

2. Inventory

The initial step in any master planning process is to prepare an inventory of the physical, operational, and functional characteristics of the airport and its immediate environs. The inventory information presented in this section provides the basis for evaluating Airport facilities and subsequently determining future facility needs.

The Department of Aviation is currently the final phase of the Love Field Modernization Program (LFMP), which included a new Terminal complex and associated airfield improvements. The new Terminal facilities were completed by the end of 2014. Minor construction projects are under way to complete the LFMP and will be completed in 2015. For the purposes of this Master Plan Update, the Terminal, Concourse facilities, and apron improvements that will result from final construction are considered to be "existing facilities."

Photographic documentation of the existing facilities at the Airport is provided in **Appendix A**.

2.1 Airfield Facilities

The Airport currently has two parallel runways, Runways 13R-31L and 13L-31R, and one crosswind runway, Runway 18-36. Runway 13R-31L is 8,800 feet long and Runway 13L-31R is 7,752 feet long. The two parallel runways are 150 feet wide and capable of accommodating the commercial airline and general aviation (GA) aircraft types that serve the Airport. The crosswind runway primarily serves as a taxiway and has not been used as a runway since 2011.

Runway 13R-31L is on the south side of the airfield and primarily accommodates commercial airline traffic. Runway 13L-31R generally accommodates both commercial airline and GA traffic. Prior to the opening of the new Terminal, Runway 13L-31R was primarily used by GA traffic, as most of the Airport's GA facilities were located on the north side of the airfield. However, since the opening of the newly designed Terminal building, which is nearly equidistant between the parallel runways, traffic patterns have changed, and the amount of commercial airline traffic using Runway 13L-31R has increased.

The Airport Reference Code (ARC) generally classifies an airport according to its ability to accommodate certain categories of aircraft operations. An ARC does not create limits on the types of operations that can occur at an airport, but is used to broadly identify various planning and design parameters that help ensure safe operations at an airport. It is most often determined based upon the Aircraft Approach Category (AAC) and the Airplane Design Group (ADG) of aircraft using or expected to use the airport on a regular basis (at least 500 operations per year); however, the Federal Aviation Administration (FAA) also considers local

characteristics when determining an airport's ARC. The AAC is designated by a letter that represents aircraft approach speed, and the ADG is designated by a Roman numeral based on aircraft wingspan and tail height. The ARC is the combination of the AAC and the ADG. The current DAL ARC is C-III. Examples of ADG III aircraft include the Boeing 737 and regional jets. Even though existing taxiways do not meet ADG IV standards, ADG IV aircraft can be accommodated at the Airport with approval of a prior permission request and by following an approved taxiway route provided by Airport Traffic Control Tower (ATCT) personnel.

The Airport runway, taxiway, and taxiway system is described in the following subsections.

2.1.1 RUNWAYS AND RUNWAY EXITS

The two parallel runways at the Airport are separated by approximately 3,000 feet. **Table 2-1** summarizes the physical characteristics of the runways and **Exhibit 2-1** shows the airfield layout. The runways are further described below.

Table 2-1: Runway Characteristics

DESCRIPTION	RUNWAYS		
	13R-31L	13L-31R	18-36
Length (feet)	8,800	7,752	6,147
Width (feet)	150	150	150
Runway End Elevation (feet above mean sea level [MSL])	13R: 476.1 31L: 476.2	13L: 476.6 31R: 486.7	18: 480.3 36: 481.5
Touchdown Zone Elevation (feet above MSL)	13R: 478.3 31L: 476.3	13L: 484.7 31R: 486.7	18: 481.0 36: 481.5
Displaced Threshold (feet)	490 (13R)	400 (13L)	-
Shoulder Width (feet)	26.5	25.0	25.0
Runway Markings	Precision	Precision	Non-precision
Load Bearing Capacity (1,000 pound units)			
Single-Wheel	100	100	50
Dual-Wheel	200	200	74
Dual-Tandem Wheel	350	350	138
Runway Composition	Concrete	Concrete	Asphalt
Gradient	0.0%	0.1%	0.0%
Current Runway Status	Active	Active	Closed

SOURCES: AirNav, LLC, www.airnav.com (accessed March 2013); AVN Data, <http://avnwww.jcabi.gov/datasheet/> (accessed March 2013).

