



RICHMOND
INTERNATIONAL AIRPORT

SURFACE MOVEMENT GUIDANCE CONTROL (SMGCS) PLAN

**Original Plan Approval 2000
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Richmond International Airport

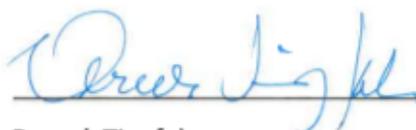
LVO/SMGCS Plan – Signatory Page

 11/01/2021

John Rutledge

Chief Operating Officer

Capital Region Airport Commission

 11/01/2021

Dereck Tingfah

Operations Manager

Capital Region Airport Commission

 11/09/21

Shelton Snow

Air Traffic Manager

Richmond Air Traffic Control Tower

Romana Wolf

Manager

Flight Procedures and Airspace Group

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SECTION 1 - INTRODUCTION

1.0 INTRODUCTION

1.1 **Background:** The Richmond International Airport has witnessed a strong, continual growth in both passenger (scheduled and charter) and cargo traffic. Air cargo operations have produced total annual cargo tonnage growth rates well above the national average. Indicative of this trend was the initiation of RIC's first scheduled wide-body cargo service by Federal Express during 1998. Most of the passenger carriage of RIC is done through narrow body jet aircraft that run heavy load factors and have little to no belly capacity available for cargo. Most of RIC's air freight growth has been accomplished through dedicated cargo aircraft. Forecast growth of this activity is very high, and the Capital Region Airport Commission, with the considerable assistance of the FAA, is actively pursuing the development of airport facilities that will provide all-cargo aircraft with the lowest possible landing minima.

1.2 **Scope:** This Surface Movement Guidance and Control System (SMGCS) Plan outlines the procedures and actions applicable to the Capital Region Airport Commission (CRAC), Richmond International Airport Air Traffic Control Tower (ATCT), and all Richmond International Airport (RIC) Tenants during low visibility operations. RIC's SMGCS Plan is a supplemental document that is intended to support, not supersede, any established policies or procedures for airports, aircrafts, vehicle operators or Air Traffic Control (ATC); however, RIC's SMGCS

Plan does recommend special operating procedures designed to enhance safety

and efficiency of both aircraft and vehicle movements during low visibility conditions. The latter is achieved through certain improvements to airfield lighting and markings along designated taxi routes created to enhance guidance control. This plan identifies the responsibilities of each airport operating entity during low visibility operations of less than 1200 feet RVR to 600 feet RVR. This plan also details how and when these responsibilities will be performed.

1.3 Distribution and Acknowledgement

This SMGCS Plan is distributed to all Richmond International Airport tenants that require the use of the Non-Movement and/or Movement Areas when the RVR is less than 1200 feet. Distribution lists and acknowledgement receipts are kept in the Airport Operations Department.

1.4 Low Visibility and Instrument Landing System Capabilities: Low visibility

operations are broken into the following two categories:

- 1) Less than 1,200 feet Runway Visual Range (RVR)
(down to and including 600 feet RVR)
- 2) Less than 600 feet RVR.

Operational parameters are based on the level of requirements defined in Federal Aviation Administration (FAA) Advisory Circular 120-57A "Surface Movement Guidance and Control System". Richmond International Airport is currently equipped with a Category III (A&B) instrument landing system capable of operations less than 1200 feet RVR down to and including 600 feet RVR.

Note: As an increased measure of safety, during low visibility, Part 91 operators should use the guidance in this plan to the greatest extent and expect “follow me” services to and from the runway environment.

1.5 SMGCS Working Group: The procedures outlined in this plan were developed by the RIC SMGCS Working Group which includes representatives from airport tenants with flight operations and the Federal Aviation Administration. This plan was developed in accordance with the requirements of FAA Advisory Circular 120-57 and revised in accordance with FAA Advisory Circular 120 57A.

1.6 Future Enhancements: This plan addresses both interim and long term enhancements and procedures regarding low visibility operations less than 1,200 feet RVR. Procedures for operations less than 1200 feet RVR, including 600 feet RVR, have been implemented by the FAA. Long term enhancements for operations below 600 RVR are to be implemented as part of overall airport improvement projects. The SMGCS Working Group will continue to meet periodically, before and after the initial SMGCS Plan is approved by the FAA. The SMGCS working Group will continue to assess current low visibility operations and modify procedures as necessary. The latter will provide additional experience and help in the design of future modifications to the Airport.

SECTION 2 - DEFINITIONS

2.0 DEFINITIONS

2.1 **Airfield**: The portion of the Airport intended to be used wholly or in part for the arrival, departure, and movement of aircraft.

2.2 **Airport Apron Controller**: “Airport Apron Controller” refers to personnel from the airlines and Airport Operations providing joint control of the concourse non-movement area. **Note: Richmond International Airport’s concourse Non-Movement areas are not controlled by the FAA tower. Airport tenants may control vehicle and aircraft movements within their lease holds. Prior approval from Airport Operations to use non-leased, non-movement areas (with the exception of designated taxiways or taxi lanes) is required.**

2.3 **Airport Operations**: Airport Operations refers to designated personnel from the Airport Operations Department at Richmond International Airport who are responsible for the overall management of the airfield. This may include Airport Security, airport operations and safety, and other activities specified in Title 14 C.F.R. Part 139.

2.4 **Apron (Ramp)**: A defined area on an airport intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, maintenance or other servicing operations. It includes the following components:

(1) **Aircraft Parking Positions**: Intended for parking aircraft to enplane/deplane

passengers, load or unload cargo.

- (2) Aircraft Service Areas: On or adjacent to an aircraft parking position.

They are used by airline and cargo service personnel/equipment for servicing aircraft and staging of baggage, freight, and mail for loading and unloading of aircraft.

- (3) Taxilane: Pavement markings intended for taxi guidance to and from aircraft parking positions on the apron.

- (4) Vehicle Lane: Pavement markings designating vehicle drive lanes on the apron for use of vehicular traffic.

2.5 Clearance Bar (Future): The clearance bar consists of three in-pavement steady-burning amber lights across a taxiway perpendicular to the centerline. These are used as hold points along the low visibility taxi route during less than 600 RVR operations and are accompanied by a geographic position marking for identification.

2.6 Controlling Region: The controlling region refers to the Federal Aviation Administration's Eastern Region to which Richmond International Airport belongs.

2.7 Geographic Position Markings (Future): These are numbers within a circle painted on the taxiway near the centerline to provide a means for aircraft or vehicles to report their position to Air Traffic Control (ATC) along the low visibility taxi route. These markings are placed in combination with clearance bars and

they can be placed alone where they will enhance operations. They are referred to as “spots” by the air traffic control tower (ATC).

