

CEN25FA019

AIR TRAFFIC CONTROL

Specialist's Services Review – Attachment 4
HOU ATCT Standard Operating Procedures
February 26, 2026

ORDER

HOU 7110.1A - CHANGE 1

HOBBY ATCT AIR TRAFFIC CONTROL STANDARD OPERATING PROCEDURES



May 15, 2023

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

HOBBY ATCT AIR TRAFFIC CONTROL STANDARD OPERATING PROCEDURES

HOU 7110.1A - CHANGE 1

FOREWORD

This order defines the duties and responsibilities of, and depicts allocated airspace for all positions of operations at Hobby ATCT. Guidance contained herein is supplemental to national, Service area, and district directives. Personnel are required to be familiar with these provisions and to exercise their best judgment when encountering situations not covered.

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CHAPTER 1: GENERAL

1-1. PURPOSE.

This order defines duties, responsibilities, and allocated airspace for all positions of operation at Houston (Hobby) Tower.

1-2. DISTRIBUTION.

This order shall receive standard intra-facility distribution and posted to the Facility Directives Repository

1-3. CANCELLATION.

This handbook cancels the HOU 7110.1A dated April 15, 2022.

1-4. EFFECTIVE DATE.

This order is effective May15, 2023.

1-5. EXPLANATION OF CHANGES.

All changes not specifically described in this paragraph are editorial in nature.

A.) 1-9, added requirement for annual review of HOU7110.1.

B.) 2-13, added requirement for monitoring of NAVAIDS, IAW national orders.

C.) 8-4, added requirement for GC to read back LC crossing instructions, if other than originally requested, via recorded line.

D.) 8-8, added requirement for ATM or designee to determine if GENOTS are applicable to the facility. GENOTS deemed non-applicable will not be briefed

E.) 2-8 (e) – Added requirement for Candidate NOTAM backup system.

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1-6. WORD MEANING.

As used in this handbook:

- a. Shall/must, or an action verb in the imperative sense, means a procedure is mandatory.
- b. Should, means a procedure is recommended.
- c. May, or need not, means a procedure is optional.
- d. Will indicates futurity, not a requirement for the application of a procedure.
- e. Singular words include the plural, and plural words include the singular.

1-7. ANNOTATIONS.

Revised, new, or reprinted, pages will be marked as follows:

- a. The change number and effective date will be printed on each revised or additional page.
- b. Bold vertical lines in the margin indicate the location of substantive revision to the order. Bold vertical lines adjacent to the title of a chapter, section, or paragraph indicate that extensive changes have been made to that chapter, section, or paragraph.
- c. Statements of fact or of a prefatory or explanatory nature relating to directive material are set forth as notes.

1-8. ABBREVIATIONS.

AFLCS	Airfield Lighting Control System
ALSF	Approach Light System w/ Sequenced Flashing Lights
ARFF	Airport Rescue & Fire Fighting
AIT	Automation Information Transfer
ASDE-X	Airport Surface Detection Equipment
ATM	Air Traffic Manager
CIC	Controller in Charge
CD	Clearance Delivery
CPDLC	Controller-Pilot Data Link Communications
D-ATIS	Digital Automated Terminal Information System
LA	Local Assist
DEF	Discrete Emergency Frequency
ECN	Emergency Communications Network
ESL	Emergency Service Level (STARS)
FD	Flight Data
FSL	Full Service Level (STARS)
GC	Ground Control
GC/DEF	Ground Control working the DEF during an emergency
GPM	Geographic Position Markings
GSI	General System Information
HC	Helicopter Control
JPA	SanJac Satellite
LC	Local Control
LUAW	Line Up and Wait
LYD	Lakeside Satellite
MVA	Minimum Vectoring Altitude
NIDS	NAS Information Display System
ODO	Opposite Direction Operations
OS	Operations Supervisor
PDC	Pre-Departure Clearance
POFZ	Precision Obstacle Free Zone
RDVS	Rapid Deployment Voice Switch
RVR	Runway Visual Range
SMGCS	Surface Movement Guidance and Control System
SOP	Standard Operating Procedure
SSALR	Simplified Short Approach Light System w/ Runway Alignment Indicator Lights
STARS	Standard Terminal Automation Replacement System
TCP	Transfer of Control Point
TDLS	Tower Data Link Services

1-9. REQUIREMENT FOR REVIEW

At a minimum, this order shall be reviewed annually by the Local Safety Council.

CHAPTER 2: PROCEDURES

2-1. RUNWAY SELECTION

The OS/CIC has primary responsibility for determining the flow/active runway(s) and whether LUAW procedures will be utilized. This determination requires consideration of factors such as surface wind direction and velocity, wind shear/microburst alerts/reports, adjacent airport traffic flows, severe weather activity, IFR departure restrictions, construction, equipment outages, and environmental factors which may affect the safety of landing and takeoff operations.

a. Normal Flows:

Flow	Landing Runways	Departure Runway(s)	Notes
South	13R, 13L	13R, 13L, 22	
North	31L, 31R	31L, 31R	RY 22 may be used with OS/CIC approval and coordination between LC and GC.
East	4	4, 31L, 31R	
West	22	22	RWY13R/31L active only with OS/CIC approval.
Church	4	4, 13R, 13L	Sunday 1000-1200 LCL (<i>see restrictions below</i>)
SMGCS	4	4	Numerous restrictions – see chapter 7
MID	4	22	Nightly 0000-0600 LCL (<i>see restrictions below</i>)

NOTE: Runway assignments outside of the designated flows above may be authorized subject to the following conditions:

1. Coordination and full concurrence between LC and GC
 2. Consideration of known factors such as surface winds, existing airborne or ground traffic, opposite direction operations, severe weather etc...
 3. The OS/CIC notification and acknowledgment of the operation
- b. Local and Ground Control may coordinate to deactivate runways if operationally advantageous.

2-2. NOISE ABATEMENT PROCEDURES

- a. Restrict turbojet aircraft to land on Runway 4 and depart on Runway 13R and 13L:
 - 1. Between the hours of 1000 to 1200 local on Sundays.
 - 2. Departures shall exit Hobby airspace via Runway 4 departure gates unless otherwise coordinated with Houston Approach Control.
- b. Restrict turbojet aircraft to land Runway 4 and depart Runway 22 between midnight and 0600 local, daily. Ensure that the Mid flow light switch is selected on the airport lighting panel. Departures shall be coordinated with I90.

NOTE: *These procedures shall be used unless wind, weather, runway/taxiway closures, runway conditions, NAVAID outages, or traffic, dictate otherwise.*

2-3. LUAW PROCEDURES

LUAW procedures may only be used after the ATM determines that an operational need exists. OS/CIC's are authorized to implement LUAW procedures using the following guidelines:

- a. Aircraft may not be LUAW at an intersection between sunset and sunrise.
- b. LC shall not be combined with any non-Local Control position. (HC and LA are considered LC positions).
- c. OS/CIC shall not be combined with a control position (LC, HC, or GC).
- d. LA must be open when authorizing more than 1 aircraft to LUAW on the same runway.
- e. LC shall not use LUAW on intersecting runways simultaneously.
- f. Do not clear an aircraft to land if an aircraft has been LUAW on that runway unless the following conditions are met:
 - 1. Safety Logic is operating in "Full Core Alert Mode" (Normal, Rain or RADAR. Limited - is NOT Full Core Alert).
 - 2. Ceiling must be 800' or greater
 - 3. Visibility must be 2 miles or better.
 - 4. There are no restrictions based on runway geometry.
 - 5. There are no fleet mix restrictions.
- g. LUAW procedures may be curtailed at the OS/CIC's discretion when traffic volume or complexity warrants.
- h. Although all runways and the taxiways which intersect them are visible from the tower, the following situations represent visibility limitations aircraft may encounter:
 - 1. Aircraft in position on runway 4 and aircraft in position on runway 31L are not visible to each other.
 - 2. Aircraft in position on runways 31L or 31R and aircraft in position on runway 22 are not visible to each other.

3. Aircraft in position on runways 13L, 13R and aircraft in position on runway 22 are not visible to each other.
- i. Intersection departure distances are provided in appendix E.
- j. Distance from runway and speed of aircraft on final must be closely monitored when using LUAW procedures as well as expected runway occupancy time.
- k. Strip management shall be in accordance with paragraph 8-1 c.8).
- l. LAHSO OPERATIONS ARE NOT AUTHORIZED

SMGCS Consideration: During SMGCS operations, advanced centerline lighting is utilized on taxiway "K", "K1" and Runway 4 to assist pilots with proper runway alignment, therefore LUAW is not required between sunrise and sunset, nor is LUAW authorized during SMGCS operations after sunset. **SMGCS Consideration:** During SMGCS operations, advanced centerline lighting is utilized on taxiway "K", "K1" and Runway 4 to assist pilots with proper runway alignment, therefore LUAW is not required between sunrise and sunset nor is LUAW authorized during SMGCS operations after sunset.

2-4. ENGINE RUN UPS

The primary location for engine run up tests is on the Taxiway Golf holding bay with aircraft positioned on a heading of 190-220 degrees. Alternative locations include, but are not limited to:

1. Taxiway Mike between Taxiways Papa and Mike-3
2. Taxiway Mike between Taxiways Hotel and Mike-1
3. Taxiway Kilo between Taxiways Juliet and Kilo-1

NOTE: Extra caution should be used when small aircraft are operating behind large aircraft performing high-power run-ups.

- a. When performing engine run ups at the alternative locations, aircraft are to be positioned so that they are parallel to the taxiway. Ensure that the aircraft is positioned so the jet blast and/or propeller wash are directed towards the center of the airport.
- b. Pilots/mechanics must contact the FAA Control Tower on ground control frequency for clearance to the designated area. Radio contact must be maintained with the tower at all times.
- c. Engine run ups may be conducted on Taxiway Romeo east of Runway 4 by Reciprocating/Turboprop engine aircraft only. Aircraft should be positioned so that the prop blast is directed towards 040 degrees.
- d. Run-up pads at the approach ends of runways may only be used by reciprocating engine aircraft for pre-takeoff checks.

2-5. ILS CRITICAL AREA.

- a. No aircraft or vehicle shall be allowed to enter the ILS critical area when the ceiling is reported to be less than 800 feet and/or the visibility is reported to be less than 2 miles and an aircraft conducting an ILS approach is inside the final-approach fix.

b. Critical areas are:

1. Runway 4- Taxiway “K-1”. Also, between but not to include RWY 4 and TWY K south of the GS antenna through TWY G.
2. Runway 31L- Taxiway “Q” and Taxiway “N”
3. Runway 13R - Taxiway “F” between RWY 13R and TXY G.

2-6. WIND DISPLAYS

The NIDS display(s) shall be used as the primary source of wind information. If it is suspected that the displayed wind data is erroneous, notify maintenance and continue to issue displayed data until advised by maintenance that the system is unreliable or unusable. If advised that the displayed data is unusable, use alternate methods of relaying wind information, (i.e. Ribbon Display, SWS, or use estimated winds from the METAR, and/or windsock).

2-7. BIRD ACTIVITY

When a bird strike is reported or an abnormal amount of bird activity is observed by tower personnel:

- a. Ensure that the provisions of Handbook 7110.65 para 2-1-23 are followed.
- b. Inform airport management of any unusual bird activity.
- c. Advise the OS/CIC.
- d. Complete MOR entry in CEDAR.

2-8. REPORTING ESSENTIAL FLIGHT INFORMATION

- a. Under normal conditions, airport personnel will give NOTAM information directly to the Automated Flight Service Station (AFSS). However, under emergency conditions, upon request Hobby Tower personnel shall relay NOTAM information to the AFSS for dissemination as received from airport personnel as indicated below.

1. Relay NOTAM information to AFSS Flight Data at 877-487-6867.
2. NOTAM information relayed to AFSS shall be recorded on the FAA Form 7230-4 including the airport representative's name.

EXAMPLE–

RY 22 CLSD 1900 TO 2100 FOR REPAIRS. AFSS NOTIFIED (BNA).

- b. Airport personnel authorized to issue NOTAM's are:

1. Airport Manager
2. Assistant Managers
3. Operations & Safety Officers
4. Airport Police (Captains, Lieutenants and Sergeants)

- c. The airport manager's office shall supply Hobby Tower with a current list of personnel authorized to issue NOTAM's. This list shall be kept in the Operational Supervisor's binder.
- d. The OS/CIC shall ensure that the current NOTAM information received from City Operations is entered on the appropriate page of the NIDS.
- e. If the FAA NOTAM system is unavailable / inaccessible, the backup Candidate NOTAM system shall be used until the primary system is restored. The Candidate NOTAM backup page is found at: <https://notambackup.faa.gov>

2-9. THREE HOUR TARMAC RULES

A Pilot-in-Command may request to return to the gate to comply with the Three Hour Tarmac Rule. When a request is received, notify the OS/CIC and:

- a. Provide expeditious handling to comply with the pilot's request.
- b. Approve requests unless:
 - 1. The movement of the aircraft would result in an airborne holding delay or a ground delay of 15 minutes or more.
 - 2. The movement of this aircraft would result in placing another aircraft in jeopardy of violating the Three Hour Tarmac Rule.
 - 3. This request would displace departures already in delay status and result in delays in excess of an additional 15 minutes.
 - 4. This request would result in a diversion or airborne holding of more than 3 aircraft.
- c. Consider operational complexity, surface operations, other arrival/departure runways, taxi routes, ramp areas and low visibility operations.
- d. Consider security and customs concerns.
- e. Consider local safety concerns, such as multiple runway crossings.
- f. Consider location of alternate de-planement areas, if applicable.
- g. Consider taxiway/runway closures and/or airport construction.
- h. An aircraft requesting taxi clearance should be accommodated as soon as operationally possible. If a taxi request cannot be accomplished in a timely manner, the following phraseology is suggested:
 - 1. "...expect a (minute) delay due to (reason)
 - OR
 - 2. "...unable due to operational disruption."

2-10. OPPOSITE DIRECTION OPERATIONS (ODO)

DEFINITION: IFR/VFR operations conducted to the same runway or parallel runway where an aircraft is operating in a reciprocal direction of another aircraft arriving, departing or conducting an approach.

NOTE: All procedures contained in this paragraph pertain to both IFR and VFR aircraft.

(1) General

- (a)** Opposite direction procedures are only applicable when Fusion is operational.
- (b)** When HOU's Certified Tower Radar Display is out of service. I90 Controlling Sector will be responsible to ensure all (arrival and departure) cutoff points are met.
- (c)** For ODO: runway 13R/L and 31L/R are considered the same runway.
- (d)** Coordination:
 - 1** HOU Local Control and I90 controlling sectors are responsible for the coordination required to conduct an opposite direction operation and issuing traffic advisories as prescribed in this agreement.
 - 2** All coordination must take place on a recorded line and include the term "opposite direction." Initial coordination must include the call-sign, type, and arrival or departure runway.
 - 3** Once an ODO has been approved, any further operations from that runway must be verbally coordinated until the ODO is completed.
 - 4** Do not allow opposite direction same runway operations with opposing traffic inside the cutoff point unless an emergency exists.

- (e)** Traffic advisories must be issued to both arrival and departure aircraft.

EXAMPLES:

OPPOSITE DIRECTION TRAFFIC (distance) MILE FINAL, (type aircraft).

OPPOSITE DIRECTION TRAFFIC DEPARTURE RUNWAY (number), (type aircraft).

OPPOSITE DIRECTION TRAFFIC (position), (type aircraft).

(2) Procedures

- (a)** The cutoff point (CP) is defined as 10 flying miles from the runway threshold.
 - 1** HOU Local Control is responsible to apply the CP between arriving and departing aircraft.
 - 2** I90 Controlling Sector is responsible to apply the CP between successive ODO arrivals.
 - 3** Visual separation is not authorized for aircraft that are conducting ODO to the same/parallel runways at HOU.
- (b)** Arrival/Arrival: I90 must ensure the first arrival has crossed the runway threshold prior to the second aircraft reaching the CP.

- (c) Arrival/Departure: HOU must ensure the departing aircraft is airborne and issued a turn to avoid conflict prior to opposing traffic reaching the CP. I90 must ensure the arrival aircraft does not cross the CP prior to the departing aircraft becoming airborne.
- (d) If the conditions in paragraph 5c(2)(b) and 5c(2)(c) are not met, action must be taken to ensure control instructions are issued to protect the integrity of the cut off points.

(3) Memory Aid Usage

- (a) The “Opposite Direction Operation” indicator bar/strip Memory aid must be used during Opposite Direction Operations as follows.
 - 1 The “Opposite Direction Operation” indicator bar/strip is to be placed in the Local Control strip bay to indicate an opposite direction operation is being conducted.
 - 2 Upon approving an opposite direction operation, Local Control will place the “Opposite Direction Operation” indicator bar/strip in the Local Control strip bay as a visual reference that an opposite direction operation is being conducted.
 - 3 When the opposite direction operation is complete, the “Opposite Direction Operation” indicator bar/strip is to be removed from the local strip bay.

2-11. WAKE TURBULENCE SEPARATION REQUIREMENTS (CWT)

HOU ATCT is authorized to apply the procedures and separation minima contained in FAA Order JO 7110.126, Consolidated Wake Turbulence (CWT) Separations Standards.

