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2012-06-15</b>	<b>Time Zone</b> Fuseau horaire Pacific Daylight Saving Time PDT
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Ngan, Ken (PWY)	<b>Buyer Id - Id de l'acheteur</b> pwy019
<b>Telephone No. - N° de téléphone</b> (604) 658-2755 ( )	<b>FAX No. - N° de FAX</b> (604) 775-6633
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> TC - Sandspit Airport - Sandspit, B.C.	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm (type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

Solicitation No. - N° de l'invitation

EZ899-130257/A

Client Ref. No. - N° de réf. du client

Amd. No. - N° de la modif.

002

File No. - N° du dossier

PWY-2-35034

Buyer ID - Id de l'acheteur

pw019

CCC No./N° CCC - FMS No/ N° VME

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**Les documents français seront disponibles sur demande.**

Please find Addendum #1 attached.

All other terms and conditions remain unchanged.

Airport Erosion Protection  
Sandspit, B.C.  
Project No.: R.048882.001

**Addendum No. 1**  
**June 7, 2012**

The following changes in the tender documents are effective immediately. This addendum will form part of the contract documents.

**Specifications:**

1. Replace Section 01 35 13 Special Procedures: Airports in Use with the attached;  
Section 01 35 13 Special Procedures: Airports in Use (Addendum 1 Revisions)
2. Appendix B - Plan of Construction Operations
3. Sandspit Airport (YZP) Tide Periods above 4 meters - the cyan is the time tides are higher than 4 meters.
4. Sandspit Airport (YZP) Scheduled Flights.

----- End of Addendum No. 1 -----

**PART 1 GENERAL**

**1.1 General and Scheduling**

- .1 Do not disrupt airport operations except as allowed by previous coordination with Departmental Representative and Sandspit Airport.
- .2 Throughout the period of the work, the airport will remain open and fully operational. Construction operations must accommodate all planned and unplanned airport operations.
- .3 Construction operations may proceed up to seven (7) days per week and at anytime of day or night, as scheduled by the Contractor to most efficiently take advantage of tides and scheduled flights.
- .4 Exact construction dates and times to be coordinated between Contractor, Departmental Representative, and Sandspit Airport prior to commencement of construction operations.
- .5 Do not disrupt airport operations except as coordinated with Departmental Representative and scheduled into construction sequence.

**1.2 Scheduled Flights**

- .1 A compilation of scheduled flights during the period of June 18<sup>th</sup> to September 15<sup>th</sup>, 2012 is attached to the end of this specification.

**1.3 Coordination of Movements in Operational Area**

- .1 Brief Departmental Representative no later than 1600 hours every day on next day's planned work and proposed construction equipment and vehicular traffic activities prior to starting work in area adjacent to or on active aerodrome facilities.

**1.4 Airside Escort Requirements**

- .1 Contractor to provide a full-time Airside Escort during all work on Sandspit Airport property.
- .2 Airside Escort to complete training by Sandspit Airport prior to beginning operations.
- .3 Airside Escort to obtain the following certificates and permits prior to beginning operations:
  - .1 Restricted Radio Operator's Certificate (Aeronautical)
  - .2 Airside and Vehicle Operators' Permit obtainable through training by Sandspit Airport.
- .4 Radios must be mounted in Airside Escort's vehicle. The

radios will be provided by Sandspit Airport.

1.5 Flight Safety

- .1 Prior to allowing personnel to cross active runways, taxiways, aprons, or when working within 60 meters of an active facility, Airside Escort to establish contact with Flight Service Station (FSS) and obtain specific clearance. Once established on airfield, maintain radio contact with Sandspit Airport at all times.
- .2 Vehicles and equipment used on the airfield must be equipped with 360 degree rotating amber beacons, or must be escorted by a vehicle equipped with such a beacon. Escorted vehicle must have 4-way emergency flashers on.
- .3 Foreign Object Debris (FOD) control protocol will be strictly enforced by the Site Representative at all times in the construction and operational area.
- .4 Contractor to maintain cleaning equipment at the construction site for FOD control and cleanup of all runway, taxiway, and apron operational surfaces affected by construction activities. Site FOD inspections and sweeps are to be conducted at the end of each working day, prior to evacuating the site, or any time when FOD objects originating from construction activities are noticed to be present on restricted areas.

1.6 Construction Equipment

- .1 All power tools, internal combustion engines, and equipment used for work on this project to be equipped with suppressors to eliminate interference with airfield radio and telecommunications equipment.

1.7 Movement of Equipment and Personnel on Airport Property

- .1 Airside Escort to coordinate, schedule, and control all construction equipment movements.
- .2 Obey signals from Flight Service Station instantly.

1.8 Evacuation

- .1 When evacuating site, the Contractor is to follow Flight Safety Procedures in Section 1.5, turn off all site construction lighting, and remove all equipment and material to an elevation below site requirements. Evacuation may be either along the access route to a location outside the flight glide path, or to the beach, with all equipment, material and personnel outside the runway lines and below the elevation of 5.1 meters.
- .2 The Contractor is to evacuate the work site within thirty (30)

minutes of a request by Airport Authorities.