- 2.8 Low Visibility Operations:** For the purpose of this plan, Low Visibility Operations are considered to be those operations that occur when fog, snow, rain, or other weather conditions or restrictions reduce the visibility to less than 1,200 feet RVR.
- 2.9 Movement Area:** This refers to the runways, taxiways, and other areas of the airport which are utilized for taxiing, hover taxiing, air taxiing, takeoff, and landing of aircraft exclusive of aprons and aircraft parking areas. Specific approval from the ATCT must be obtained prior to entering the movement area.
- 2.10 Non-Movement Areas:** This refers to taxiways, taxilanes, apron areas, or other areas that are not under the control of ATC.
- 2.11 Runway Guard Lights (Elevated):** These fixtures consist of a pair of elevated yellow flashing lights that are located on both sides of a taxiway at the Runway Holding Position marking. Their function is to confirm the presence of an active runway and assist in preventing runway incursions. Along the low visibility taxi route at RIC elevated guard lights are placed on TWY “M”ike and TWY “L”ima at the approach ends of RWY 16/34 and TWY “A”lpha at RWY 20. There are also pairs of guard lights co-located with a Runway Holding Position marking and sign just short of the departure end of RWY 2.

2.12 Runway Guard Lights (In-pavement):

These fixtures are made up of a row of in-pavement flashing yellow lights installed across an entire taxiway at the Runway Holding Position marking. Their function is to confirm the presence of an active runway and assist in preventing runway incursions. In-pavement guard lights are installed on Taxiway “L”ima at the approach end of RWY 34 (along RIC’s low visibility taxi route).

2.13 Runway Visual Range (RVR): An instrumentally derived value, based upon standard calibrations, which represent the horizontal distance a pilot will see down the runway from the approach end. This value is based on the sighting of either high intensity runway lights or on the visual contrast of other targets whichever yields the greater visual range. RVR is based on what a pilot, in a moving aircraft, should see looking down the runway. RVR is a horizontal visual range and is reported in hundreds of feet. RVR values are taken in three different zones on a Designated RVR Runway.

The three zones are as follows:

- (1) **Touchdown RVR:** This RVR value is the visibility readout obtained from RVR equipment serving the runway touchdown zone.
- (2) **Midpoint (MID) RVR:** This RVR values is the visibility readout obtained from RVR equipment located midfield of the runway
- (3) **Rollout RVR:** This RVR value is the visibility readout obtained from RVR equipment located nearest the rollout end of the runway.

2.14 Surface Movement Guidance and Control System (SMGCS): This system consists of the provisions for guidance to, and control or regulation of, all pilots, ground vehicle operators, and personnel on the movement area during low visibility operations. Guidance relates to facilities and information necessary for pilots and ground vehicle operators to safely operate at the airport. Control or regulation means the measures necessary to prevent collisions and ensure traffic flows smoothly and efficiently.

2.15 Surface Painted Directional Signs

Surface Painted Directional Signs are configured in the same manner as a TWY Directional Sign and are placed in locations where it is not possible to provide Taxiway Directional Signs at intersections. Presently there are no Surface Painted Directional Signs at RIC.

2.16 Surface Painted Holding Position Markings

Surface Painted Holding Position Markings are pavement markings identifying a specific Runway Holding Position. The configuration of the marking is an exact replica of the associated Runway Holding Position sign. All taxiways leading to both Runway 2/20 and Runway 16/34 have Surface Painted Holding Position Markings.

2.17 Surface Painted Location Signs

Surface Painted Location Signs are pavement markings configured in the same

manner as a Taxiway Location Sign, and are used as supplemental information found along side a taxiway centerline for individuals, confirming the taxiway to which they are located on. These markings are painted along the low visibility taxi route found on the taxiways west of Runways 2/20, excluding TWY “E” cho, TWY “G”olf , TWY “F”oxtro, and TWY “T”ango .

2.18 Stop Bars (Future): Stop bar lights are required for SMGCS plans below 600 feet RVR and are used to control access positively to an active runway or to an ILS Critical Area. They consist of elevated and in-pavement red fixtures that are installed at the Runway Holding Position or ILS Critical Area Holding Position markings. Stop Bar lighting may be controlled by the Air Traffic Control Tower (ATCT). In addition to the red fixtures, a system of in-pavement green taxiway centerline lead-on lights are located at areas where aircraft will enter or cross a runway. These light fixtures will illuminate after the stop bar lights extinguish and provide a secondary visual confirmation to an individual that one is clear to cross or enter a runway.

2.19 Taxi Route: This refers to a specific sequence of taxiways or taxiway segments used by aircraft during low visibility operations of less than 1200 feet RVR operations when taxiing between the runway and the apron.

SECTION 3 - FACILITIES, SERVICES, & EQUIPMENT

3.0 FACILITIES, SERVICES AND EQUIPMENT

3.1 Runways: Only Runway 16/34 is to be used for operations when the reported visibility is less than 1,200 RVR. Runway 34 is served by a Category III (A&B) instrument landing system (ILS) and is equipped with an Approach Lighting System with Sequenced Flashers (ALSF-2), touchdown zone lighting, centerline lighting, high intensity runway edge lighting, and three RVR transmissometers (touchdown, midpoint and rollout). Runway 34 is appropriately marked for precision instrument operations in accordance with current FAA standards. Runway 16 is served by a Category I ILS and is equipped with a Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR), runway centerline lighting, high intensity runway edge lighting, and three RVR transmissometers (touchdown, midpoint and rollout). Runway 16 is also appropriately marked for precision instrument operations in accordance with current FAA standards.

3.2 Taxiway Lights: Medium intensity blue taxiway edge lights are installed on all taxiways along the low visibility taxi route with the exception of portions of Taxiway “U”niform.

Portions of Taxiway “U”niform that do not have blue taxiway edge lights are:

- (1) East side between the approach end of RWY 20 and TWY “B”ravo
- (2) Sections on both sides between TWY “B”ravo and TWY “V”ictor
- (3) Sections on both sides between TWY “V”ictor and TWY “C”harlie
- (4) Sections on both sides between TWY “C”harlie and TWY “E”cho

These portions of Taxiway “U”niform that do not have blue taxiway edge lights

are supplemented with blue FAA approved reflectors. Continuous green taxiway centerline lights are also installed on all taxiways along the low visibility taxi route with the exception of Taxiways V, R, F, T, G. The spacing of centerline lights must be 12 ½ feet only on curves (see Table 1, FAA A/C 150/5340-30).

