



AIRSIDE WORKS PROCEDURE MANUAL

FOR CHANGI AIRPORT

Compiled by

Standards and Health Unit
Engineering & Development Cluster

Version 31/2024

15 April 2024

CONTENTS

PROCEDURE

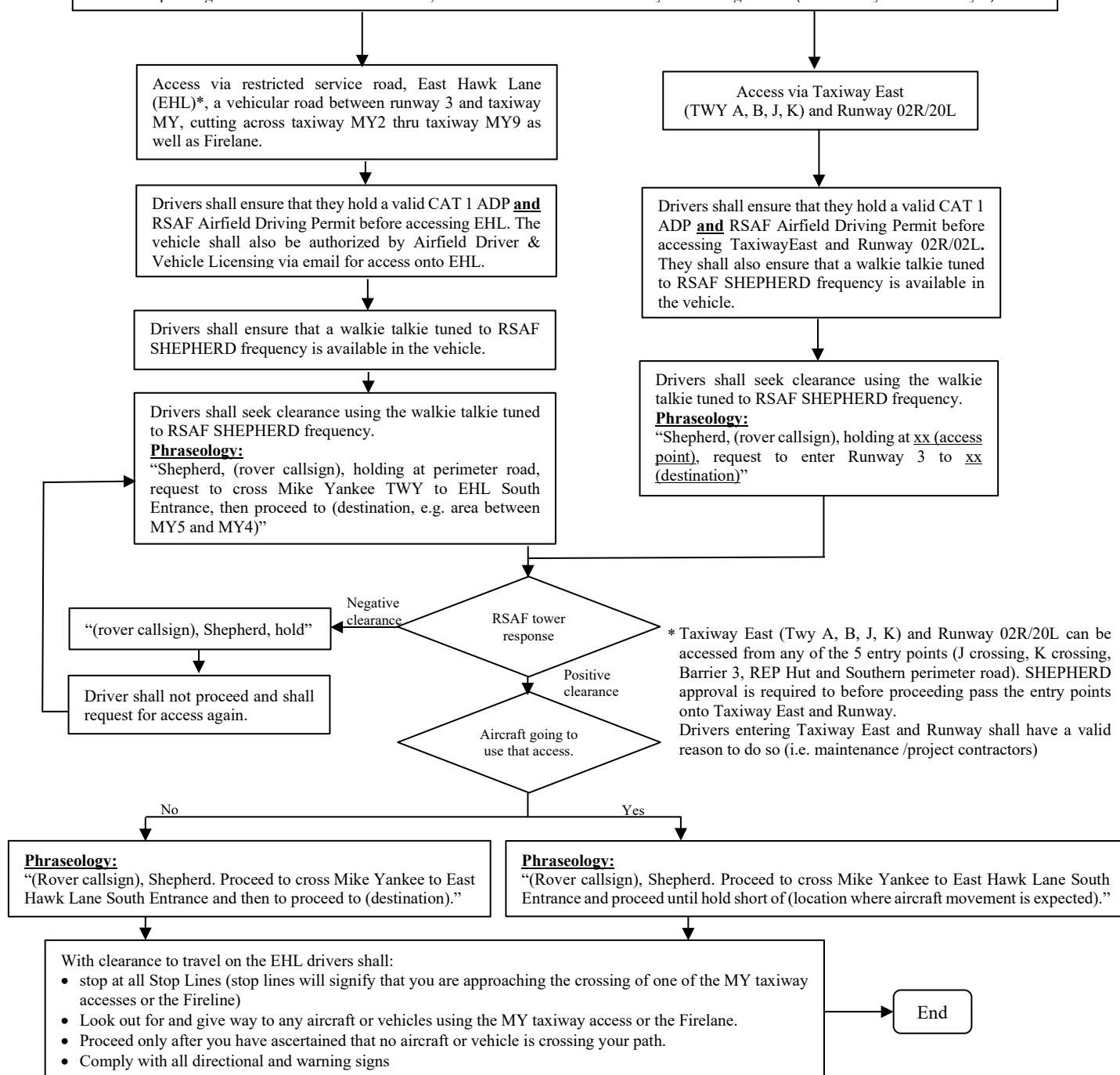
1	PROCEDURE FOR DRIVERS ACCESSING VICINITY OF RUNWAY 3	AWP/4
2	NORMAL OPENING OF TAXIWAY/TAXILANE CLOSURE	AWP/5
3	NORMAL OPENING OF AIRCRAFT STAND CLOSURE	AWP/6
4	MOBILISATION OF WORK PARTIES UPON LOCAL ACTION ACTIVATION	AWP/7
5	RESPONSE TO LEAKAGE INCIDENT ON RUNWAY /TAXIWAY /TAXILANE /AIRCRAFT STAND	AWP/8
6	APPLYING TAXIWAY /TAXILANE /AIRCRAFT STAND CLOSURE TO CARRY OUT MAINTENANCE/PROJECT WORK	AWP/10
7	PREPARING AND DISSEMINATING AIP AMENDMENT/AIP SUPPLEMENT	AWP/15
8	RESPONSE BY PROJECT CONTRACTOR TO UNDERGROUND SERVICE DAMAGE BY PROJECT CONTRACTOR DURING EXCAVATION WORK	AWP/16
9	PROCEDURE FOR CANCELLING TAXIWAY/TAXILANE/AIRCRAFT STAND CLOSURE OUTSIDE CAG NORMAL WORKING HOURS	AWP/17
10	PROCESS FLOW ON UPDATING OF AERODROME MANUAL, AIRPORT OPERATIONAL AND SAFETY(AOS), AIRSIDE WORKS PROCEDURE (AWP)	AWP/18
11	RESPONSE TO CRASH ON LAND WITHIN CHANGI AIRPORT WITHIN AES TURN-OUT AREA (RUNWAY 1, 2 or 3)	AWP/21
12	PROCESS FLOW ON COMMISSIONING AND HANDING OVER UPON COMPLETION OF PROJECT AT MOVEMENT AREA	AWP/22

- | | | |
|----|--|--------|
| 13 | PROCESS FLOW ON DESIGN CHECK TO ENSURE COMPLIANCE TO CAAS AIR NAVIGATION REGULATION 139, AERODROME SPECIFICATIONS AND ADVISORY CIRCULARS | AWP/30 |
| 14 | SAFETY BRIEFING WORKFLOW FOR AIRSIDE SAFETY INDUCTION BRIEFING (ASIB) & AIRPORT OPERATIONAL SAFETY REQUIREMENTS(AOS) | AWP/33 |
| 15 | SAFETY INSPECTION FRAMEWORK (DEVELOPMENT / PROJECT) | AWP/34 |

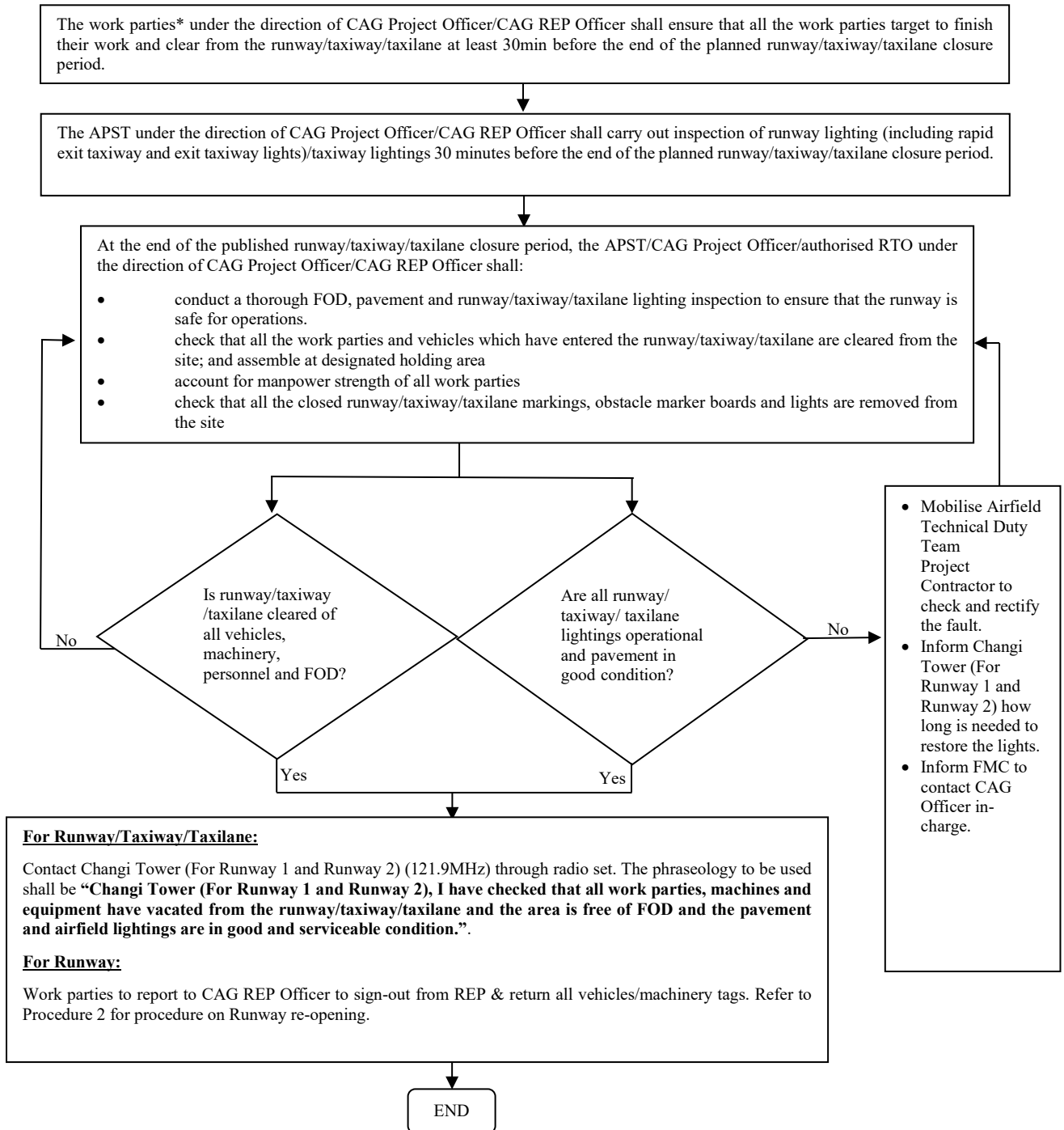
PROCEDURE 1: PROCEDURE FOR DRIVERS ACCESSING VICINITY OF RUNWAY 3

The CAT 1 / CAT 1(R) drivers accessing runway 3 vicinity shall:

- check that the two (2) yellow flashing lights on their rovers are serviceable before entering the runway 3 vicinity.
- check the serviceability of the radio set by establishing a comms check with Changi Apron at least once a day at the start of the shift.
- check the serviceability of the transponder by observing that the green LED is blinking (2 times per sec).
- contact Changi Tower (For Runway 1 and Runway 2)/Changi East Tower (For Runway 3) through radio set on the frequency listed in Airside Works Procedure Manual Procedure 1, before the planned runway access. Please refer to the document on “CAT1 Airside Driving Theory Handbook” Standard Phraseology for further details.
- shall ensure that RT set had been tuned and RT set shall be clearly labelled to indicate Ground Frequency and Runway Frequency.
- only enter the runway upon receiving clear approval from Changi Tower (For Runway 1 and Runway 2)/Changi East Tower (For Runway 3) and the stop bar lights are not illuminated. If in doubt, read back the instructions or clarify with Changi Tower (For Runway 1 and Runway 2).