- .3 Contractor is to evacuate the site for all scheduled flights. Evacuation time to be 20 minutes prior to flight landing or takeoff, and 5 minutes following. All delayed flights in which notification and updated schedule is provided to the Contractor one hour or more before the scheduled takeoff or arrival will not be considered an unscheduled stoppage of work.
- .4 **Unscheduled Stoppage of Work:**
  - .1 May occur as a result of observance by the Contractor of airport operational requirements for unscheduled flights or emergencies. When unscheduled stoppages exceed one hour in aggregate in any one day, the Contract Sum will be increased by the amount of any direct expense incurred by the Contractor, as reviewed by the Departmental Representative, for the aggregate period (including the first hour) in respect of plant and labour rendered idle and not employable on the site. No payment will be admitted in respect of any other consequential costs, losses or expenses.
  - .2 Submission for reimbursement of such expenses must be supported by detailed and duly authenticated records prepared by the Contractor, which must be countersigned by the Departmental Representative. The Site Representative must be notified at the commencement and on cessation of each period of work stoppage admissible under this Clause.
  - .3 No claim will be entertained where such stoppage does not exceed one hour in aggregate each day.

1.9 **Specific Site Requirements**

- .1 When work is to be done within restricted area after normal working hours, provide Departmental Representative with minimum 24 hours notice of area and times.
- .2 Contractor's vehicles will be removed from the construction site when not actually in use. If Contractor's vehicles are left at the airport, they are to be stored in a location coordinated with and directed by Departmental Representative.
- .3 Operators of the vehicles to be guided by requirements of the Transport Canada Manual of Airport Traffic Directive for the Operation of Vehicles on Airport Movement Areas, a copy of which will be supplied to the Contractor prior to construction startup.
- .4 The Contractor's employees and equipment that are authorized to enter the security area will be restricted to the designated

work area unless escorted by Airside Escort.

- .5 Any Contractor employee found outside of the work site without authorization will have his security pass revoked and will no longer be allowed within the security area.

1.10 Staging/Storage/Stockpile Areas

- .1 Security of any and all materials in storage or staging areas will be the sole responsibility of the Contractor.
- .2 No construction equipment storage or material stockpiling is allowed onsite.

1.11 Deliveries

- .1 Any delivery vehicle required to encroach on aircraft movement/maneuvering areas not closed to aircraft traffic, must comply with requirements of this Section.
- .2 Contractor to provide Airside Escort for all entrance to and movements on Sandspit Airport.

1.12 Haul Routes

- .1 The costs of construction, maintenance, and dust control of all haul routes will be incidental to the Work.
- .2 The Departmental Representative will identify the haul routes on Sandspit Airport. All Contractor's vehicles must follow the haul routes.
- .3 The Contractor will be responsible to ensure all personnel are familiar with the haul routes prior to use.
- .4 Vehicles and drivers not following designated haul routes will be removed and permanently barred from the site.
- .5 Maintain haul routes in good condition at all times during construction. Provide dust control as directed by Departmental Representative.
- .6 Any mud or debris tracked onto the active aircraft operating surface by construction activities to be immediately removed so as not to present a hazard to aircraft operations. No construction machinery use is anticipated to be needed on any aircraft operating surfaces.
- .7 The use of calcium chloride for dust control is not permitted on the airport property.
- .8 The Contractor is responsible to restore all haul routes to the conditions which existed prior to construction to the satisfaction of the Departmental Representative, upon completion of the work.

Transport Canada Airport (YZP) Erosion Protection  
Sandspit, B.C.  
Project No.: R.048882.001