3.3 Runway Guard Lights (Elevated and In-pavement): Elevated Runway guard lights are installed at all entrances to Runway 16/34. In-pavement runway guard lights are located on Taxiway "L"ima at Runway 34. They are co-located with the elevated guard lights.

3.4 Taxiway Guidance Signing and Marking Inspections: Taxiway guidance signage and marking are inspected daily or at the request of ATC as part of the Airport Operations Department Airport Safety Self-Inspection program.

3.5 Non-Movement Area Control: Control of the non-movement areas around the terminal apron and cargo apron is administered by the airlines, cargo operators, and/or the Airport Commission. **Note: Richmond International Airport's concourse Non-Movement areas are uncontrolled by the FAA tower. Airport tenants may control vehicle and aircraft movements within their lease holds. Prior approval from Airport Operations to use non-leased, non-movement areas (with the exception of designated taxiways or taxi lanes) is required.** Appropriate Non-Movement/Movement Area Boundary markings are installed on apron edges. "Airport Apron Controller" refers to personnel from the

airlines and Airport Operations providing joint control of the concourse non-movement area.

- 3.6 Follow-Me Service:** The Airport Commission will provide “follow-me” service upon request, subject to availability of equipment, and the need to accomplish higher priority duties. To enhance safe operations in low visibility conditions, Part 91 operators should request “follow-me” services to and from the runway environment. The Airport Commission “follow-me” vehicle is identified by yellow flashing lights. A “follow-me” request may be initiated by the pilot or ATC to the Airport Communications Center or designee.
- 3.7 Aircraft Docking:** The airlines assume control of aircraft in the vicinity of the gates and provide aircraft docking by the use of wing walkers, follow-me vehicles, tugs or other appropriate means as set out in the respective airline's operations manual.
- 3.8 Communications:** Telephone and/or radio communications are functional between all organizations involved in the execution of this plan. The communications nerve center for this plan will be Airport Communications, a division of Richmond International's Airport Operations Department.
- 3.9 Notification:** All organizations involved in the execution of this plan are notified in accordance with the checklist in Appendices A and B when the plan is initiated or terminated.

SECTION 4 - AIRCRAFT RESCUE FIRE FIGHTING

4.0 AIRCRAFT RESCUE AND FIRE FIGHTING

- 4.1 **ARFF Coverage:** The primary Aircraft Rescue and Fire Fighting (ARFF) facility is located on the Airport's midfield between Taxiway "C" and Runways 2/20 and 16/34. During low visibility operations of less than 1200 feet RVR, equipment and personnel will remain on alert status, on location at the ARFF station.
- 4.2 **ARFF Coordination:** Annually, Air Traffic Control (ATC) and a representative of the Airport Rescue and Fire Fighting (ARFF) department will meet to ensure the effectiveness of ARFF services during SMGCS operations, as required by 14 CFR Part 139 during the annual Airport Emergency Plan review.
- 4.3 **ARFF Procedures:** In the event of an emergency, response procedures will remain as established for normal operating conditions for on-airport personnel as well as off-airport personnel.

SECTION 5 - VEHICLE CONTROL

5.0 VEHICLE CONTROL

5.1 **Vehicle Access:** Vehicle access to Richmond International Airport is controlled by a system consisting of perimeter fencing and gates in accordance with TSR 1542. All authorized airport and tenant vehicles entering the airport are identified by mandatory displayed markings, decals, or a temporary pass. Access to the Airport Operations Area (AOA) is controlled by a computerized card access control system, and a “Best” key lock system. In addition to RIC’s Access Control System (ACS), there are contracted security personnel at certain access points to the Air Carrier Ramp who are able to contact Airport Operations with access inquiries. A contact number to Airport Operations has been provided to all airport tenants who lease areas that allow access to the AOA. During periods of low visibility, tenants may make AOA access inquiries to Airport Operations. Accordingly, Airport Operations will be the deciding authority on who may enter the AOA.

5.2 **Utilization of Vehicle Service Roads:** Except for the necessary movement in leased areas, vehicles on the airfield should be operated within the boundaries of vehicle service roads. The latter is required when low visibility conditions of less than 1200 feet RVR are present. Vehicle service roads are identified by solid line on each side with a broken line used as a center divider. Accompanying vehicle service roads are stop signs and markings, yield signs and markings, and general guidance and location signs. Vehicle service roads that abut Movement

markings.

5.3 Driver's Training: All drivers who access the Air Operations Area are provided Driver's Training, which is broken down into Non-Movement and Movement Area courses. The need to operate in these areas is subject to strict scrutiny by Airport Operations. The requestor wishing to operate vehicles in these areas must provide a verifiable need to gain access to these areas. All Drivers' training is accomplished through Richmond International Airport's Airport Operations Department using AAAE's Interactive Employee Training (IET) courses. Training programs are tailored to RIC's environment. Included in the computer-based training are details of FAA required airfield signage, airfield markings, and procedures during SMGCS operations. IET also informs trainees that amber colored strobe lights are positioned at certain AOA access gates alerting that SMGCS operations are in effect. Low visibility conditions of less than 1200 feet RVR will prompt Airport Public Safety Personnel to patrol and monitor the AOA for unauthorized vehicles. In addition, authorized drivers are required to stop and/or report unauthorized vehicles and personnel to Airport Operations.

5.4 Access Restrictions: When low visibility conditions exist, all vehicular movement within the AOA will be limited to essential operations. Vehicles permitted access to the Movement Area during these conditions are restricted to designated RIC and FAA Airways Facility maintenance personnel. As a consequence, no vehicles outside the direct support of RIC's SMGCS plan will

be allowed in the Movement Areas. In addition, RIC's Public Safety personnel will analyze all construction and/or other specialized activity on the airport and may determine that limitations be imposed. Limitations may range from a temporary restriction to complete suspension of the activity.

SECTION 6- AIR TRAFFIC CONTROL PROCEDURES

6.0 AIR TRAFFIC CONTROL PROCEDURES

6.1 **SMGCS Plan Initiation:** Air Traffic Control (ATC) personnel will coordinate with the Capital Region Airport Commission (CRAC) staff when a lowering visibility trend indicates an impending need to implement the SMGCS procedures. The checklists contained in Appendix A and B will be used to implement these low visibility procedures. **ATC will assign taxi routes in accordance with the Low Visibility Taxi Route Chart (Exhibit B).** These procedures will be terminated by ATC personnel when no longer deemed necessary, due to prevailing weather conditions. Procedures are in place for both Departures and Arrivals of aircraft at Richmond International Airport, when the RVR drops below 1200 feet. **All traffic, whether aircraft (air carrier, cargo aircraft, and general aviation) or vehicle must contact the Air Traffic Control Tower (ATCT) before accessing any Movement Areas.**

6.2 **Taxi Routes for Aircraft Departing on Runway 34:**

6.2.1 **Air Carrier Aircraft:**

Air Carrier aircraft will taxi from the edge of the movement area at both the North and South ends of the Air Carrier Apron at Taxiway "A"lpha. Upon ATC clearance, aircraft will proceed as assigned by ATC, via the SMGCS plan authorized taxiways (see Exhibit B) to the ILS Critical Area Holding Position. Here, aircraft will await clearance to taxi onto Runway 34. Aircraft may be held at runway intersections and taxiway/taxiway intersections along the route.

