

Winter Deicing Season 2024/2025

Protocols & Operations



October 16, 2024



Contents

Purpose.....	1
Protocols	1
Best Management Practice	2
Regulatory Requirements.....	3
Glycol Capture Areas	5
Deicing Location by Airline	6
Deicing Locations	
Charlie Pad.....	7
Concourse A Carriers	8
Concourse C Carriers / North Gates.....	9
Concourse C Carriers / South Gates	10
Concourse E Carriers	11
Hotel Pad.....	12
Cargo Carriers and General Aviation.....	13



Purpose

State and Federal environmental regulations require the collection and treatment of deicing fluids for the protection of water quality. This document presents the St. Louis Lambert International Airport Winter Deicing Season 2024/2025 Plan. The purpose for this plan is three-fold:

- To ensure all parties are aware of the general protocols for deicing aircraft.
- To ensure deicing locations are within glycol capture areas. Application of deicing fluids at locales other than those prescribed by the plan is prohibited.
- To ensure locations where deicing fluids can be applied are appropriately identified and understood by all parties.

Protocols

The following protocols will be applicable to all deicing applicators for deicing. Adjustments to protocols will be considered on a case-by-case basis by contacting STL Airport Operations at 314-426-8040.

High Importance

- **When STL Airport Operations receives a snow or a freezing precipitation forecast it will advise users that the Charlie and Hotel Pads may be needed for deicing activities.**
- **When an airline begins and ends deicing operations, notification to STL Airport Operations is **Mandatory at 314-426-8040**.**
- **Glycol fluid applications will be limited to the exclusive use of propylene based products (Type I and Type IV). Ethylene glycol products are not allowed.**
- **The Charlie Pad, Lima Pad, and Hotel Pad are available by request to STL Airport Operations for remote aircraft parking. The Charlie Pad must be cleared by 05:00 hours if a freezing precipitation or full snow event is forecast.**
- **Airlines and deicing contractors **must** have a marshal to direct aircraft onto the Charlie Pad, Hotel Pad, Lima Pad, Mike Deice, and the outbound D20-D26 taxilane for deicing.**
- **FAA ATCT must be contacted for clearance into and out of the Charlie Pad, Hotel Pad, Lima Pad, Mike Deice, and the outbound D20-D26 taxilane for deicing at radio frequency 127.55.**



General Protocols

- Each airline has an assigned deicing location(s).
- Airlines must not push back from gate until the aircraft is ready to reposition to deicing location.
- GA aircraft must coordinate with Alliance Ground International (AGI) prior to taxiing to the D20-D26 deicing taxiway.
- The Charlie Pad has six deicing spots.
- The Hotel Pad has four deicing spots. Lufthansa has preferential use of H1 during a deicing event, followed by Spirit Airlines. Cargo operators will use H2. General aviation business aircraft should use the D20-D26 deicing taxiway.
- The Lima Pad has three deicing spots. Southwest has preferential use of this pad for deicing.
- Mike Deice has one (1) angled spot at Gate C34 (M1). American Airlines has preferential use for this deicing location.
- The Apron between Concourses B and C, specifically Gate B4, may be utilized for deicing efforts. American Airlines has preferential use for this deicing location.
- Echo Pad and Papa Pad will not be used for deicing.
- Engine-on versus engine-off during application of fluids is a matter of individual airline policy.
- Deicing the aircraft engine nacelle to ensure safe engine start is allowed at any location.
- FAA ATCT is not responsible for aircraft movement on or managing the deicing activity at the Charlie Pad, Hotel Pad, Lima Pad, Mike Deice, and the D20-D26 deicing taxiway.

Best Management Practice

- St. Louis Lambert Airport, as a best management practice, encourages the use of blend-to-temperature glycol applications in a deicing event to reduce overall deicing fluid usage.
- Airlines and deicing contractors should include deicing best management practices in employee and spill control training.



Regulatory Requirements

The Missouri Department of Natural Resources (DNR) requires St. Louis Lambert International Airport to operate under conditions established in a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. As a result of historical permit violations, the Airport has collaborated with DNR to develop a Storm Water Pollution Prevention Plan (SWPPP) and reasonable permit conditions to protect water quality while ensuring aircraft safety. Full implementation of these Deicing Protocols is a critical part of the Airport's success in both goals.

Tenants of the Airport (airlines and service providers) are subject to the same regulations as the Airport. As part of each lease agreement, tenants receive coverage under the Airport's NPDES permit if they maintain compliance with the applicable permit requirements described above.

Surface runoff and storm sewers at the Airport discharge to Coldwater Creek. Prevention of deicing effluent from entering local watershed streams is paramount to compliance with the NPDES permit and protection of Coldwater Creek. The application of deicing fluids is, therefore, limited to capture areas that are within the Airport deicing collection drainage system. Capture areas drain to storm sewers that can be diverted to an industrial waste water pre-treatment tank when deicing is occurring. The treatment tank reduces BOD (Biochemical Oxygen Demand) before sending the water to a municipal wastewater treatment plant. This prevents discharge of water to the environment. Deicing outside of the designated areas or when the system is not in collection will result in a prohibited discharge to Coldwater Creek.