**01 35 13**  
**SPECIAL PROCEDURES: AIRPORTS IN USE**  
**(ADDENDUM 1 REVISIONS)**

Page 5 of 5

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**PART 2 PRODUCTS**

Not used

**PART 3 EXECUTION**

Not used

**-END OF SECTION-**



## Sandspit Airport (YZP) Scheduled Flights

Date	Day	8:00 AM	9:00 AM	9:28 AM	9:50 AM	10:00 AM	11:00 AM	12:00 PM	12:30 PM	1:00 PM	2:00 PM	3:04 PM	3:25 PM	4:00 PM
18-Jun-12	Monday								COA Dep YZP			AC Arr YZP	AC Dep YZP	
19-Jun-12	Tuesday		COA Arr YZP					AN Arr/Dep HA Arr/Dep	AN Arr/Dep HA Arr/Dep			AC Arr YZP	AC Dep YZP	
20-Jun-12	Wednesday											AC Arr YZP	AC Dep YZP	
21-Jun-12	Thursday											AC Arr YZP	AC Dep YZP	
22-Jun-12	Friday											AC Arr YZP	AC Dep YZP	
23-Jun-12	Saturday											AC Arr YZP	AC Dep YZP	
24-Jun-12	Sunday											AC Arr YZP	AC Dep YZP	
25-Jun-12	Monday		COA Arr YZP					AN Arr/Dep	COA Dep YZP AN Arr/Dep			AC Arr YZP	AC Dep YZP	
26-Jun-12	Tuesday											AC Arr YZP	AC Dep YZP	
27-Jun-12	Wednesday		COA Arr YZP					AN Arr/Dep	COA Dep YZP AN Arr/Dep			AC Arr YZP	AC Dep YZP	
28-Jun-12	Thursday											AC Arr YZP	AC Dep YZP	
29-Jun-12	Friday											AC Arr YZP	AC Dep YZP	
30-Jun-12	Saturday		COA Arr YZP									AC Arr YZP	AC Dep YZP	
01-Jul-12	Sunday							AN Arr/Dep	COA Dep YZP AN Arr/Dep			AC Arr YZP	AC Dep YZP	
02-Jul-12	Monday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
03-Jul-12	Tuesday		COA Arr YZP	AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
04-Jul-12	Wednesday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	COA Dep YZP AN Arr/Dep			AC Arr YZP	AC Dep YZP	
05-Jul-12	Thursday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
06-Jul-12	Friday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
07-Jul-12	Saturday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
08-Jul-12	Sunday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
09-Jul-12	Monday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
10-Jul-12	Tuesday		COA Arr YZP	AC Arr YZP	AC Dep YZP			AN Arr/Dep	COA Dep YZP AN Arr/Dep			AC Arr YZP	AC Dep YZP	
11-Jul-12	Wednesday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
12-Jul-12	Thursday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
13-Jul-12	Friday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
14-Jul-12	Saturday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
15-Jul-12	Sunday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
16-Jul-12	Monday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
17-Jul-12	Tuesday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
18-Jul-12	Wednesday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
19-Jul-12	Thursday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
20-Jul-12	Friday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
21-Jul-12	Saturday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
22-Jul-12	Sunday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
23-Jul-12	Monday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
24-Jul-12	Tuesday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
25-Jul-12	Wednesday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
26-Jul-12	Thursday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
27-Jul-12	Friday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
28-Jul-12	Saturday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
29-Jul-12	Sunday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
30-Jul-12	Monday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
31-Jul-12	Tuesday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
01-Aug-12	Wednesday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
02-Aug-12	Thursday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
03-Aug-12	Friday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
04-Aug-12	Saturday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
05-Aug-12	Sunday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	

## Sandspit Airport (YZP) Scheduled Flights

Date	Day	8:00 AM	9:00 AM	9:28 AM	9:50 AM	10:00 AM	11:00 AM	12:00 PM	12:30 PM	1:00 PM	2:00 PM	3:04 PM	3:25 PM	4:00 PM
06-Aug-12	Monday		AC Arr YZP	AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
07-Aug-12	Tuesday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
08-Aug-12	Wednesday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
09-Aug-12	Thursday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
10-Aug-12	Friday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
11-Aug-12	Saturday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
12-Aug-12	Sunday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
13-Aug-12	Monday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
14-Aug-12	Tuesday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
15-Aug-12	Wednesday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
16-Aug-12	Thursday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
17-Aug-12	Friday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
18-Aug-12	Saturday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
19-Aug-12	Sunday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
20-Aug-12	Monday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
21-Aug-12	Tuesday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
22-Aug-12	Wednesday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
23-Aug-12	Thursday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
24-Aug-12	Friday			AC Arr YZP	AC Dep YZP							AC Arr YZP	AC Dep YZP	
25-Aug-12	Saturday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
26-Aug-12	Sunday			AC Arr YZP	AC Dep YZP			AN Arr/Dep				AC Arr YZP	AC Dep YZP	
27-Aug-12	Monday			AC Arr YZP	AC Dep YZP			HA Arr	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
28-Aug-12	Tuesday		COA Arr YZP	AC Arr YZP	AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
29-Aug-12	Wednesday			AC Arr YZP	AC Dep YZP			AN Arr/Dep	AN Arr/Dep			AC Arr YZP	AC Dep YZP	
30-Aug-12	Thursday			AC Arr YZP	AC Dep YZP			HA Arr/Dep	HA Arr/Dep			AC Arr YZP	AC Dep YZP	
31-Aug-12	Friday											AC Arr YZP	AC Dep YZP	
01-Sep-12	Saturday		COA Arr YZP		AC Dep YZP				COA Dep YZP			AC Arr YZP	AC Dep YZP	
02-Sep-12	Sunday							AN Dep				AC Arr YZP	AC Dep YZP	
03-Sep-12	Monday							HA Dep				AC Arr YZP	AC Dep YZP	
04-Sep-12	Tuesday											AC Arr YZP	AC Dep YZP	
05-Sep-12	Wednesday											AC Arr YZP	AC Dep YZP	
06-Sep-12	Thursday											AC Arr YZP	AC Dep YZP	
07-Sep-12	Friday											AC Arr YZP	AC Dep YZP	
08-Sep-12	Saturday											AC Arr YZP	AC Dep YZP	
09-Sep-12	Sunday											AC Arr YZP	AC Dep YZP	
10-Sep-12	Monday											AC Arr YZP	AC Dep YZP	
11-Sep-12	Tuesday											AC Arr YZP	AC Dep YZP	
12-Sep-12	Wednesday											AC Arr YZP	AC Dep YZP	
13-Sep-12	Thursday											AC Arr YZP	AC Dep YZP	
14-Sep-12	Friday											AC Arr YZP	AC Dep YZP	
15-Sep-12	Saturday											AC Arr YZP	AC Dep YZP	