6.2.1.1 Cargo Aircraft:

Cargo aircraft will taxi from the edge of the movement area at Taxiway "T"ango or Taxiway "M"ike. Upon ATC clearance, aircraft will proceed as assigned by ATC, via the SMGCS plan authorized taxiways (see Exhibit B) to the ILS Critical Area Holding Position. Here, aircraft will await clearance to taxi onto Runway 34. Aircraft may be held at runway intersections and taxiway/taxiway intersections along the route.

6.2.1.1.1 General Aviation Aircraft:

General Aviation aircraft will taxi from the edge of the movement area at Taxiway "V"ictor, Taxiway "T"ango, Taxiway "R"omeo, or Taxiway "M"ike. Upon ATC clearance, aircraft at Taxiway "V"ictor, Taxiway "T"ango, Taxiway "R"omeo, or Taxiway "M"ike, will proceed as assigned by ATC, via the SMGCS plan authorized taxiways (see Exhibit B) to the ILS Critical Area Holding Position. Here, aircraft will await clearance to taxi onto Runway 34. Aircraft may be held at runway intersections and taxiway/taxiway intersections along the route.

6.2.1.1.2 Virginia Army Guard

Aircraft departing from the Army guard ramp will taxi from the edge of the movement area at Taxiway "L"ima. Upon ATC clearance, aircraft at Taxiway "L"ima will proceed east onto Taxiway "L"ima to the ILS Critical Area Holding Position. Here aircraft will await clearance to taxi onto Runway 34.

6.3 Taxi Routes for Aircraft Departing on Runway 16:

6.3.1 Air Carrier Aircraft:

Air Carrier aircraft will taxi from the edge of the movement area at both the North and South ends of the Air Carrier Apron at Taxiway "Alpha". Upon ATC clearance, aircraft will proceed as assigned by ATC, via the SMGCS plan authorized taxiways (see Exhibit B) to the runway holding position for Runway 20. Here, aircraft will await clearance to taxi across Runway 20 onto Runway 16, unless otherwise instructed. Aircraft may be held at runway intersections and taxiway/taxiway intersections along the route.

6.3.1.1 Cargo Aircraft:

Cargo Aircraft will taxi from the edge of the movement area at Taxiway "Tango", or Taxiway "Mike". Upon ATC clearance, aircraft will proceed as assigned by ATC, via the SMGCS plan authorized taxiways (see Exhibit B) to the runway holding position for Runway 20. Here, aircraft will await clearance to taxi across Runway 20 onto Runway 16, or onto Runway 16 from Taxiway "Mike" 1 unless otherwise instructed. Aircraft may be held at runway intersections and taxiway/taxiway intersections along the route.

6.3.1.2 General Aviation Aircraft:

General Aviation aircraft will taxi from the edge of the movement area at

Taxiway "Romeo" or Taxiway "Victor", Taxiway "Tango", or Taxiway

“Mike. Upon ATC clearance, aircraft will proceed as assigned by ATC, via the SMGCS plan authorized taxiways (see Exhibit B) to the runway holding position for Runway 20. Here, aircraft will await clearance to taxi across Runway 20 onto Runway 16, unless otherwise instructed. Aircraft may be held at runway intersections and taxiway/taxiway intersections along the route.

6.3.1.3 Virginia Army Guard

Aircraft departing from the Army guard ramp will taxi from the edge of the movement area at Taxiway “L”ima. Upon ATC clearance, aircraft at Taxiway “L”ima will proceed as assigned by ATC, via the SMGCS plan authorized taxiways (see Exhibit B) to the runway holding position for Runway 20. Here, aircraft will await clearance to taxi across Runway 20 onto Runway 16, unless otherwise instructed. Aircraft may be held at runway intersections and taxiway/taxiway intersections along the route.

6.4 Taxi Routes for Aircraft Arriving on Runway 34:

6.4.1 Air Carrier Aircraft:

Air Carrier aircraft will taxi from the departure end of Runway 34 crossing Runway 20, unless otherwise instructed, to their destination on the airport. Aircraft destined for the Air Carrier Apron will proceed upon ATC clearance via the SMGCS plan authorized taxiways (see Exhibit B) into the Non-Movement Area and their assigned gate. Aircraft may be held at runway intersections and taxiway/taxiway intersections along the route.

6.4.1.1 Cargo Aircraft:

Cargo aircraft will taxi from the departure end of Runway 34 crossing Runway 20, or on to Taxiway "Mike from Taxiways "Mike 3, "Mike 2 or "Mike 1 unless otherwise instructed, to their destination on the airport. Aircraft destined for the Cargo Apron or East Ramp 1 will proceed upon ATC clearance via the SMGCS plan authorized taxiways (see Exhibit B) into the Non-Movement Area. Aircraft may be held at runway intersections and taxiway/taxiway intersections along the route.

6.4.1.2 General Aviation Aircraft:

General Aviation aircraft will taxi from the departure end of Runway 34 crossing Runway 20, or on to Taxiway "Mike from Taxiways "Mike 3, "Mike 2 or "Mike 1 unless otherwise instructed, to their destination on the airport. Aircraft destined for areas along Taxiway "Romeo, Taxiway "Tango, Taxiway "Victor or Taxiway "Mike will proceed upon ATC clearance via the SMGCS plan authorized taxiways (see Exhibit B) into the Non-Movement Area. Aircraft may be held at runway intersections and taxiway/taxiway intersections along the route.

6.4.1.3 Virginia Army National Guard Procedures:

If military helicopters from the Virginia Army National Guard are required to depart under low visibility conditions, they will follow their established

procedures.

6.5 Taxiway/Taxiway Holding Position Markings:

Taxiway/Taxiway Holding Position markings identify a particular location on a taxiway or apron where aircraft are required to stop when instructed to “hold short” of another taxiway or apron. These markings are painted in certain locations along RIC’s low visibility taxi route to the west of Runways 2/20. They help reduce congestion along the route and increase aircraft maneuverability options for Air Traffic Control (ATC) by providing separation from other taxiing aircraft.