The Airport Environmental Health & Safety Department samples effluent at stream outfalls to ensure compliance with the NPDES permit. Adjustments to deicing activities will be made if permitted water quality levels are exceeded. Sample results are reported to the DNR monthly. Failure to capture and treat deicing effluent will trigger the DNR to implement additional and more burdensome regulations in the NPDES permit covering the Airport and its tenants.



Aircraft Deicing Water Pollution Prevention and Regulatory Compliance

STL's SWPPP Permit integrates the Airport's and the Tenant's responsibilities for storm water pollution prevention management.

- Current Clean Water Discharge Operating Permit and SWPPP, Effective Date: January 1, 2022 / Expiration Date: March 31, 2026, MO-0111210.
- Regulators have rewarded our record of storm water quality monitoring and have allowed for a partnership with shared responsibility and mutual benefit of less regulatory burden.
- Permit will cover Airport Tenants who meet the following reporting criteria:
 - Preparation of site-specific SWPPP and submittal to the Airport for incorporation into the Airport's SWPPP, template available upon request.
 - Conduct awareness training.
 - Conduct monthly SWPPP inspections and document corrective actions.
 - Be prepared to provide all of the above documentation upon written request from the Airport.

STL's SWPPP Permit integrates the Airport's and the Tenant's responsibilities for storm water pollution prevention management.

- Tenant-specific SWPPP includes:
 - SWPPP team, contact information and training
 - Assessment of potential pollutant sources associated with tenant activities, Inspection and corrective action documentation
 - Management Certification
 - Reporting of ADF Usage to Airport EHS monthly – Request and report form will be emailed soon.
- The Airport is conducting annual tenant SWPPP compliance visits per our Permit and we appreciate our tenants hosting and assisting with these visits.

The Airport appreciates and thanks each airline and service provider for their teamwork and continued pollution prevent efforts!

- Continue submitting Aircraft Deicing Fluid Monthly Tracking to:
Jarron Hewitt, Airport EHS
jdhewitt@flystl.com
- Brendan Wilder, Airport EHS Manager
bjwilder@flystl.com
- And Remember:
 - **Absolutely no use of urea**
 - **Absolutely no use of ethylene glycol**
 - **Absolutely no dumping of expired or off-spec ADF**
 - **(Please provide SDSs for all ADF products to Airport EHS)**

St. Louis Lambert International Airport
Winter Deicing Season 2024/2025
October 16, 2024



Glycol Capture Areas

Prevention of deicing effluent from entering local water shed streams is paramount to the NPDES permit. The application of deicing fluids is, therefore, limited to areas that are within the Airport deicing collection drainage system.

Capture areas (red lines) are south of the scupper drains on Concourses A and C at Terminal 1 and Concourse E on Terminal 2, the Lima Pad south and west of the scupper drains, the Hotel Pad north of the scupper drain, the Charlie Pad south of the vehicle service road, and the D20-D26 taxilane between the C and D Concourse. At the North Cargo area, the scupper drains are located south of the UPS apron.





Deicing Location by Airline

AIRLINE	LOCATION	GATES	DEICING ENTITY	DEICING LOCATION
AIR CANADA	CONCOURSE A	A17	ALLIANCE GROUND INTERNATIONAL (AGI)	OUTBOUND TAXILANE AT GATES D20-D26
CHARTER FLIGHTS		A9, A15		
DELTA		A2, A3, A4, A6, A8, A10	DELTA	AT GATE (EXCEPT A10), APRON WEST OF CONCOURSE B, OR CHARLIE PAD
UNITED		A12, A14, A16, A18, A19, A21	UNITED GROUND EXPRESS (UGE)	AT GATE, APRON WEST OF GATE A3, OR CHARLIE PAD
AVELO		A15	UGE	
ALASKA	CONCOURSE C	C15	AGI	OUTBOUND TAXILANE AT GATES D20-D26
AMERICAN		C6, C8, C16, C18, C24	AMERICAN	AT GATE, GATE B4, AREA BETWEEN CONCOURSE B AND C, OR MIKE DEICE
FRONTIER		C19, C23	AGI	OUTBOUND TAXILANE AT GATES D20-D26
SOUTHERN AIRWAYS EXPRESS		C3		
SPIRIT		C30	PRIME FLIGHT	HOTEL PAD
SUN COUNTRY		C28	AGI	OUTBOUND TAXILANE AT GATES D20-D26
LUFTHANSA	CONCOURSE E	E29	PRIME FLIGHT	HOTEL PAD
SOUTHWEST		E4-E24, E29-E40	SOUTHWEST	AT GATE, LIMA PAD, OR HOTEL PAD
CENTENE MANAGEMENT	GA		AGI	OUTBOUND TAXILANE AT GATES D20-D26
JET LINX				
SIGNATURE AVIATION				
AMAZON AIR	CARGO		PRIME FLIGHT	HOTEL PAD
DHL			AGI	
FEDEX				
OTHER CARGO			UPS	NORTH CARGO
UPS				