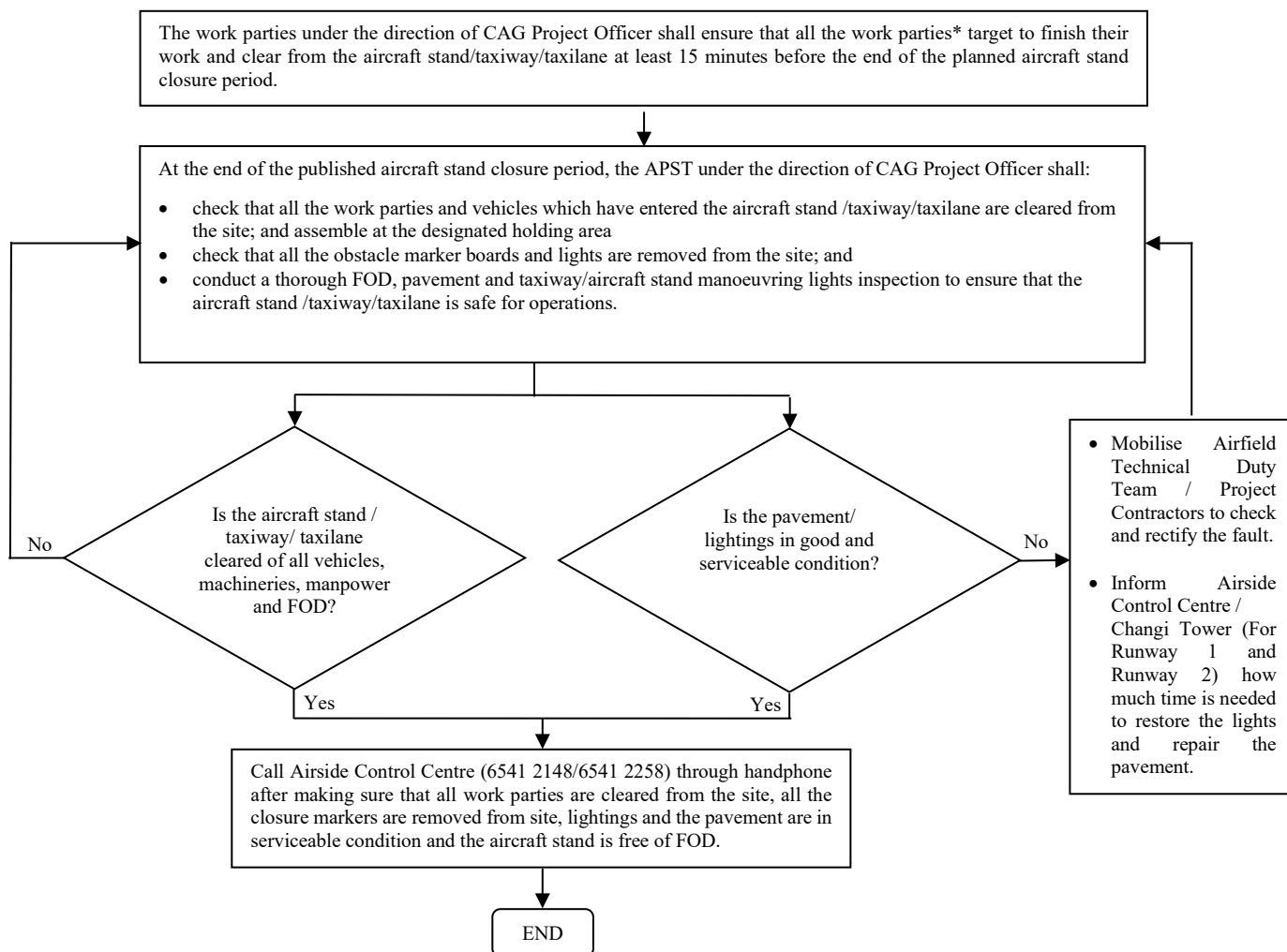


PROCEDURE 2: NORMAL OPENING OF TAXIWAY/TAXILANE CLOSURE



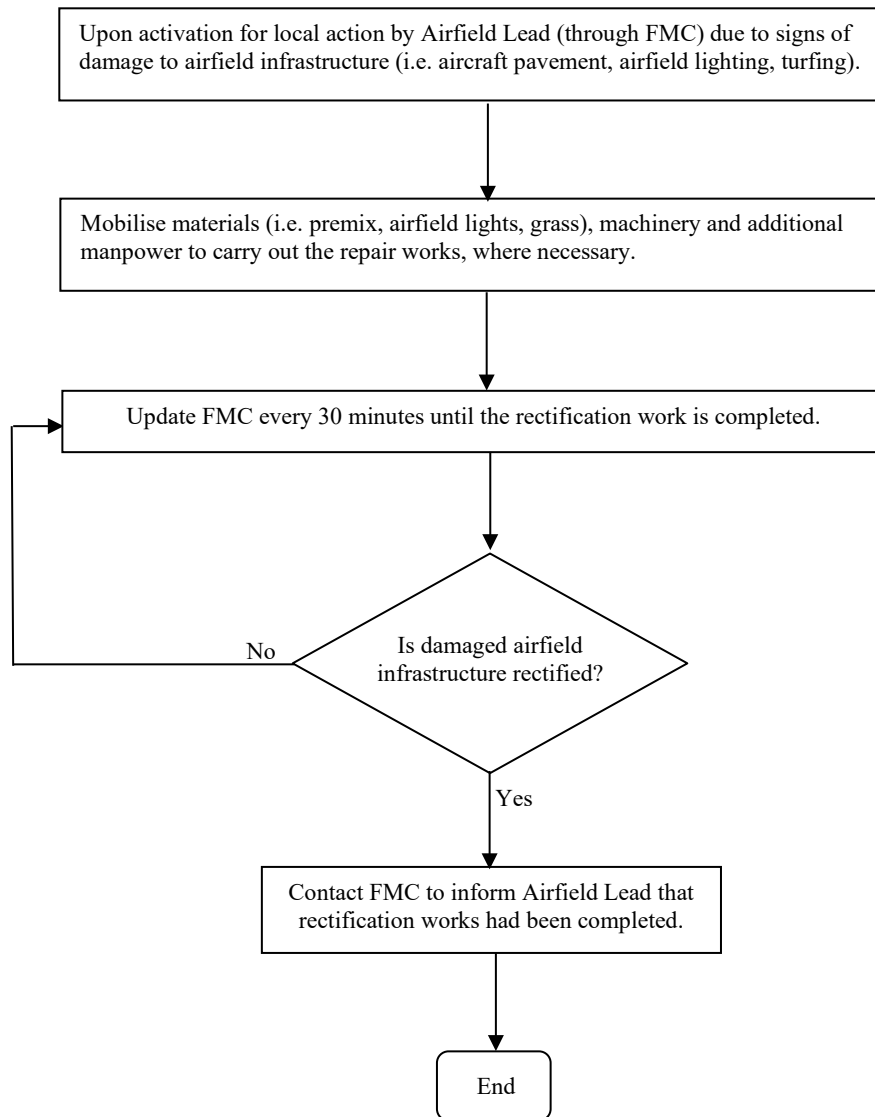
*Work parties includes, but are not limited to CAG staff, authorized RTO and/or safety personnel and other resident site staff engaged to represent CAG.

PROCEDURE 3: NORMAL OPENING OF AIRCRAFT STAND CLOSURE

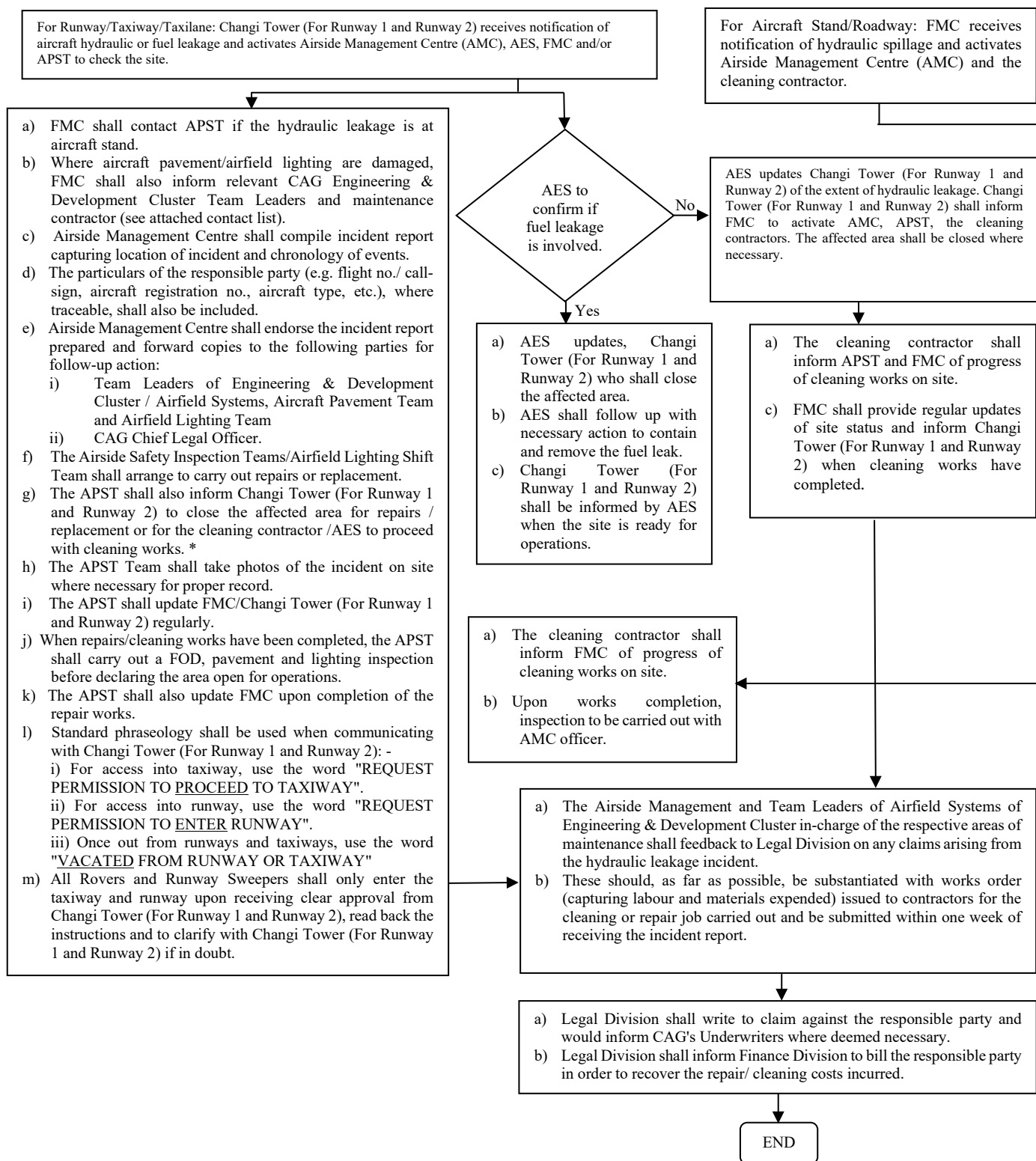


*Work parties includes, but are not limited to CAG staff, authorized RTO and/or safety personnel and other resident site staff engaged to represent CAG.

PROCEDURE 4: MOBILISATION OF WORK PARTIES UPON LOCAL ACTION ACTIVATION



PROCEDURE 5: RESPONSE TO LEAKAGE INCIDENT ON RUNWAY/TAXIWAY/TAXILANE/AIRCRAFT STAND / ROADWAY



- * For temporary closure purposes, the APST shall carry a minimum of 4 sets of heavy-duty, rubber type cones, chequered flags and red fixed lights to demarcate the closed area.