Taxiway/Taxiway Holding Position markings are painted in the following locations:

- TWY U
 - North of TWY E
 - South of TWY A
 - North and South of TWY C
 - North and South of TWY V
- TWY G
 - West of TWY A
 - East of TWY A between TWY U
- TWY F
 - West of TWY A
- TWY E
 - East of TWY A between TWY U
- TWY T
 - South of TWY F
-
- TWY A
 - West of TWY U (South End)
 - North and South of TWY F
 - West of TWY U (North End)
 - North and South of TWY G
 - North of TWY E

- TWY V
 - West of TWY A
 - East of TWY A between TWY U
- TWY C
 - East of TWY A

6.6 Air Traffic Control and “Follow Me” Requests:

“Follow Me” services are requested through the Air Traffic Control Tower (ATCT). ATC will advise the pilot requesting this service the availability of resources, as detailed in Chapter 3 Facilities, Services, and Equipment. ATC will then relay the request to Airport Communications. Airport Operations will contact the ATCT directly to advise if the service can be provided. Aircraft departing from any locations not addressed in Sections 6.2 through 6.4 will require "follow me" service.

**SECTION 7 - AIRCRAFT PROCEDURES & LOW VISIBILITY
CONDITIONS**

7.0 AIRCRAFT PROCEDURES & LOW VISIBILITY CONDITIONS

7.1 Pilot Responsibility

Pilots operating at Richmond International Airport during periods of low visibility, where the RVR is less than 1200 feet, must have a current approved copy of RIC's SMGCS Chart. All pilots should expect to follow the Low Visibility Taxi Route to their destination on the airport. Richmond International Airport's Non-Movement Areas are uncontrolled. Hence, aircraft/vehicle conflicts must be solved by the tenant lease holder.

7.2 SMGCS Plan Authorized Runways / Taxiways:

During periods of low visibility, where the RVR is less than 1200 feet, aircraft operations are only permitted on Runway 16/34. Taxiing is permitted on Taxiways C (west of Taxiway U), A (between C and E and between R and Runway 20), U (north of G), R, V, F, G, E, L (South of E), and T which are highlighted on the Taxi Route Chart (Exhibit B).

7.3 Taxi Procedures:

Departing aircraft will proceed to the movement area boundary and then contact ATC. With permission from ATC, the aircraft will then taxi to the instructed holding position, via the designated route, and await further clearance from ATC.

7.4 Deicing Procedures:

If conditions require deicing, each tenant will follow their established procedures for deicing before taxi. Deicing is not authorized in the movement area. There are

no Deicing Pads at Richmond International Airport however in some instances deicing spots have been designated as a part of the RIC Airline Deice Plan.

7.6 Virginia Army National Guard Procedures:

If military helicopters from the Virginia Army National Guard are required to depart under low visibility conditions, they will follow their established procedures.

SECTION 8 - RESPONSIBILITIES

8.0 RESPONSIBILITIES

8.1 CAPITAL REGION AIRPORT COMMISSION (CRAC):

- (1) Host meetings of the SMGCS Working Group.
- (2) Ensure a complete review of the SMGCS plan and airfield activities are done on **at least an annual basis**.
- (3) Maintain documentation of working group proceedings.
- (4) Coordinate, amend, publish, and distribute the SMGCS Plan.
- (5) Appropriately train personnel in low visibility procedures.
- (6) Assist ATC in notification procedures as outlined in Appendix A.
- (7) Monitor adherence to those sections of the Plan under CRAC's control.
- (8) Develop and coordinate the Low Visibility Taxi Route(s)/Chart(s) with the regional Air Traffic Divisions and FAA Headquarters, Air Traffic Divisions and FAA Headquarters, Air Traffic Rules and Procedures Service, Terminal Procedures Branch, ATP-120.
- (9) Revise the Low Visibility Taxi Route Chart as needed.
- (10) Conduct inspections, report failures, and provide maintenance to all SMGCS equipment, markings, and lighting.

8.2 AIR TRAFFIC CONTROL:

- (1) Conduct a communications check with Airport Communications prior to implementation of the plan.
- (2) Initiate/terminate this plan as specified in Section 6.0.

- (3) Monitor and Control aircraft and vehicles in the Movement Area
- (4) Provide progressive instructions to ARFF and other pertinent responders during an emergency
- (5) Appropriately train personnel in low visibility procedures.
- (6) Include advisory on ATIS; "Low visibility procedures are in effect."

8.3 AIRPORT TENANTS:

- (1) Participate in the SMGCS Working Group.
- (2) Enforce SMGCS plan driving procedures and safe practices within tenant lease holds to the highest degree.
- (3) Assure adherence to sections of the SMGCS Plan under airport tenant control and take action to correct deficiencies.
- (4) Appropriately train personnel in low visibility procedures.
- (5) Provide airport charts to all movement area vehicle operators depicting low visibility taxi routes.

8.4 MILITARY TENANTS:

- (1) Participate in the SMGCS Working Group.
- (2) If necessary, follow me services may be provided but are subjected to the availability terms set forth for Part 91 operators.

SECTION 9 - SMGCS ENHANCMENTS

9.0 SMGCS ENHANCEMENTS

9.1 Current Enhancements:

To enhance the safety of low visibility operations of less than 1200 feet RVR to 600 feet RVR, the Capital Region Airport Commission has made the following airfield improvements:

Action:

- (1) Installed Category IIIB Instrument Landing System for Runway 34.
- (2) Elevated Runway guard lights have been installed at all entrances to Runway 16-34. In pavement runway guard lights have been added to Taxiway "L"ima at Runway 34.
- (3) Painted markings on the apron to indicate the non-movement area boundary.
- (4) Installed taxiway centerline lights on taxiways E, C, U, and L.

Portions of taxiways that have centerline lighting: (As depicted in Exhibit B)

- **TWY E**
 - TWY CLLs are installed from the eastern boundary of TWY "A"'s OFA, adjacent to the Air Carrier Apron, to the portion of TWY "L" north of TWY H.
- **TWY C**
 - TWY CLLs are installed from the eastern boundary of TWY A "'s OFA, adjacent to the Air Carrier Apron and east to the TWY "U" intersection.

- **TWY U**
 - TWY CLLs are installed on TWY “U” between TWY “A” and TWY “E”

- **TWY L**
 - TWY CLLs are installed on TWY “L”, south of TWY “E,” to the edge of RWY 34.

- (5) Installed taxiway centerline reflectors on Taxiway A abeam the air carrier terminal apron.

- (6) Equipped ARFF department vehicles with Driver Enhanced Vision System (DEVS).