St. Louis Lambert International Airport
 Winter Deicing Season 2024/2025
 October 16, 2024



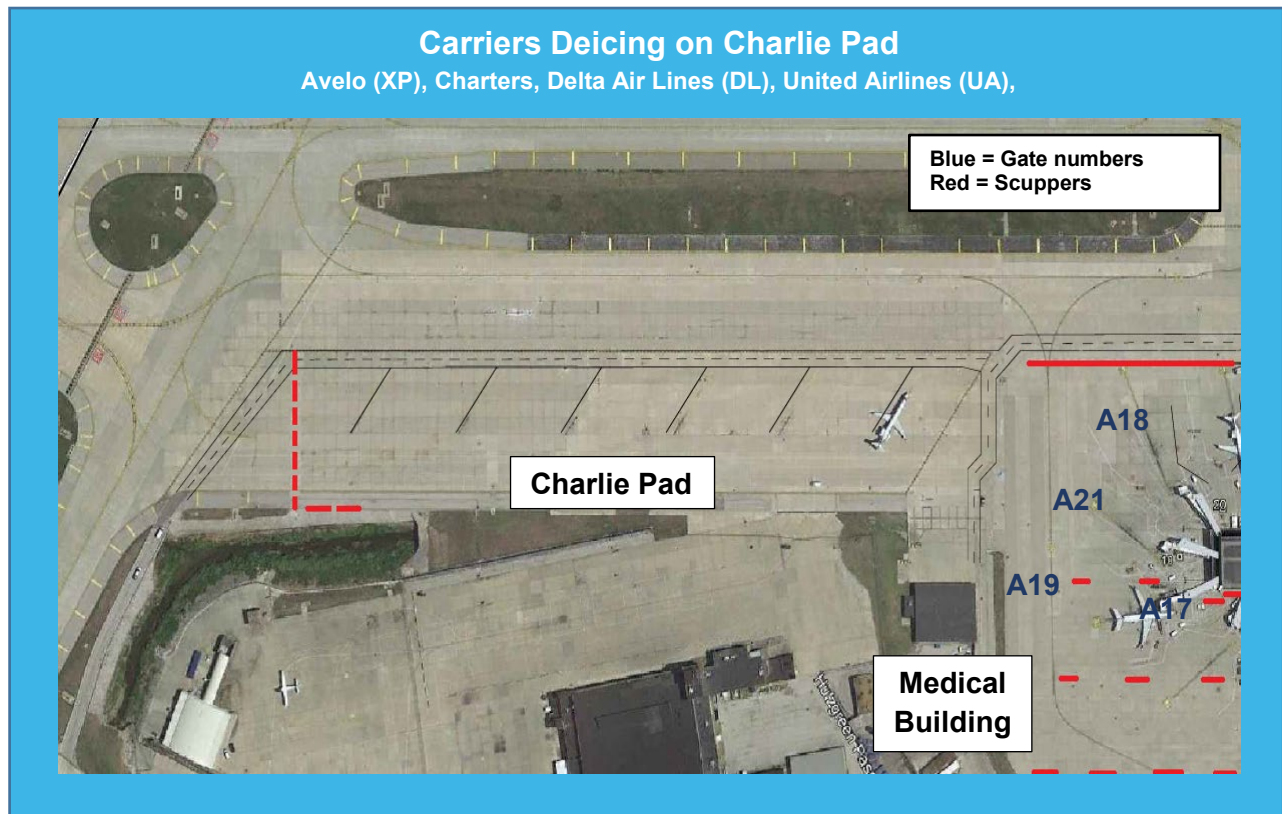
Deicing Locations

Charlie Pad

Charlie Pad will continue to be a preferred location for remote aircraft parking. **The pad must be cleared of aircraft prior to 05:00 hours when a freezing precipitation or snow event is forecast for the morning hours.** During the remainder of the day, STL Airport Operations may direct airlines to clear the pad for deicing activities when need arises.