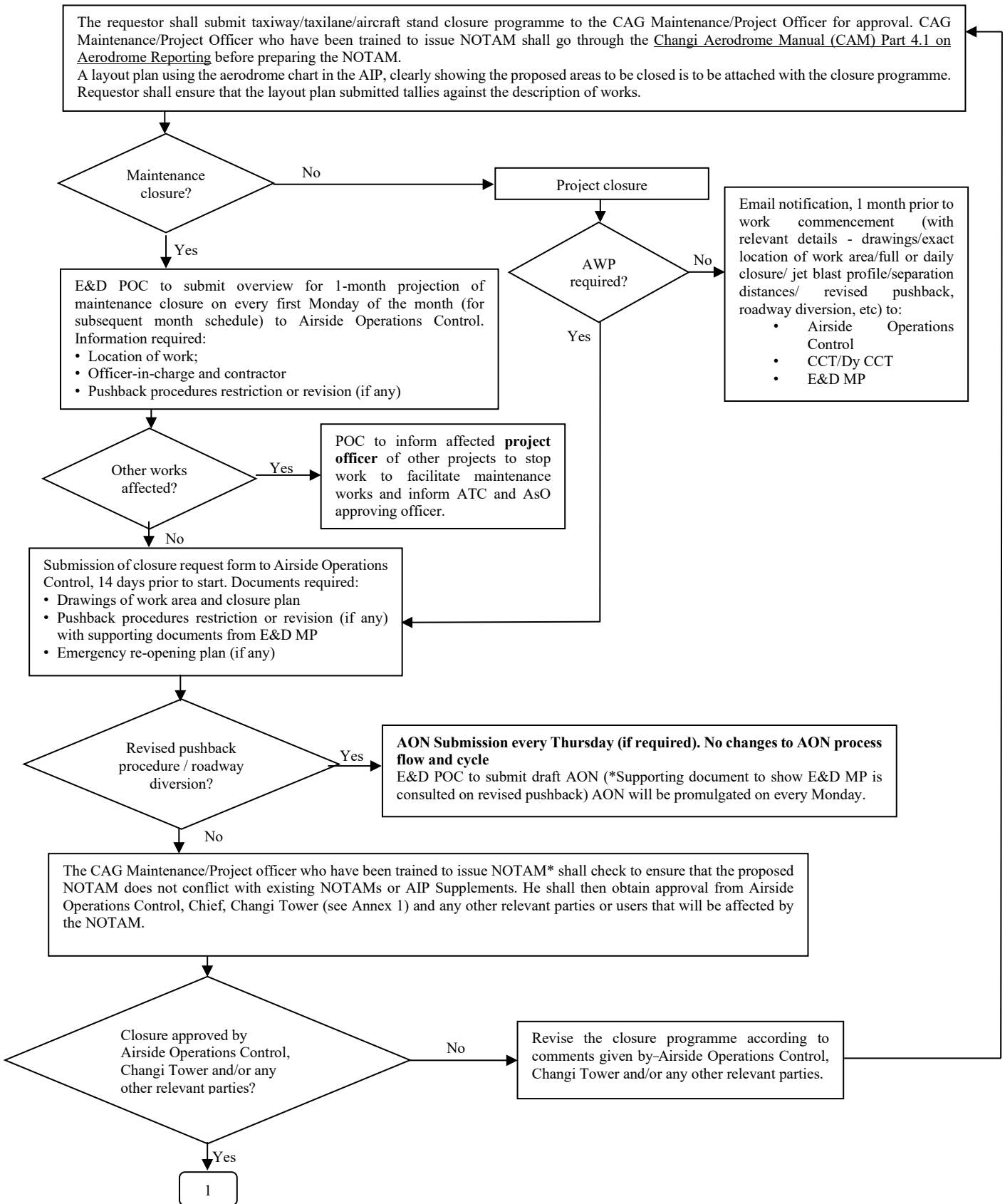
Additional Note: If there is hydraulic fluid leakage on the runway, friction test is required to be carried out.

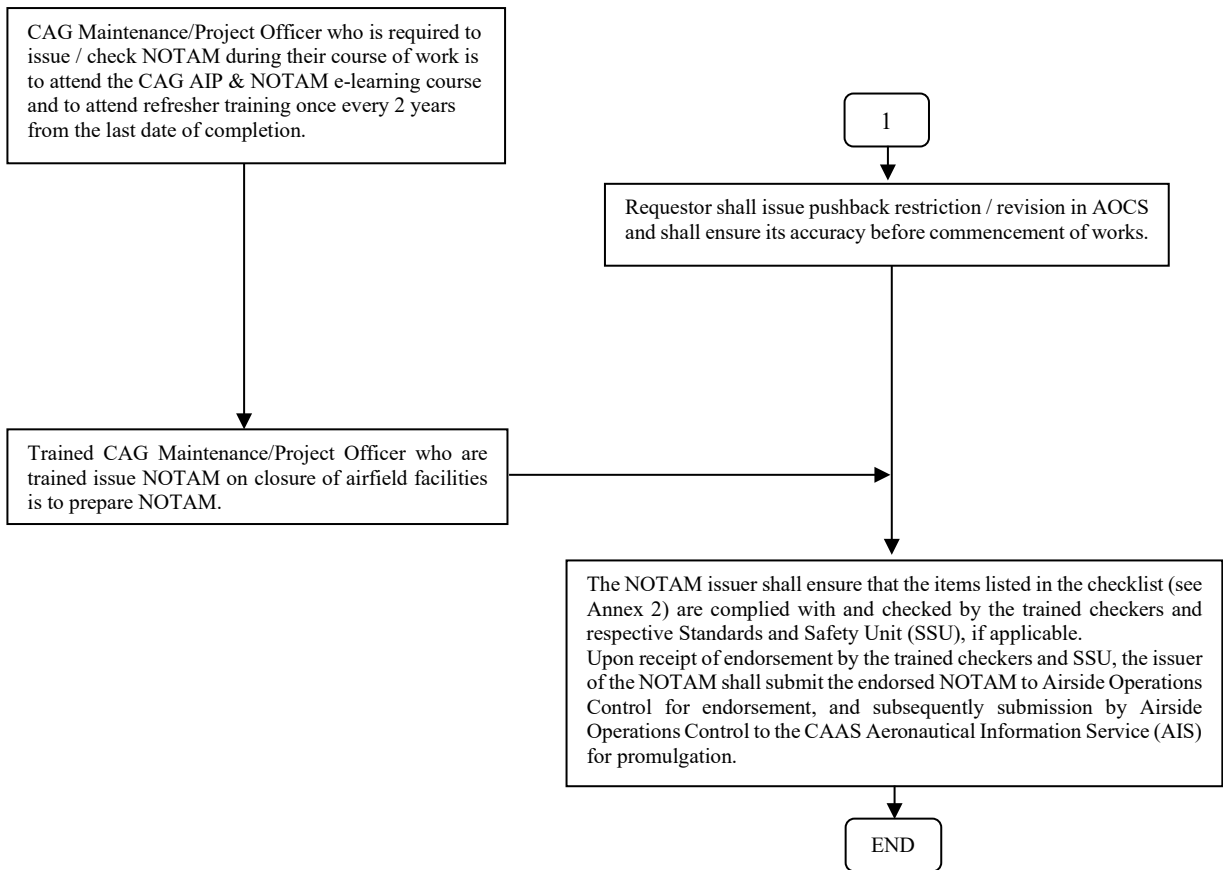
Depending on the extent of the leakage, the APST shall make an assessment on the risk to re-open the runway without first conducting a friction test. An example of risk which can be mitigated without first conducting a friction test is when a spillage is localized in area and has been thoroughly cleaned up. If in doubt, the APST should still take the safer approach to determine the need to conduct a friction test before re-opening of the runway. For aircraft accident a friction test shall be carried out. If after conducting the friction test and the result shows that the friction level along any 100m section is measured to be 0.34 or less at test speed of 95km/h or to be at 0.50 or less at test speed of 65km/h, the APST shall notify the Airfield Lead and inform the Team Leader of CAG E&D Airfield Systems, Aircraft Pavement Team to take immediate action to arrange for the removal of rubber deposits.

LIST OF CONTACT PERSONS FOR AIRCRAFT HYDRAULIC LEAKAGE INCIDENT ON RUNWAY/TAXIWAY/TAXILANE/AIRCRAFT STAND

Changi Tower		
1	Duty Tower Watch Manager	Tel: 6541 2416/2417
Airport Emergency Service (AES)		
2	Station 1 Watch Tower	Tel: 6541 2526
3	Station 2 Watch Tower	Tel: 6541 2544
4	Station 3	Tel: 6541 2531
FMC		
5	Duty Supervisor	Tel: 6541 2424
Airside Operations Control		
6	Airside Control Centre (ACC)	Tel: 8533 4558 / 6541 2151
7	Airside Management Centre (AMC)	Tel: 6541 2273 / 2275
CAG Engineering & Development Cluster		
8	Team Leader, Airfield Systems, Aircraft Pavement Team	HP: 8191 9223
9	Team Leader, Airfield Lighting Team	HP: 9457 7373
Primech A&P Pte Ltd		
10	Contractor's Manager	HP: 8784 1517
11	Contractor's Duty Phone	HP: 9735 0216

PROCEDURE 6: APPLYING TAXIWAY/TAXILANE/ AIRCRAFT STAND CLOSURE TO CARRY OUT MAINTENANCE/PROJECT WORK





Additional Notes:

- (a) Approval from Changi Tower is not required for closure of aircraft stand (i.e. provided that no runway/taxiway/taxilane is required).
- (b) Application for stand closure is via online gate closure portal **at least 10 working days** before the proposed date of closure. Submission not fulfilling the required lead time requirement via the portal will be evaluated on a case-by-case basis.

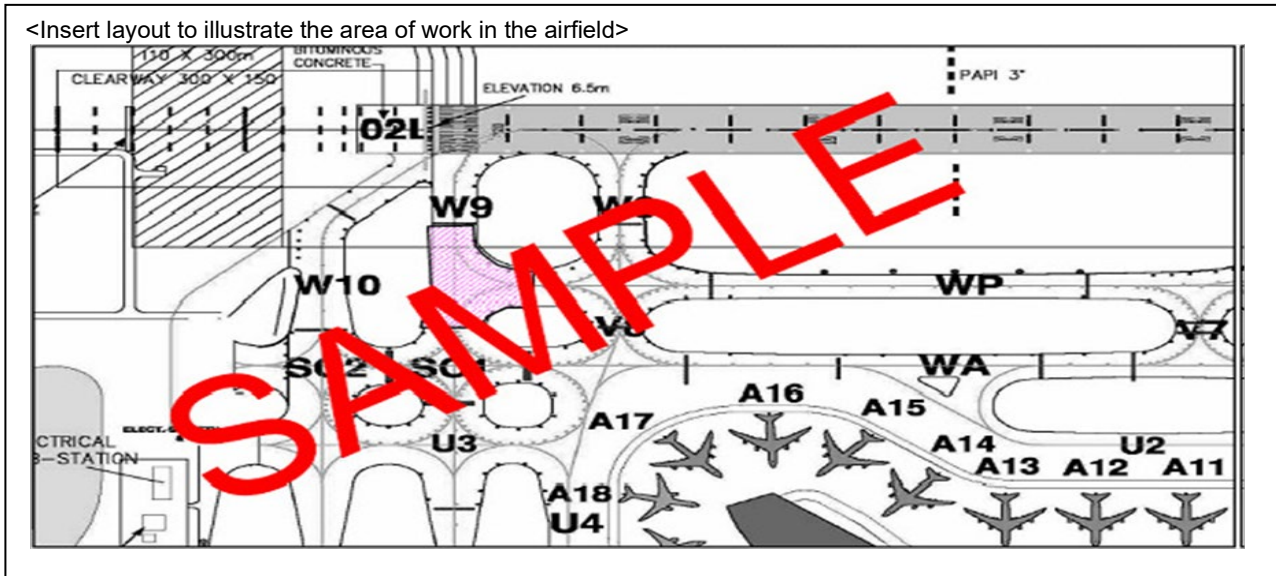
Annex 1

Twy Closure Approval No: _____

CLOSURE PROGRAMME

<Insert title of project/ work scope>

<Insert layout to illustrate the area of work in the airfield>



For clarification, please call handphone:
 CAG (Project officer): _____ Contractor: _____ / Rover _____