2-12. SPECIAL ACTIVITY AIRSPACE (SAA)/SPECIAL USE AIRSPACE (SUA) NOTIFICATION PROCEDURES

The OS/CIC on duty is required to notify the impacted sectors of active Special Activity Airspace/Special Use Airspace and activate the associated restriction area map if there is one available. Upon the completion of the Special Activity Airspace/Special Use Airspace activity the OS/CIC on duty is required to notify the impacted sectors of the termination and deactivate the associated restriction area map if applicable.

2-13. NAVAID MONITOR REQUIREMENT

Localizer NAVAIDs are monitored in the tower for the purpose of providing immediate information regarding NAVAID status. Should an applicable NAVAID enter alarm status, controllers shall abide by the provisions of JO7110.65 3-3-7, and notify affected sectors / positions at I90.

PHRASEOLOGY–

CAUTION, MONITOR INDICATES RUNWAY (number) LOCALIZER UNRELIABLE.

CHAPTER 3: STARS PROCEDURES

3-1. INFORMATION DISPLAYED

- a. Data blocks: Controller's shall display the position symbol, ACID, Type, Altitude and speed for aircraft in their airspace.
- b. The automatic altitude readout of an aircraft under another controller's jurisdiction may be used for vertical separation purposes without verbal coordination provided the operation is conducted using single site radar coverage.
- c. General System Information shall include: ATIS code, HOU Altimeter, Runway and Approach in use.
- d. MVA map – LC and HC shall display the MVA map that correlates with the RADAR site in use.

3-2. ALTITUDE FILTERS

Altitude filters shall be set on both tracked and untracked targets as follows:

- a. Local Control
 1. Lower limits - 000 feet.
 2. Upper limits - 1,000 feet above tower airspace.

EXAMPLE-

Multi-Function, filter 000060 space 000060

- b. Helicopter Control
 1. Lower limits - 000 feet
 2. Upper limits - 2,000 feet (minimum)

3-3. CHANGING MODE LEVEL

- a. STARS will normally be operated in FUSION mode. If FUSION fails:
 1. Transition to South RADAR - FSL mode (*ESL mode if necessary*).
 2. If South RADAR fails: transition to North RADAR - FSL mode (*ESL mode if necessary*).
- b. The OS/CIC shall:
 1. Make the determination to transition modes.
 2. Coordinate with other tower positions and I90 if transition will affect their operation.
 3. Assist affected positions in the transition.
 4. Ensure that displayed information is adequate.

3-4. RADAR SERVICES

- a. Provide Class B services as directed in JO 7110.65.
- b. Provide all radar identified aircraft/helicopters appropriate radar services. Advise the aircraft when:
 - 1. Radar contact is established or when radar contact is lost.
 - 2. Radar services are terminated.
 - 3. Leaving the Houston Class B airspace.
- c. All aircraft/helicopters operating in HOU Tower Class B airspace shall be radar identified prior to entering Class B airspace, and shall display a full data block to the maximum extent possible. Medical helicopters that depart Bravo airspace westbound from the medical center need not be radar identified.

3-5. RADAR FAILURE

- a. In the event of a RADAR failure
 - 1. Coordinate with the I90 OS and Hobby final.
 - 2. Hobby Class "B" released to I90.
 - 3. Automatic releases are cancelled.
 - 4. Helicopter Control (HC) shall be closed and combined with LC.

CHAPTER 4. COORDINATION

4-1. INTERPHONE MESSAGE FORMAT

The following are step-by-step procedures to be used in inter-phone coordination:

- a. Receiver states position identification.
- b. Caller states position identification (*may be omitted for intra-facility coordination*).
- c. Caller states message.
- d. Receiver states response to caller's message.
- e. Receiver states operating initials (*may be omitted for intra-facility coordination*).
- f. Caller states operating initials (*may be omitted for intra-facility coordination*).

4-2. USE OF HOTLINES/OVERRIDE LINES

- a. The hotlines connect to a speaker that is audible to several positions at I-90. There is a two second delay between the time the line is activated and the time the speaker is activated. Use the following inter-phone format to ensure that the appropriate position at I90 hears the call: "(I90 position), Hobby on the (appropriate line), (I90 position)."

EXAMPLE– "*South, Hobby, on the one line, south.*"

- b. The override lines connect directly to the headset of a control position. Use the hotlines/override lines as appropriate to coordinate other exchanges of information.

4-3. COORDINATION BETWEEN LOCAL CONTROL AND GROUND CONTROL

- a. LC shall advise GC and Hobby final (*if necessary*) when an aircraft's landing runway is other than that displayed in the STARS field 2 (scratch pad).
- b. LC shall advise GC when an aircraft's departure runway assignment is changed.
- c. GC shall advise LC of all known maintenance personnel (City or FAA) inside the Runway Safety Area (RSA). ***No operations shall be allowed if a vehicle is present in the RSA.***
- d. LC shall coordinate with GC prior to allowing a vehicle or aircraft to utilize a runway that is closed or not previously designated as active.
- e. GC must obtain approval from LC prior to assigning a departure runway that is not part of the designated flow. The OS/CIC must also be made aware of such operations and has final approval authority.

NOTE: *The assignment and use of a runway for departure contrary to the prescribed flow in use is subject to situational factors such as "MEDEVAC Priority, weather and wind conditions, existing traffic demands etc...).*

- f. GC shall verbally advise LC of any aircraft assigned an intersection departure in addition to marking the strip with the runway and intersection assigned. (i.e. 13R/K).

- g. When coordinating to cross or use any portion of an active runway Ground Control:
1. Must, before coordinating, determine if the operation is feasible.
 2. Must obtain approval from LC, via the landline.
 3. Must, with specificity, reference any LC airborne or ground traffic (ACID/type/position) they wish to cross behind or ahead of.

PHRASEOLOGY EXAMPLES-

- (a) *“After (ACID/type/position)/ [AHEAD OF (ACID/type/position)] CROSS (crossing coordination)”*.
- (b) *“After SWA12 [ahead of SWA432] cross runway 22 at Charlie”*.
- (c) *“After/ahead of the Gulfstream [departure] cross runway 22 at Bravo”. If there is more than one departure, GC must specify a call sign.*
- (d) *“After aircraft short final, cross runway 13R at Lima”*.
- (e) *“Cross runway 13L at Delta”*.
- h. **Coded Crossings:** Internal coded crossing phraseology associated with parallel runway crossings is utilized as an effort to significantly reduce the probability of internal miscommunication between controllers and to eliminate all probability of transposing/confusing runway numbering (Rwy 13R/31L/ Rwy 13L/31R). Coded Crossings phraseology shall be utilized as follows:

“Echo East”	Cross RWYs 13R/31L, and 13L/31R on TWY ‘E’ to the north ramp.
“Echo West”	Cross RWYs 13L/31R, and 13R/31L on TWY ‘E’ to the west ramp.
“Hotel East”	Cross RWYs 13R/31L and 13L/31R on TWY ‘H’
“Hotel West”	Cross RWYs 13L/31R and 13R/31L on TWY ‘H’
“Kilo East”	Cross RWYs 13R/31L and 13L/31R on TWY ‘K’
“Kilo West”	Cross RWYs 13L/31R and 13R/31L on TWY ‘K’
“Lima East”	Cross RWYs 13R/31L and 13L/31R on TWY ‘L’
“Lima West”	Cross RWYs 13L/31R and 13R/31L on TWY ‘L’
“Cross Exec”	Cross RWY 4/22 from/to TWY K1 to/from TWY ‘G’

i. Coordination Restrictions:

1. Coordination to cross or use any portion of an active runway shall be on the landline. GC shall advise LC, and LC shall acknowledge when the operation is complete. It is not required to make this notification on the landline.
2. GC shall complete ALL coordinated crossings prior to starting a position relief briefing.

NOTE: Briefings must be paused in the event of a priority crossing i.e. MS81, ARFF, medical emergency aircraft etc. and can resume once the priority crossing is complete.

j. Area of Control

1. South & North Flow operations: LC shall retain control of arrivals operating between the parallel runways. (see appendix C) GC shall give way to LC's traffic.
2. LC and GC shall have priority on taxiways as depicted in the "Preferred taxi and ground movement" maps in appendix C.

k. Transfer of Control Points (TCP)

1. Runway 13R departures on taxiways Delta and Echo shall be switched from GC frequency to LC frequency holding short of Runway 13L.

NOTE: Flight progress strips of aircraft taxied to TCP's shall be placed in the strip bay located to the right of the local control position. Additionally, these aircraft shall be advised to "monitor tower frequency" upon reaching the TCP. LC shall be responsible for runway crossings at the TCP.

4-4. COORDINATION BETWEEN LOCAL CONTROL AND HELICOPTER CONTROL

a. General.

1. HC shall utilize coded arrival/departure routes to the greatest extent possible.
2. HC shall advise GC of helicopter landings/departures prior to authorizing helicopters to land or depart. (i.e. "Plate down").

NOTE: This is not required to be done on a landline.

3. Coordination to depart the airport shall be on a recorded line.
4. (North and South Flow) HC shall not allow helicopters from the east ramps departing or arriving from the north, to overfly any portion of runway 22. HC shall instruct the helicopter to remain east of the approach end of runway 22.
5. In order to protect for a missed approach, no aircraft shall fly within 1 mile of the departure end of a landing runway unless verbal coordination is accomplished (landline is not required).

b. Arrivals/Departures.

1. HC shall point-out arrivals from the outer fixes (GOLD, BROADWAY, BALLPARK and STONE) to the inner fixes (TOWER, TERMINAL, TRIANGLE and SOUTH RAMP).
2. If landing does not require crossing runways, no further coordination is required with LC, including arrivals from the north going to the east ramps during North or South flow.
3. Coordination to cross active runways shall be on the landline. HC shall:
 - (a) Reference all of LC's pertinent traffic (landing, departing or taxiing).
 - (b) State the call sign.

- (c) State the destination (i.e. south ramp, plate etc.).

Arrival Example-

“Behind SWA32, Police 72F cross mid-field to the triangle.”

Departure Example-

“Behind SWA32, Police 72F cross (runway(s), direction).”

- (d) HC shall reference all of LC’s pertinent traffic (landing, departing or taxiing).

- (e) State the departure point.

- (f) State the direction of departure.

- (g) Runway crossings shall be coordinated in accordance with the example in section 4-4 subpara b 3c.

4. In all cases, HC shall utilize the ASDE-X and STARS radar to reference and maintain separation from all of LC’s traffic.

c. Overflights.

1. HC shall enter aircraft type and route information in the data block for all pipeline aircraft flying Delta Routes.

- (a) Type: HELO, C172, etc.

- (b) Route: D2 (indicates Delta 2 route).

2. AIT may be used for Pipeline aircraft under the following conditions:

- (a) Type aircraft and coded route shall be in the data block.

- (b) Automated point-outs may only be used when there is no applicable traffic that would need to be referenced. Otherwise verbal point-outs shall be made over the landline.

- (c) Automated data-block hand-offs may be used respective to LC/HC airspace boundaries in which the traffic will operate. Verbal hand-offs with no data-block transfer are permitted with proper coordination.

CHAPTER 5. FLIGHT PROGRESS STRIPS

Manually prepared flight progress strips shall comply with the FAAO 7110.65.

1	2A	5	8	9	9B	10	11	12
2		6	8A	V	9C	13	14	15
3		7	8B			16	17	18
4				9A				

(Figure 5-1)

5-1. IFR (Refer to figure 5-1)

SWA563	0216	KHOU	KHOU LURIC1 ORRTH../KBOS			
D/B738/L	P1300					
917	370					

(Figure 5-1a)

Box 2a - Utilize the following symbols to depict the departure gate.
(Refer to figure 5-1a)

GATE	Strip Marking	SID/ADR	TRANS	Fixed Pair	
				JETS	PROPS
GOMER	M	BLTWY(M)	CRIED	DRE	RDE
		STYCK (L)	DOLEY - WTSON	STK	STC
		WYLSN (D)	GIFFA	BUM	LYW
			MAJKK	KLJ	JAM
		CRIED (M)		AAA	
		GIFFA (D)		YGI	
		LOA (L)	ADM - BYP - FUZ	YLO	
	D	Aircraft departing the GOMER gate landing Dallas Terminal Area			
CLEEP	C	INDIE (Y)	TPAKK	NDI	IDN
		LFK (Y)	LIT		
	W	STRYA (W)	DPATY - JBULL	STY	RYA
		LURIC (K)	HAWES - ORRTH	LRC	CRL
		AEX (W)	CEW - GCV - MCB	YAE	
		ELD (K)		ENJ	
		RAECN..DARTR.J29. LURIC (III)			
TRIOS	S	ELOCO (S)	LLA	ELO	OLE
		SBI270016..SBI (S)			

BOLOS	B	VUH.V70.SBI (B)				
	X	HOODO (X)	BOWFN-CFOOD-HRV-LEV-SBIRD		BOW	
	U	PEECE (U)	MUSYL		PCE	ECP
			ANKRR		KRR	RRK
KELPP			LPP	LPP		
AGGIT	H	PTRON (H)	WWREN - NGP		DPO	DPR
		NGP (H)			NGP	
FREEP	F	PTRON (F)	PSX - YOMOM - CRP		SKU	SKB
		PSX (F)	SAT - FST			
		KEEDS.V20 MAGUS (V)			VCT	
PRARI	P	RETYR (P)	JCT - MNURE - SAT		RYR	RRY
		RETYR (Z)	WAILN		RET	ETY
		RETYR (J)	CRGER		RYT	ERY
		IDU (P)	JCT	CWK - CRP - LRD	YPR	
RNAV SID ADR Conventional SID						
ATC assigned only (wx re-route)			(#) Scratch pad symbol			

NOTE: Aircraft assigned an initial altitude of 3,000' shall use the same letters as above with a circle drawn around the letter. E.g., **(P)** **(B)** to match their respective departure tag and the current departure flow procedures. Additionally these aircraft shall have their frequency written in box 9a.

NOTE: When rerouting of aircraft is necessary, departure gate strip marking shall include the reroute departure gate followed by the primary departure gate.

EXAMPLE: P/D - for a Dallas reroute over Industry.

- Box 1** - Aircraft Identification
- Box 2** - Revision number
- Box 2a** - Departure Gate / Strip Request Originator
- Box 3** - Aircraft Type (and number of aircraft, if more than one)
- Box 4** - CID: "Check Mark" by CID indicates entered in Delay-Ops
- Box 5** - Beacon code – Check mark by code indicate STARS data has been checked.
- Box 6** - Proposed Departure Time (or, previous fix on an active flight)
- Box 7** - Requested Altitude (or, coordination fix on an active flight)
- Box 8** - Departure & Arrival airport (or, coordination time on an active flight)
- Box 8a** - Parking location / Gate Number (use symbols in table 5a on page 20)
- Box 8b** - Runway Assignment
- Box 9** - Route of Flight

Box 9A - Special departure instructions i.e. FRC, CDR. (Circle instructions - place a check mark by the circled data when issued). Mark “CC/RR” in bold letters for reroutes and amendments. (Refer to figure 5-1b)

SWA1995	4275	KHOU	KHOU RETYR3 JCT./KLAX			W
D/B738/L	P	P2300	CC			
123	370					

(Figure 5-1b)

Box 10 - Not used.

Box 11 - Not used.

Box 12 - IFR clearance issued. (“Check mark” if issued verbally, “P” if by PDC, “W” if by CPDLC). (Refer to figure 5-1c)

SWA37	4235	KHOU	KHOU INDIE2 TPAKK./KEWR			W
D/B738/L	C	P1800				
303	410					

(Figure 5-1c)

Box 13 - ATIS code received by pilot

Box 14 - EDCT time

Box 15 - Time released

Box 16 - Delay Operations – Taxi time

Box 17 - Delay Operations – Departure time

Box 18 - Not used.

5-2. VFR (Refer to figure 5-1)

Box 1 - Aircraft Identification

Box 2 - Revision number

Box 2a - Departure Gate / Strip Request Originator

Box 3 - Aircraft Type (and number of aircraft, if more than one)

Box 4 - CID: “Check Mark” by CID indicates entered in Delay-Ops

Box 5 - Beacon code – Check mark by code indicate STARS data has been checked.

Box 6 - Proposed Departure Time (or, previous fix on an active flight)

Box 7 - Requested VFR Altitude (or, coordination fix on an active flight)

Box 8 - Departure & Arrival airport (or, coordination time on an active flight)

Box 8a - Parking location (use symbols in figure 5a on page 20)

- Box 9** - Route of Flight
- Box 9a** - A large letter "V"; the direction of flight (destination airport if local area, "LCL" if local air work) and departure frequency, if applicable.
- Box 13** - ATIS code received by pilot

PARKING LOCATION	SYMBOL
SCI Ramp	SCI
Northeast Ramp	NE
East Ramp (off taxiway R)	R
East Ramp (off taxiway P)	P
Galaxy	G
East Ramp	E
South Ramp	S
West Ramp	W
Customs Ramp	C

(Table 5-2a, Parking Locations)

CHAPTER 6. DUTY FAMILIARIZATION/POSITION RELIEF BRIEFING

6-1. DUTY FAMILIARIZATION

All operational personnel, prior to working their first control position of their duty must view and listen to the prerecorded Center Weather Service Unit (CWSU) Pre-duty briefing and check CEDAR for pertinent briefing items.