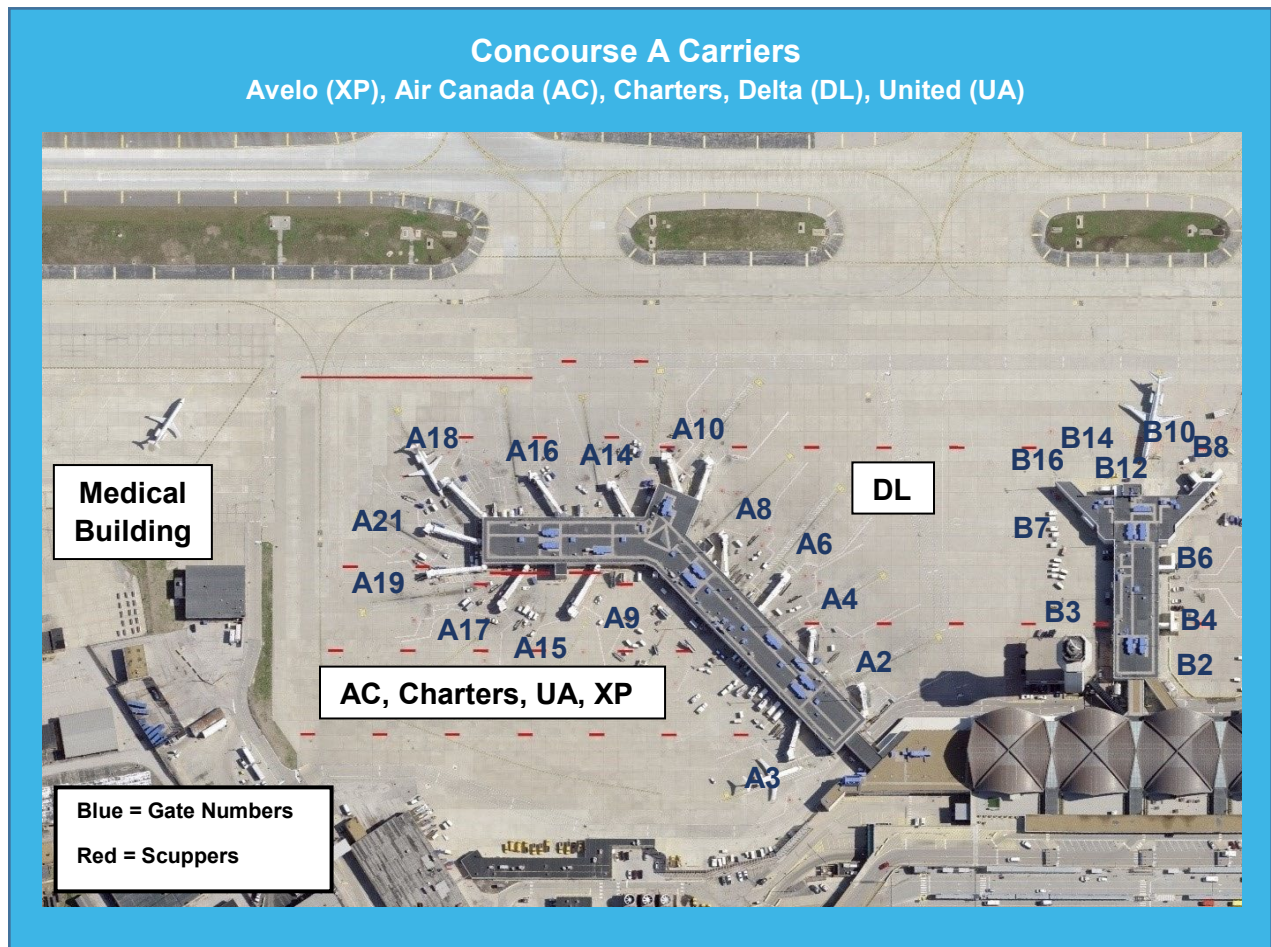
The Charlie Pad will be the preferred location for deicing of Avelo Airlines, Delta Air Lines, and United Airlines. Widebody aircraft/charters should be parked at the far west end of the Charlie Pad. The west half of the Pad may have occasional use by other carriers for deicing overflow. Staging for deicing trucks will be at the Medical Building. Deicing vehicles cannot be parked overnight at the Medical Building.

Charlie Pad has six parking positions that are marked for Aircraft Design Group III. In the event a Design Group IV or larger aircraft is deiced at Charlie Pad, the parking position to either side of the Design Group IV aircraft will not be used. FAA ATCT will direct aircraft movement to and from the Charlie Pad.





Concourse A Carriers



Air Canada (AC) and Charters will be deiced by AGI on the outbound taxilane at Gates D20 - D26.

Avelo Airlines (XP) will be deiced by United Ground Express (UGE) at the gate, on the Charlie Pad, or on the apron west of Gate A3. UGE will have three trucks for deicing.

Delta Air Lines (DL) aircraft will be deiced by DL personnel. DL has three trucks for deicing. DL can deice aircraft on the apron between Concourse A and Concourse B south of the scupper drain, on the apron west of Gate A3, on the Charlie Pad, or at the gate. There is no gate deicing at Gate A10. Aircraft at Gate A10 will push back onto the apron between the A and B Concourses to deice. Applying deicing fluid at the apron fronting Gates B10 / B12 / B14 / B16 is not allowed.