AC Air Canada  
COA Charlotte Queen Adventures  
AN Air North  
HA Hawk Air

GATE 1



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# Transport Canada Airport (YZP)

## Erosion Protection

### Sandspit, BC

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## Plan of Construction Operations

Prepared for:  
Public Works and Government Services Canada

Prepared by:  
Charles Ramos, P.Eng.  
Herold Engineering Limited  
3701 Shenton Road  
Nanaimo, BC V9S 3J4  
Tel: 250-751-8558  
Fax: 250-751-8559

June, 2012



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Figure 1    Project Communication Chart

### APPENDICES

Appendix A    Design Drawings

# **1 Introduction**

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## **1.1 Background**

Wave and tidal erosion is a continuing issue at the northwest end of runway 12-30. A protective berm was recently removed from this area in order to meet aerodrome elevation standards, resulting in greater wave overtopping. To ensure the edge of bank remains stable, Transport Canada is proposing to stabilize the bank with protective rock armour.

The scope of work associated with the construction includes construction of a protective bank revetment along approximately 185 lineal meters of bank, and involving the following construction items:

- Excavation of the existing bank to design grades
- Installation of geotextile fabric
- Installation of underlayer material
- Installation of protective armour
- Installation of a protective rock mattress extending 15 meters inland of the top of bank
- Restoration of disturbed areas at completion of construction.

## **1.2 The Airport Environment**

The airport environment is dynamic and involves various stakeholders, including Transport Canada, the users, airlines, Nav Canada, the operator, airport staff, security, etc. The airport environment is highly regulated in the interest of public safety, and as such, any deviations from standard operating procedure are carefully considered and subject to detailed review and input from the stakeholders and regulators.

This construction project is very important to Sandspit Airport in order to ensure the stability and continued usage of runway 12-30. It is expected that construction will impact normal operation of the facility and will require temporary operational changes. The cooperation of all parties, including the Contractor, will be paramount in the success of this project.

## **1.3 Purpose of the Plan of Construction**

The primary purpose of the Plan of Construction Operations (PCO) is to provide a notification of deviation from the certification standards and the Aerodrome Operations Manual (AOM) for the Sandspit Airport. The PCO is a statement of the approved operational procedures to be employed to maintain the certification criteria of the airport during the implementation of the construction project planned for 2012. Airport Management will be required to file this PCO with the AOM while the project is in progress.

The secondary purpose of the Plan of Construction Operations (PCO) is to formulate, in advance, the coordination required to implement this construction project with a minimum of interruptions and conflict with airport

operations and ensure that airport security and flight safety are not compromised by the construction operations.

The third purpose of the plan is to inform all airport users, tenants, Transport Canada, Nav Canada and air carriers of the project, so that they may appreciate and plan for the project's potential implications to their operations. Further, the PCO is important to summarize the information gathered through consultation with the stakeholders.

## **2 Construction Operations Plan and Schedule**

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### **2.1 Scope of Work and Scheduling**

This section is intended to outline the proposed construction operations and planned schedule for the work. Appendix A contains design drawings providing a graphical description of the work. The drawings contained in Appendix A include:

C01 Title Page  
C02 Spit Point Revetment Plan and Typical Section  
C03 Cross Sections, 0+000 to 0+110  
C04 Cross Sections, 0+000 to 0+110  
Site Drawing C-1 by Hay and Company Consultants Inc. handlettered "Access Route".

Construction shall proceed up to seven (7) days a week and at anytime of day or night throughout the dates of **June 22 and September 7, 2012**, as scheduled to most efficiently work with tides and scheduled flights. The exact construction dates and times will be confirmed through coordination between the Departmental Representative, Contractor, and Sandspit Airport prior to the commencement of construction activities.

No work hours have been stipulated in the contract for this work as it is highly tide dependent, and flexibility with timing is necessary. Expected work hours will be determined following contract award. The onsite construction is expected to take up to 30 days.

**All local Emergency Services in Sandspit, including Medevac operations, to be advised of the upcoming construction work and approximate durations as the Contractor may require time to clear the runway area if work is proceeding during a time with no scheduled flights.**

Airline schedule and permitted working times to be confirmed prior to construction.

### **2.2 Revetment Construction**

Work to include all items noted in Section 1.1. During the course of the work, the following will be in effect:



### Construction

- Construction to take place at most favorable hours, as determined in coordination with Sandspit Airport and taking into account scheduled flights and tide levels.
- Contractor will be required to sweep all pavement areas abutting the working area prior to the leaving the site and prior to any flights.
- Access to the construction area to be via the access route through Gate 1 and along existing access track paralleling the fence as shown in Appendix A. Keys for the lock on Gate 1 will be provided to the Contractor by Sandspit Airport following the Contractor's completion of airside training and acquiring of all required permits.

## **2.3 Construction Access Roads**

Construction access roads are proposed for the project as shown on drawings contained within Appendix A. The access road takes advantage of existing traveled areas at the airport.

The Contractor will be required to restore the existing access road to pre-construction conditions upon completion of the project.

The Contractor will coordinate with the Sandspit Airport during construction to ensure safe construction access routes are clearly defined to avoid confusion and possible incursions. The Contractor will conduct at minimum, weekly safety briefings for all construction personnel, and all new personnel operating at the site.