LEGEND	CLOSURE LOCATION	DATE	TIME (L/T)	REMARKS (FULL/DAILY)
Requested By:	Supported By:	Approved By:		
(Company)	CAG Engineering & Relevant Group	(Runway & Taxiway/Taxilane Only)		SVP, Airside Operations Control
(Name)	(Name)	Chief Changi Tower(WEST)	(Name)	(Name)
(Signature & Date)	(Signature & Date)	(Signature & Date)	(Signature & Date)	(Signature & Date)

Colour code

- : Taxiway/taxilane closure
- : Work area
- : Stand Closure - (no aircraft parking)
- : Stand restriction - (for layover only/no movements/no engine run)
- : Advisory Note - aircraft pushback restrictions

NOTE: The description of work under closure location and the inserted layout (use AIP Aerodrome chart) must tally, and NOTAM accordingly

File Reference: _____

CHECKLIST FOR NOTAM / AIP SUPPLEMENT / AIP AMENDMENT / AERONAUTICAL INFORMATION CIRCULAR PROMULGATION

Project Title: _____

Requesting Section: _____ Work Location: _____

Before Promulgation		
S/No	Item	Please Circle / Respond
1	Have you checked whether the aeronautical data and information of the draft NOTAM / AIP Supplement / AIP Amendment / Aeronautical Information Circular impacts safety and efficiency of the airside's operations (eg. runway closure, longer taxiing route, pushback restriction/revision, obstacles, etc.)?	Yes / No / N.A.
2	Have mitigation measures for the impact on safety of operations in the airside, arising from the NOTAM / AIP Supplement / AIP Amendment / Aeronautical Information Circular, been reviewed and fully endorsed in the form of a risk assessment?	Yes / No / N.A.
3	Have you ensured that the necessary safety provisions (e.g. visual aids, closure markings / markers, obstacle lights, etc.) will be in place on site to support the NOTAM / AIP Supplement / AIP Amendment / Aeronautical Information Circular?	Yes / No / N.A.
4	Have you consulted Changi Tower / Airside Operations Control / relevant AIP Subject Owner(s) on the proposed changes / activities before drafting the NOTAM / AIP Supplement / AIP Amendment / Aeronautical Information Circular?	Yes / No / N.A.
5	Have you checked that the aeronautical data and information of the draft NOTAM / AIP Supplement / AIP Amendment / Aeronautical Information Circular in association with the proposed changes / activities is correct and not in conflict with any of the existing NOTAMs / AIP Supplements / AIP Amendments / Aeronautical Information Circulars?	Yes / No
6	Have you checked that the phrasing of the aeronautical data and information of the draft NOTAM / AIP Supplement / AIP Amendment / Aeronautical Information Circular is accurate and complete?	Yes / No
7	Have you ensured that all areas affected by the changes are visually indicated on existing chart(s) for traceability?	Yes / No
8	Have you confirmed that the aeronautical charts comply with the requirements stated in Annex 4 Aeronautical charts?	Yes / No
Name/ Designation of officer assigned to check the site when the NOTAM / AIP Supplement / AIP Amendment is effected		
Contact Number		

Issuer of NOTAM/AIP Supplement/AIP Amendment:

Checker of NOTAM/AIP Supplement/AIP Amendment:

Name / Designation_____
Signature / Date_____
Name / Designation_____
Signature / Date

Checked by SSU:

Name / Designation_____
Signature / Date

After Promulgation		
1	Have you checked that the promulgated NOTAM / AIP Supplement / AIP Amendment / Aeronautical Information Circular is correct?	Yes
2	Have you provided the NOTAM / AIP Supplement / AIP Amendment / Aeronautical Information Circular reference number and attached it with this Checklist as a supporting document?	Yes Ref No: _____
If your answer to any of the above items is "No", please give the reason(s) below: -		

Issuer of NOTAM/AIP Supplement/AIP Amendment:

Checker of NOTAM/AIP Supplement/AIP Amendment:

Name / Designation

Signature / Date

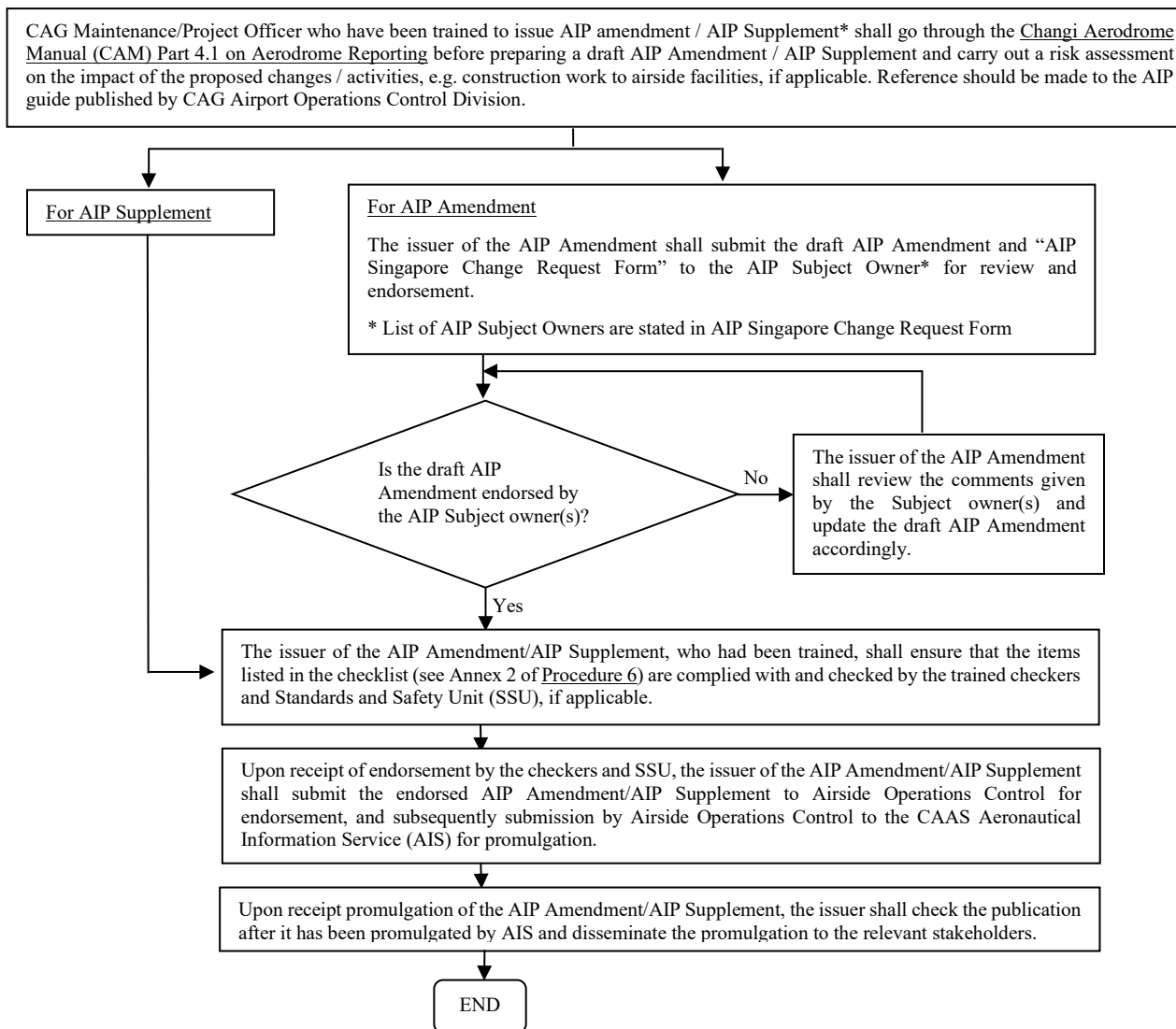
Name / Designation

Signature / Date

Note:

- For content of NOTAM which takes effect less than 1 day, the issuer of NOTAM shall inform Airside Safety Inspection Team (Changi) / Aircraft Pavement & Airfield Lighting Inspection Teams (Seletar) via phone and fax immediately after the NOTAM is promulgated.
- Only those officers have been trained can issue NOTAM.
- The checker of NOTAM/AIP Supplement/AIP Amendment shall be officers who have undergone training.
- The checker of the NOTAM/AIP Supplement/AIP Amendment cannot be the issuer of the same NOTAM/AIP Supplement/AIP Amendment.
- NOTAM / AIP Supplement / AIP Amendment Promulgation Form must be attached to this checklist.
- NOTAM / AIP Supplement / AIP Amendment Promulgation Form shall be checked by the respective SSU before submission.
- Project officers shall consult Airside Operations Control, prepare AIP and all the necessary supporting documents, and submit to Airside Operations Control within the publication timeline as stipulated in Changi Aerodrome Manual. Airside Operations Control shall be responsible for the final submission to CAAS, AIS.
- For NOTAM promulgation only – Maintenance works carried out by Team Leaders of E&D Airfield Systems, Pavement section and AFL section need not be endorsed by SSU. However, the issuer has to complete the checklist before sending the NOTAM to CAAS AIS and ASIT (Changi) / Aircraft Pavement & Airfield Lighting Inspection Teams (Seletar).