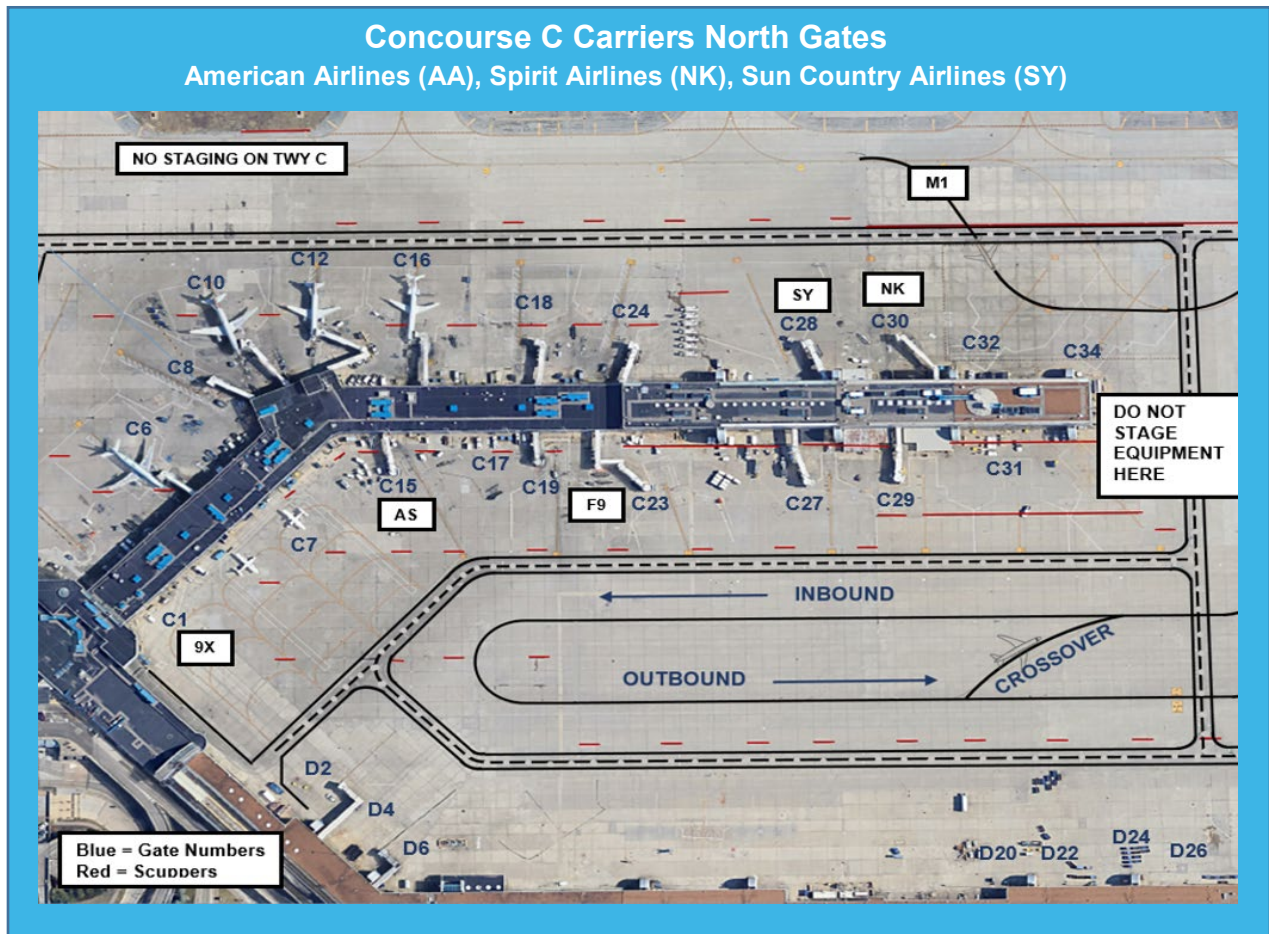
United Airlines (UA) will be deiced by United Ground Express (UGE) at the gate, on the Charlie Pad, or on the apron west of Gate A3. UGE will have three trucks for deicing.

UGE and DL need to coordinate aircraft deicing on the apron west of Gate A3, so as not to block arriving or departing aircraft. A marshal must be used to direct aircraft deicing on the Charlie Pad

St. Louis Lambert International Airport
Winter Deicing Season 202/2025
October 16, 2024



Concourse C Carriers / North Gates



American Airlines (AA) has the option to push back at the gate, deice at Gate B4, in the area between Concourse B and Concourse C, or on the apron fronting Gate C34 (Mike Deice). All fluid application must occur south of the scupper drain line. There will be no deicing at Gates C10 and C12 since aircraft deicing at these gates are outside the collection area. Applying deicing fluid at the apron fronting Gates B10 / B12 / B14 / B16 is not allowed.

AA will have seven deicing trucks with three trucks for anti-icing and four trucks for deicing. When AA aircraft are on Mike 1 (M1) position, deicing trucks should stage next to Concourse C while waiting for aircraft. However, no equipment may be staged in the area east of Concourse C detailed on the graphic below. AA will also have a designated marshal to direct aircraft into the apron fronting Gate C34 for deicing. Aircraft will use taxiway 6 for exiting Mike Deice as directed by the FAA ATCT.

Spirit Airlines (NK) will be deiced by Prime Flight on the Hotel Pad.