PREPARED BY: Ricondo & Associates, Inc., March 2013.

MAY 2015

DALLAS LOVE FIELD



EXHIBIT 2-1

Airport Layout

- Airport Buildings To Be Demolished
- Airport Property Line



SOURCE: Google Earth Pro, 2015; Dallas Love Field Airport Layout Plan, 2002; Research & Associates, Inc., May 2015.



Planning Technical Report 2015-001 Dallas Love Field 2015 Master Plan Update. Airport Layout Plan, Exhibit 2-1. Airport Layout Plan, May 14, 2015. © 2015.

Airport Master Plan Update Inventory

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2.1.1.1 Runway 13R-31L

Runway 13R-31L is 8,800 feet long and 150 feet wide. Blast pads extend from each end of the runway to protect the ground from erosion during aircraft departures. This runway consists of concrete and has a load bearing capacity of 100,000 pounds for single-wheel landing gear, 200,000 pounds for dual-wheel landing gear, and 350,000 pounds for dual-tandem wheel landing gear. Runway 13R-31L is equipped with high intensity runway edge lights and runway centerline lights. **Table 2-2** indicates the instrumentation and lighting available for this runway and for Runway 13L-31R. As mentioned previously, this runway primarily accommodates commercial airline traffic, as GA facilities are located on the opposite side of the airfield.

Table 2-2: Runway Instrumentation and Lighting

INSTRUMENTATION	RUNWAY 13R	RUNWAY 31L	RUNWAY 13L	RUNWAY 31R
APPROACH AIDS				
Localizer	x	x	x	x
Glide Slope Indicator	x	x	x	x
Distance Measuring Equipment	x	x	x	x
Outer Marker Beacon	x	x	x	x
Runway Visual Range Transmissometer	x	x	x	x
APPROACH LIGHTING SYSTEM				
Precision Approach Path Indicator	x	-	-	x
Medium Intensity Approach Light System with Runway Alignment Indicator Lights	-	x	x	x
RUNWAY LIGHTING				
High Intensity Runway Edge Lights	x	x	x	x
Touchdown Zone Lights	-	x	x	-
Runway Centerline Lights	x	x	x	x

SOURCES: AirNav, LLC, www.airnav.com (accessed March 2013); AVN Data, <http://avnwww.jccbi.gov/datasheet> (accessed March 2013).

PREPARED BY: Ricondo & Associates, Inc., March 2013.

Runway 13R has a displaced landing threshold of 490 feet and complies with runway safety area (RSA) standards. **Table 2-3** presents the published declared distances.

Table 2-3: Declared Distances (in feet)

RUNWAY	TAKEOFF RUN AVAILABLE	TAKEOFF DISTANCE AVAILABLE	ACCELERATE-STOP DISTANCE AVAILABLE	LANDING DISTANCE AVAILABLE
13R	8,800	8,800	8,800	8,310
31L	8,800	8,800	8,000	8,000
13L	7,752	7,752	7,752	7,352
31R	7,752	7,752	6,952	6,952

SOURCE: AirNav, LLC, www.airnav.com (accessed April 2014).
 PREPARED BY: Ricondo & Associates, Inc., April 2014.

Aircraft arriving on Runway 13R can exit the runway at five locations, as shown on Exhibit 2-1. Exits on Taxiways C3, C1, and C are right-angled and the exit on Taxiway J is an angled exit located near the Terminal gates. Taxiway D is also an exit for aircraft arriving on Runway 13R. Runway 13R is equipped with an instrument landing system (ILS) that allows for Category I precision approaches. The Runway 13R ILS includes a localizer, a glide slope, distance measuring equipment (DME), an outer marker beacon, and a runway visual range (RVR) transmissometer. Runway 13R is equipped with a precision approach path indicator (PAPI), as well as high intensity runway edge lights and runway centerline lights.