6-2. POSITION RELIEF BRIEFING

- a. A pre-brief shall be accomplished prior to assuming any position for the first time using the pre brief checklist in appendix A-2.
- b. The OS/CIC position shall briefing shall be conducted IAW appendix A-1. There is no pre-brief for the OS/CIC position.
- c. Position relief briefings shall be conducted in accordance with FAAO 7110.65, Appendix D, Standard Operating Practice (SOP) for the Transfer of Position Responsibility.
- d. Prior to obtaining a relief briefing, the relieving controller shall monitor the position long enough to become familiar with the traffic situation.
- e. Relief briefings shall be recorded to the maximum extent possible using the RB function of the RDVS in accordance with FAAO 7210.3.
- f. Position briefings shall be conducted using the “position relief checklist” in appendix A-3. Items in **RED** must be verbally stated. Items in BLACK need only be mentioned if applicable.
- g. The controller being relieved and the relieving controller share equal responsibility for the completeness and accuracy of the briefing.
- h. Local and Ground Control are critically dependent positions and shall not be simultaneously relieved. A minimum of 2 minutes must elapse after completion of position relief on either position before beginning relief on the other.
- i. Controllers being relieved must remain at the position and monitor the operation for a minimum of 2 minutes. After the 2 minutes have elapsed, the relieved controller must indicate completion by use of the RB function of RDVS. “(initials) off.”

NOTE: The ATM waives this requirement for the FD/CD, CI, and OS/CIC position.

- j. **Supervisor Notification:** All personnel shall ensure the OS/CIC is notified of conditions that impact operations, including but not limited to:
 1. Weather/PIREPs
 2. Equipment status
 3. Emergency situations
 4. Special flights / operations
 5. Pilot initiated aborted takeoffs and missed approaches
 6. TCAS/RA reports
 7. Any unusual situations

NOTE: If the controller is unsure and/or a situation is questionable, treat as an unusual situation and notify the OS/CIC.

CHAPTER 7. SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM (SMGCS) OPERATIONS

7-1. NOTIFICATION CRITERIA

The following criteria should be used as a guideline for determining when to notify Hobby Airport Operations for SMGCS operations:

RVR $\leq$ 1600 Surface or visibility = 1/2 sm

The above RVR and surface visibility allows one-half hour for airport operations to prepare for SMGCS, and SMGCS shall be in place by the time the RVR reading reaches 1,200' or lower.

7-2. PROCEDURES

If the RVR drops to 1600' or surface visibility of 1/2 sm:

- a. Notify Airport Operations that SMGCS operations are imminent.
- b. Notify ARFF Station 81 via ECN that SMGCS operations is imminent.
- c. Turn on back-up generators for:
 1. Runway 4 ALSF approach lights
 2. Airfield Lighting System

7-3. SMGCS OPERATIONS

Activate the airfield lighting system to the respective day or night SMGCS lighting.

- a. Airport Operations shall:
 1. Terminate all construction activity in movement areas and determine whether construction shall be terminated or limited in non-movement areas.
 2. Provide "Follow-Me" service upon pilot request to Ground Position Markings (GPM). (See appendix C for GPM's)

NOTE: *Airport Operations and ARFF vehicles are allowed unescorted entry onto movement areas. All others require escort service by Airport Operations.*

- b. Hobby Tower shall:
 1. Broadcast SMGCS on the D-ATIS.
 - (a) For a manual ATIS include the phraseology "SMGCS low visibility Operations are in effect."
 2. Only use Runway 4. All other runways shall be designated as inactive.
 3. Designate Taxiway Golf, south of runway 4 as inactive so as to prevent an inadvertent encroachment into the Precision Obstacle Free Zone (POFZ).

NOTE: *This portion of Taxiway Golf does not have SMGCS lighting installed.*

4. Use taxiway Yankee for westbound traffic, and use taxiway Zulu for eastbound traffic.

7-4. DEPARTURES

- a. Pilots are responsible for contacting ATC prior to pushback or repositioning aircraft. The movement of aircraft to a GPM or movement area boundary line may be accomplished with a follow-me vehicle or other appropriate means, including unassisted taxi if visibility on the aprons permits. When holding short of a GPM, pilots shall contact ground control for taxi instructions.
- b. Hobby GC or controller to which GC is combined (i.e., during a mid-shift) will use pilot position reports to monitor the aircraft position prior to its entry onto the movement area.
- c. (Follow-me service) All aircraft may request follow-me service provided by Airport Operations from the non-movement area boundary marking to a GPM or runway entrance.

7-5. DEPARTURE TAXI ROUTES (depicted in Appendix D)

- a. North Ramp-West side of terminal: Aircraft will taxi with ATC clearance to one of the GPM's and then call GC for clearance to continue taxi into the movement area. Aircraft will taxi eastbound on taxiway Zulu to H1 and then via Hotel to Runway 4.
- b. North Ramp- East side of terminal: Aircraft will taxi with ATC clearance to one of the GPM's and then call GC for clearance to continue taxi onto the movement area. Aircraft will taxi westbound on taxiways Yankee to H1 and then via Hotel to Runway 4.
- c. North Ramp-South side of terminal: After receiving pushback clearance onto taxiway Y, aircraft will request to continue to taxi in the movement area along the low visibility taxi route.
- d. West Ramp: Aircraft will taxi with ATC clearance south bound on taxiway Golf and hold at the "1G" Geographic Position Marking (GPM). When directed by ATC, aircraft will turn right on Taxiway Hotel and hold short of Runway 4.
- e. South Ramp: Aircraft will taxi with ATC clearance northwest bound on taxiway Juliet and hold at "1J" Geographic Position Marking (GPM). When directed by ATC, aircraft will turn left onto taxiway Kilo and hold short of the ILS critical area and await takeoff clearance from ATC on taxiway K1.
- f. Papa Ramp: Aircraft will taxi with ATC clearance northwest bound on taxiway Charlie to "1C" Geographic Position Marking (GPM). When directed by ATC, aircraft will turn left onto taxiway Kilo, cross runways 13L and 13R and hold short of the ILS critical area and await takeoff clearance from ATC on taxiway K1.
- g. East/Southwest Maintenance/Signature Ramps: Aircraft will exit their ramps, with ATC clearance southwest bound onto taxiway Kilo, and hold short of the ILS critical area and await takeoff clearance from ATC on taxiway K1.

NOTE: It is not required to have aircraft make the intermediate stop at a GPM with ASDE-X in service.

Representative GPM



7-6. ARRIVALS

- a. Taxiways Y and K are used as the primary arrival taxiways.
- b. (Follow-me service) All aircraft may request follow-me service.

7-7. ARRIVAL TAXI ROUTES (depicted in Appendix C)

- a. North Ramp - West side of terminal: Exit Runway 4 onto taxiway Y and then proceed westbound.
- b. North Ramp - East side of terminal: Exit Runway 4 onto taxiway Y and then proceed westbound.
- c. North Ramp - South side of terminal: Exit Runway 4 onto taxiway Y and then proceed westbound.
- d. West Ramp: Exit Runway 4 onto taxiway Y then via Taxiways Y, H1, H and G to the appropriate ramp.
- e. South Ramp: Exit Runway 4 onto taxiway K, turn left on taxiway M and hold at the “1M” GPM. After receiving clearance from ATC, turn right onto taxiway L and continue to the south ramp.
- f. Papa Ramp: Exit Runway 4 onto taxiway K, cross runways 13L and 13R (when directed by ATC), turn left on taxiway M and hold at the “1M” GPM. After receiving clearance from ATC, taxi via M and turn left onto taxiway P and continue to the Papa ramp.
- g. East/Southwest Maintenance/Signature Ramps: Exit Runway 4 onto taxiway K. Proceed to the east ramp.

CHAPTER 8. POSITION DUTIES AND RESPONSIBILITIES

8-1. LOCAL CONTROL (LC)

a. General.

1. Primary frequency 118.7, backup frequency 120.2.
2. Shall monitor frequency 120.95 unless; HC is open or it is being used by another operational position.
3. Issue clearances for movement on active runways and within the airspace depicted in Appendix D from the surface up to and including 5000 MSL, excluding the descent area for the runway in use above 1000 feet and airspace delegated to HC.
4. Determine whether the "quick look" function for automated handoffs is to be utilized.
5. When HOU STARS is out of service, relinquish control of all airspace to the appropriate controller. Record the sequence of arrival aircraft on a writing tablet.
6. When HOU STARS is in ESL mode automatic releases are cancelled, but local still retains control of designated airspace.
7. Shall utilize magnetic tags to indicate flow restrictions, runway closures, special instructions, etc.

b. Weather.

1. Solicit and disseminate PIREPs in accordance with 7110.65 para 2-6-2.
2. Take tower visibility observations as required.
3. Forward all visibility changes to FD and the OS/CIC.
4. Broadcast Hazardous In-flight Weather Advisory Service (HIWAS), AIRMET, SIGMET and CWA information as required.
5. Shall inform Hobby Final when the Class B surface area changes from VFR to IFR, or IFR to VFR and when the weather on final is different from what the NIDS displays.

c. Departures.

1. Shall automatically release and retain control of departures until radar or vertical separation exists. Point out any aircraft that may enter airspace other than that owned by the receiving controller.
2. When automatic releases are canceled, shall request release from I90.
3. Shall control departures to ensure they do not turn early into airspace owned by HC ("Triangle" and "Plate").

4. Shall assign headings that ensure departures exit the Hobby Class B airspace via the appropriate departure corridor except aircraft which will remain clear of I90 airspace.
NOTE: TRACON has control for turns once aircraft have left 3000 feet, reference all tagged targets.
NOTE: (south flow) LYD may turn departures to the west reference all tagged targets.
5. Shall relay to the departure controller appropriate information on departures as contained in the Houston TRACON/Hobby ATCT Letter of Agreement (I90/HOU LOA).
6. Shall hand off via inter-phone all primary and non-tagged targets to departure control.
7. Shall NOT issue a departure clearance to a fixed wing aircraft until they have received the flight progress strip from GC.
8. Shall utilize strip bay management procedures as follows:
 - (a) Shall place a visual aid in the local control strip bay when personnel and equipment, aircraft, or a vehicle, are on an active runway.
 - (b) When an aircraft is ready for departure, the strip is offset in the bay to the right unless a runway crossing will occur prior to take-off clearance, then the strip is offset to the left.
 - (c) When an aircraft is LUAW, the strip is moved 1/4 of the way out of the holder to the right.
 - (d) When the aircraft is cleared for takeoff, the strip is moved 3/4 of the way out of the holder to the right.
 - (e) When the aircraft is switched to departure, the strip is stored.
 - (f) Runway Crossing Indicator:
 - (1) The "Runway Crossing" indicator bar/strip is to be placed in local control strip bay to indicate when a vehicle/aircraft has clearance to cross an "active" runway." This indicator will be utilized when no flight progress strip is available to allow compliance with current strip bay management procedures as written above. Upon approving an active runway crossing, local control will place the indicator bar/strip in the local strip bay as a visual reference that the runway is not safe for arriving/departing aircraft. When the runway crossing is complete, the indicator is to be removed from the local strip bay.

(g) Landing Clearances.

- (1)** Two options are available to indicate that a landing clearance has been acknowledged by an aircraft. One of these options shall be utilized to indicate landing clearance acknowledgement.

Option 1: The STARS data blocks of inbound aircraft that have acknowledged a landing clearance shall be changed to “Blue” in color.

Option 2: The call sign of inbound aircraft shall be written on the local control writing/scratch pad. A “Check Mark” shall be placed next to the call sign of inbound aircraft that have acknowledged a landing clearance.

NOTE: *When HOU STARS is out of service, the default landing clearance procedure shall be Option 2(writing/scratch pad).*

9. Delay Operations

- (a)** When the DelayOps program is out of service, record the departure time in the appropriate box on the flight progress strip of the aircraft affected by the delay program.

d. Arrivals.

- 1. "Quick look" HOU final when using STARS data for automated handoffs.
- 2. Has the option of changing the landing runway assignments of arriving aircraft, provided Hobby Tower ensures separation with all successive arrivals.
 - (a)** Must verbally state the runway they are landing on. This is not required to be on the landline i.e. "Landing 22" or "Landing the Left".
- 3. When STARS is in operation, shall be responsible for the separation of aircraft 5 nm from the runway or the final approach fix, whichever is farther.
- 4. Handle missed approaches IAW the HOU/I90 LOA.
- 5. Shall advise Hobby Final if unable to provide visual separation inside the final approach fix.

e. Practice Approaches.

- 1. Turbojet air carrier aircraft are not normally permitted to make practice instrument approaches, touch-and-go landings, or other landings and takeoffs for training purposes. Exceptions to this policy may be granted on an individual basis for instrument calibration or equipment functional test if permitted by airport traffic.

f. Emergencies.

- 1. Assist the emergency aircraft to extent possible, affording it "priority" status until the emergency is terminated by OPS 3.
- 2. Treat all runways and crossing runway intersections as closed until "OPS3" reopens each.
- 3. Clear "OPS3" onto the emergency runway ASAP after the emergency aircraft lands.
- 4. Instruct emergency aircraft where to exit runway and to contact GC on the DEF frequency.
- 5. Coordinate with city operations (OPS3) to reopen crossing runway intersections and landing runway.

8-2. LOCAL ASSIST (LA)

- a. Monitors tower frequency in use.
- b. At the discretion of Local Control, Local Assist may accept /initiate handoffs/point-outs and coordinate with adjacent facilities as needed.
- c. Assist Local Control in maintaining traffic vigilance.

NOTE: *Per JO 7210.3, This position is considered essential to the operational integrity and safety levels required to minimize the potential for surface errors and land-over incidents.*

8-3. HELICOPTER CONTROL (HC)

- a. General.
 - 1. Primary frequency 120.95, backup frequency 120.2.
 - 2. Shall issue clearances for movement of VFR aircraft within the airspace depicted in Appendix D from the surface up to and including 1000 MSL. *(Note: ALL IFR aircraft shall be worked by LC only).*
 - 3. Shall not allow any aircraft to enter LC inner 3 mile ring without prior coordination.
 - 4. When HOU STARS is out of service, HC shall be combined with Local Control.
- b. Weather.
 - 1. Solicit and disseminate PIREPs in accordance with 7110.65 para 2-6-2.
 - 2. Broadcast Hazardous In-flight Weather Advisory Service (HIWAS), AIRMET, SIGMET and CWA information as required.
 - 3. Shall be combined with Local Control whenever Hobby airport is IFR.
- c. Departures.
 - 1. Shall advise GC prior to authorizing any helicopter to depart. This is not required to be on the landline.
 - 2. Shall call traffic on all moving aircraft/vehicles in the vicinity of the departing helicopter.
 - 3. Shall coordinate with LC on the landline prior to authorizing any helicopter to depart into LC's airspace.

NOTE: *When HC is open, LC only needs to be advised that HC is climbing into the plate/triangle.*

PHRASEOLOGY EXAMPLE– “Triangle up!”

- (a) Coordination for a specified direction (i.e. “westbound”) implies HC will instruct the aircraft to proceed direct to the inner-fix of the route being flown and then to proceed outbound on the route. LC's approval implies permission to cross all necessary runways to get to the inner-fix.

“Triangle westbound” - approval allows HC to clear a helicopter from the triangle to the tower and then outbound on a coded route to the west (DeBakey, Dome or Gator).

- (b) Coordination direct to the outer-fix implies HC will instruct the helicopter to proceed direct to the outer-fix without overflying the inner fix.
- (c) Runway Crossing - All departures shall be instructed to overfly the inner fix of their route except as listed below.
 - (1) South Flow - East/HPD ramp - remain east of RY 22, direct to Broadway.
 - (2) Church Flow - West ramp - remain west of RY 13R, direct to Broadway.
 - (3) East Flow - East ramp - remain east of RY 31L, direct to Stone.
 - (4) North Flow - East/HPD ramp - remain east of RY 22, direct to Broadway.
- 4. To the extent possible, assign coded departure routes to all helicopters and ensure they stay on those routes.
- 5. (South/North flow) All northbound helicopter departures from the East ramp and HPD ramp shall be instructed to remain east of the approach end of runway 22 direct to BROADWAY intersection.
- 6. Ensure all airborne aircraft are properly tagged and displayed on STARS.
- d. Arrivals.
 - 1. To the extent possible, assign coded arrival routes to all helicopters and ensure they remain on those routes.
 - 2. Shall coordinate with LC prior to allowing any helicopter to enter LC's airspace. If the arrival is on a coded route, automated point out procedures should be used.
 - 3. Shall coordinate with LC, over the landline to cross over any portion of an active runway.
 - 4. (South/North flow) All arrivals from the north to the East ramp and HPD ramp shall be instructed to remain east of the approach end of runway 22 to get to the ramp.
 - 5. Shall advise GC prior to allowing any helicopter to land at Hobby airport. This is not required to be on the landline

8-4. GROUND CONTROL (GC)**a. General.**

1. Primary frequency 121.9, backup frequency 120.2
2. Shall assist LC and HC in maintaining traffic vigilance.
3. Area of responsibility is all taxiways (see appendix C) and inactive runways.
4. Shall continually scan the movement areas, work environment, and all areas of responsibility.
5. Shall maintain an awareness of activities in the cab that will affect the GC operation by: observing, listening, monitoring radio frequencies, moving about so as to observe areas normally hidden by obstructions and adjusting to the activity. Areas include, but are not limited to:
 - (a) Outside Environment:
 - (1) Taxiways/runways
 - (2) Parking areas for taxiway entry
 - (b) Inside Environment:
 - (1) Wind instruments
 - (2) RVR indicators
 - (3) STARS/ASDE-X
 - (4) Strips/pad
6. Shall broadcast Hazardous In-flight Weather Advisory Service (HIWAS) information as required by FAA 7110.65.
7. Shall ensure all aircraft taxiing for departure have the current ATIS information.
8. When directed by the OS/CIC or when delays are anticipated, shall enter aircraft beacon codes in DelayOps. Place “Check Mark” by CID to indicate aircraft has been entered in DelayOps.
 - (a) When the DelayOps program is out of service, record the taxi time in the appropriate box of the flight progress strip of the aircraft affected by the delay program.

b. Taxiing.