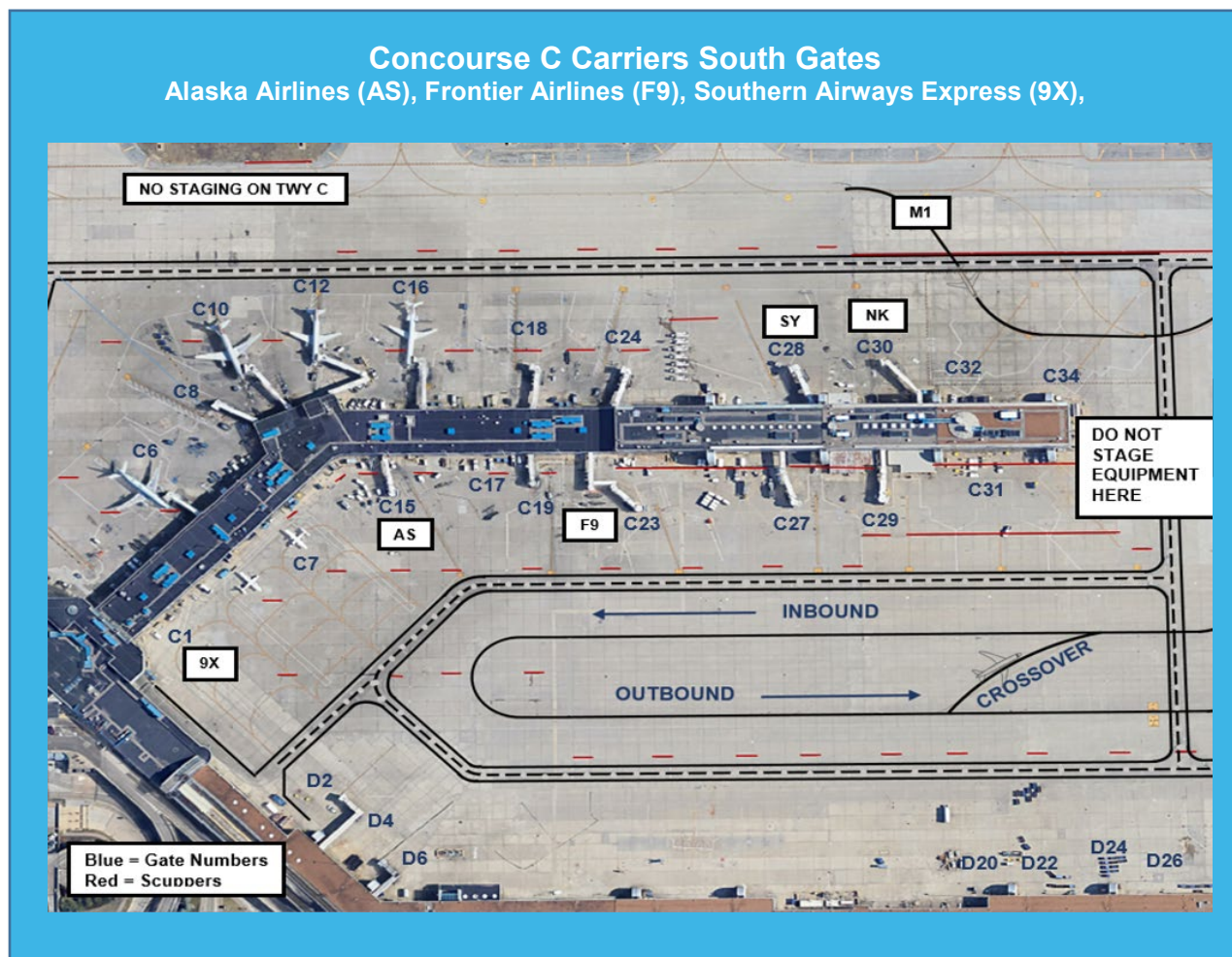
Sun Country (SY) will be deiced by AGI on the outbound taxiway at Gates D20 to D26.

AGI will stage two trucks for deicing at Gates D20-D26. A marshal must be used to direct aircraft onto the outbound D20 - D26 taxiway for deicing.

St. Louis Lambert International Airport
Winter Deicing Season 202/2025
October 16, 2024



Concourse C Carriers / South Gates



Alaska Airlines (AS) will be deiced by AGI on the outbound taxilane at Gates D20 to D26.

Frontier Airlines (F9) will be deiced by AGI on the outbound taxilane at Gates D20 to D26.

Southern Airways Express (9X) will be deiced by AGI on the outbound taxilane at Gates D20 to D26.

AGI will stage two trucks for deicing at Gates D20-D26. A marshal must be used to direct aircraft onto the outbound D20 - D26 taxilane for deicing.