Aircraft arriving on Runway 31L can exit the runway at six locations. Exits on Taxiways C1 and C6 and at the end of the runway are right-angled; exits on Taxiways C2 and C4 are 45-degree exits; and the exit on Taxiway D is an angled exit. Runway 31L is equipped with an ILS that allows for Category I precision approaches and the same approach aids as those for Runway 13R. This runway is equipped with a medium intensity approach lighting system with runway alignment indicator lights (MALSR). Runway 31L lighting consists of high intensity runway edge lighting, touchdown zone lights, and runway centerline lights. **Table 2-4** presents the published instrument approaches and their specifications for the parallel runways.

Table 2-4: Runway Instrument Approach Specifications

RUNWAY	PUBLISHED INSTRUMENT APPROACH	APPROACH MINIMUMS ^{1/}	DECISION ALTITUDE (FEET ABOVE MSL)
31L	ILS	200 feet – 1,800 feet	676
31R	ILS	200 feet – 2,400 feet	687
13L	ILS	200 feet – 1,800 feet	680
13R	ILS	200 feet – 0.75 mile	678
31L	RNAV GPS (LPV)	293 feet – 2,400 feet	769
31R	RNAV GPS (LPV)	200 feet – 2,400 feet	687
13L	RNAV GPS (LNAV)	460 feet – 4,500 feet ^{2/}	940
13R	RNAV GPS (LNAV)	442 feet – 1.25 mile (AAC C) 442 feet – 1.5 mile (AAC D)	920
13L	RNAV GPS (LPV)	200 feet – 1,800 feet	680
13R	RNAV GPS (LNAV/ VNAV)	470 feet – 1.5 mile	946

NOTES:

GPS = Global Positioning System

ILS = Instrument Landing System

LNAV = Lateral Navigation

LPV = Localizer Performance with Vertical Guidance

MSL = Mean Sea Level

RNAV = Area Navigation

VNAV = Vertical Navigation

1/ Minimums are the lowest available on each runway: the first component is the Decision Height (feet) and the second value is the Runway Visual Range).

2/ For Aircraft Approach Categories C (aircraft with an approach speed greater than or equal to 121 knots, but less than 141 knots) and D (aircraft with an approach speed greater than or equal to 141 knots, but less than 166 knots).

SOURCE: AirNav, LLC, www.airnav.com (accessed April 2014).

PREPARED BY: Ricondo & Associates, Inc., April 2014.

2.1.1.2 Runway 13L-31R

Runway 13L-31R is 7,752 feet long and 150 feet wide. It has blast pads at each end and its surface consists of grooved concrete. The load bearing capacity of the runway is 100,000 pounds for single-wheel landing gear, 200,000 pounds for dual-wheel landing gear, and 350,000 pounds for dual-tandem wheel landing gear.

Runway 13L-31R is the primary runway for general aviation traffic because of its proximity to GA facilities and fixed base operator (FBO) facilities on the north side of the airfield. As discussed previously, this runway will remain the primary runway for GA activity while continuing to serve commercial airline aircraft operations because of its proximity to the new gates developed as part of the LFMP.

Runways 13L and 31R are each equipped with an ILS that allows for Category I precision approaches. Similar to Runway 31L, Runway 13L is equipped with a MALSR, and its runway lighting consists of high intensity runway edge lighting, touchdown zone lights, and runway centerline lights. Runway 31R is equipped with a PAPI and a MALSR, and the runway lighting consists of high intensity runway edge lighting and runway centerline lights.

To comply with RSA standards, a displaced landing threshold of 400 feet was recently implemented on Runway 13L. Table 2-4 presents the published precision approaches and their specifications with the displaced threshold in place. Aircraft arriving on Runway 13L can exit the runway at five locations to access the Terminal gates or GA facilities located between the two parallel runways. Exits on Taxiways D, B6, B4, and B2 are 45-degree exits and the remaining exit at the end of the runway is a right-angled exit. To access the GA facilities on the northeast side of the airfield, GA aircraft can exit the runway at four locations (Taxiways A3, A2, A1, and A), all of which are right-angled exits.