1. Issue clearances and instructions for aircraft and vehicles operating on the airport movement area, except for active runways.
2. Shall approve an aircraft’s “push-back” when that movement causes the aircraft to enter the movement area. This typically occurs on the:
 - (a) Terminal ramp (Gates 29, 31, 32, 50, 51)

(b) West ramp/United Maintenance**PHRASEOLOGY–**

“(ACID) pushback approved” or “(ACID) push approved”

3. Shall coordinate and obtain approval from LC, via the landline, prior to issuance of any clearance that crosses or uses any portion of an active runway. Before coordinating, determine if the operation is feasible. When coordinating, reference any of LC’s traffic that may conflict with the intended operation. If LC gives any coordinated crossing other than requested, GC must read back the coordinated crossing instructions via the recorded line. Crossing coordination shall be accomplished IAW JO7110.65 3-1-3(a)

PHRASEOLOGY -

CROSS (runway) AT (point/intersection)

4. Shall use flight progress strips for all departures. Ensure correct aircraft parking location, current ATIS code, and departure runway are marked on flight progress strips (IAW Chapter 5).
5. When ASDE is out of service:
 - (a) Shall record on a pad, the arrival sequence as well as all other moving aircraft.
- c. Emergencies: If 120.2 is available, all non-medical emergencies shall be worked on that frequency, hereby known as the DEF (Discrete Emergency Frequency).
 1. Ground Control (GC) shall:
 - (a) Monitor frequency 121.9 at all times.
 - (b) Monitor frequency 120.2 at all times unless that frequency has been assigned to an operational position (LC, HC, CD, and FD).
 - (c) Coordinate with the OS/CIC as to the status of a DEF and who will work the DEF.
 - (d) Afford priority status to the emergency aircraft and all vehicles responding to the emergency.
 - (e) With the exception of emergency vehicles and OPS3, GC shall keep all other aircraft and vehicles away from the emergency aircraft until the incident commander returns the DEF back to ATC.
 2. Ground Control (GC/DEF) shall:
 - (a) Assist the emergency aircraft to extent possible, affording it “priority” status until the emergency is terminated by OPS 3.
 - (b) With the exception of emergency vehicles and OPS3, GC/DEF shall keep all other aircraft and vehicles away from the emergency aircraft until the incident commander returns the DEF back to ATC.

- (c) After coordination with LC has been accomplished direct ARFF vehicles to their standby positions. After the emergency aircraft has landed issue a clearance for the emergency vehicles to proceed onto the runway to follow the emergency aircraft.
- (d) Instruct all non-medical emergency aircraft where to stop so that they may be inspected by ARFF.
- (e) After advising ARFF Command “the frequency is yours” GC must monitor the frequency throughout the emergency to ensure that all movement on the “movement area” is safe and to keep the tower team apprised as to the state of the emergency, assisting when necessary.
- (f) After ARFF Command returns the frequency back to GC taxi the emergency aircraft and all ARFF vehicles to their requested destinations.

d. Multiple Runway Crossings.

1. Hobby Tower’s waiver allows multiple runway crossings to be issued with a single clearance at the intersections listed below (*See appendix F for map*).

Taxiway	Runway Being Crossed			Coded Crossing Coordination
E	13R/31L	13L/31R		“Echo (east/west)”
H	13R/31L	13L/31R		“Hotel (east/west)”
K	13R/31L	13L/31R		“Kilo (east/west)”
L	13R/31L	13L/31R		“Lima (east/west)”
K1 to G	4/22			“Exec”

8-5. FLIGHT DATA (FD)

a. Weather.

1. (*In accordance with JO 7110.65 para. 2-6-5*). When the weather service (CWS) or the tower observes the prevailing visibility to be less than 4 miles, FD shall take tower visibility observations and forward them to the (CWS) and advise the OS/CIC.
2. Responsible for soliciting and handling PIREPs in accordance with JO 7110.65
3. Record and disseminate PIREP information. Enter PIREP information into NIDS.
4. Review and disseminate SIGMET, AIRMET, CWA and other known or observed weather that may affect aircraft safety. Ensure HIWAS broadcasts are conducted.
5. Communicate GI messages, flow control messages, SWAP’s and MIT messages to the OS/CIC for dissemination to the appropriate control position.

6. Update the STARS GSI area (Altimeter, approach in use and ATIS code).
 7. Update and ensure all current GI's (flow messages, AIRMETS, CWAs and PIREP's) are posted in NIDS and the Status Information Area (SIA) at Flight Data. This information shall be retained in Flight Data's strip bay until expiration/cancellation.
Retain expired messages for inclusion in daily flight progress strip bundle.
- b. ATIS (Automatic Terminal Information Service).
1. Record, update, and monitor ATIS/D-ATIS broadcasts.
 2. Request the OS/CIC, or other CPC, listen to the playback prior to broadcast to evaluate content, clarity, and overall quality. Only if no other qualified individual is available should the person preparing the message review it prior to broadcast.
 - (a) If using D-ATIS, verify text message screen is accurate.
 - (b) Select Review and check the message for accuracy prior to broadcast.
 - (c) Shall ensure all operating positions and the OS/CIC are aware of the new ATIS code
 3. Inform I90 of the ATIS code by entering appropriate message in the NIDS and STARS. This entry will also acknowledge receipt of weather information.
- c. Clearances
1. Make necessary altitude and/or departure gate amendments for Hobby departures. Ensure STARS data blocks reflect amended information.
 2. When Clearances are received via the FDIO and do not conform to local PDR's, or route is unknown, contact the appropriate Houston Center Flight Data to verify the route of flight.
 3. Enter VFR and local IFR departures into the STARS, ensuring assignment to the appropriate tab list.
 4. Enter departure time, via FDIO or inter-phone, for aircraft that will not automatically acquire.

8-6. CLEARANCE DELIVERY (CD)**a. General**

1. Primary frequency 125.45, backup frequency 120.2.
2. Broadcast Hazardous In-flight Weather Advisory Service (HIWAS) information as required by FAA 7110.65.

b. Clearances

1. Formulate clearances and prepare departure flight progress strips in accordance with strip marking procedures defined in Chapter 5.
2. Issue and ensure receipt of clearances to aircraft departing Hobby Airport.

c. PDC/CPDLC Procedures.

1. Review proposed clearances received via TDLS for accuracy and route integrity.
2. Ensure accuracy of pre-populated fields i.e.
 - Altitude assignment
 - Departure frequency
 - Appropriate SID/Transition, and/or ADR/ADAR
 - Pre-Taxi instructions (If appropriate)
3. Transmit the clearance via TDLS. ADR/ADAR's shall be included.

The following shall not be transmitted via PDC:

 - (a) Clearances that may cause misunderstanding or be misinterpreted by the pilot.
 - (b) Flight plans that include an ADR/ADAR which does not either complete the route or return the flight to the filed route of flight.
4. After PDC Clearance is successfully transmitted, mark strip with "P" in box 12 and pass to GC.
5. CD shall retain flight progress strip for CPDLC eligible flights until "W" (WILCO) is received.
6. After receiving WILCO from aircraft, mark strip with "W" in box 12 and pass to GC.
7. CD shall ensure that "CC" is marked on flight progress strip PRIOR to processing any route/final altitude amendments via CPDLC.
8. In the event of the following, CD/FD shall retain the flight progress strip until all issues are resolved.
 - (a) Reroutes
 - (b) Revisions
 - (c) Amendments
 - (d) FRCs
 - (e) Any clearance that needs to be verbally issued

8-7. OPERATIONAL SUPERVISOR/CONTROLLER-IN-CHARGE

- a. Watch supervision requires maintaining situational awareness of traffic activity and operational conditions in order to provide timely assistance to specialists and that ensure available resources are deployed for optimal efficiency. Situational awareness is defined as a continuous extraction of environmental information. Integrate this information with previous knowledge to form a coherent mental picture and use that picture in directing future events. Simply put, situational awareness means knowing what is going on around you.
- b. Watch supervision may be performed by an Operational Supervisor (OS) or controller-in-charge (CIC).
- c. The OS/CIC is responsible for eliminating distractions within the operational area. The operational area is defined as the entire control tower.
- d. In order to enhance the OS/CIC's ability to maintain optimal situational awareness within the operation, the following administrative activities are to be conducted outside of the operational area:
 - 1. Watch schedule development.
 - 2. Sending/receiving email
 - 3. OJT training report completion/training session debriefs.
 - 4. Non-operational/personal phone calls.
 - 5. Team meetings.

NOTE: Required administrative duties (i.e. MOR reporting, accident package completions etc.) must not be accomplished to the detriment of operational duties. Should any other activities become operationally distracting, the OC/CIC should take proactive measures to eliminate the distraction.

- e. The OS/CIC is responsible for setting shift goals and providing guidance for the shift by ensuring an atmosphere conducive to effective performance by the team and fosters the safe, orderly and expeditious flow of traffic with an emphasis on eliminating errors and runway incursions. OS/CIC shift priorities include but are not limited to:
 - 1. Monitoring and managing traffic volume/flow
 - 2. Supervising and directing all tower operations
 - 3. Properly staffing control positions, based on current and anticipated traffic volume and/or other activities.
 - 4. Accomplishing on-the-job training and other facility training requirements
 - 5. Eliminating/minimizing distractions (i.e. excessive tower cab conversations, personal phone calls).
 - 6. Ensuring professional conduct and teamwork.
 - 7. Emphasizing the use of standard phraseology.

- 8.** Making appropriate on-the-spot corrections when technical performance issues are observed.
- 9.** Coordinate HOU Delays as follows:
 - (a)** Advise I90 TMU when delays exceed 15-minutes and thereafter when traffic delays increase/decrease by 15-minute intervals. This shall be accomplished via ETVS landline or telephone.
 - (b)** Advise ATM when delays exceed 30 minutes and thereafter when traffic delays increase/decrease by 15 minute intervals
- 10.** Determine the runway(s) in use and usage of LUAW procedures. Coordinates with I90 when runway changes are required.
- 11.** Coordinate with City Operations for all runway and taxiway closures.
- 12.** Initiate/Terminate SMGCS procedures.
- 13.** Ensure all personnel are aware of ASDE-X Status.
- 14.** Position relief. Manage position rotation to ensure equitable and adequate breaks. Stagger relief briefings to maintain continuity.
- 15.** Ensure controllers properly pre-brief. Ensure the position briefings and transfer of position responsibility is carried out in accordance with this order.
- 16.** Equipment and Status Information Area (SIA).
 - (a)** When outages occur, notify responsible maintenance agency as well as all appropriate aviation interests, (e.g., Airport operations, I90, adjacent airports). Report all power outages to Airport Operations.
 - (b)** Ensure appropriate log entries are completed
 - (c)** Ensure ITWS and ASDE-X systems are set to the appropriate flow
 - (d)** Ensure all runway and taxiway closures are depicted correctly on the ASDE-X.
 - (e)** Ensure all SIA's are accurate and up to date, including:
 - CEDAR (facility log)
 - NOTAM Information Area at FD (updated daily as required)
 - Magnets on LC's radar scope
 - NIDS
 - (f)** Operate airport/approach lighting systems as needed and ensure the appropriate airport/approach lighting settings are selected.
- 17.** Data collection and reporting
 - (a)** Prepare invalid mode C reports and forward to QA.
 - (b)** Process NOTAM information in accordance with procedures in paragraph 2-9.

- (c) CIC of the mid shift shall compile and enter delays attributed to local initiatives in OPSNET before midnight. Ground Stops, EDCT's and AFP's do not need to be reported.
 - (d) Check, post, and disseminate NOTAM information on the appropriate page of the NIDS.
 - (e) Report bird strikes to City Operations and create a MOR entry in CEDAR.
 - (f) Prepare ASDE alarm forms and forward to QA.
 - (g) Ensure Watch Checklist is completed in accordance with HOU 7210.1.
- 18.** Monitor presidential aircraft movement, to ensure proper separation services, control instructions, and all required coordination is accomplished IAW JO 7110.65
- (a) The OS/CIC is the liaison between Secret Service and the controllers. The OS/CIC is responsible for ensuring applicable security requirements are met.
- 19.** During an emergency, the OS/CIC shall monitor or assign a CPC who is GC qualified to work the DEF (normally 120.2). This may be assigned to GC if traffic is light.
- 20.** Report observed or reported aircraft malfunctions, incidents and irregularities as required by directives.
- 21.** Notify appropriate individual (OS/ATM) when unusual circumstances require assistance.
- 22.** Approve/disapprove leave requests, or shift/RDO swaps.
- 23.** Three Hour Tarmac Rule: When a tarmac delay request is received:
- (a) Determine whether or not a "significant disruption" would result in approving taxi requests due to the Three Hour Tarmac Rule (HOU 7110.1 par. 2-10).
 - (b) Notifying the overlying facility (I-90).
 - (c) Notify the Washington Operations Center (WOC) through the regional Operations Center (ROC).
- 24.** Air Traffic Incidents:
- (a) On the OS/CIC's computer, there is a folder icon called "Packages & Forms". Cheat-sheets for processing incidents can be found there.
 - (b) The OS/CIC – shall enter all required information using the appropriate form(s) found in the OS/CIC Binder.
 - (c) Forms from either source shall be printed out and faxed to the ROC as required
- 25.** Contingencies for changing ATC service levels:
- (a) In the event that Hobby tower is unable to provide a normal level of service, the OS/CIC shall reference the ATC Contingency Binder for guidance towards modifying the ATC Contingency level. There are two predetermined contingency levels.
- (1)ATC Alert
 - (2)ATC Zero

f. Position Staffing Guidelines

- (a) Staffing and complexity factors such as traffic volume, weather, closures, flow restrictions, equipment outages, unusual operations, runway configuration, etc., must be considered in determining when to combine/de-combine positions.
- (b) The following position staffing guidance shall be adhered to the extent practical:
 - (1) FD may only be combined to CD.
 - (2) HC, GC, LA and CD may only be combined to LC.
 - (3) OS/CIC may be combined to any position; however combining to LC shall be as a last resort.
 - (4) FD/CD will not normally be combined with the OS/CIC position between the hours of 0800(L)-2000(L). The combining of OS/CIC to FD/CD is considered normal practice between the hours of 2000L to 0600L daily.
 - (5) When 2 or more ATCS's are on duty (not inclusive of CIC), LC and GC should normally be de-combined. To the extent practical, these positions should remain de-combined between the hours of 0700- 2200(L).
 - (6) When 3 or more ATCS's are on duty (not inclusive of CIC), LC, GC and FD/CD should be staffed independently.
 - (7) Subject to weather and resources, it is preferential to independently staff the HC position when operationally feasible.
 - (8) To the extent resources permit, LA should be staffed (JO 7210.3 2-6-5b.). This position is considered essential to the operational integrity and safety levels required to minimize the potential for surface errors and land-over incidents.
 - (9) LA shall be open in order to LUAW more than one aircraft on the same runway. OS/CIC approval is required to combine these positions.
 - (10) Newly position certified controllers may not be assigned to combined positions until they have a minimum of 20 hours on both positions.
 - **EXAMPLE**—a newly certified controller may not work LC and GC combined before having at least 20 hours on both positions.
This does not apply to positions that are normally worked as combined positions.
 - **EXAMPLE**— (LC & LA, LC & HC or CD & FD)

8-8. GENOT Distribution

The Air Traffic Manager (or their designee) will determine if published GENOTS are applicable to operations at HOU ATCT. GENOTS determined to be applicable shall be briefed appropriately by Support Staff.

Appendix A-1: OS/CIC POSITION RELIEF BRIEFING.