## **2.4 Construction Equipment Usage**

Construction equipment will penetrate the obstacle limitation surfaces for active runways during construction. For a time period of 15 minutes prior to flight landing or takeoff and 5 minutes after landing or takeoff, construction equipment is required to clear the site either by moving on access path clear of the flight glide path, or by moving all equipment to the tidal area to either side of the runway, and lowering all equipment below the elevation of 5.1 meters.

## **2.5 Construction Equipment Storage and Stockpiling Area**

No construction equipment storage or material stockpiling will be allowed on airport property. There will be no deviation from this requirement without prior approval from Sandspit Airport and the Departmental Representative.

## **2.6 Security and Escorting Requirements**

All personnel and vehicle operators operating within airside facilities, both within and outside of defined project areas, will be under direct supervision of an airside security escort provided by the Contractor. Travel across active aircraft movement areas to access construction work sites will not be

permitted without an airside escort and will be limited to a maximum of four (4) vehicles per escort.

The access gate to airside construction will be securely locked and closed at all times after each use.

Access gates to the airside will require security personnel to inspect all personnel and equipment entering the site. These security personnel would not be required if the gates are locked. The Contractor will be responsible to post security personnel as appropriate at each entrance gate when required. These security personnel will be periodically inspected by the designated escort and the engineer's site representative for compliance.

Airside Escorts will be coordinated through the Sandspit Airport. It will be the responsibility of the Contractor to coordinate with Sandspit Airport sufficient lead time for all airside security escorting training and permit requirements. One (1) Airside Escort will be provided as required to monitor the perimeter of the active construction zone, and provide Airside Escort services to restricted areas, as required.

## **2.7 Temporary Barricades**

Temporary barricades are not expected to be required.

## **2.8 Underground Utility Locations**

Underground utilities are not expected in the area of excavation. Runway lighting in the area of work has been identified on the drawings in Appendix A.

Contractor is required to identify any underground utilities in the area of work to avoid damage, and protect it during construction operations.

## **2.9 F.O.D. Control Program**

The Airport has a stringent Foreign Object Debris (F.O.D.) control protocol in place. Under no circumstances will the Contractor be permitted to dispose of any F.O.D. while onsite. F.O.D. will be monitored by the Airport and the Departmental Representative. Any F.O.D. observed must be removed immediately in accordance with the F.O.D. control program. Details of the F.O.D. control program will be provided to all parties prior to construction and commencement of the work.

# **3 Airport Operations and Procedures**

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## **3.1 Communication Protocols and Responsibilities**

During construction, communication protocols and responsibilities must be clearly understood, practiced and enforced. Figure 1 shows the general communication flow during the project. The following provides additional details as to the responsibilities of the major project participants.

### **3.1.1 Airport Operator/Transport Canada**

Transport Canada operates the airport. Sandspit Airport refers to Airport Management.

Sandspit Airport is responsible for enforcing Transport Canada's Aerodrome Safety procedures, and coordinating with Nav Canada

Sandspit Airport will liaise with the Departmental Representative during construction.

### **3.1.2 Departmental Representative**

The Departmental Representative will retain a Site Representative to act as site reviewer during the construction.

The Site Representative will monitor the progress of the work and provide a full-time onsite reviewer during construction. The Departmental Representative will communicate with the Contractor and site personnel and provide updates to stakeholders as construction proceeds.

The Departmental Representative will interact with Airport Management as required to ensure the safe and efficient execution of the work.

The Departmental Representative will coordinate all technical issues during construction with the Contractor.

### **3.1.3 Contractor**

The Contractor will be responsible for the construction of the proposed works. The Contractor will also designate a Contractor Superintendent to be responsible for the overall coordination of their site activities and to act as a Safety Superintendent and Site Foreman during construction.

The Contractor Superintendent will communicate through the Site Representative. The Contractor's administrative office staff will communicate through the Departmental Representative.

### **3.1.4 Transport Canada Aerodrome Safety**

Transport Canada Aerodrome Safety is interested in ensuring the continued safe operation of the airport and that all applicable regulations, standards and recommended practices are complied with. Periodic inspections may be conducted during the construction period to ensure the intent of this PCO is followed.

Only Sandspit Airport, or if directed, the Departmental Representative, to communicate with Transport Canada Aerodrome Safety on matters related to this project.

### **3.1.5 Nav Canada**

Nav Canada provides Air Traffic Advisory Services and Vehicle Control Services at the Sandspit Airport. Nav Canada personnel require a clear understanding of the project status at all times.

Only Sandspit Airport, or if directed, the Departmental Representative, to communicate with Nav Canada on matters related to this project.

## **3.2 Aerodrome Standards and Recommended Practices**

Sandspit Airport is a certified airport and must comply with Aerodrome Standards and Recommended Practices TP312, and a number of other regulations and standards. This PCO has been prepared based on recommended practices to accommodate temporary deviations from these standards in order to allow the proposed construction activity.