9.2 Future Enhancements (if requested):

To enhance the safety of operations below 600 feet RVR, the following should be completed:

- Action:
- (1) Paint apron/taxiway designations on the surface of the taxiways at certain places where the taxiway centerlines diverge to provide pilots additional aids in low visibility situations.

 - (2) Paint Geographical Position Marking “spots” with applicable International Civil Aviation Organization (ICAO) standard yellow taxiway intersection markings along the taxiways

 - (3) Paint vehicle drive lines with the movement/non-movement area boundary clearly marked.

APPENDICIES

APPENDIX A

ATC Implementation Checklist

SMGCS

Notification

- Capital Region Airport Commission Airport Communications, dial (804)-226-0001.

Implementation

- Conduct communications check with Airport Communications
- Clear all taxiways not on low visibility taxi route
- Extinguish non-taxi route lights if possible
- After the Airport Public Safety Department has conducted a visual inspection of all SMGCS elements;
 - Provide guidance to aircraft along the low visibility taxi route
 - ATIS Advisory; “Low visibility procedures are in effect”

Appendix B

CRAC Notification/ Implementation Checklist

Notification

Upon receiving notification from ATC, contact the following to inform them of the SMCGS status:

- All applicable departments via “Group E” page
- Facilities and Operations Department
On-duty personnel/ foremen by radio
- ARFF
On-duty ARFF supervisor by radio
- Airport Police
On-duty Police Supervisor by radio
- Tenants
Via Facilities and Operations Department

Implementation

- Visually inspect all SMCGS elements and report back to ATC prior to SMCGS activation.
- Visually inspect all SMCGS elements not monitored electronically every two hours.
- Issue necessary NOTAM(S) as determined by inspection results.

Appendix C

Revision Index

Date Revised	Initials	Page #	Revision Title
9/3/07	JMS		Created Cover Page for SMGCS Plan
12/28/07	JMS		Created Revision Index for SMGCS Plan
12/28/07	JMS		Created SMGCS Safety Working Group Member Listing
12/28/07	JMS	1-1 ¶1.1	Remove “Because” started with “Most”
12/28/07	JMS	1-1 ¶1.1	Remove “By” replaced with “done through”
12/28/07	JMS	1-1 ¶1.1	Added “and have” started sentence with “Most of”
12/28/07	JMS	1-1 ¶1.1	Added substantive reference AC120-57A A.2 ¶1.4
12/28/07	JMS	1-2 ¶1.4	Removed “not supersede policies” reference
12/28/07	JMS	1-2 ¶1.2	Added “before and after FAA approval” reference
12/28/07	JMS	1-3 ¶1.4	Added “AWOPM” title to FAA members
12/31/07	JMS	Sec. 2	Incorporated. def. from AC120-57A A.2 (2.1,2,3,6,13,15,16,17)
12/31/07	JMS	2-2 ¶ 2.5	Added “steady burning”
12/31/07	JMS	2-3 ¶ 2.9	Added helicopter references to Movement Area def.
12/31/07	JMS	2-3 ¶ 2.11	Aligned “Elevated” guard light def with AC 120-57A A.2 ¶ 2.11
12/31/07	JMS	2-4 ¶ 2.12	Added “In-pavement” guard light def. from AC 120-57A A.2 ¶2.12
12/31/07	JMS	2-4 ¶ 2.13	Aligned “RVR” def with AC120-57A & AC97-1A added
12/31/07	JMS	Sec.2	Change definition titles to bold format.
12/31/07	JMS	Sec.2	Changed page number format for chapter
1/1/08	JMS	Sec.3	Added “runway” before light designations ¶3.1
1/1/08	JMS	Sec.3	Started sentence with “Runway 34” and “Runway 16” ¶3.1
1/1/08	JMS	Sec.3	Added “Airport Communications, Nerve Center” reference ¶3.8
12/31/07	JAS	Sec.3	Changed to include inspection frequency per AC 120-57A A.2 ¶ 3.4
12/31/07	JAS	Sec.3	Inserted new ¶ 3.5 from AC 120-57A A.2 ¶ 3.7 “Non-Movement Area Control”
12/31/07	JAS	Sec.3	Aligned ¶ 3.6 with AC 120-57A A.2 ¶ 3.9 to include Part 91 ops
12/31/07	JAS	Sec.3	Inserted new ¶ 3.7 from AC 120-57A A.2 ¶ 3.10 “Aircraft Docking”
12/31/07	JAS	Sec.3	¶ 3.8 changed “Appendixes” to Appendices”
12/31/07	JAS	Sec.3	Re-numbered ¶ 3.5 – 3.7 as ¶ 3.6, 3.8, 3.9
12/31/07	JAS	Sec.3	Cleaned up paragraph formatting
1/1/08	JMS	Sec.4	Inserted new 4.1 to include references from AC 120-57A A.2 ¶ 4.2
1/1/08	JAS	Sec.4	Added section titles per AC 120-57A A.2
1/1/08	JMS	Sec.5	Changed TSR “1452” to “1542”
1/1/08	JMS	Sec.5	Added “deciding authority” and “ramp security” references ¶ 5.1
1/1/08	JMS	Sec.5	Added “use of service roads” and “specifications of VSR” references ¶5.2
1/1/08	JMS	Sec.5	Deleted “tenant provided training” Added “IET training” references ¶5.3
1/1/08	JMS	Sec.5	Aligned Sec.5 ¶5.4 with AC 120-57A A.2 ¶5.4