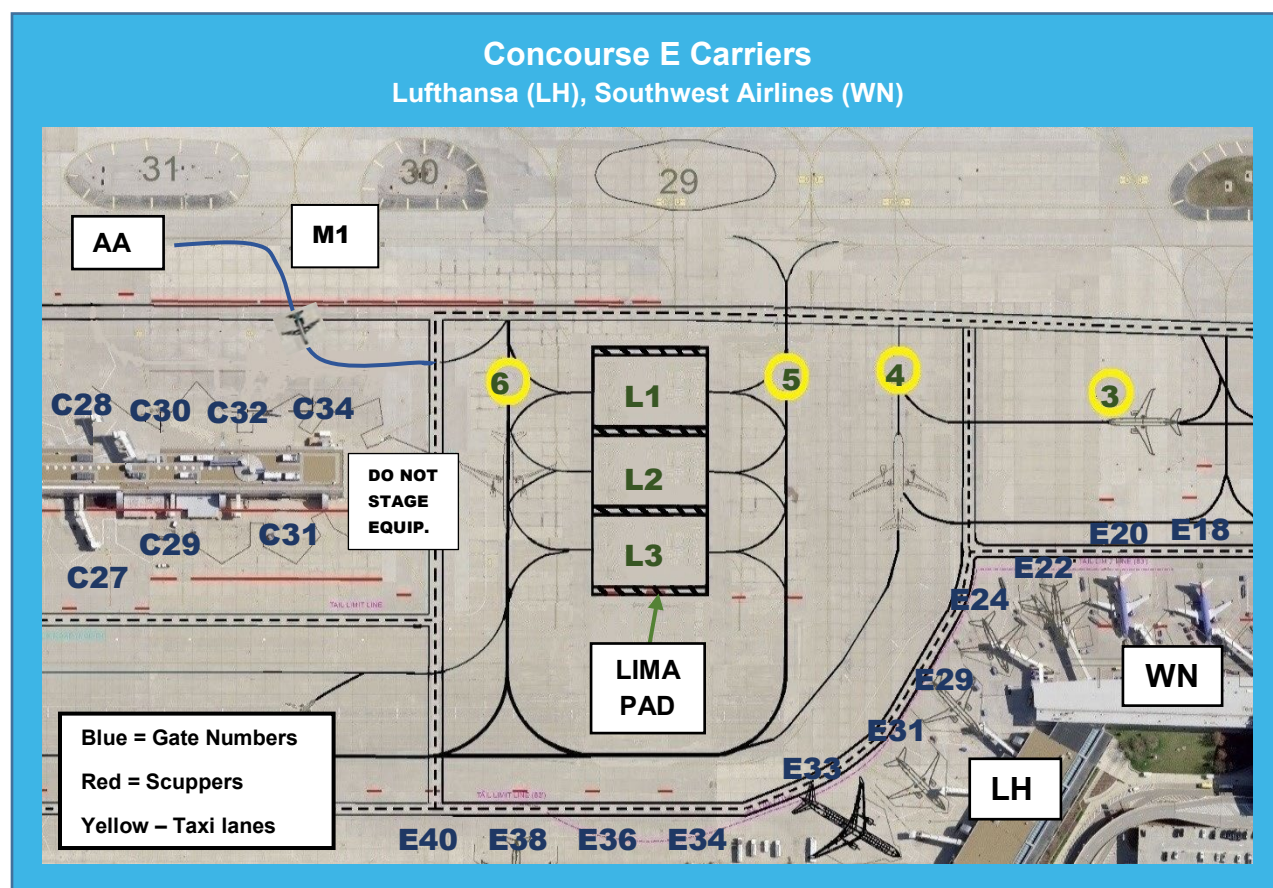
Inbound taxilanes will be kept clear for maneuvering aircrafts.

Once an aircraft has been deiced on the outbound D20-D26 taxilane, FAA ATCT must be contacted for clearance to exit. Any carrier may use the "crossover" taxilane to exit as directed by ATCT. **Directional use (inbound-outbound) at taxilanes 4, 5, and 6 will be at the direction of FAA ATCT.**

St. Louis Lambert International Airport
Winter Deicing Season 2024/2025
October 16, 2024



Concourse E Carriers



Lufthansa (LH) will be deiced by Prime Flight on Hotel Pad position H1.

Southwest Airlines (WN) aircraft will be deiced by WN personnel. WN has eighteen trucks available to deice aircraft. WN can deice aircraft at Gates E4 – E24 and E29 - E40, or on the Lima Pad. In addition, WN has the option to deice on the Hotel Pad if positions are open. WN must have a designated marshal to direct aircraft on the Hotel Pad.

Deicing vehicles for use on the Lima Pad will stage in the Lima Pad designated vehicle safety zones. Taxilanes 4, 5, and 6 will be kept clear for inbound and outbound aircraft. At the Lima Pad, all deicing should occur south and west of the scupper drains. WN aircraft will stage on Spot L1, Spot L2, and Spot L3. WN will have a designated marshal to direct aircraft onto the Lima Pad.