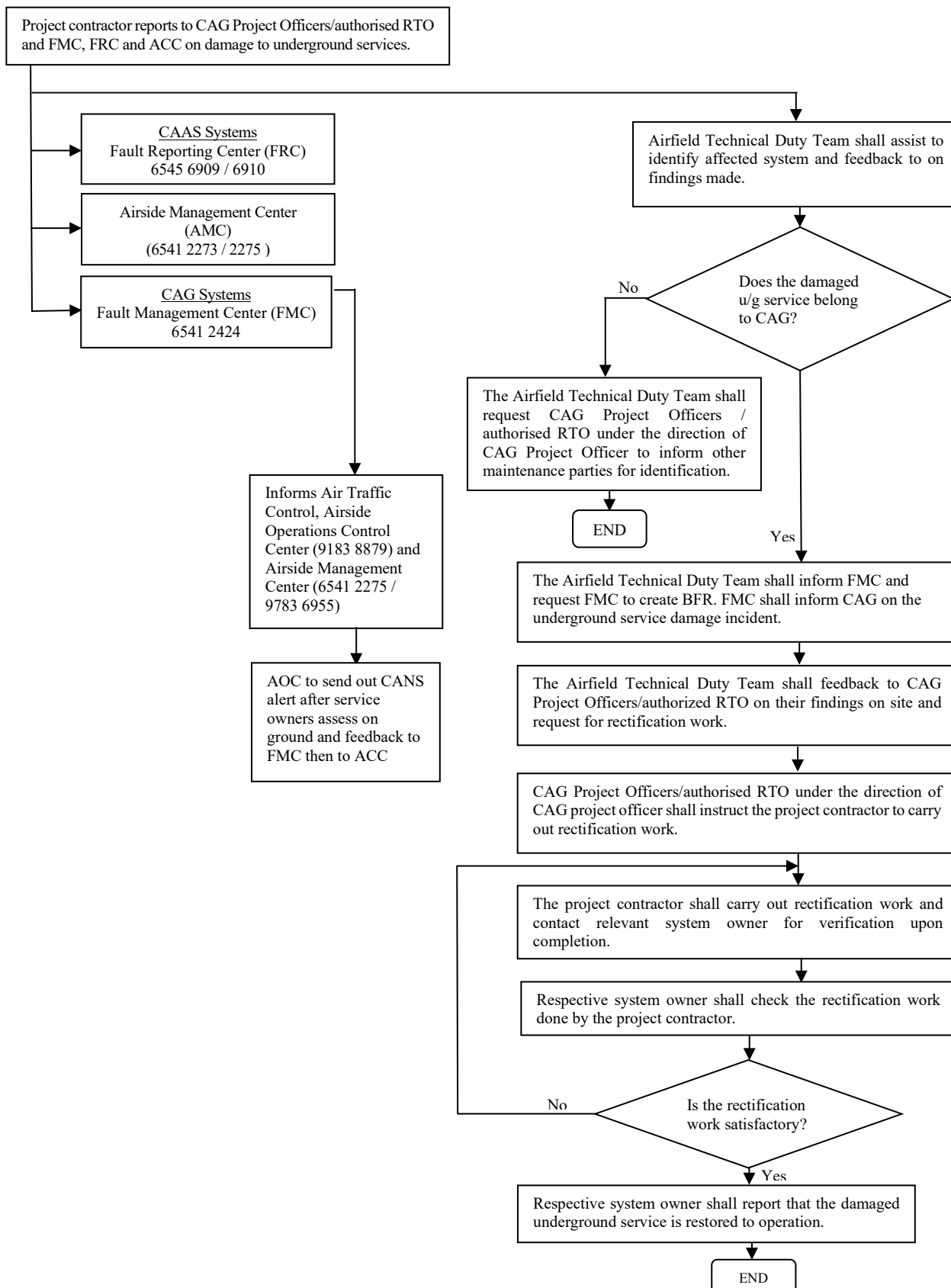
PROCEDURE 7: PREPARING AND DISSEMINATING AIP AMENDMENT/AIP SUPPLEMENT



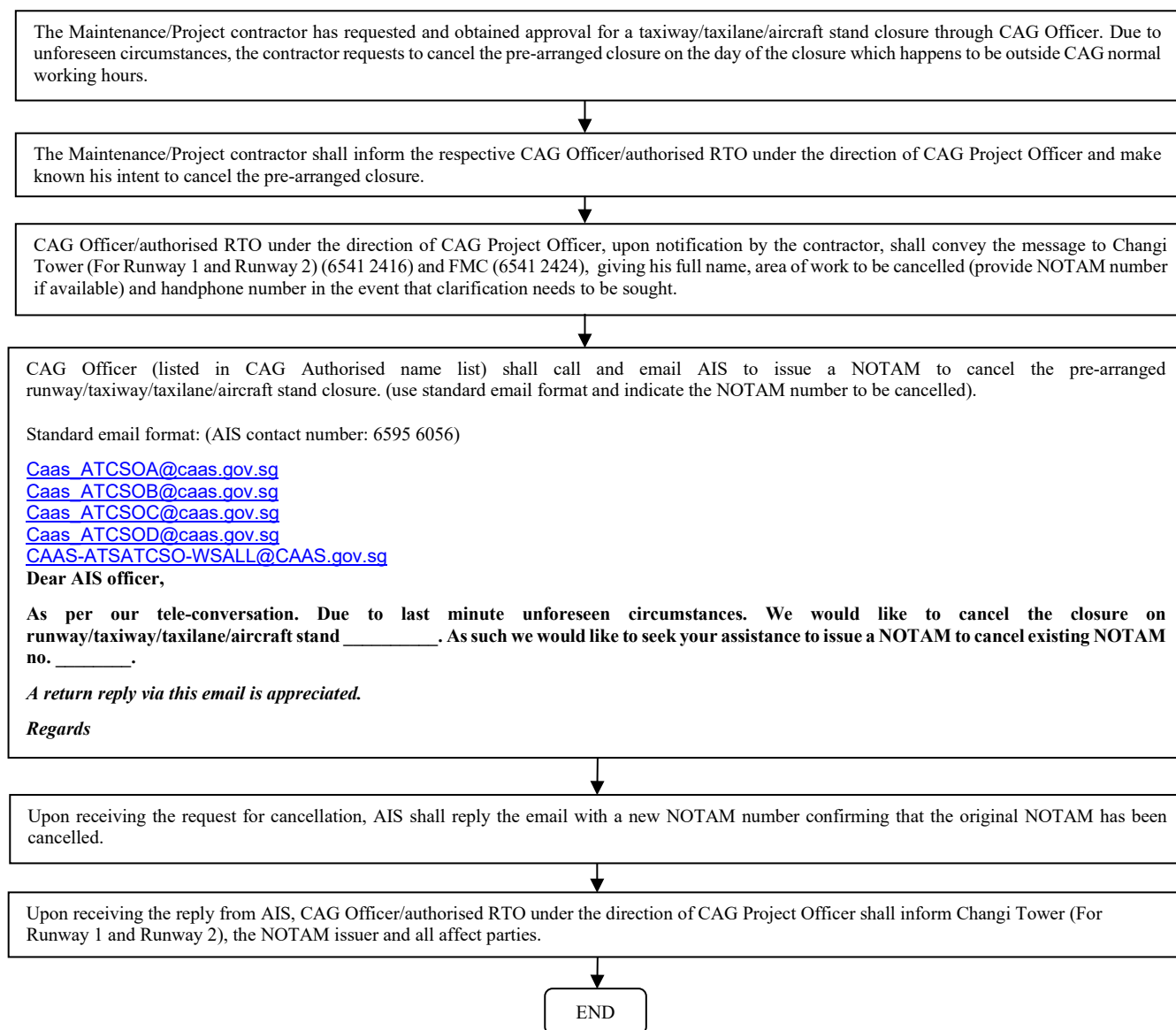
Additional Note:

- For newly constructed / rehabilitated aircraft parking stands, early confirmation on the data by the licensed surveyor through email would be established prior to submission of endorsed as-built drawings.
- Project / maintenance officer shall ensure that updates in the AIP and aerodrome manuals are made whenever there are changes to the infrastructure.
- For permanent changes to the information contained in the AIP, or completion of new airfield infrastructure (e.g. new taxiway / new aircraft stand etc.), CAG Maintenance/Project Officer shall inform Master Planning (Airfield Capacity Planning team) to update the changes in the Changi Aerodrome Manual (CAM) and in AIP Singapore accordingly.
- For AIP/AIP supplement promulgation, the form shall only be signed off if a proper safety assessment has been carried out where applicable.
- For permanent changes that are put up using NOTAMs, an additional “AIP Singapore Change Request Form” is needed to submit to AIS for AIP amendment.
- For permanent changes that are put up using AIP Supplement, an additional “AIP Singapore Change Request Form” is needed to submit to AIS for AIP amendment.
- For amendment on WSSS AD2.24 Aerodrome Chart AD-2-WSSS-ADC-2, in parallel with the submission to CAAS AIS, the issuer of the AIP amendment shall extend a copy to AES (for their update of the crash map).

PROCEDURE 8: RESPONSE BY PROJECT CONTRACTOR TO UNDERGROUND SERVICE DAMAGE BY PROJECT CONTRACTOR DURING EXCAVATION WORK



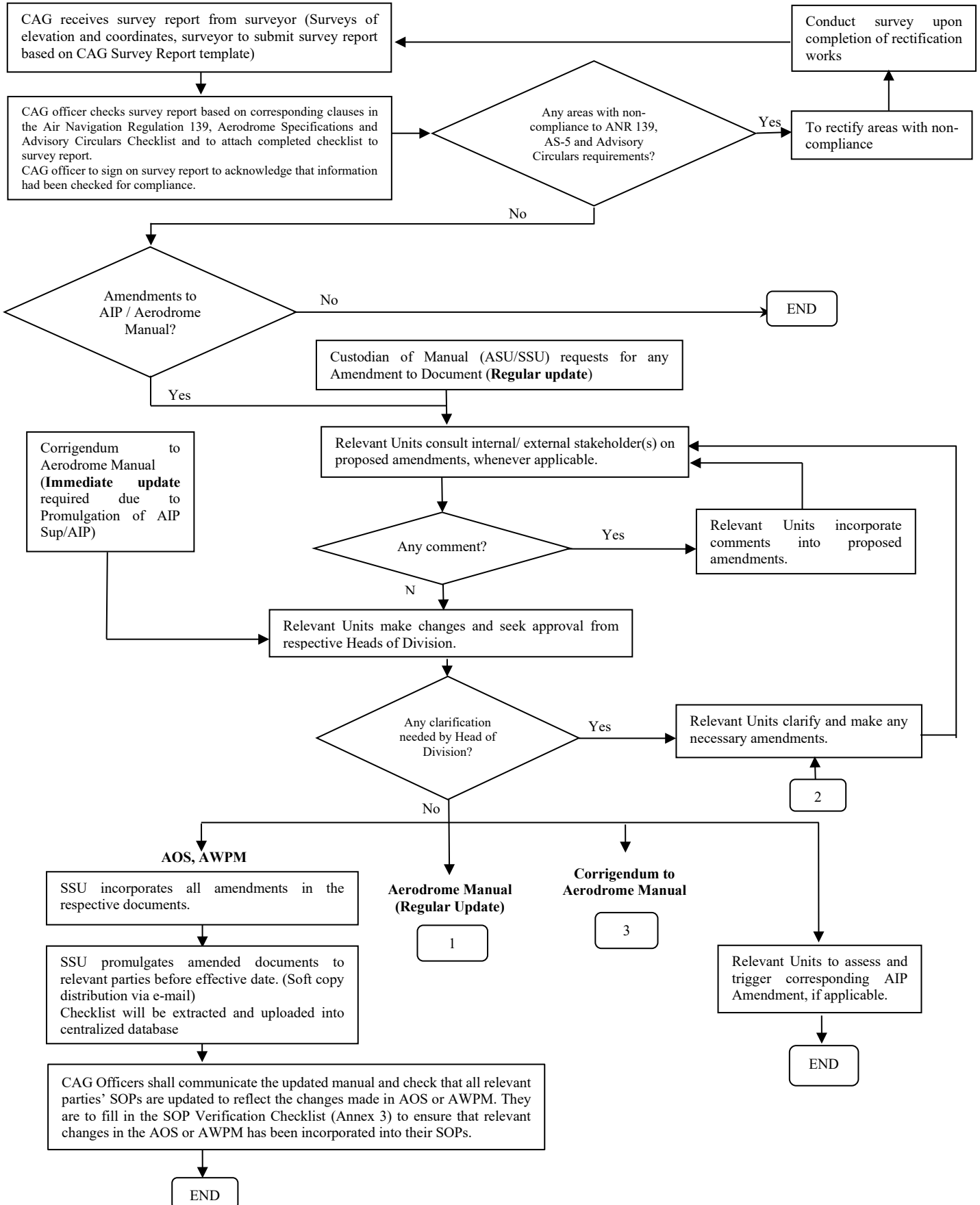
PROCEDURE 9: PROCEDURE FOR CANCELLING TAXIWAY/TAXILANE/AIRCRAFT STAND CLOSURE OUTSIDE CAG NORMAL WORKING HOURS