The following outlines the aeronautical safety measures implemented:

- All construction equipment to be removed clear of any airport obstacle limitation surfaces during flight arrival and departure.
- No storage or stockpile areas will be located on airport property as noted in Item 2.5.
- Airside facilities (runways, aprons) will be closed while construction operations are in process. The Contractor is required to clear the site for all incoming and outgoing flights, at which time airside facilities will be open.
- The Contractor is required to clear the site for all scheduled flights.
- The Contractor is required to clear the site within 30 minutes following request by the Sandspit Airport.

## **3.3 Instrument Approach Procedures and Nav Aid Electronic Interference**

All construction equipment and material storage areas will remain clear of any onsite navigational aid protection areas. At the end of the project, all equipment is to be removed from the site and the areas are to be restored to their original condition.

## **3.4 Vehicle Safety Requirements**

Vehicles and equipment operators will not be permitted to go outside the specified working areas. Any requirement to travel outside these areas will require approval from the Sandspit Airport.

All vehicles that will be operated or driven on the aircraft maneuvering areas of the aerodrome (open or closed) will be equipped with an amber warning beacon that will be turned on while the vehicle is on these areas. If equipped with headlights, these will also be turned on.

An amber warning beacon will be mounted on each vehicle in a location that will permit the beam to be seen by aircraft or surface traffic from any position within 360 degrees. If a rotating beacon is used, the light beam is to be set at an angle of 6 degrees above the horizontal and it shall rotate at a constant speed of 35 rpm. The enclosing globe of the warning light is to be amber for all vehicles.

### **3.5 General Site Procedures**

#### **3.5.1 General**

The Contractor Superintendent will be responsible for ensuring that all construction personnel at the aerodrome operate construction equipment and service vehicles in a safe manner in accordance with the procedures outlined in this document and the Contract Plans and Specifications.

Prior to the start of construction the Contractor Superintendent in conjunction with the Sandspit Airport and the Departmental Representative to brief all key project/construction personnel on:

- a) The procedures for the movement of equipment and personnel working on site,
- b) Security regulations, and
- c) Other applicable aerodrome directives.

The Contractor Superintendent to ensure that all new personnel to the project are briefed.

When required, the Sandspit Airport to advise Nav Canada of any deviations to construction activities at the airport relative to this approved PCO.

Nav Canada is responsible for providing cautionary advisories to aircraft and the Sandspit Airport. The Sandspit Airport will then be responsible for forwarding cautionary advisories to the Airside Escort.

A NOTAM will be issued for the duration of the construction project indicating construction activities and closures for all stages of the project. NOTAM coordination to be the responsibility of the Sandspit Airport.

Notwithstanding any of the above, all equipment to depart all, or portions of, the construction areas for operational reasons if requested to do so by the Sandspit Airport, the Departmental Representative or their designates. This requirement will normally apply during inclement weather when limited visibility on the ground could create hazardous conditions for aircraft and construction equipment, and for unscheduled or emergency flights.

### **3.5.2 Scheduled Flights**

Scheduled air service to the Sandspit Airport is presently provided by Air Canada, Air North, Hawk Air, Northern Thunderbird and Charlotte Queen Adventures. It is not anticipated that construction will affect regularly scheduled flights.

### **3.5.3 Unscheduled Flights**

Construction may affect unscheduled flights if no advance notice is received. Operators may be required to delay takeoff or landing until the Contractor can clear the zone. In accordance with the Contract, the Contractor will have 30 minutes to clear the zone from time of notification by Sandspit Airport.

### **3.5.4 Daily Startup and Shutdown Procedures for Construction Activities Requiring an Airside Escort**

#### Construction Startup

At the start of each construction shift, the Contractor Superintendent, Sandspit Airport and the Site Representative to gather in the Contractor's site office to confirm the shift's planned activities its impact on airport operations, and escort requirements.

The Departmental Representative will coordinate the work with an airside escort. The airside escort will advise Nav Canada as required that personnel and equipment are working in the construction areas and confirm that all required NOTAMs are in place.

The Airside Escort will supervise construction activities and will monitoring the tower frequencies during construction.

#### Construction Shutdown

At the end of the shift, the Contractor to ensure that all equipment is parked a safe distance from aircraft movement areas, all airside surfaces are clear of FOD and that the work and pedestrian areas are safe, secured and all required barricades are in place and hazard lights functioning properly. After this is complete, the Contractor's representative to vacate the site and ensure all gates are securely locked.

### **3.5.5 Regular Construction Progress Meetings**

Regular construction meetings are to be held throughout the construction period. The purpose of the meetings will be to review construction progress and schedule, and to address construction issues of concern.

### **3.5.6 Final Inspection/Runway Opening**

Once construction is completed including final grading of disturbed areas and sweeping of airside surfaces, a final inspection will be completed by the Departmental Representative and the Sandspit Airport. Upon the approval of the inspection by both parties, the Sandspit Airport will notify Nav Canada.

### **3.6 NOTAMs and Responsibility**

The Sandspit Airport will be responsible for the origination, revision and cancellation of NOTAMs. The NOTAM will advise the aviation community of the establishment, condition or change in any aeronautical facility, service, procedure or hazard as well as the approximate time period involved.

The Sandspit Airport will work with the Departmental Representative to coordinate the NOTAMs. Forty-eight (48) hours prior notification must be provided to Sandspit Airport and should include all relevant details. The Sandspit Airport will then coordinate publishing of the NOTAM with Nav Canada.