Controllers shall use the following checklist as a means to brief the relieving specialist. Relief briefing shall be recorded using the RB function of the RDVS in accordance with FAAO 7210.3. Items in **RED** must be verbally stated. Items in **BLACK** need only be mentioned if applicable.

a. Status Information Areas: (self-brief: NIDs, NOTAM board, 7230-4, postings at FD)

1. **Current Weather & Trends & Forecast** (*Wind, Storms, Altimeter, Weather on final*)
2. **PIREP's/SIGMET's/CWA's** (*posted at FD*)
3. **NOTAM's/Special Notices** (*Ensure all personnel are briefed*)
 - (a) Check tower FAX and NIDs for new NOTAM's (*FDC and HOU NOTAM pages*)
 - (b) Ensure 7230-4 and SIA at FD are up-to-date (*WCLC etc*)
4. **WEEKENDS AND HOLIDAYS:**
 Check for new GENOTs in AIS-R, if new GENOTs are available, print GENOT and brief personnel. Log GENOT briefed in Facility Log 7230-4.
 Example: GENOT 21/21 BRIEFED. GENOT printout goes to the M&PA.
**The Support Specialist will check for GENOTs and brief personnel Monday-Friday.*

b. Equipment Status:

(address **ALL** that are **NOT FULLY** operational or that are not in the normal configuration)

1. Communication (Radios and RDVS)
2. RADAR (FSL = Full Svc Level, ESL = Emergency Service Level)
3. Check operation of MSAW Alarm (STARS entry: multi-function, 2, A3)
4. **Airfield lighting (ON/OFF as appropriate, flow, outages)**
5. **ILS Status** (CHECK MONITOR, outages, approach lights)
6. TDLS (PDC, FDIO and D-ATIS)
7. **ASDE-X configuration and status** (Inhibited Targets, Test Volume)

c. Airport Status/Activities:

1. **Airspace configuration** (i.e. "South Flow")
2. **Runway status** (active/inactive/closed or unavailable)
3. Taxiway closures (if different than displayed on ASDE-X)
4. Special Conditions (i.e. Braking Action, Bird Reports, Mowing, Construction)

d. Flow Control: (ensure magnets correctly reflect flow)

1. Ground Stops and EDCTs (covered in SIA)
2. In-trail spacing, CFRs and Gate Swaps

f. Special Activities/Operations: (*Flight Checks, New Procedures, Handwritten Notes*)

g. Staffing

1. Special Instructions/Restrictions
2. Training
3. Leave Requests
4. Other duties and Special Requests (*incl. union time, ART 17 time, etc*)

h. TRAFFIC (Including pre-arranged coordination and special requests)

Appendix A-2: PRE-BRIEF CHECKLIST (self-brief)

This checklist SHALL be used by all controllers prior to relieving any control position.

a. Status Information Areas:

1. Current Weather (*NIDs-4: IFR/Marginal VFR/VFR*)
2. Pertinent PIREP's (*posted at FD*)
3. SIGMET's/CWA's (*posted at FD*)
4. Pertinent NOTAM's/Special Notices (*grease board*)

b. Equipment Status: (Equipment itself, 7230-4 and grease board)

1. Communication (Radios and RDVS)
2. RADAR (FSL/ESL)
3. Airfield lighting (correct flow, outages)
4. ILS Status (outages including approach lights)
5. ASDE- X (operational status, runway configuration, inhibited targets)

c. Airport Status/Activities: (STARS, ASDE and grease board)

1. Airspace configuration (i.e: South Flow)
2. Runway Status (active/inactive/closed/unavailable)
3. Taxiway closures (*ASDE-X*)
4. Special Conditions (i.e. Braking Action, Bird Reports)
5. Mowing/Construction

d. Weather Trends: (*ITWS*)**e. Flow Control:** (ensure magnets correctly reflect flow)

1. Ground Stops and EDCT's (covered in SIA)
2. In-trail spacing, CFR's and Gate Swaps

Appendix A-3: POSITION RELIEF BRIEFING.

Controllers shall use the following checklist as a means to brief the relieving specialist. Relief briefing shall be recorded using the RB function of the RDVS in accordance with FAAO 7210.3. Items in **RED** must be verbally stated. Items in **BLACK** need only be mentioned if different than what the SIA reflects.

a. Self Brief: (NIDS, NOTAM board, 7230-4, postings at FD)

All controllers shall pre-brief prior to plugging into any position. Relieving controllers shall state for the recordings they have pre-briefed.

b. Equipment Status: (Not fully operational or not in normal configuration for the flow)

1. Communication (Mains/Standbys)
2. RADAR (FSL/ESL)
3. ASDE- X (inhibited targets)

d. Airport Status/Activities:

- 1. Runway Status (active/inactive/closed/unavailable)**
2. Taxiway status (if different than the SMGCS displays)
3. Current Conditions (i.e. Braking Action, Bird Reports)

e. Weather/Trends: (Winds, Storms, **Visibility and Ceilings on Final**)

f. Special Activities/Operations: (Flight Checks, New Procedures, Handwritten Notes)

g. TRAFFIC (Include Pre-arranged Coordination's and special requests)

Appendix B: EMERGENCY ASSISTANCE CHECKLIST

The purpose of this appendix is to provide an emergency assistance checklist for Air Traffic personnel at Houston Hobby ATCT.

MINIMUM INFORMATION REQUIRED FOR INFLIGHT EMERGENCIES

Aircraft Identification:

Aircraft Type:

Nature of Emergency:

Pilot's Desire:

Obtain the Following Information as Necessary

Altitude:

Fuel remaining (in time):

Pilot Reported Weather:

Pilot Capability for IFR Flight (Yes or No)

Time and Place of Last Known Position:

Airspeed:

Navigation Equipment Capability:

NAVAID Signals Received:

Visible Landmarks:

Aircraft Color:

Number of People on Board:

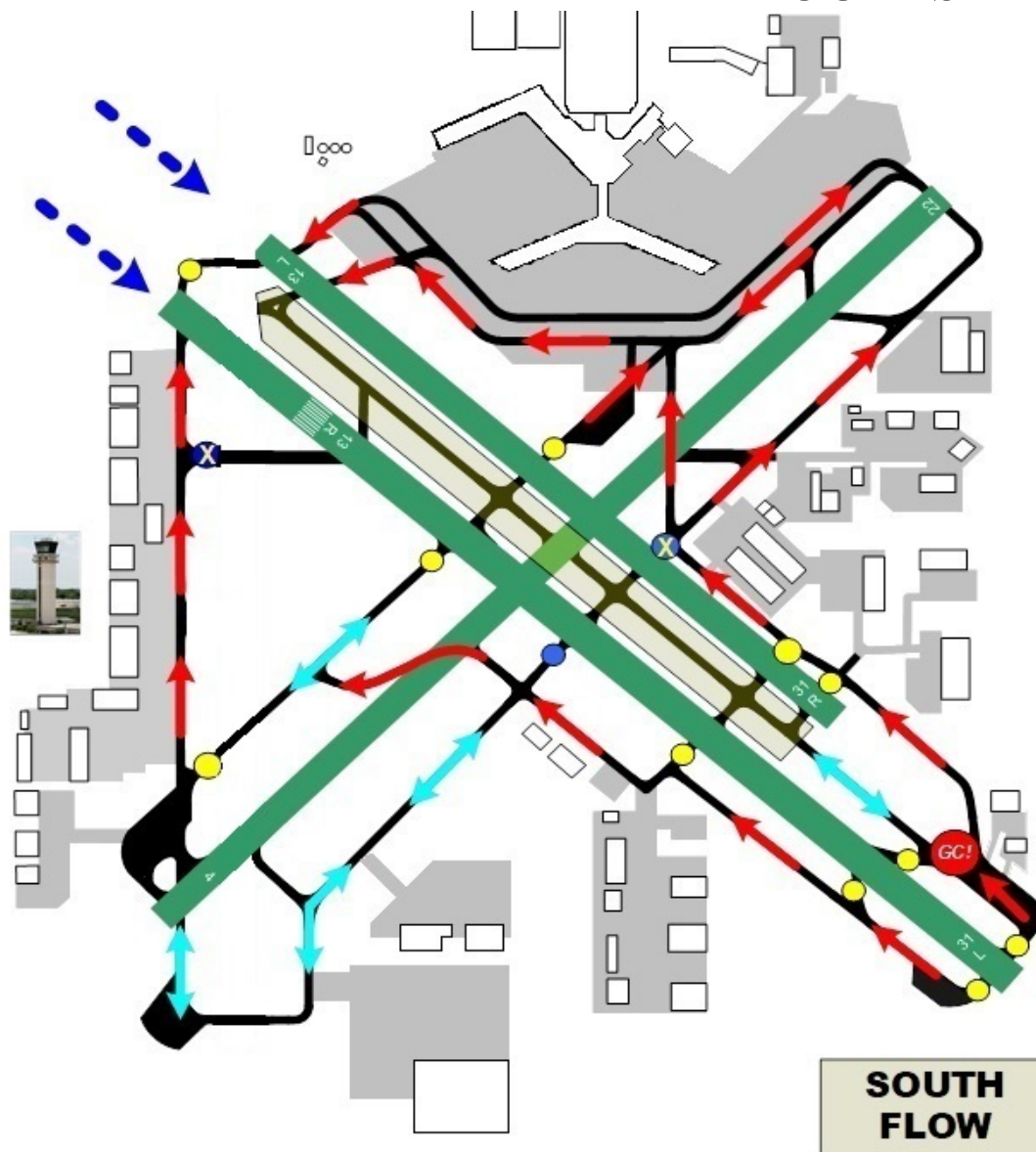
Point of Departure:

Destination:

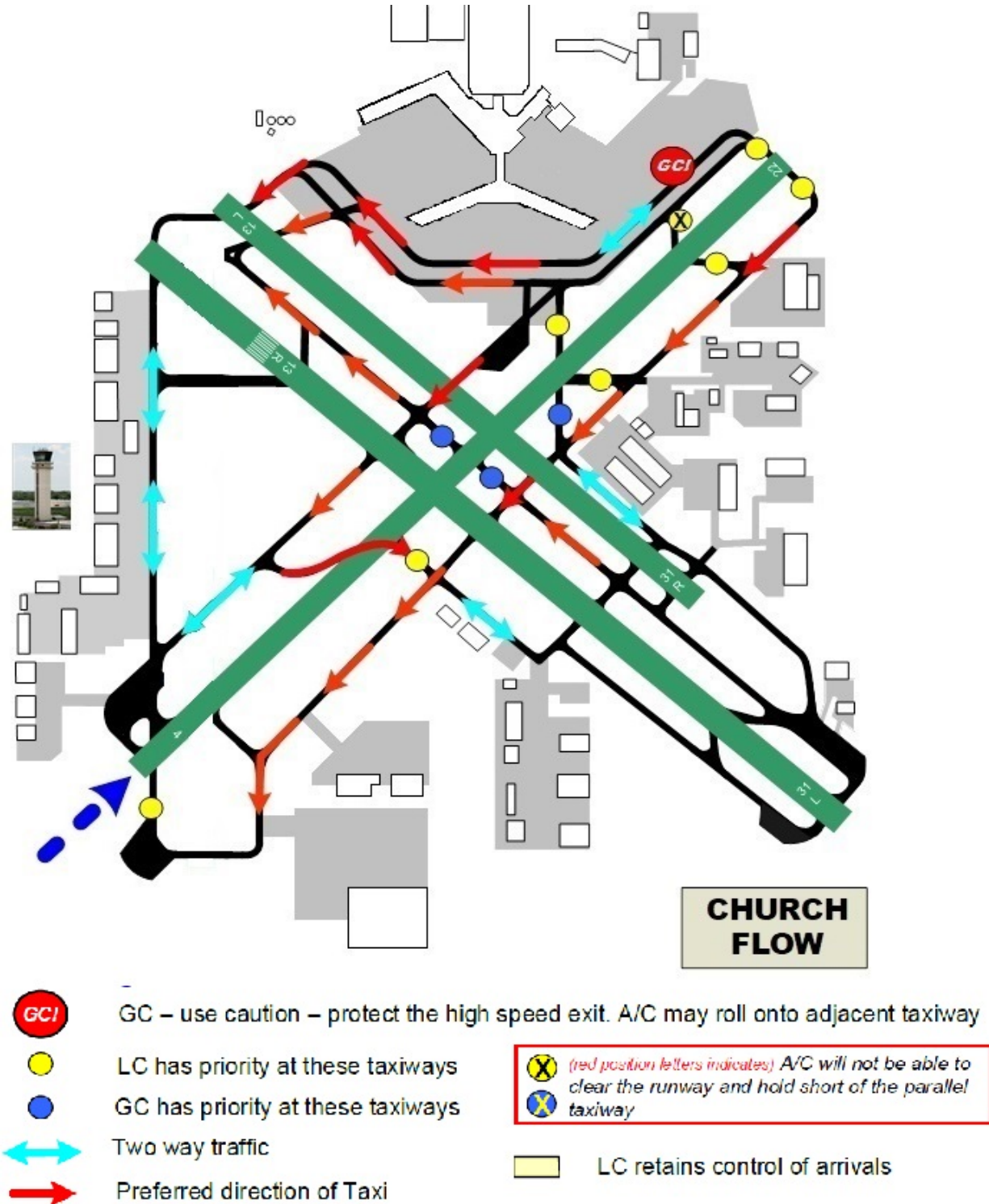
Emergency Equipment on Board:

Other:

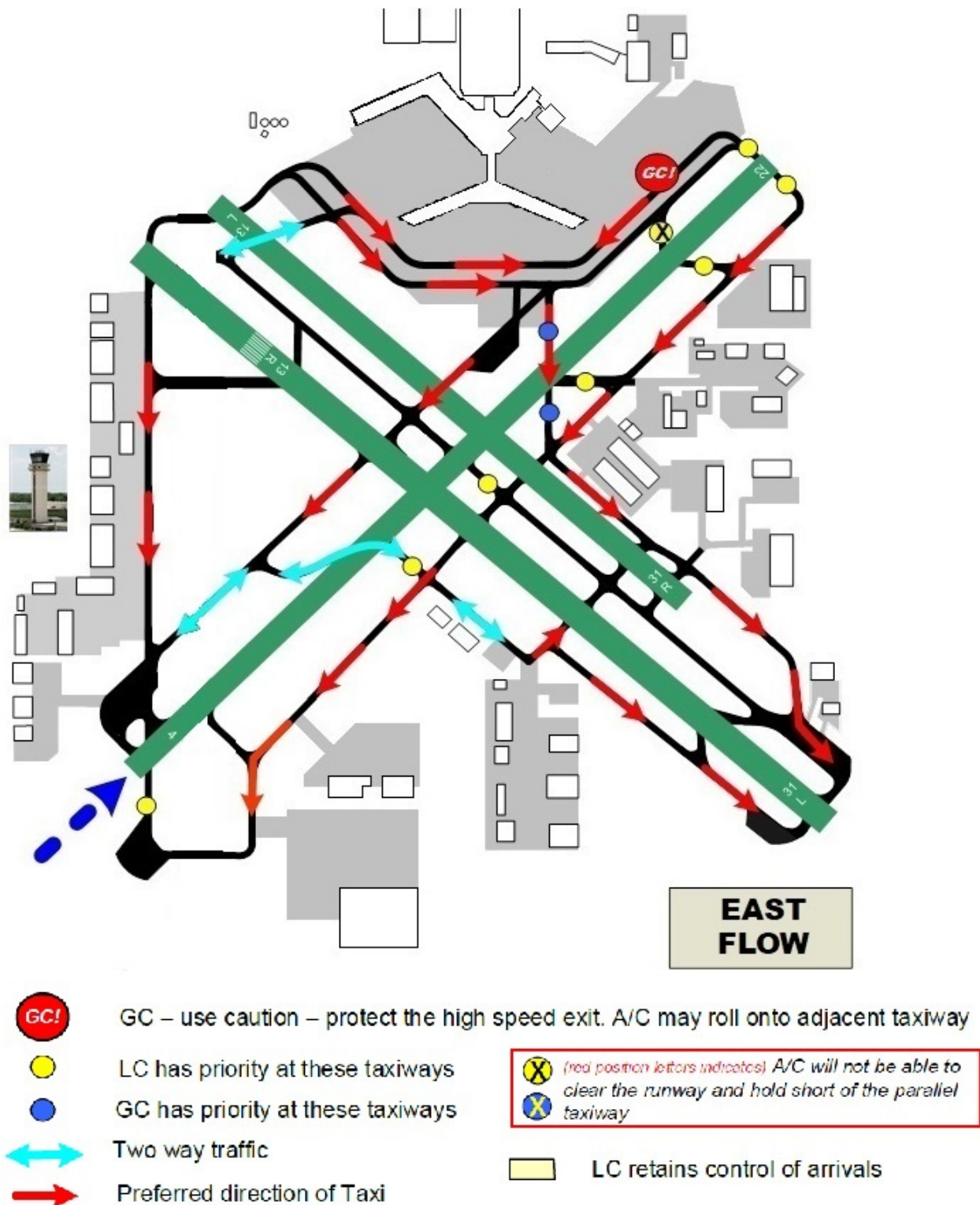
PREFERRED TAXI ROUTES



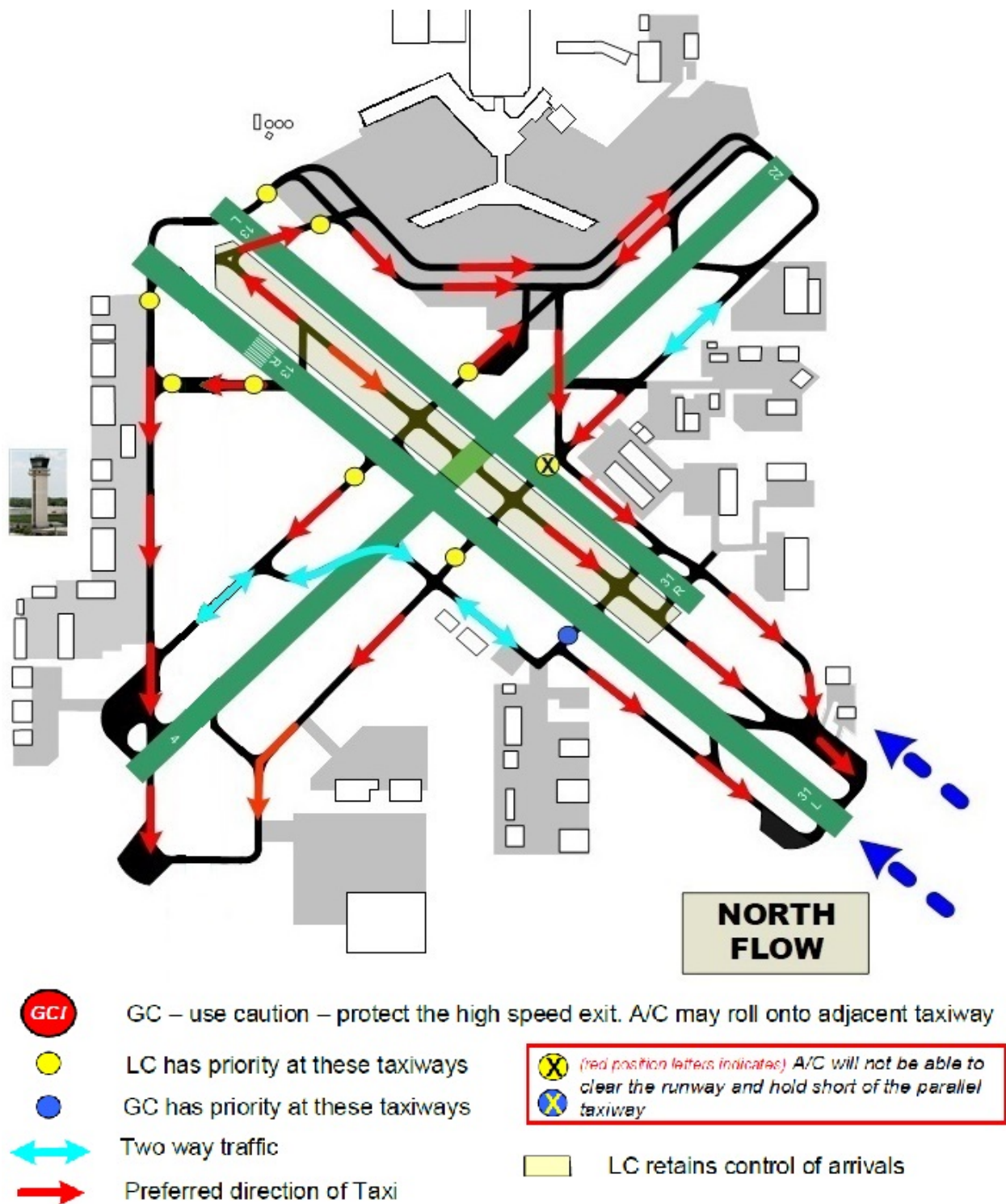
PREFERRED TAXI ROUTES



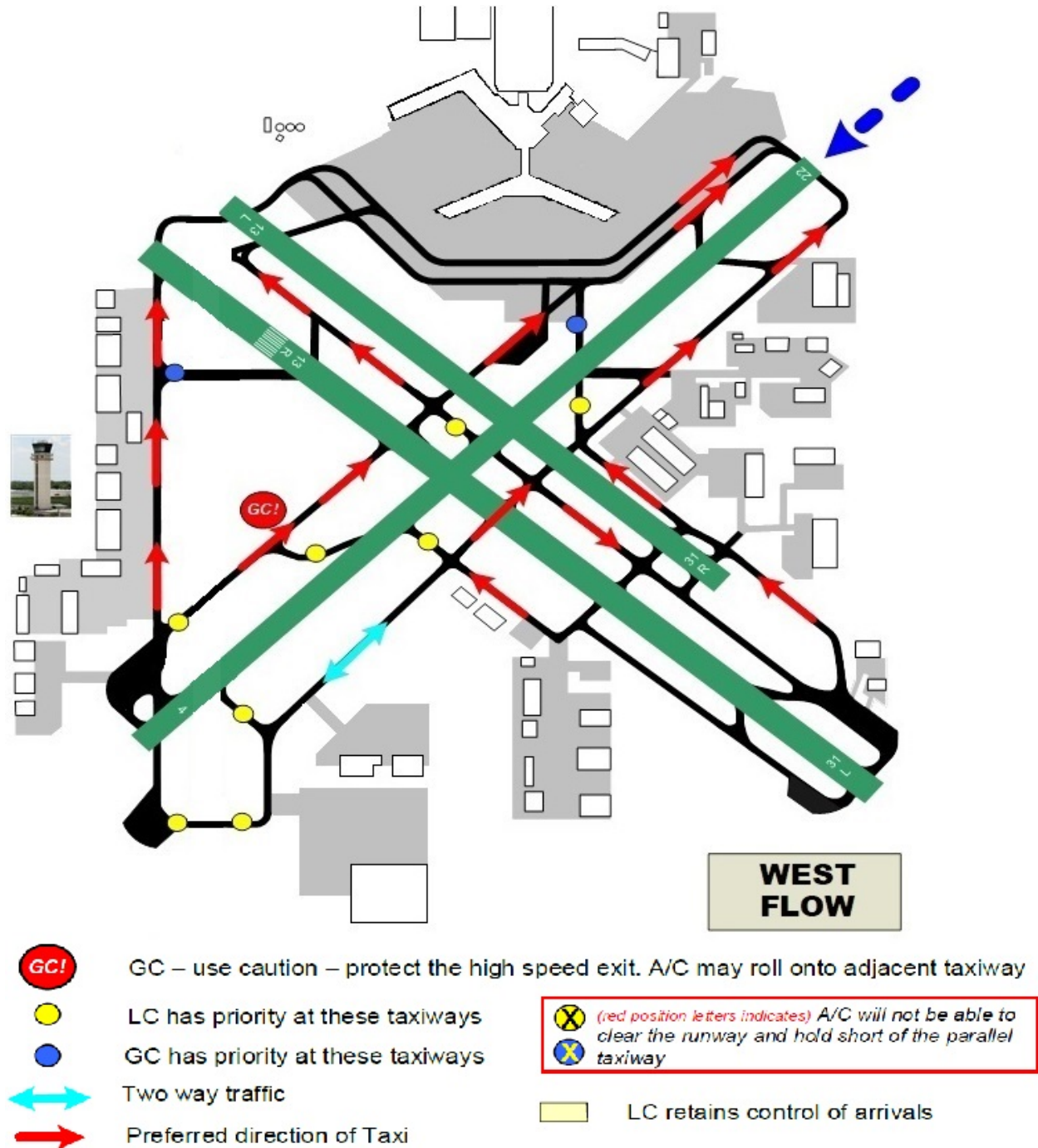
PREFERRED TAXI ROUTES

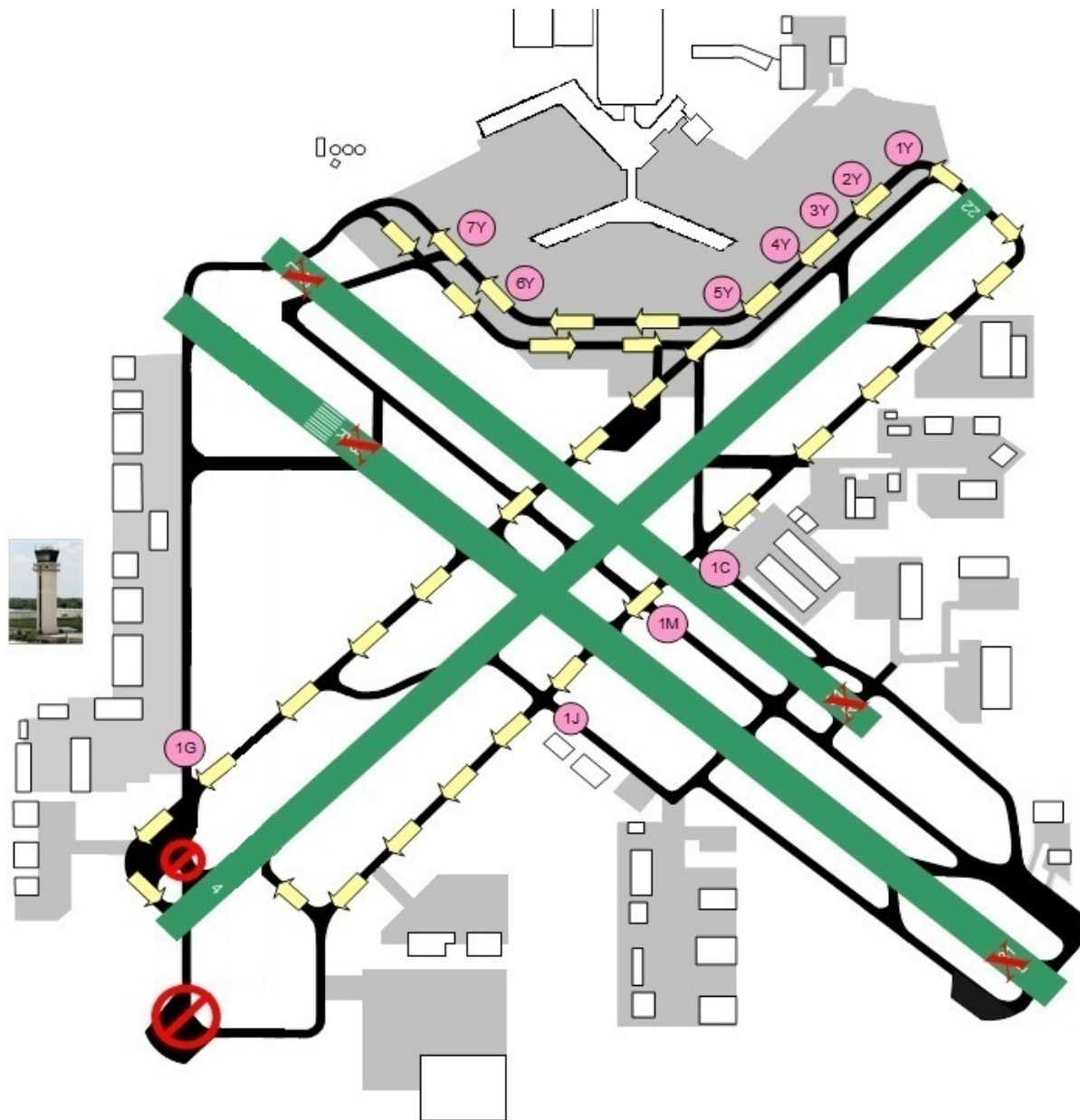


PREFERRED TAXI ROUTES



PREFERRED TAXI ROUTES





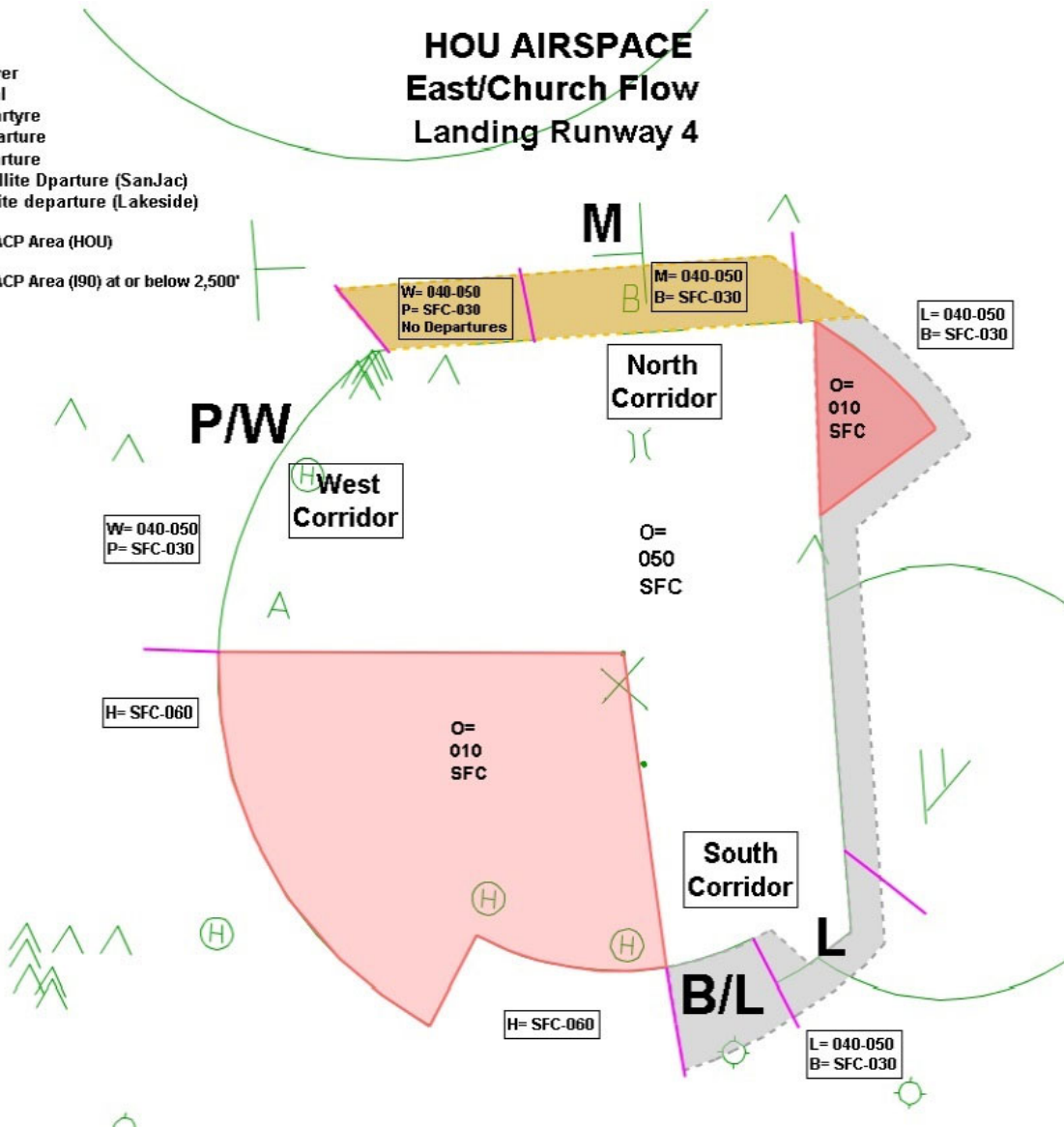
SMGCS FLOW

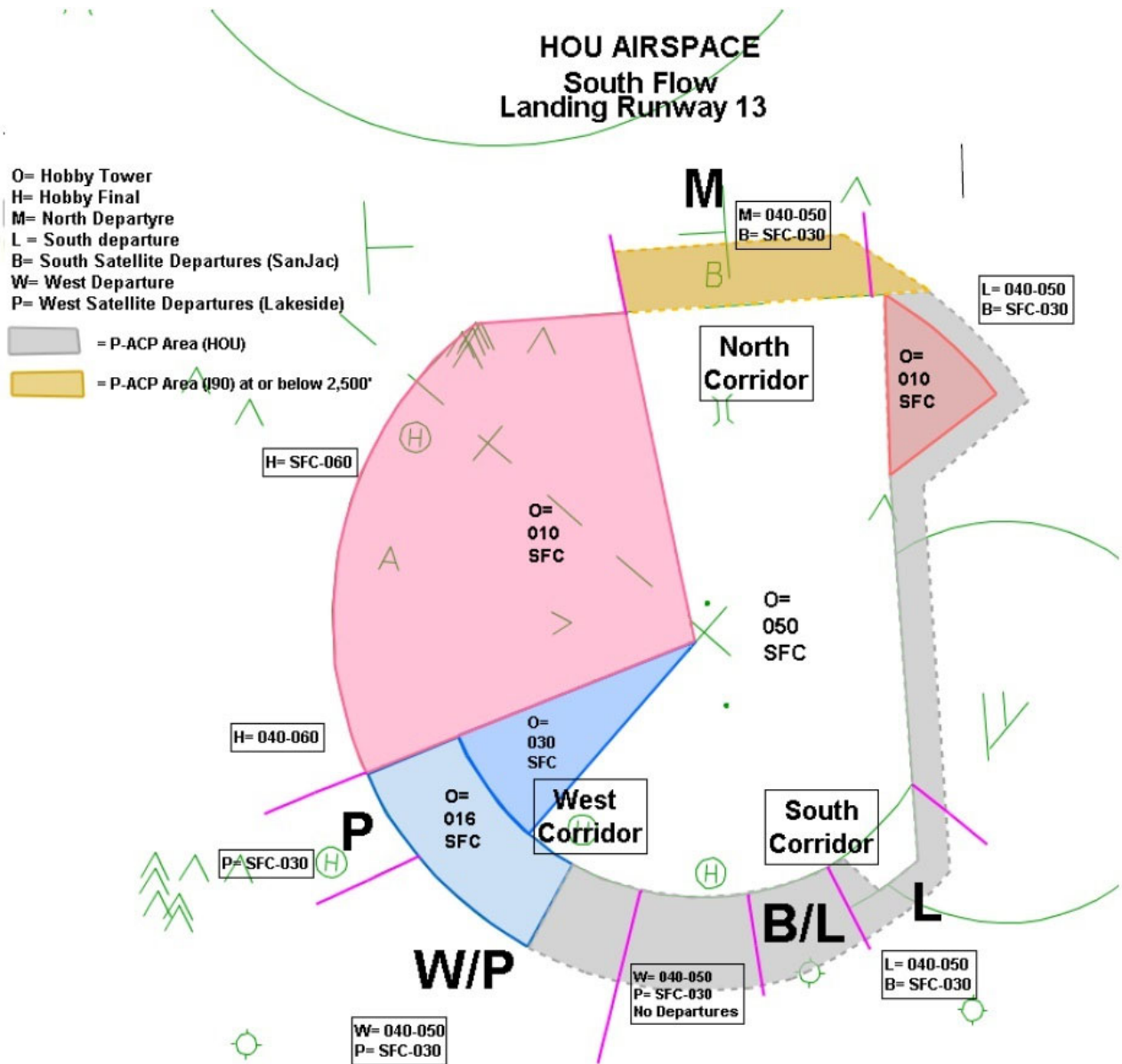
(all taxiways are one-way)