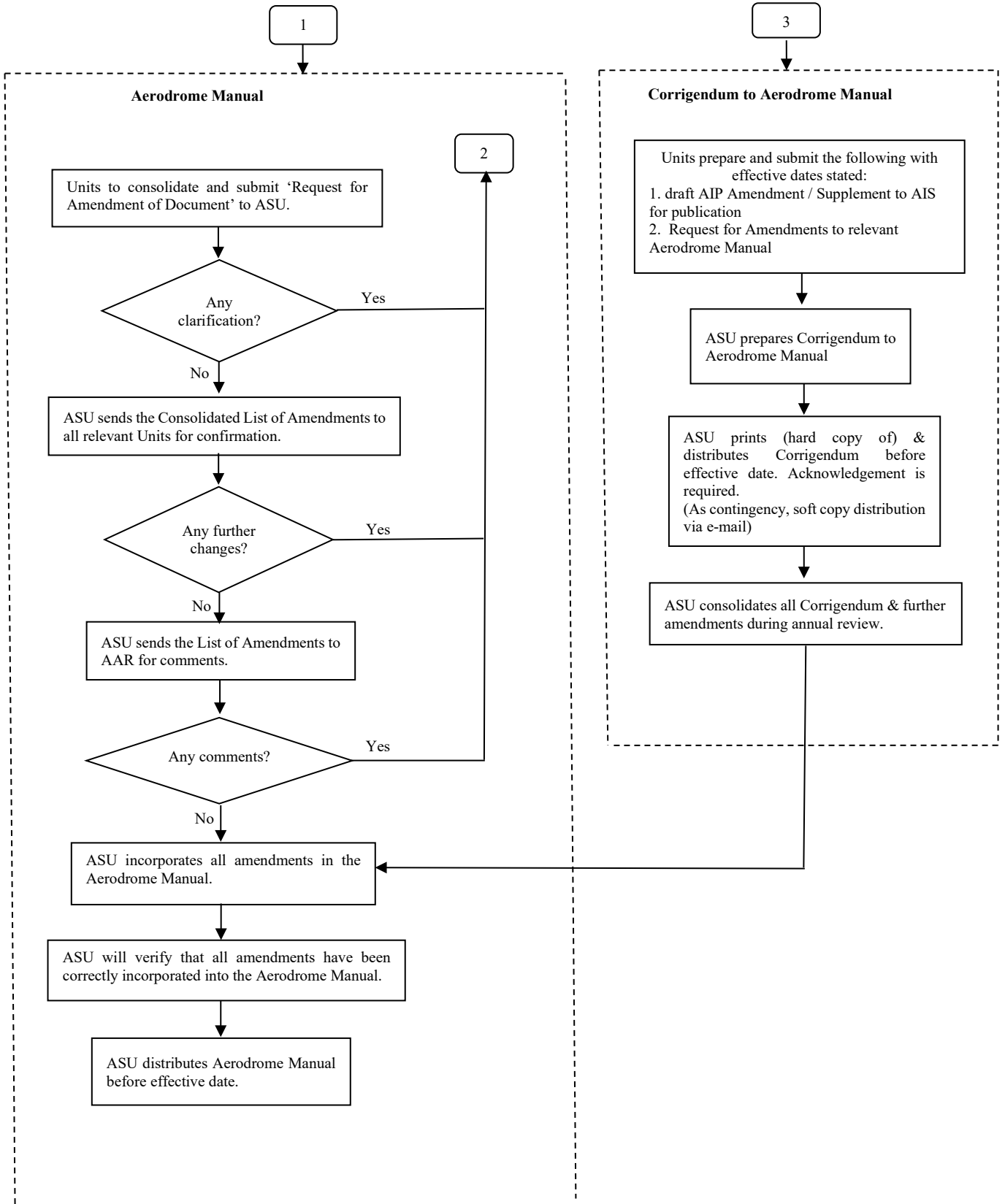


Note:

- 1) If the Original NOTAM contains several other dates and which will be cancelled together with the runway/taxiway/taxilane/aircraft stand to be closed, then the issuer of the NOTAM shall re-issue a new NOTAM for the rest of the remaining dates.
- 2) There is no requirement to cancel the NOTAM if the CAG Officer/authorised RTO so decides to re-open the runway/taxiway/taxilane/aircraft stand earlier after it has been closed according to the approved timing.

PROCEDURE 10: PROCESS FLOW ON UPDATING OF AERODROME MANUAL, AIRPORT OPERATIONAL AND SAFETY(AOS), AIRSIDE WORKS PROCEDURE MANUAL (AWPM)





Annex 3

SOP Verification Checklist



The purpose of this checklist is to ensure that work parties had implemented the latest requirements, where relevant, as stipulated in CAG’s procedures such as the Airport Operational and Safety Requirement Manual (AOS) or Airside Works Procedure Manual (AWPM) as and when a new revision to the manual or SOP is promulgated.

CAG project / maintenance officer shall attach excerpts of the affected SOP from work parties for documentation of such changes made.

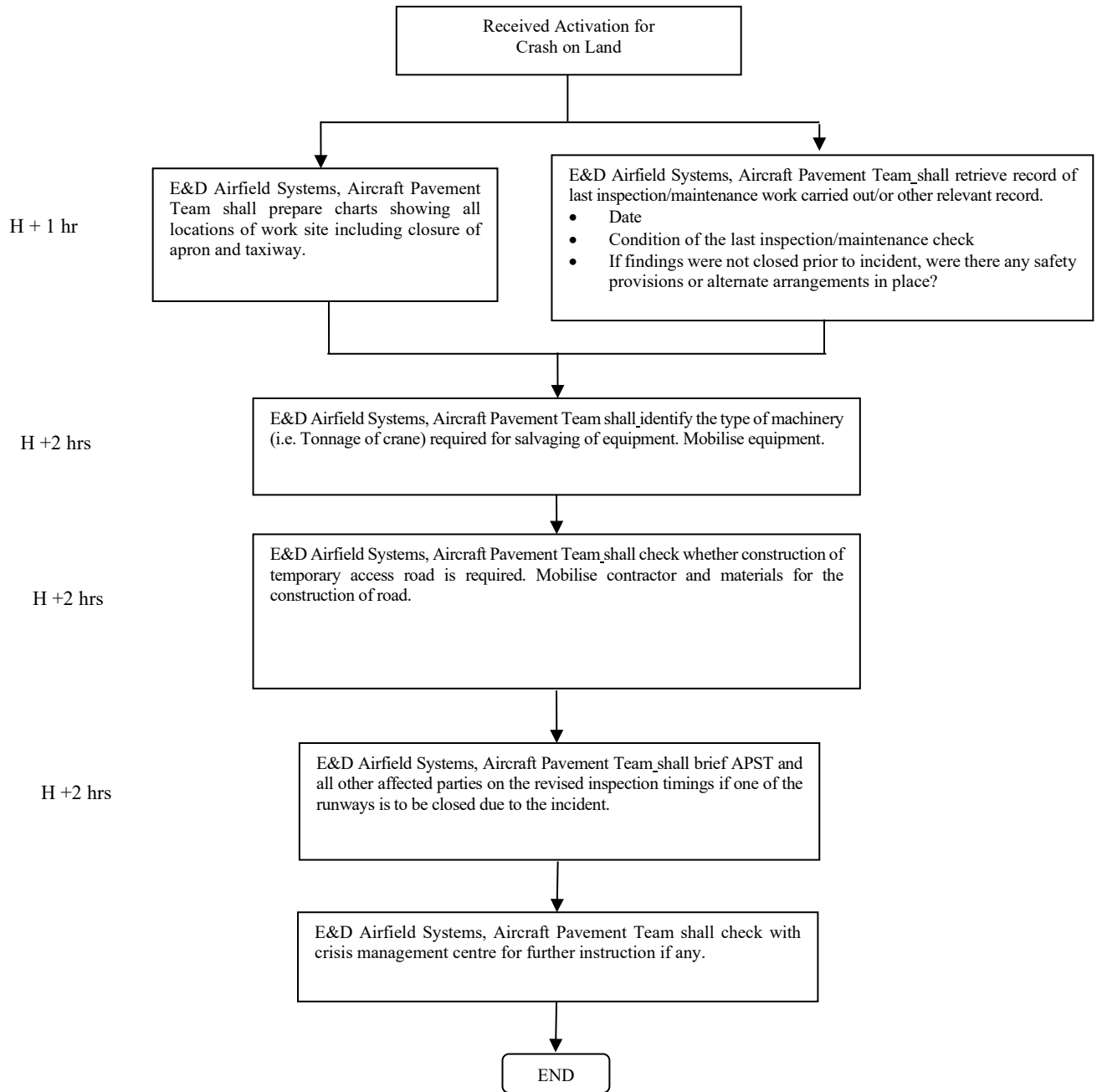
CAG Manual : AOS / AWPM*
 Revision : _____
 Manual Revision Date : _____

* Delete where applicable

Reference number in list of amendment form	Clause reference in CAG Manual	Not Implemented	Not Applicable	Implemented	Remarks (Reason for not implementing / implemented with reference to work parties' SOP and to include work parties' SOP clause reference number)

Check by (CAG) : _____
 Date : _____
 Scope of Work : _____

PROCEDURE 11: RESPONSE TO CRASH ON LAND WITHIN CHANGI AIRPORT WITHIN AES TURN-OUT AREA (RUNWAY 1 or 2)



**PROCEDURE 12: PROCESS FLOW ON COMMISSIONING
AND HANDING OVER UPON COMPLETION OF PROJECT
AT MOVEMENT AREA**

Upon completion of any airside project work, the contractor shall conduct inspections, testing & commissioning works with CAG Maintenance/Project officers. The inspections and testing and commissioning works shall be carried out in accordance to the requirements spelt out in the contract specifications and the findings/ results shall be recorded in the inspections, testing and commissioning forms.



Upon certifying that the project has been completed satisfactorily, the CAG Maintenance/Project officer shall inform the respective parties responsible for taking over the new facility for operations and maintenance and arrange for a handing over inspection with the users. CAG maintenance / project officer shall ensure that the new aircraft movement area remains inaccessible to aircraft by marking it as a closed aircraft movement area until the handing and taking over process has completed.



This list below shall serve as a guide for areas to be checked, acknowledged and taken over by respective parties. The project officer shall consult all the respective system owners for their detailed handing/taking over checklist prior to handing over.

Civil work*

- Pavement condition
- Quality of dimension airfield marking
- Drainage, turfing
- FOD

Airfield Lighting System*

- Airfield Lighting
- Taxiway guidance signs
- Aircraft Stand Manoeuvring Guidance Light System
- Airfield Lighting Control System

CAFHI*

- Fuel pits available for the intended aircraft types

PLB/ADGS*

- PLB serviceability, including fixed gangway and movable arms
- PLB security doors
- PLB obstacle lights
- ADGS serviceability
- INS sign
- Aircraft stand bay indicator sign

Floodlights*

- Floodlights and lighting levels
- Obstacle lights on high mast
- Earth Receptacle & Lightning Protection

CCTV *

- CCTV on high mast, if any

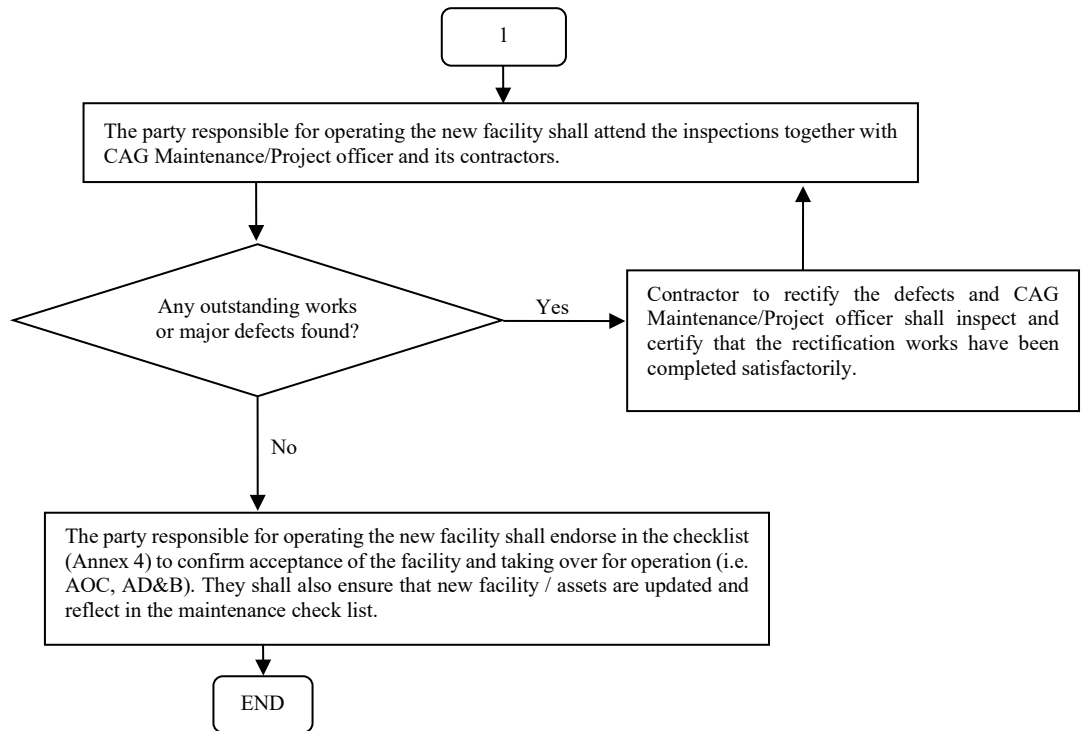
Master Planning *

- Safety separation distances
- Safety distance to object
- Marking and lighting of obstacles
- Sizing of the ESA and EPS is sufficient for the ground handler
- 2nd layer of checks on as-built drawings, to ensure compliance to Air Navigation Regulation 139, Aerodrome Specifications and Advisory Circulars upon completion of markings, guidance sign and other visual aids modification or construction.