Situations may arise where an urgent NOTAM is required at the Airport and the Sandspit Airport cannot be contacted. Under these circumstances the Departmental Representative will be responsible to contact Nav Canada advising of the current situation at the airport.

### **3.7 Incident Reporting Procedures**

If an "Aviation Occurrence" accident or incident occurs onsite during the construction, the incident will be reported as per onsite procedures through the Departmental Representative to the Sandspit Airport. The Sandspit Airport will be responsible for initiating and carrying out this work.

### **3.8 Stakeholder Consultation**

The Departmental Representative will send a copy of the PCO to the Sandspit Airport for their review, approval and endorsement. Once the PCO is approved, the Airport will forward copies to all applicable parties.

During the construction period, communications with the airlines and tenants will be the responsibility of the Sandspit Airport. The Departmental Representative will be responsible for the coordination of information between the Sandspit Airport and the Contractor. Any changes to the plan as outlined within this document will be communicated as required by Transport Canada.

The Departmental Representative will distribute a copy of the approved PCO to the Contractor prior to construction.



## 4 Endorsements

**PROJECT:**

Transport Canada Airport (YZP) – Erosion Protection

**AIRPORT NAME/OPERATOR and CERTIFICATE HOLDER:**

Sandspit Airport

*This Plan of Construction Operations (PCO) has been prepared and reviewed by the following persons. This PCO documents a coordinated approach to completing the construction project **in the year 2012 at the Sandspit Airport** while maintaining a reasonable level of safety for those involved in the construction project and the aviation community.*

*I undertake to meet the obligations set out in this plan of construction; and I hereby certify that the information in this plan is complete and accurate and no relevant information has been omitted,*

2012-

Date ( Y-M-D )

Signature of Airport Operator/Certificate Holder

*This Plan of Construction Operations was prepared in consultation with the Airport Operator and the Schedule Service Providers by:*

2012- 06-06

Date ( Y-M-D )



Signature of Charles Ramos, Herold Engineering Ltd.

*This Plan of Construction Operations Manual/Amendments is approved:*

2012-

Date ( Y-M-D )

Signature of Aerodrome Safety /Transport Canada

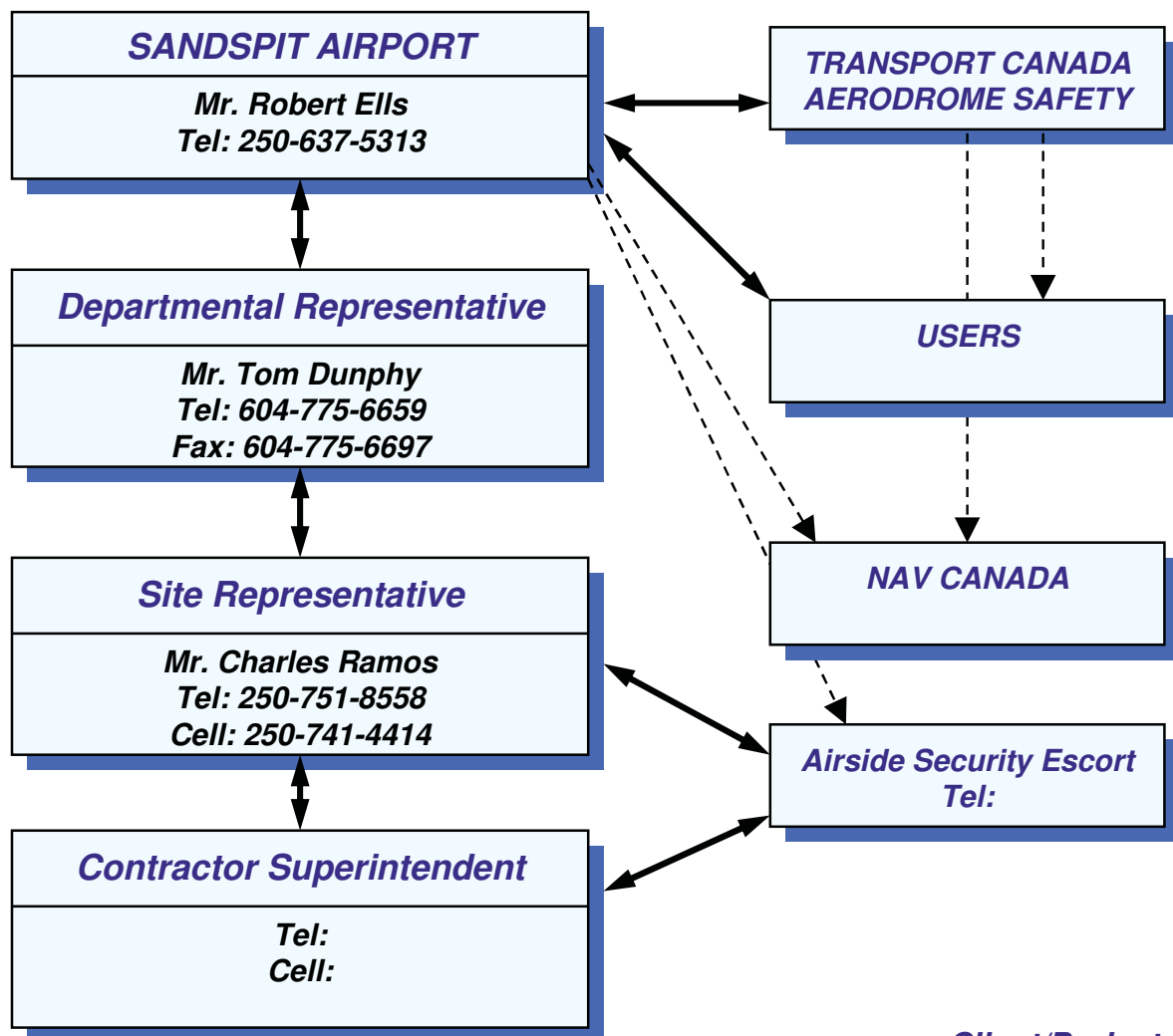
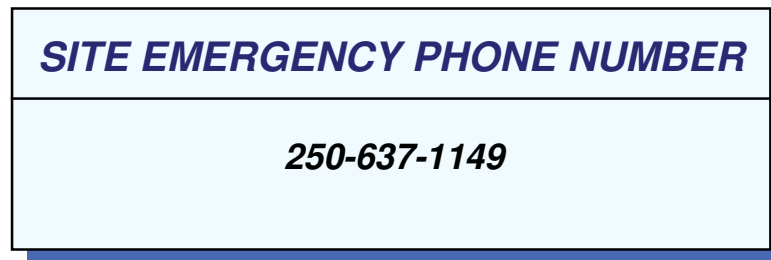
*This Plan of Construction Operations has been reviewed and its implications on construction efficiency and the roles and responsibility of the Contractor understood by:*