1/2/08	JMS	Sec.6	Separated procedures for tenants on the North South end of Air Carrier Apron departing RWY 34 ¶6.2
1/2/08	JMS	Sec.6	Separated procedures for GA departing RWY 34 from TWY R & V
1/2/08	JMS	Sec.6	Separated procedures for tenants on the North and South end of Air Carrier Apron departing RWY 16 ¶6.3
1/2/08	JMS	Sec.6	Separated procedures for GA departing RWY 16 from TWY R & V
1/2/08	JMS	Sec.6	Revised GA title for ¶6.2 and ¶6.3 (3 and 4)
1/2/08	JMS	Sec.6	Bold all Paragraph titles in chapter ¶6.1- 6.5
1/2/08	JMS	Sec.6	Created new ¶6.4 defining “Taxiway/Taxiway Holding Position”
1/2/08	JMS	Sec.6	Updated “Taxiway/Taxiway Holding Positions” on SMGCS route ¶6.4
1/2/08	JMS	Sec. 6	Created new ¶6.4 detailing ATC procedures and “Follow Me” service
1/4/08	JMS	Sec. 7	Changed Section 7.0 title to Aircraft Procedures and Low Visibility
1/4/08	JMS	Sec. 7	Inserted “South of E” reference to ¶7.2
1/4/08	JMS	Sec. 7	Inserted reference to “No Deicing Pads at RIC” to ¶7.4
1/4/08	JMS	Sec. 7	Removed “Virginia Air National Guard” procedure
1/4/08	JMS	Sec. 7	Added new titles and format to paragraphs ¶7.1- 7.6
1/4/08	JMS	Sec. 8	¶8.1 Added “at least annual basis” reference
1/4/08	JMS	Sec. 8	Re-arrange responsibilities for ¶8.1- 8.3
1/4/08	JMS	Sec. 8	Included FAA divisions in development of Low Visibility Charts ¶8.2
1/4/08	JMS	Sec. 8	Included tenants responsibility to enforce driving procedures ¶8.3
1/4/08	JMS	Sec. 8	Inserted Military Tenants responsibility ¶8.4
1/4/08	JMS	Sec. 8	Created new responsibility for US Gov’t Law Enforcement ¶8.5
1/4/08	JMS	Sec. 9	Distinguished which portions of TWYs had CLL ¶9.1 Current Enhancements
1/4/08	JMS	Sec. 9	Inserted Lead On/Off CLL RWY 34 enhancement to ¶9.1 Current Enhancements
1/4/08	JMS	A. A	Re-formatted Notification paragraph
1/4/08	JMS	A. B	Replaced “them” with “individuals” under Notification paragraph
1/4/08	JAS	Sec. 1-9	Re-numbered the whole SMGCS Plan
1/4/08	JMS	TOC	Re-numbered TOC
1/4/08	JMS	TOC	Replace Section 7.0 with “Aircraft Procedures and Low Visibility
1/7/08	JMS	Sec. 1-9	Created dividers for sections
1/8/08	JMS	Sec. 6	Removed ¶6.5 from Section 6.0
1/8/08	JMS	Sec. 1 p. 1	Inserted new ¶1.3 “Distribution and Acknowledgement”
1/8/08	JMS	Sec. 1-9	Inserted “less than” reference to 1200 feet RVR
1/8/08	JMS	Sec. 6	Re-bulleted paragraph ¶6.1 - 6.4
1/10/08	JMS	Sec. 6	Changed “Aircrafts” to “Aircraft” ¶6.1 - 6.4
1/10/08	JMS	p.21	Inserted “Virginia Army Guard” procedure ¶6.2.1.1.1.c
1/10/08	JMS	p.28	Inserted “TWY U” North and South of TWY V reference ¶6.5
1/10/08	JMS	p.28	Inserted “TWY G” West of TWY T reference ¶6.5
1/10/08	JMS	p.29	Inserted “TWY T” Between TWY G and TWY J reference ¶6.5

1/10/08	JMS	TOC	Re-numbered TOC
1/10/08	JMS	p. 4	Changed “uncontrolled” to “not controlled” ¶2.2
1/10/08	JMS	p.22	Aircraft will await clearance onto RWY 16 at RWY 20 Holding Position ¶6.3
1/10/08	JMS	p.31	Removed last sentence of ¶7.6
7/29/2009	JN	p. 16	Updated A/C reference in 3.2
7/29/2009	JN	p. 29	Added Army Guard Procedure
8/3/2009	JN	Chart	Added new center line lights “lead off” RWY 34 @ A
9/27/2021	DT	p. 12	Changed “in place” to “installed on” ¶2.12
9/27/2021	DT	p. 13	Inserted “Presently there are no Surface Painted Directional Signs at RIC”. ¶2.15
9/27/2021	DT	p. 13	Deleted “Presently, TWY “A” at the Approach end of RWY 20 is the only taxiway with Surface Painted Holding Position Markings at RIC”. ¶2.16
9/27/2021	DT	p. 13	Inserted “All taxiways leading to both Runway 2/20 and Runway 16/34 have Surface Painted Holding Position Markings”. ¶2.16
9/27/2021	DT	p. 17	Deleted “including non-illuminated taxiways”. ¶3.3
9/27/2021	DT	p. 17	Changed “signing” to “signage” ¶3.4
9/27/2021	DT	p. 18	Inserted “Airport” ¶3.6
9/27/2021	DT	p. 22	Changed “which” to “who” ¶5.1
9/27/2021	DT	p. 26	Deleted “at all times” ¶6.1
9/27/2021	DT	p. 27	Inserted “or Taxiway Mike” ¶6.2.1.1
9/27/2021	DT	p. 27	Inserted “or Taxiway Mike” ¶6.2.1.1.1
9/27/2021	DT	p. 28	Inserted “or Taxiway Mike” ¶6.3.1.1
9/27/2021	DT	p. 28	Inserted “Aircraft taxiing from East Ramps 1, 3, and 4 will hold at either ILS hold markings unless otherwise instructed”. ¶6.3.1.1
9/27/2021	DT	p. 28	Inserted “or ILS hold markings” ¶6.3.1.1
9/27/2021	DT	p. 28	Inserted “or Taxiway Mike”. ¶6.3.1.2
9/27/2021	DT	p. 30	Inserted “or on to Taxiway Mike from Taxiways Mike 3, Mike 2, or Mike 1” ¶6.4.1.1
9/27/2021	DT	p. 30	Inserted “or East Ramp 1” ¶6.4.1.1
9/27/2021	DT	p. 30	Inserted “or on to Taxiway Mike from Taxiways Mike 3, Mike 2 or Mike 1” ¶6.4.1.2
9/27/2021	DT	p. 30	Inserted “or Taxiway Mike” ¶6.4.1.2
9/27/2021	DT	p. 31	Deleted “North of TWY G” ¶6.5
9/27/2021	DT	p. 31	Deleted “North and South of TWY F” ¶6.5
9/27/2021	DT	p. 31	Changed “North and South of TWY E” to “North of TWY E” ¶6.5
9/27/2021	DT	p. 31	Deleted “West of TWY T” ¶6.5
9/27/2021	DT	p. 31	Deleted “East of TWY A between TWY U” ¶6.5
9/27/2021	DT	p. 31	Changed “Between TWY G and TWY F” to “South of TWY F” ¶6.5
9/27/2021	DT	p. 31	Deleted “North of TWY G” ¶6.5
9/27/2021	DT	p. 31	Deleted “South of TWY F” ¶6.5
9/27/2021	DT	p. 31	Deleted “East of TWY R” ¶6.5