*if applicable



1



Annex 4

Checklist for Commissioning of Airside Infrastructure and Works

Project Title: _____



	* Runway / Taxiway	:	_____
	Aircraft Parking Stand	:	_____
	Other Works	:	_____

No	Facility / Equipment	Compliance / Functionality Checked	Check Status	Checked By	Signed / Date	Maint Checklist Updated?	Remarks / Comments Addressed
1	Civil Works						
1.1	Condition of Runway / Taxiway pavement		*Acceptable / To Rectify / NA			*Yes / No	
1.2	Runway / Taxiway ground markings dimension in accordance to specifications		*Acceptable / To Rectify / NA			*Yes / No	
1.3	Condition of Parking Stand pavement		*Acceptable / To Rectify / NA			*Yes / No	
1.4	Parking Stand ground markings dimension in accordance to specifications		*Acceptable / To Rectify / NA			*Yes / No	
1.5	Stop-line markings dimension in accordance to specifications for each aircraft type		*Acceptable / To Rectify / NA			*Yes / No	
1.6	Primary and Secondary Roadway		*Acceptable / To Rectify / NA			*Yes / No	
1.7	Roadway ground markings dimension in accordance to specifications		*Acceptable / To Rectify / NA			*Yes / No	
1.8	Jet blast deflector		*Acceptable / To Rectify / NA			*Yes / No	
1.9	Drains		*Acceptable / To Rectify / NA			*Yes / No	

No	Facility / Equipment	Compliance / Functionality Checked	Check Status	Checked By	Signed / Date	Maint Checklist Updated?	Remarks / Comments Addressed
1.10	Turfing		*Acceptable / To Rectify / NA			*Yes / No	
2	<u>PLB / ADGS</u>						
2.1	Fixed gangway serviceability		*Acceptable / To Rectify / NA			*Yes / No	
2.2	PLB serviceability		*Acceptable / To Rectify / NA			*Yes / No	
2.3	PLB security doors		*Acceptable / To Rectify / NA			*Yes / No	
2.4	PLB red obstacle lights		*Acceptable / To Rectify / NA			*Yes / No	
2.5	PLB safety zone ground markings dimension in accordance to specifications		*Acceptable / To Rectify / NA			*Yes / No	
2.6	ADGS display & control panel		*Acceptable / To Rectify / NA			*Yes / No	
2.7	INS sign constructed in accordance to specifications		*Acceptable / To Rectify / NA			*Yes / No	
2.8	Bay indicator sign constructed in accordance to specifications		*Acceptable / To Rectify / NA			*Yes / No	
2.9	Gate Operating System (GOS) updated		*Acceptable / To Rectify / NA			*Yes / No	
3	<u>ANCILLARY BUILDING SERVICES AND M&E SYSTEMS</u>						
3.1	Apron Floodlight & lighting levels To attached lux level reading and check against specifications as stipulated in Air Navigation Regulation 139, Aerodrome Specifications and Advisory Circulars.		*Acceptable / To Rectify / NA			*Yes / No	
3.2	Apron floodlight OG box + plinth		*Acceptable / To Rectify / NA			*Yes / No	
3.3	Lightning protection shelter		*Acceptable / To Rectify / NA			*Yes / No	

No	Facility / Equipment	Compliance / Functionality Checked	Check Status	Checked By	Signed / Date	Maint Checklist Updated?	Remarks / Comments Addressed
3.4	Earth receptacle		*Acceptable / To Rectify / NA			*Yes / No	
3.5	OBS lights for jet blast fence		*Acceptable / To Rectify / NA			*Yes / No	
4	<u>AFL system / ALCS</u>						
4.1	Runway / Taxiway centerline and edge lights To attached specifications of installation.		*Acceptable / To Rectify / NA			*Yes / No	
4.2	Airfield mandatory and information signs constructed in accordance to specifications in terms of dimension and luminance		*Acceptable / To Rectify / NA			*Yes / No	
4.3	Airfield Lighting Control System (ALCS) updated		*Acceptable / To Rectify / NA			*Yes / No	
4.4	Aircraft Stand Manoeuvring Guidance Light System		*Acceptable / To Rectify / NA			*Yes / No	
4.5	Guidance signs are designed and constructed in compliance with Air Navigation Regulation 139, Aerodrome Specifications and Advisory Circulars / ICAO Annex 14		*Acceptable / To Rectify / NA			*Yes / No	
5	<u>CCTV</u>						
5.1	Camera Coverage of Aircraft Parking Stand/Runway/Taxiway		*Acceptable / To Rectify / NA			*Yes / No	
6	<u>Fuel hydrant system</u>						
6.1	Underground fuel hydrant pit location		*Acceptable / To Rectify / NA			*Yes / No	
6.2	Dimension of markings for hydrant pits in accordance to specifications		*Acceptable / To Rectify / NA			*Yes / No	
6.3	Height of protrusion of fuel pit above pavement level		*Acceptable / To Rectify / NA			*Yes / No	
6.4	CAFHI infrastructure has been commissioned in line with relevant JIG Standards. CAFHI to send CAG confirmation by the project consultant that the relevant commissioning tests have been conducted and are satisfactory		*Acceptable / To Rectify / NA			*Yes / No	

No	Facility / Equipment	Compliance / Functionality Checked	Check Status	Checked By	Signed / Date	Maint Checklist Updated?	Remarks / Comments Addressed
6.5	CAFHI Hansa test bay closure matrix and test plans has been updated. CAFHI to send CAG: <ul style="list-style-type: none"> Updated Hansa test bay closure matrix Confirmation that Hansa test plans and parameters has been recalibrated and updated 		*Acceptable / To Rectify / NA			*Yes / No	
7	<u>Compliance checks</u>						
7.1	Safety separation distances between runway / taxiway		*Acceptable / To Rectify / NA			*Yes / No	
7.2	Safety separation distances to object		*Acceptable / To Rectify / NA			*Yes / No	
7.3	Marking and lighting of obstacles		*Acceptable / To Rectify / NA			*Yes / No	
7.4	Sizing of the ESA/EPA at parking stand		*Acceptable / To Rectify / NA			*Yes / No	
7.5	Geographical WGS-84 survey requirements		*Acceptable / To Rectify / NA			*Yes / No	
7.6	Markings for ERA, ABL for parking stand		*Acceptable / To Rectify / NA			*Yes / No	
7.7	Pavement slope compliance to Air Navigation Regulation 139, Aerodrome Specifications and Advisory Circulars		*Acceptable / To Rectify / NA			*Yes / No	
8	<u>Documentation</u>						
8.1	Issuance of NOTAM		*Acceptable / To Rectify / NA			*Yes / No	
8.2	Issuance of AON		*Acceptable / To Rectify / NA			*Yes / No	
8.3	Submission of AIS publication (AUP Supp, AIP amdt) Project officer to ensure that information submitted is aligned with updates to the aerodrome manual.		*Acceptable / To Rectify / NA			*Yes / No	
8.4	Update to Aerodrome Manual (CAM / SAM) Project officer to ensure that information submitted is aligned with updates to the AIP / AIP Supp.		*Acceptable / To Rectify / NA			*Yes / No	
9	<u>Others</u>						

No	Facility / Equipment	Compliance / Functionality Checked	Check Status	Checked By	Signed / Date	Maint Checklist Updated?	Remarks / Comments Addressed
9.1	Operational item (pushback procedure in AOCS)		*Acceptable / To Rectify / NA			*Yes / No	
9.2	Operational item (fire extinguisher at parking stand)		*Acceptable / To Rectify / NA			*Yes / No	
9.3	Operational item (FOD bin)		*Acceptable / To Rectify / NA			*Yes / No	
9.4	Others (to specify: _____)		*Acceptable / To Rectify / NA			*Yes / No	

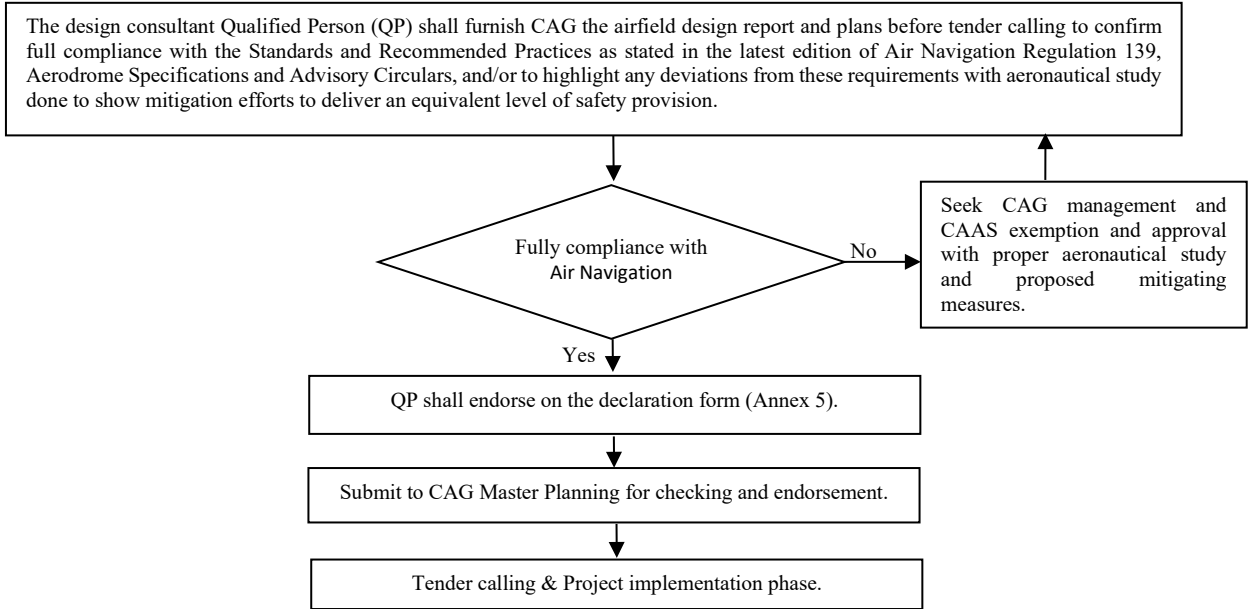
***Note:**

- Handover shall only commence upon approval from CAAS, AAR
- All items checked should be compliant to Air Navigation Regulation 139, Aerodrome Specifications and Advisory Circulars and critical dimension (i.e. Marking font size, safety distances, e.t.c) shall be recorded.
- As-built drawings to be attached once available and uploaded into internal drawing management system (i.e. Newforma for E&D), after handing-over.