2012-

Date ( Y-M-D )

Signature of Contractor





**Client/Project:**  
**Transport Canada Airport (YYP)**  
**Erosion Protection**  
**PROJECT COMMUNICATION CHART**  
*Figure 1*

# **Appendix A**

## **Design Drawings**

Sandspit Airport (YZP) Tides above 4.0 CHS (0.0 GSC)

Date	Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
18-Jun-12	Monday																X								
19-Jun-12	Tuesday										X			X			X								
20-Jun-12	Wednesday													X			X								
21-Jun-12	Thursday																X								
22-Jun-12	Friday																X								
23-Jun-12	Saturday										X						X								
24-Jun-12	Sunday													X			X								
25-Jun-12	Monday										X						X								
26-Jun-12	Tuesday																X								
27-Jun-12	Wednesday													X			X								
28-Jun-12	Thursday																X								
29-Jun-12	Friday																X								
30-Jun-12	Saturday										X						X								
01-Jul-12	Sunday										X			X			X								
02-Jul-12	Monday										X						X								
03-Jul-12	Tuesday										X						X								
04-Jul-12	Wednesday										X			X			X								
05-Jul-12	Thursday										X						X								
06-Jul-12	Friday										X						X								
07-Jul-12	Saturday										X						X								
08-Jul-12	Sunday										X			X			X								
09-Jul-12	Monday										X						X								
10-Jul-12	Tuesday										X						X								
11-Jul-12	Wednesday										X			X			X								
12-Jul-12	Thursday										X						X								
13-Jul-12	Friday										X						X								
14-Jul-12	Saturday										X						X								
15-Jul-12	Sunday										X			X			X								
16-Jul-12	Monday										X						X								
17-Jul-12	Tuesday										X						X								
18-Jul-12	Wednesday										X			X			X								
19-Jul-12	Thursday										X						X								
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22-Jul-12	Sunday										X			X			X								
23-Jul-12	Monday										X						X								
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26-Jul-12	Thursday										X						X								
27-Jul-12	Friday										X						X								
28-Jul-12	Saturday										X						X								
29-Jul-12	Sunday										X			X			X								
30-Jul-12	Monday										X						X								
31-Jul-12	Tuesday										X						X								
01-Aug-12	Wednesday										X			X			X								
02-Aug-12	Thursday										X						X								
03-Aug-12	Friday										X						X								
04-Aug-12	Saturday										X						X								
05-Aug-12	Sunday										X			X			X								
06-Aug-12	Monday										X						X								

Sandspit Airport (YZP) Tides above 4.0 CHS (0.0 GSC)

Date	Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
07-Aug-12	Tuesday									X							X								
08-Aug-12	Wednesday										X			X			X								
09-Aug-12	Thursday																								
10-Aug-12	Friday										X						X								
11-Aug-12	Saturday										X						X								
12-Aug-12	Sunday													X			X								
13-Aug-12	Monday										X						X								
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15-Aug-12	Wednesday										X			X			X								
16-Aug-12	Thursday										X						X								
17-Aug-12	Friday																X								
18-Aug-12	Saturday										X						X								
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27-Aug-12	Monday																X								
28-Aug-12	Tuesday										X						X								
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01-Sep-12	Saturday										X						X								
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04-Sep-12	Tuesday																X								
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12-Sep-12	Wednesday																X								
13-Sep-12	Thursday																X								
14-Sep-12	Friday																X								
15-Sep-12	Saturday																X								

X Scheduled Flight