1C (GPM) = Geographic Position Marking

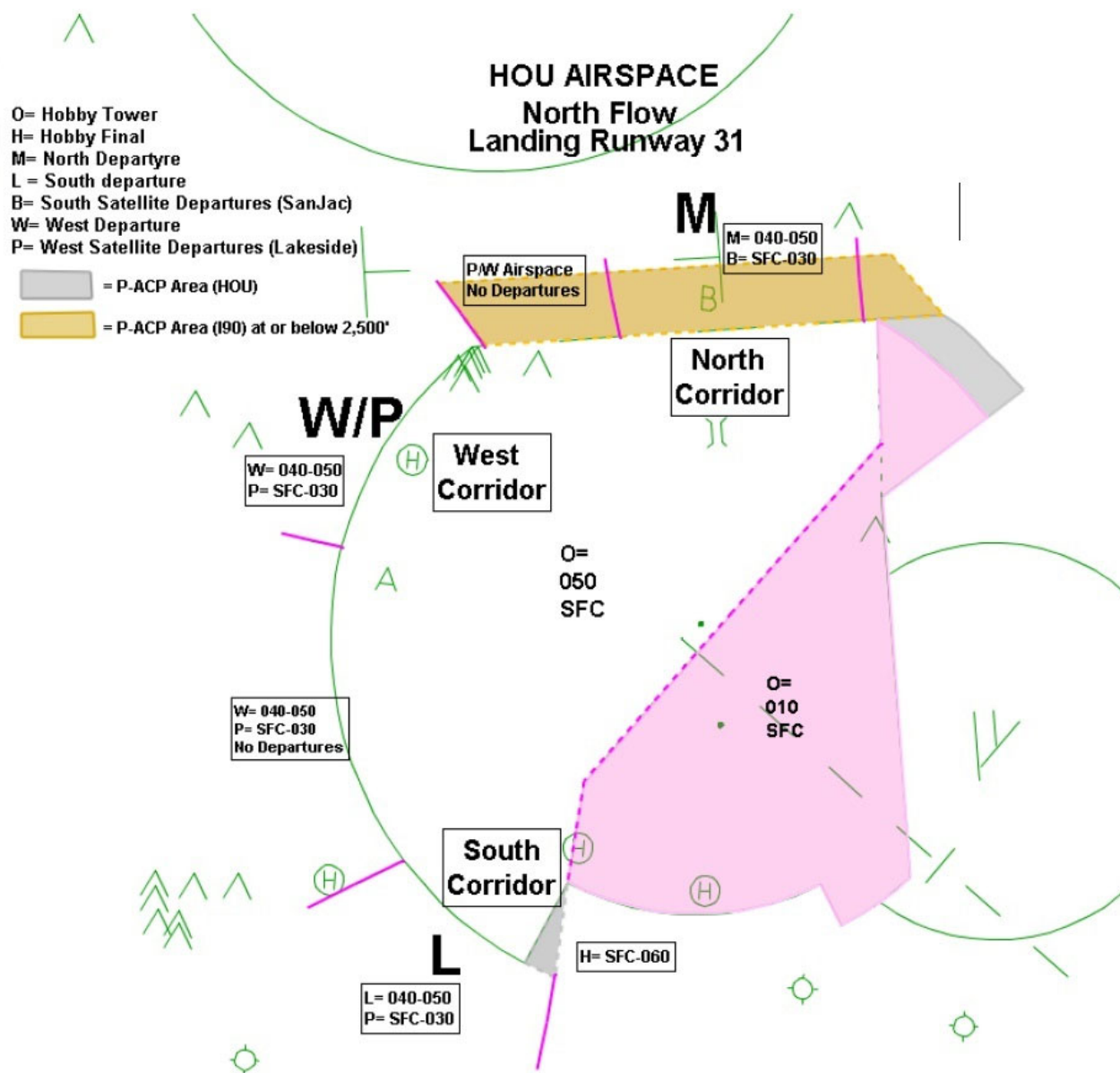
O= Hobby Tower
 H= Hobby Final
 M= North Departyre
 L = South departure
 W= West Departure
 B= South Satellite Dparture (SanJac)
 P= West satellite departure (Lakeside)

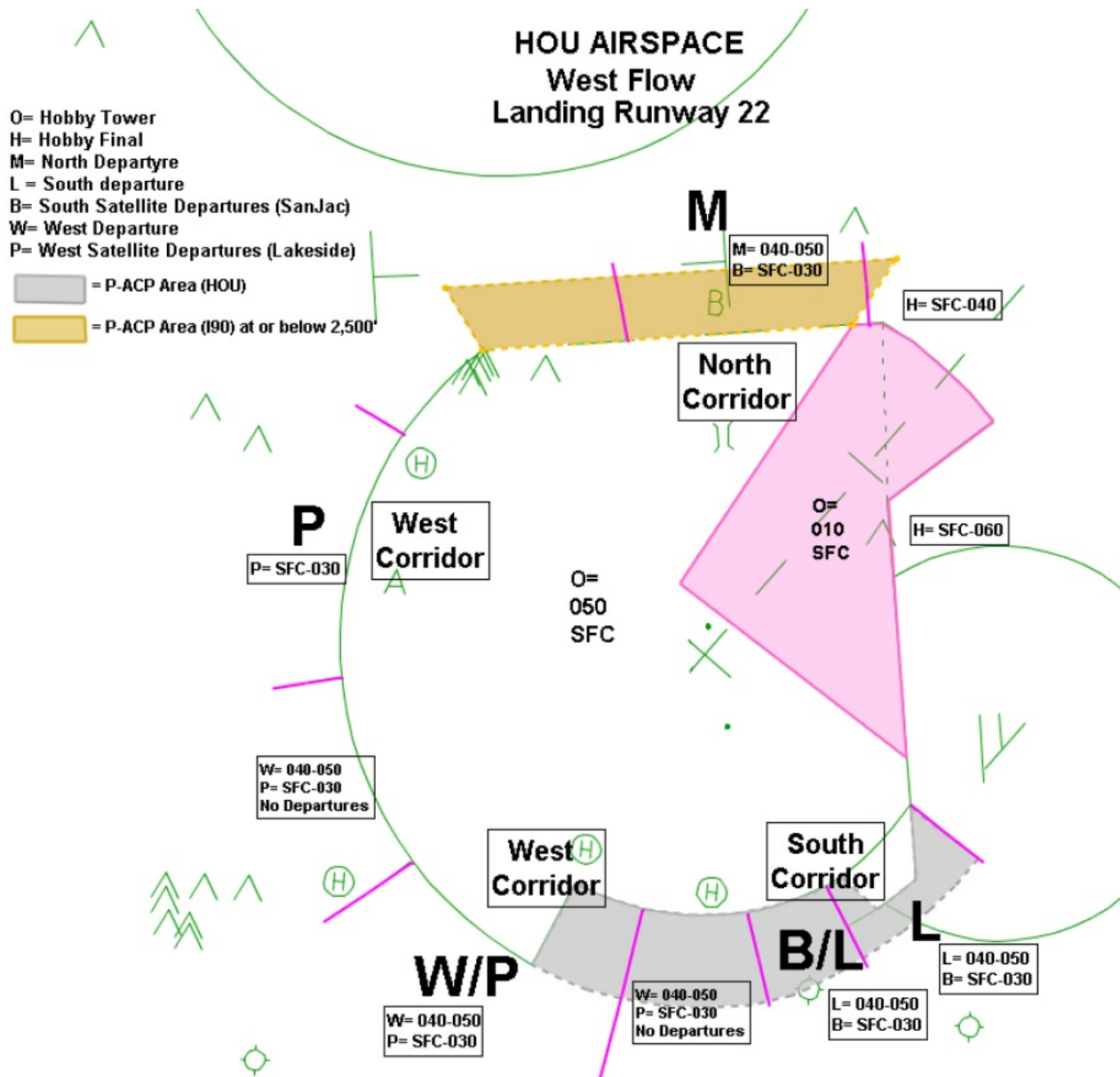
= P-ACP Area (HOU)
 = P-ACP Area (I90) at or below 2,500'





Appendix 1





DEPARTURE CORRIDOR AND TRACON DEPARTURE GATES

North Corridor

(Departure North (M)):

- (a) GOMER Gate - M, L, D
- (b) CLEEP Gate – Y, W, K

West Corridor

(Departure West (W)):

- (a) PRARI Gate – P, Z, J

IAH landing RY 33L/R:

- (b) GOMER Gate - M, L, D
- (c) CLEEP Gate – Y, W, K

South Corridor

(Departure South (L)):

- (a) FREEPORT Gate - F, V
- (b) AGGIT Gate – H
- (c) TRIOS Gate – S
- (d) BOLOS Gate – B, U, X

West Satellite Corridor

(Lakeside Satellite (P)):

- (a) PRARI Gate - P, Z, J, N
- (b) FREEPORT Gate - F, V

IAH landing RY26L/26R/27/33L/R:

- (c) GOMER Gate - M, L, D
- (d) CLEEP Gate – Y, W, K

South Satellite Corridor

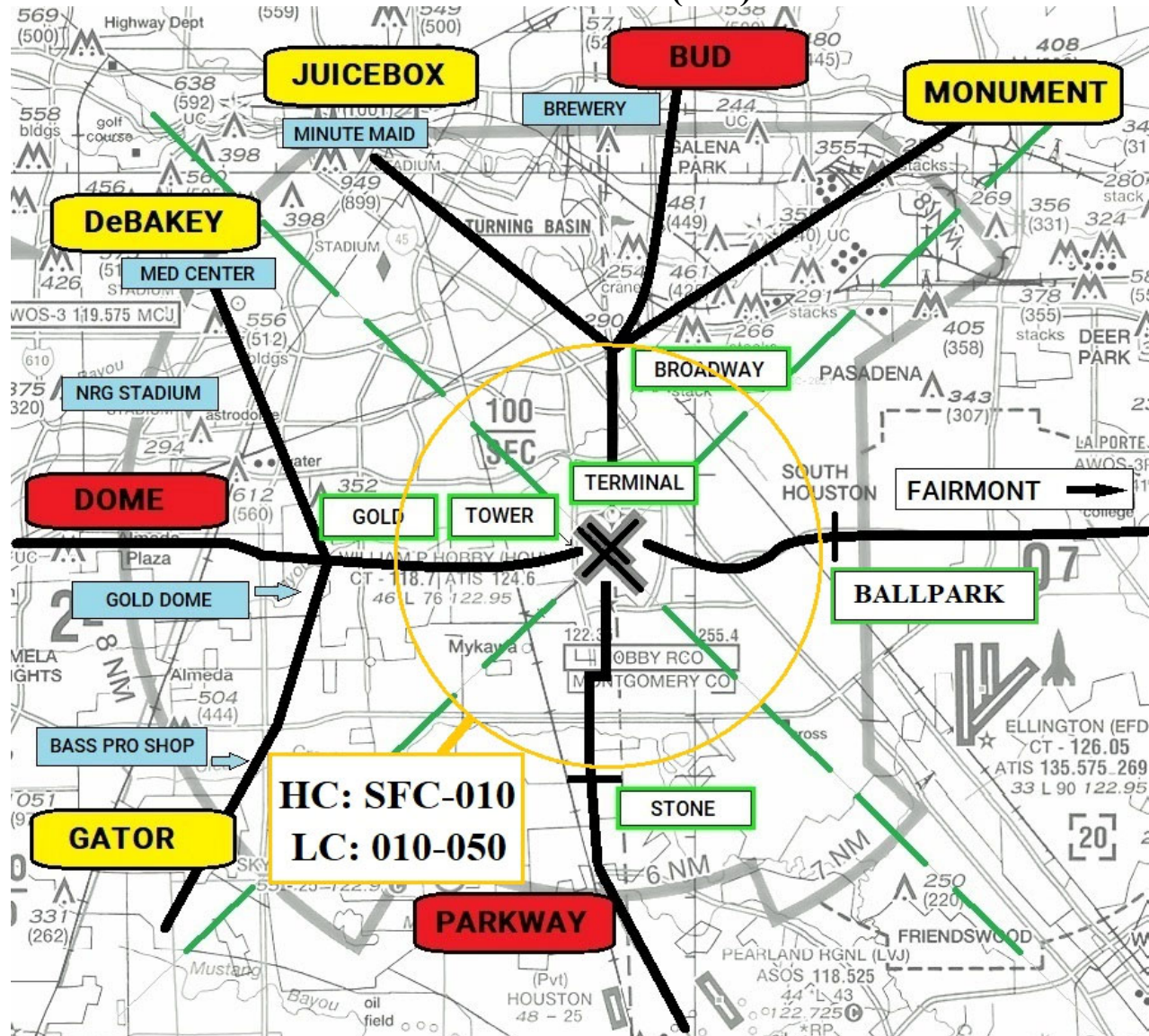
(San Jac Satellite (B)):

- (a) TRIOS Gate – S
- (b) BOLOS Gate – B, U

IAH landing RY 8L/8R/9:

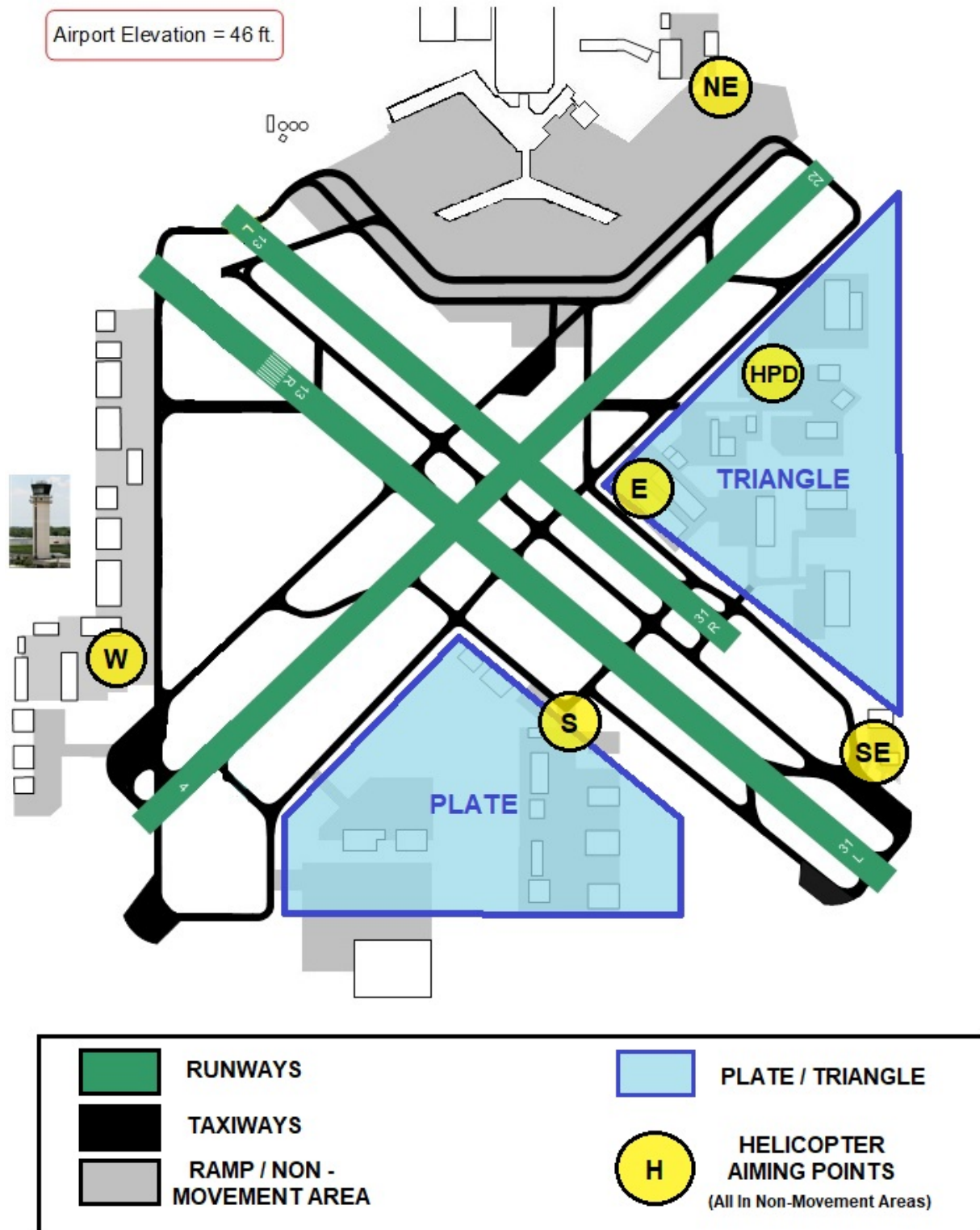
- (c) GOMER Gate – M, L, D
- (d) CLEEP Gate – Y, W, K

HELICOPTER CONTROL (HC) AIRSPACE



Intersection Departure Distances

Runway 4 (7602')		Runway 22 (7602')	
Inter	Remaining	Inter	Remaining
K-1	7200	K-2	6300
H-2	5150	B	6250
J	5100	C	4600
31L	4550	13L	3850
M	4000	M	3550
31R	3750	13R	3050
C	3000	J	2450
B	1300	H-2	2400
K-2	1250	K-1	400
Runway 13R (7599')		Runway 31L (7599')	
Inter	Remaining	Inter	Remaining
M-1	6000	M-3	6250
H	5300	L	4300
22	4500	K	3700
K	3850	4	3200
L	2650	H	2250
M-3	1300	M-1	1550
Runway 13L (5148')		Runway 31R (5148')	
Inter	Remaining	Inter	Remaining
D	4650	L	4800
H	2800	K	3600
22	2050	4	3050
K	1500	H	2300
L	350	D	500



HOU BEST PRACTICES

1. GC clears aircraft to cross a runway at a taxiway only after the aircraft is established on the taxiway that crosses the runway(s).
2. GC instructs aircraft to join another taxiway after exiting a runway. This is used at RWY exits where aircraft would not be able to stop, clear the hold short lines, and hold short of another taxiway.
3. GC instructs aircraft on TWY M between the parallels to hold short of the taxiway intended to be used to cross either RWY 13L or RWY 13R.
4. When use of visual separation is not an option, LC holds on to departures that will cross the departure corridor until the departure is verified leaving the MVA of 1600. This is to ensure separation during IMC/IFR condition, and ensure LC can assign the MVA at a minimum.