9/27/2021	DT	p. 31	Inserted “West of TWY U (South End)” ¶6.5
9/27/2021	DT	p. 31	Inserted “North and South of TWY G” ¶6.5
9/27/2021	DT	p. 31	Inserted “North and South of TWY F” ¶6.5
9/27/2021	DT	p. 31	Inserted “North of TWY E” ¶6.5
9/27/2021	DT	p. 31	Inserted “West of TWY U (North End)” ¶6.5
9/27/2021	DT	p. 35	Inserted “however in some instances deicing spots have been designated as a part of the RIC Airline Deice Plan”. ¶7.4
9/27/2021	DT	p. 40	Deleted “RWY 7/27” ¶9.1
9/27/2021	DT	p. 40	Inserted “TWY H” ¶6.5
10/11/2021	DT	p. 2	Amended Table of Contents page numbers

Richmond International Airport

LVO/SMGCS Working Group

Name: Dereck Tingfah	Name: Brad Christopher
Title: Operations Manager	Title: Director of Maintenance
Organization: C.R.A.C.	Organization: C.R.A.C.
E-mail: dtingfah@flyrichmond.com	Email: bchristopher@flyrichmond.com
Phone: 804-226-8535	Phone: 804-226-8507
 	
Name: Kevin McDaniel	Name: Matt Tenney
Title: Operations Supervisor	Title: Police Chief
Organization: C.R.A.C.	Organization: C.R.A.C.
E-mail: kmcdaniel@flyrichmond.com	Email: mtenney@flyrichmond.com
Phone: 804-226-8590	Phone: 804-226-3081
 	
Name: Andrew Wilhelm	Name: Billy Heron
Title: Operations Officer	Title: Manager
Organization: C.R.A.C.	Organization: American Airlines
E-mail: awilhelm@flyrichmond.com	Email: billy.heron@aa.com
Phone: 804-226-8590	Phone: 804-614-3722
 	
Name: Larry Hamilton	Name: Michael Minton
Title: Operations Officer	Title: Manager
Organization: C.R.A.C.	Organization: Piedmont Airlines
E-mail: lhamilton@flyrichmond.com	Email: Michael.minton@aa.com
Phone: 804-226-8590	Phone: 804-727-3800
 	
Name: John Fitzgerald	Name: Toby Tobin
Title: Fire Chief	Title: Manager
Organization: C.R.A.C.	Organization: Aero Industries
E-mail: jfitzgerald@flyrichmond.com	Email: toby@aeroind.com
Phone: 804-226-8557	Phone: 804-222-7211
 	
Name: Steve Himelspach	Name: Micah Getson
Title: Pilot / Safety Manager	Title: Supervisor
Organization: L3 Harris Technologies	Organization: RIC Air Traffic Organization
Email: Steven.J.Himelspach@L3Harris.com	Email: micah.getson@faa.gov
Phone: 858-220-9486	Phone: 804-226-6530

Attachment A

Revised 10/11/2021

LESS THAN RVR 1200 \uparrow 600

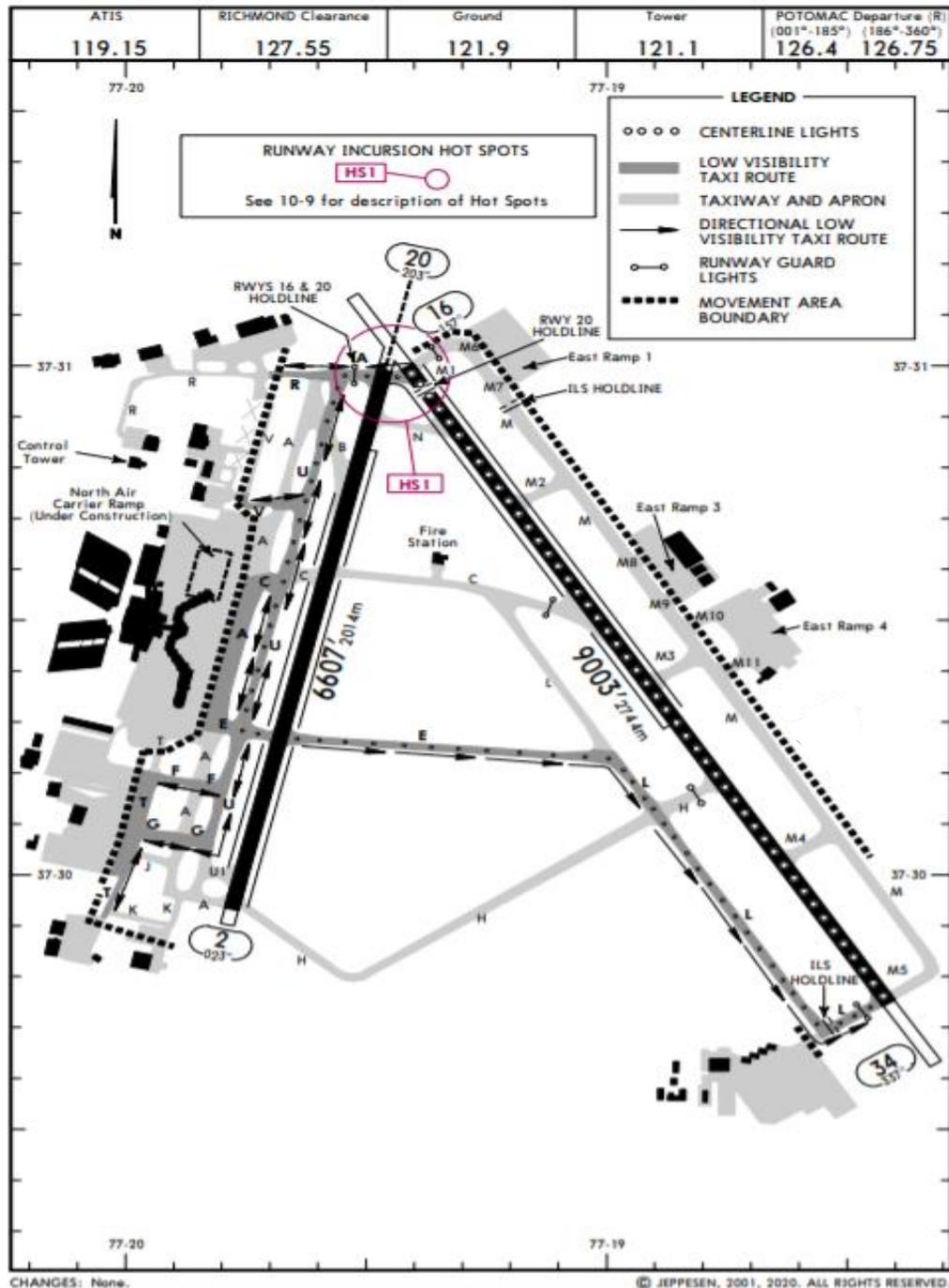


Exhibit B

Low Visibility Taxi Chart