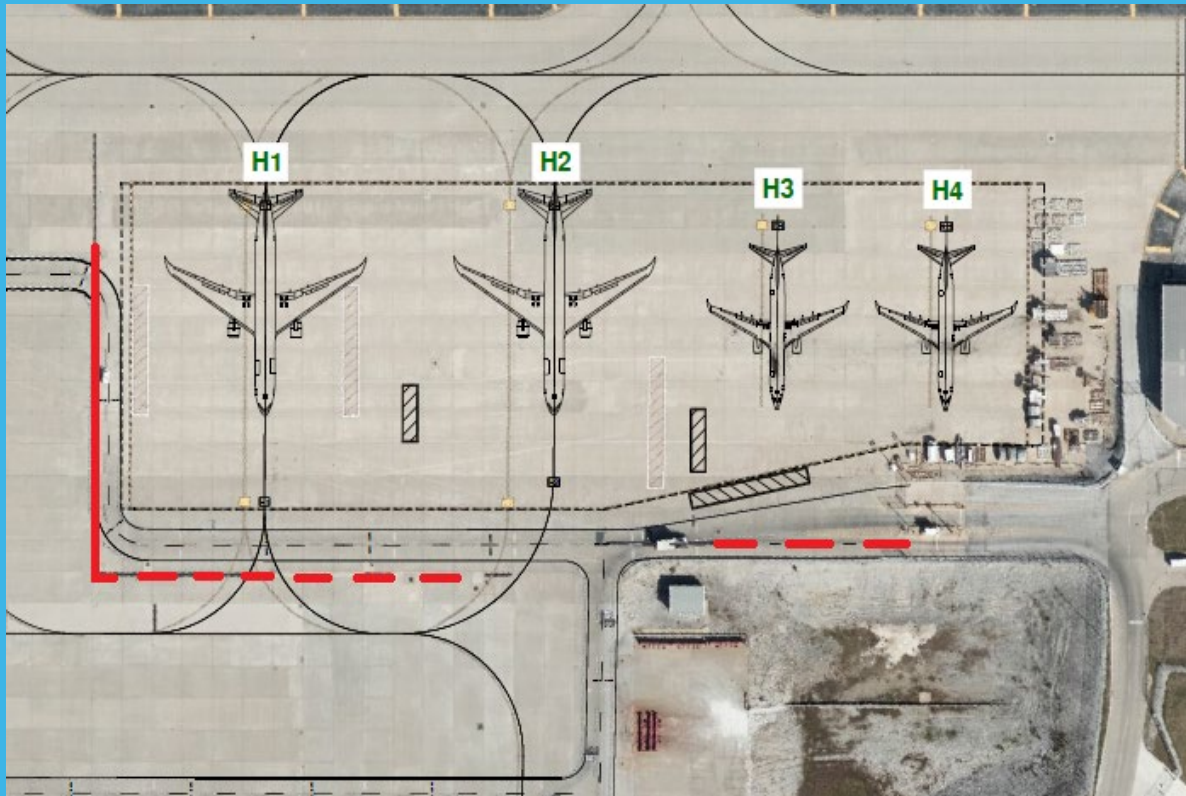
After deicing, WN aircraft will use taxilane 6 for exiting the Lima Pad as directed by FAA ATCT. **Directional use (inbound-outbound) at taxilanes 4, 5, and 6 will be at the direction of FAA ATCT.**



Hotel Pad

Carriers Deicing on Hotel Pad

Amazon Air [Sun Country cargo (SY)], DHL [Mesa Airlines (YV)], FedEx (FX),
Lufthansa (LH), Spirit Airlines (NK), other Cargo Operators



The Hotel Pad has four parking or deicing positions. Lufthansa (LH) has preferential use of H1 during a deicing event followed by Spirit Airlines (NK). Cargo aircraft have preferential use of H2. WN has the option to deice on the Hotel Pad if positions are open.

Airlines/deicing applicators must have a designated marshal to direct aircraft on the Hotel Pad for deicing. Prime Flight (aka Majestic Terminal Services) will stage three trucks for deicing at the east end of the Hotel Pad. AGI repositions deicing trucks to the Hotel Pad from Gates D20-D26.

When LH is utilizing position H1, the following precautions should be recognized. Deicing vehicles must stay to the far southeast corner of the designated deicing truck area so as to remain outside of the aircraft's Vehicle Safety Zone (VSZ). Airport vehicles must clear the adjacent service roads west and south of position H1. In the event that LH exits north from H1 and proceeds east on Taxiway C, aircraft at positions H2, H3, & H4 must be positioned far enough south to avoid the exiting aircraft's wingspan.

St. Louis Lambert International Airport
Winter Deicing Season 2024/2025
October 16, 2024



Cargo Carriers and General Aviation

UPS will deice on the apron north of the scuppers (designated by the red line) which is plumbed for the capture of deicing effluent.

All other cargo carriers must deice on the Hotel Pad. Carriers flying for Amazon Air [including Sun Country cargo (SY)] will be deiced by Prime Flight (aka Majestic Terminal Services). AGI will deice DHL [Mesa Airlines (YV)], FedEx, and unscheduled cargo carriers (e.g. Atlas, Kalitta, etc).

AGI will deice all General Aviation aircraft on the outbound taxilane at Gates D20 - D26. Aircraft from Centene Management, Jet Lynx, and Signature Aviation should contact AGI before taxiing to the inbound taxilane between Concourse C and Concourse D. A marshal must be used to direct aircraft onto the D20 - D26 taxilane for deicing. AGI will stage two trucks for deicing at Gates D20-D26.



If DHL, FedEx, Jet Lynx, Signature Aviation or any other cargo/charter carrier require their own staff to monitor deicing at the Hotel Pad, those employees must acquire the appropriate SIDA badging.