EXAMPLE: Church flow; 13R departure to West with arrivals to RWY 4.

NOTE: This is most important for like performance type aircraft.

5. Landing RWY 4: to and from Atlantic aircraft must use TWY Y until passing TWY B. Alternate option is to hold short of TWY B

APPENDIX H OPERATIONAL RISK MANAGEMENT (ORM) PRINCIPLES, PROCESS, and PROCEDURE

An Operational Risk Management Plan (ORMP) is a formal document for review and approval in collaboration with Air Traffic and Technical Operations (Tech Ops) to be used in conjunction with local procedures to support the completion of formal ORM maintenance activities and projects that may affect the National Airspace System (NAS).

a. Principles of ORM.

1. Situational Awareness - Understand the current state and dynamics of the operation and remain vigilant for future changes and developments.
Considerations include:
 - (a) Peak and off-peak traffic periods.
 - (b) Weather conditions.
 - (c) Known concurrent activities that could affect, or be affected by this activity. Example: VIP movement, airshows, other outages, etc.
 - (d) Additional outages in your facility or adjacent facility.
 - (e) Current staffing/operational oversight.
 - (f) Other communication/surveillance equipment available as an alternate means of providing air traffic services.
2. Plan Actions - The method and resources needed to accomplish the activity. Considerations include:
 - (a) Review break rotations/staffing plan to ensure positions are staffed accordingly.
 - (b) Review applicable (e.g., FAA Order JO 1900.47) Air Traffic Control Operational Contingency Plans.
 - (c) Brief affected staff prior to outages of the credible risks and potential impacts including worst-case scenarios and alternate procedures.
 - (d) Identify the Tech Ops Point of Contact (POC) if immediate contact is needed.
 - (e) Test back-up equipment before releasing the primary equipment to be worked on (where applicable)

3. Identify operational consequences - Identify the NAS systems and air traffic stakeholders that will, or could potentially be affected during the execution of the plan. Considerations include:
 - (a) Credible risks and potential impacts including worst-case scenarios that could affect Air Traffic's ability to provide service.
 - (b) Affected facilities, sectors/areas, positions, or other stakeholders participating in, or potentially impacted by the activity.
 - (c) Adverse effects to ATC personnel safety.
4. Communicate - An ongoing exchange of information between Tech Ops and Air Traffic personnel is essential for the review of the potential operational consequences and development of mitigation strategies. The information must be received, understood, and, in some cases, approved. Considerations include:
 - (a) Identified credible risks and potential impacts including worst-case scenarios.
 - (b) Mitigation Strategies.
 - (1) Include using the back-up equipment/systems, alternate channels, etc.
 - (2) Confirm proper operation of support equipment, standby equipment and/or backup systems prior to conducting the scheduled activity.
 - (3) Confirm Tech Ops and Air Traffic are prepared to implement their mitigation strategies.
 - (c) Notify Tech Ops immediately of any circumstances that may affect the procedure/task, e.g., change in operational hours, unusual circumstances, or operational configurations.
 - (d) "Take-5", if needed (to gain more information or reassess approval).
 - (e) Discuss and/or document effectiveness of plan for future reference or training

5. Coordinate - Considerations include:

- (a) Coordinating the activity with the appropriate adjacent facilities.
- (b) Additional coordination and notification requirements should there be a change to planned activity.
- (c) Notify Regional Operations Center (ROC), Domestic Events Network (DEN), or facility management (when applicable).
- (d) Verify the equipment status and configuration upon completion of the activity.
- (e) Ensuring that Out for Maintenance (OFM) and Return to Service (RTS) are recorded on FAA Form 7230-4, Daily Record of Facility Operations.

b. Process. ATM must:

- 1. Collaborate with Tech Ops during any projected planned maintenance tasks that may impact Air Traffic Control.
- 2. Ensure affected Air Traffic stakeholders or appropriate Subject Matter Experts (SMEs) are notified of planning meetings.
- 3. Review all Project Risk Plans (PRP) received from Tech Ops. PRP is a living document that promotes coordination and communication and reduces the risk to the NAS associated with project implementation.
- 4. Forward concur or non-concur via the notification email or directly through the Corporate Work Plan Portal link provided in the email.

c. Procedure Requiring an ORMP.

- 1. Facility Management in collaboration with NATCA will:
 - (a) Identify persons or positions authorized to review and/or approve ORMPs for the facility.
 - (1) Approver – ATM (or designee)
 - (2) Reviewer – Support Managers (or designee)
 - (3) Team Members – NATCA Rep (or designee) and additional facility personnel can be added by any team member
 - (b) Communication procedures to ensure team members are notified will be via email, other electronic means, or verbal communication of their team participation responsibilities.

- (c) Add team members for informational and increased situational awareness purposes and should address any concerns through the Point of Contact (POC)/reviewer or approver.
- 2. Air Traffic Team Members consist of Point of Contact (POC)/Reviewer and Approver.
- 3. Air Traffic Team Members must:
 - (a) Consist of a Union representative
 - (b) Add additional team members as necessary.
 - (c) Participate in ORMP meetings.
 - (d) Review and comment on the ORMP.
 - (e) Assess operational risks, identify any conflicting activities, and propose mitigations.
 - (f) Maintain situational awareness until completion of the activity.
 - (g) Contact the Air Traffic POC if the situation changes or the ORMP requires reassessment.
- 4. The Air Traffic POC/Reviewer is responsible for coordination of the ORMP meeting with all affected air traffic stakeholders.
 - (a) Reviews the composition of the ORMP team and ensures the appropriate Air Traffic Team Members and/or Air Traffic Approver have been assigned. When more than one facility is affected, ORMPs may require multiple reviewers or approvers.
 - (b) Adds team members as appropriate.
 - (c) Participates in ORMP meetings.
 - (d) Identifies any conflicting activities.
 - (e) Ensures the completeness and feasibility of executing the ORMP, (shares responsibility with the Air Traffic Approver)
 - (f) When the ORMP has been submitted for Air Traffic review, complete the Air Traffic mitigation plan element and submit the ORMP for approval. The System Support Center (SSC) Manager will submit the plan to the Air Traffic and Tech Ops approvers.
 - (g) Ensures the affected Air Traffic personnel are briefed and prepared to implement mitigations prior to commencing work

5. The Air Traffic and Tech Ops Approvers are responsible for the final review of the ORMP. The Approvers:
 - (a) Ensure the completeness and feasibility of executing the ORMP (shared responsibility with the Air Traffic POC/reviewer).
 - (b) Approve the ORMP or select the Take 5 button with comments for additional consideration or follow-up.
 - (c) Change role assignments or team members as necessary.
 - (d) Identify any conflicting activities.
 - (e) Ensure the High Visibility Event flag is set when it meets the appropriate definition outlined below.

d. Procedure Not Requiring ORMP

1. Current day-to-day coordination and cooperation between Air Traffic and TechOps for normal/local equipment outages fall under the principles of ORM. When planned outages and maintenance activities WITH NO ORMP needed, personnel will apply the principles of ORM and review the ORM checklist. Checklist available in the NIDS and listed below

PRINCIPLES	CONSIDER THIS
1. Situational Awareness Understanding the current state and dynamics of the operation and remaining vigilant for future changes and developments.	○ Peak and off-peak traffic periods. ○ Weather conditions ○ Known concurrent activities that could impact, or be impacted by this activity <i>Example: VIP movement, airshows, other outages, etc.</i> ○ Additional outages in your facility or an adjacent facility ○ Current staffing/operational oversight ○ What other communication/ surveillance means are available as an alternate means of providing air traffic services
2. Plan Actions The method and resources needed to accomplish the activity.	○ Review break rotation/staffing to ensure positions are staffed accordingly ○ Review applicable publications, policies and procedures i.e.- FAA Order JO 1900.47, Air Traffic Control Operational Contingency Plans ○ Brief staff on duty during outage of the credible risks and potential impacts including worst case scenarios and alternate procedures. ○ Identify the Tech Ops POC if immediate contact is needed. ○ Test back up equipment before releasing the primary equipment to be worked on (where applicable)
3. Identify Operational Consequences Identify the NAS Services and Air Traffic stakeholders that will, or could potentially be affected during the execution of the plan.	○ Know the credible risks and potential impacts including worst-case scenarios that could affect Air Traffic's ability to provide services. ○ Affected facilities, sectors/ areas, positions, or other stakeholders participating in, or potentially impacted by the activity. ○ Determine if there are adverse effects to ATC personnel safety.
4. Communicate An ongoing exchange of information between Technical Operations and Air Traffic personnel to review the potential operational consequences and develop mitigation strategies. The information must be received, understood, and in some cases approved.	○ Identified credible risks and potential impacts including worst-case scenarios. ○ Mitigation strategies ▪ Included using the backup equipment/systems, alternate channels, etc. ▪ Confirm proper operation of support equipment, standby equipment and/or backup systems prior to conducting scheduled activity. ▪ Confirming Technical Operations and Air Traffic are prepared to implement their mitigation strategies ○ Notify Tech Ops immediately of any circumstances that may affect the procedure/task, i.e. change in operational hours/ unusual circumstances, operational configurations, etc. ○ Take-5, if needed (to gain more information or reassess approval). ○ Discuss and/or document effectiveness of plan for future reference or training.
5. Coordinate	○ Coordinating the activity with the appropriate adjacent facilities, if necessary. ○ Additional coordination and notification requirements should there be a change to planned activity. ○ Notify ROC, Den or facility management (when applicable). ○ Verify the equipment operational status and configuration upon completion of the activity. ○ Record Out for Maintenance (OFM) and Return to Service (RTS) on the facility log (7210-4)

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

HOU N 7110.230

Effective Date:
January 15, 2024

Houston Hobby ATCT Houston, Texas

Cancellation Date:
January 14, 2025

SUBJ: Appendix A-3: POSITION RELIEF BRIEFING.

- 1. Purpose of this Notice.** This notice transmits mandatory changes to HOU 7110.1A.
- 2. Audience.** All Houston Hobby ATC Operational Personnel.
- 3. Where can I Find This Notice?** This notice is distributed to Houston Hobby ATCT binder and the Facility Directive Repository: <https://loa.faa.gov/>.
- 4. Explanation of Policy Changes.** This change amends Appendix A-3: POSITION RELIEF BRIEFING to include requirement for controllers to review the current ATIS prior to taking responsibility for the Clearance Delivery (CD)/Flight Data (FD) position.
- 5. Procedures/Action.** Apply new changes shown in red. Changes will be incorporated into the next revision of HOU 7110.10A.

Appendix A-3: POSITION RELIEF BRIEFING.

- a. **Self-Brief: (NIDS, NOTAM board, 7230-4, postings at FD, ATIS)**
All controllers shall pre-brief prior to plugging into any position. Relieving controllers shall state for the recordings they have pre-briefed.

Prior to taking responsibility of the Clearance Delivery/Flight Data Position controllers shall first review the ATIS information.

BRANDI LYNN
NESLADEK

Digitally signed by
BRANDI LYNN NESLADEK
Date: 2024.01.10 15:43:30
-06'00'

Brandi Nesladek
Air Traffic Manager (A)
Houston Hobby ATCT (HOU)

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

HOU N 7110.231

Effective Date:
January 15, 2024

Houston Hobby ATCT Houston, Texas

Cancellation Date:
January 14, 2025

SUBJ: OPERATIONS SUPERVISOR (OS)/CONTROLLER-IN-CHARGE (CIC)

- 1. Purpose of this Notice.** This notice transmits mandatory changes to HOU 7110.1A.
- 2. Audience.** All Houston Hobby ATC Operational Personnel.
- 3. Where can I Find This Notice?** This notice is distributed to Houston Hobby ATCT binder and the Facility Directive Repository: <https://loa.faa.gov/>.
- 4. Explanation of Policy Changes.** This change amends 8-7 OPERATIONS SUPERVISOR (OS)/CONTROLLER-IN-CHARGE (CIC) to incorporate guidance on reviewing new ATIS information prior to broadcasting.
- 5. Procedures/Action.** Apply new changes shown in red. Changes will be incorporated into the next revision of HOU 7110.10A.

8-7 OPERATIONS SUPERVISOR (OS)/CONTROLLER-IN-CHARGE (CIC)

Title through d. No change
Add.

- e. The OS/CIC is responsible for setting shift goals and providing guidance for the shift by ensuring an atmosphere conducive to effective performance by the team and fosters the safe, orderly, and expeditious flow of traffic with an emphasis on eliminating errors and runway incursions. OS/CIC shift priorities include but are not limited to:

26. Review the ATIS for accuracy and clarity before the new ATIS information is broadcasted.

BRANDI LYNN NESLADEK
Digitally signed by
BRANDI LYNN NESLADEK
Date: 2024.01.10
15:42:40 -06'00'

Brandi Nesladek
Air Traffic Manager (A)
Houston Hobby ATCT (HOU)

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

HOU N 7110.232

Effective Date:
March 19, 2024

Cancellation Date:
March 18, 2025

Houston Hobby ATCT Houston, Texas

SUBJ: Chapter 6-1: DUTY FAMILIARIZATION.

- 1. Purpose of this Notice.** This notice transmits mandatory changes to HOU 7110.1A.
- 2. Audience.** All Houston Hobby ATC Operational Personnel.
- 3. Where can I Find This Notice?** This notice is distributed to Houston Hobby ATCT binder and the Facility Directive Repository: <https://loa.faa.gov/>.
- 4. Explanation of Policy Changes.** This change amends Chapter 6-1: DUTY FAMILIARIZATION to reflect the requirement to listen to the prerecorded Center Weather Service Unit Pre-duty briefing and acknowledge completion of this briefing.
- 5. Procedures/Action.** Apply new changes shown in red. Changes will be incorporated into the next revision of HOU 7110.10A.

Chapter 6-1: DUTY FAMILIARIZATION.

- a. All operational personnel, prior to working their first position of their current shift must view and listen to the prerecorded Center Weather Service Unit (CWSU) briefing. After listening to this weather briefing, and prior to working any position, employees must initial and date the "Pre-Duty Weather Briefings Daily Tracking Log."
- b. Training Enterprise Application and Management (TEAM) will be the primary method used for briefing items. Unless otherwise instructed by the OS/CIC on duty, all pre-duty briefing items must be acknowledged prior to working an operational position. All other "Read & Acknowledge" briefing items must be acknowledged by the end of the employees first shift after the briefing item is posted.
- c. Employees are to complete their Center Weather Service Unit briefing, and all other pre-duty briefing items upon signing in for their shift. Unless otherwise instructed by the OS/CIC on duty, operational employees are to report to the tower cab no later than 15

minutes after the start of their shift with all pre-duty requirements completed. If additional time is needed to complete their pre-duty requirements, the employee must make this request with the OS/CIC on duty in a timely manner.

BRANDI LYNN NESLADEK
Digitally signed by
BRANDI LYNN NESLADEK
Date: 2024.02.23 11:04:08
-06'00'

Brandi Nesladek
Air Traffic Manager (A)
Houston Hobby ATCT (HOU)