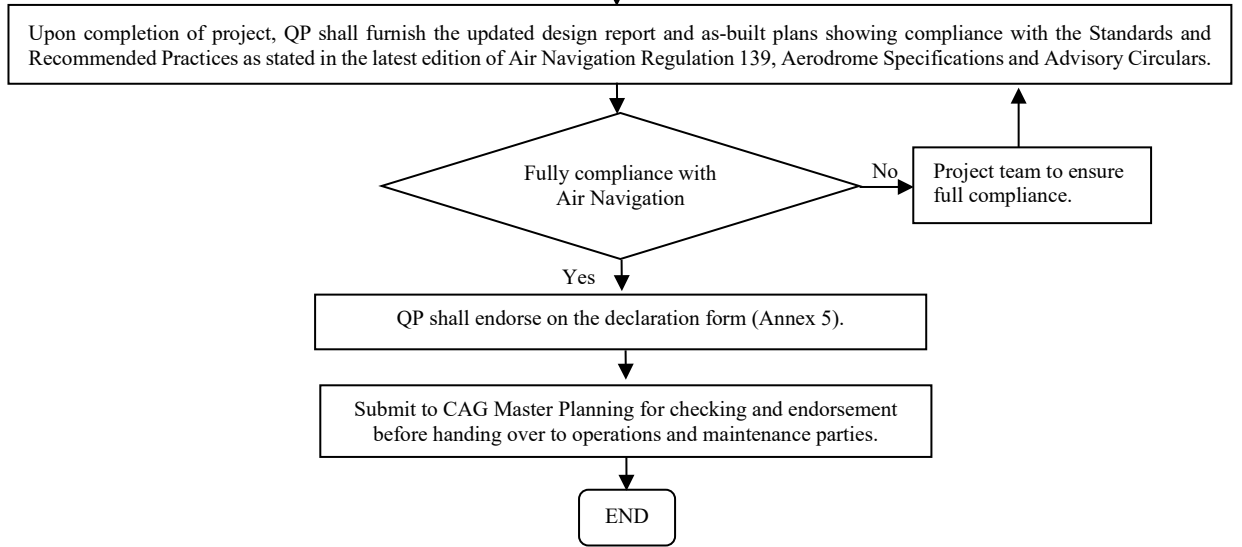
Infrastructure Type: *Runway/ Taxiway / Taxilane / Aircraft Parking Stand / Others: (_____)			
Hand Over (E&D / CE PDCO)	Taking Over (Operations)	Witness By	
Section : _____	Division : _____	Company : _____	
Name : _____	Name : _____	Name : _____	
Designation : _____	Designation : _____	Designation : _____	
Signature : _____	Signature : _____	Signature : _____	
Date / Time : _____	Date / Time : _____	Date / Time : _____	
Infrastructure Type: *Runway/ Taxiway / Taxilane / Aircraft Parking Stand / Others: (_____)			
Hand Over (E&D / CE PDCO)	Taking Over (E&D Maintenance)	Witness By	
Section : _____	Division : _____	Company : _____	
Name : _____	Name : _____	Name : _____	
Designation : _____	Designation : _____	Designation : _____	
Signature : _____	Signature : _____	Signature : _____	
Date / Time : _____	Date / Time : _____	Date / Time : _____	

PROCEDURE 13: PROCESS FLOW ON DESIGN CHECK TO ENSURE COMPLIANCE TO CAAS AIR NAVIGATION REGULATION 139, AERODROME SPECIFICATIONS AND ADVISORY CIRCULARS

(A) Before Tender Calling Stage



(B) Project Completion Stage



DECLARATION ON COMPLIANCE TO CAAS AIR NAVIGATION REGULATION 139, AERODROME SPECIFICATIONS AND ADVISORY CIRCULARS FOR AIRFIELD DESIGN AT CHANGI AND SELETAR AIRPORTS

(A) INFORMATION ON PROPOSED DEVELOPMENT/PROJECT

Proposed Development / Project :
Location :

(B) DECLARATION BY DESIGN CONSULTANT QUALIFIED PERSON

The design consultant Qualified Person (QP) hereby declares that:

For the proposed airfield related development:

- a. The submitted design report and plan(s) (Tender / As-Built)* comply fully with the Standards and Recommended Practices as stated in the latest edition of the Air Navigation Regulation 139, Aerodrome Specifications and Advisory Circulars (version: ____) published by the Civil Aviation Authority of Singapore (CAAS), unless otherwise stated below;
- b. The complete list of non-compliances are:

Air Navigation Regulation 139, Aerodrome Specifications and Advisory Circulars Clause	Details of Non-Compliance	Remarks

Note: to submit on a separate page if necessary

DESIGN QUALIFIED PERSON

Name: _____ Designation: _____

Signature: _____ Date: _____

Company Stamp: _____

(C) CHECK BY CAG'S MASTER PLANNING

This is to certify that the design report and plan(s) submitted by the appointed design consultant have been checked to ensure that:

For the proposed airfield related development:

The consultant's submitted design report and plan(s) (Tender / As-Built)* comply fully with the Standards and Recommended Practices as stated in the latest edition of the Air Navigation Regulation 139, Aerodrome Specifications and Advisory Circulars (version: ____) published by the Civil Aviation Authority of Singapore (CAAS). The relevant chapter(s) checked are:

Air Navigation Regulation 139, Aerodrome Specifications and Advisory Circulars Chapter / Clauses	Yes	No	N.A	Remarks
Physical Characteristics				
Obstacle Restriction and Removal				
Visual Aids for Navigation				
Visual Aids for Denoting Obstacles				
Visual Aids for Denoting Restricted Use Areas				
Electrical Systems				
Aerodrome Operational Services, Equipment and Installations				
Others (please specify: _____)				
<i>Note: to submit on a separate page if necessary</i>				

Additional aeronautical studies done to provide equivalent level of safety for any non-compliances.
The following aeronautical studies reports for the non-compliances identified are attached:

Nos	Air Navigation Regulation 139, Aerodrome Specifications and Advisory Circulars Clause	Report Reference No.

CHECKED BY

Name: _____ Designation: _____

Signature: _____ Date: _____

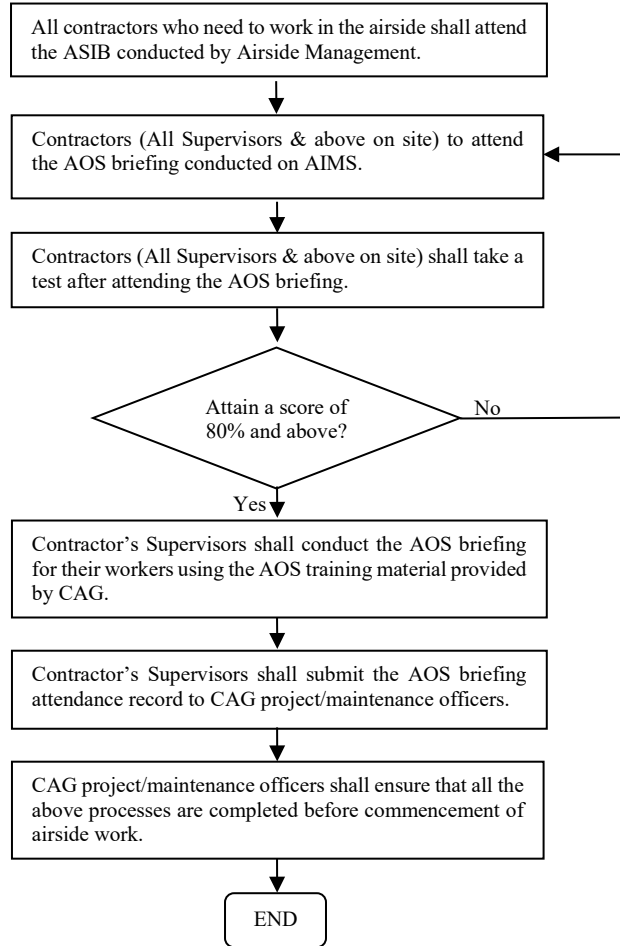
ENDORSED BY

Name: _____ Designation: _____

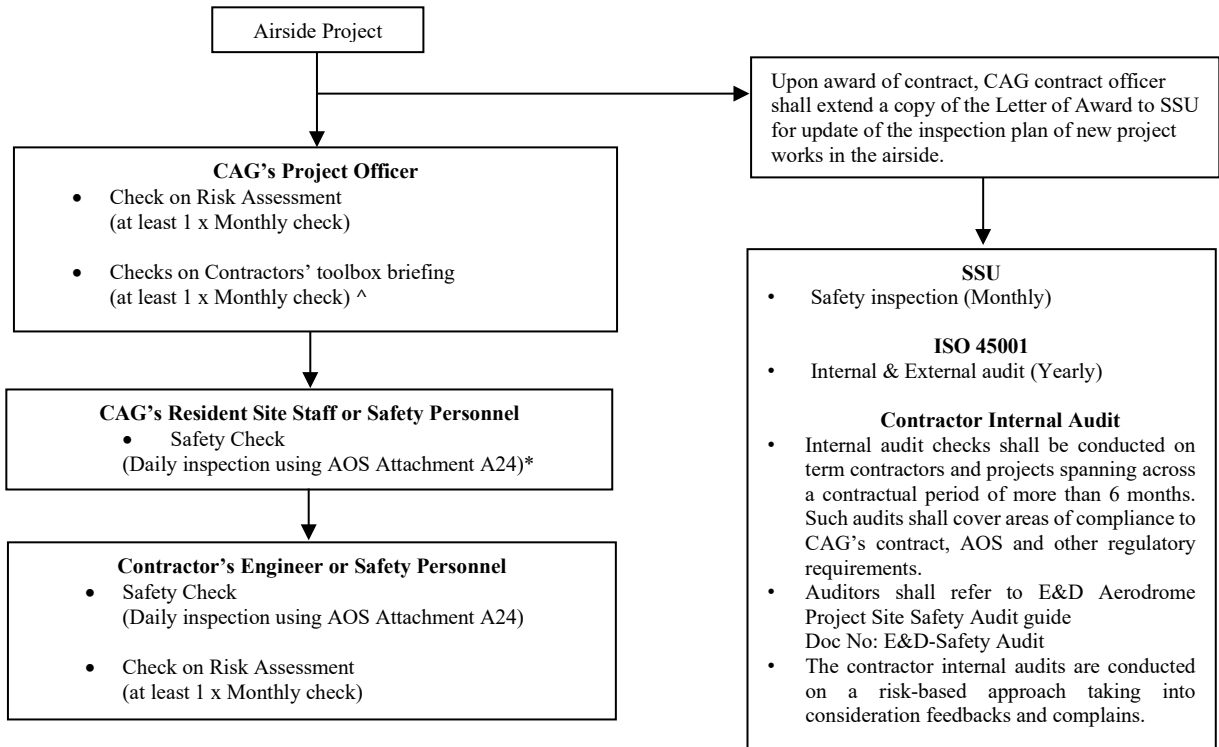
Signature: _____ Date: _____

* Delete where applicable

**PROCEDURE 14: SAFETY BRIEFING WORKFLOW FOR
AIRSIDE SAFETY INDUCTION BRIEFING (ASIB) &
AIRPORT OPERATIONAL SAFETY REQUIREMENTS (AOS)
BRIEFING**



PROCEDURE 15: SAFETY INSPECTION FRAMEWORK
(DEVELOPMENT / PROJECT)



* On days that the site supervisory personnel are not at work due to public holidays or weekends, the contractor shall assign a person holding a supervisory post or minimally a safety coordinator, to conduct the checks on behalf of the site supervisory personnel. Information of person who has conducted the check on public holidays or weekends shall be indicated on the daily inspection checklist.

To ensure the quality of the checks, photographs of critical check items such as closure markers and markings, obstacle lights and chequered flags shall be taken and forwarded to the site supervisory personnel for verification. Site supervisory personnel shall then attach the photographs and endorse on the checklist on the next working day.

^

CAG's Project Officer are advised to utilize a copy of the approved risk assessment form to conduct the checks. Mitigation measures checked shall be indicated on the RA with date that it was inspected. Project Officers are also advised to indicate explicitly the checks done or when any mitigation measure has been completed. Where practicable based on progress and scope of work, project officers shall complete checks for every single line item on the RA within a period of 1 year, except for work activities which have not commence. This is to ensure that every line item is checked within a reasonable timeframe. The team lead for the project, shall also conduct checks on the completeness of the RA checks by the project officer once every quarter. CAG's Project Officer can exercise their own discretion when conducting such checks if the records are kept in a manner that provides traceability and ensure completeness of check.

CAG's appointed site representative is to conduct checks on contractor's toolbox briefing at least once a week, signing off on the attendance record only when they are physically present for the briefing session and had verified the accuracy of contents briefed against what is recorded.