Runway 31R has five exits to access the gates or GA facilities located southwest of the runway: Taxiways B1, B3, and B5 (45-degree exits), Taxiway D (greater than 90-degree exit), and Taxiway B (right-angled exit). GA aircraft accessing the northeast side of the airfield can exit the runway at five locations: Taxiways A1, A2, and A3 and the exit at the end of the runway are right-angled, and Taxiway D is a 45-degree exit.

2.1.1.3 Runway 18-36

As previously mentioned, Runway 18-36 has not been used as an active runway since 2011. Runway 18-36 is 6,147 feet long and 150 feet wide. It is constructed of asphalt. Currently, Runway 18-36 is used as a taxiway as it does not meet FAA requirements for RSA or runway object free area (ROFA) lengths, or FAA lighting requirements. The FAA standards for the RSA and ROFA of an ARC B-II runway with visual approaches are 300 feet beyond the runway end. Currently, the RSA and the ROFA for Runway 18-36 are only 200 feet, which is a deficit of 100 feet from the FAA standards. In addition, as part of the Taxiway L extension project, some of the visual approach slope indicator (VASI) lights for the Runway 36 approach were removed. These lights have not been replaced.

2.1.2 TAXIWAYS AND TAXILANES

As illustrated on Exhibit 2-1, Runways 13R-31L and 13L-31R each have at least one associated parallel full-length taxiway. Taxiway C is associated with Runway 13R-31L and is located northeast of the runway. The separation between the runway centerline and the taxiway centerline is 416 feet. Taxiways A and B are associated with Runway 13L-31R and both extend the full length of the runway. Taxiway A is located between the runway and the general aviation facilities. Taxiway B is located between Runway 13L-31R and the Terminal building. The separation between the centerline of Taxiway A and the centerline of Runway 13L-31R is 400 feet. For Taxiway B, this separation increases to 618 feet on the Runway 13L end and to 682 feet on the Runway 31R end. Taxiways A, B, and C are 75 feet wide.

The fourth longest taxiway at the Airport is Taxiway D. It is a 4,500-foot-long and 75-foot-wide crossfield taxiway that is partially parallel to Runway 18-36. Taxiway D is located east of Runway 18-36 and extends from the Runway 36 end to Taxiway A.

All other taxiways are 75 feet wide, with the exception of Taxiways E, G, and W, which are 50 feet wide. Taxiway F is closed. Taxiways P and Q, both 75 feet wide, are currently used as taxilanes and are in the process of being converted to taxiways. All taxiways are equipped with taxiway centerline lights.

In accordance with FAA Advisory Circular (AC) 150/5300-13A (Change 1), *Airport Design*, the standard width of an ADG III taxiway safety area is 118 feet. However, a taxiway safety area width of 165 feet is maintained at the Airport for the 75-foot-wide taxiways. The safety areas for Taxiways E, G, and W are 79 feet wide, which is the standard width for an ADG II taxiway safety area.

2.1.3 RAMP AREAS

Exhibit 2-2 depicts the passenger Terminal ramp, the general aviation ramp, and the aircraft maintenance ramp areas. The passenger Terminal ramp includes the recent improvements associated with the LFMP and the opening of the new Terminal building. The Terminal ramp surrounds the Terminal building and provides commercial aircraft access to the taxiways. The ramp is approximately 36 acres and is designed to provide for the safe maneuvering of aircraft to and around the Terminal's 20 gates.

One commercial aircraft maintenance center operated by Southwest Airlines is currently located at the Airport. The maintenance center is located on the northwestern side of the airfield, near the Runway 13R threshold and consists of a large maintenance hangar and an extensive ramp area available for aircraft parking, staging, and maintenance. Pilots access the maintenance center via Taxiway C6, and then cross Runway 13R to Taxiway H. This ramp does not have the necessary sound attenuation or blast deflection equipment to accommodate high-powered and sustained engine runups. Engine runups are performed in designated areas on the airfield. Section 2.2.7 provides information regarding the engine runup areas.

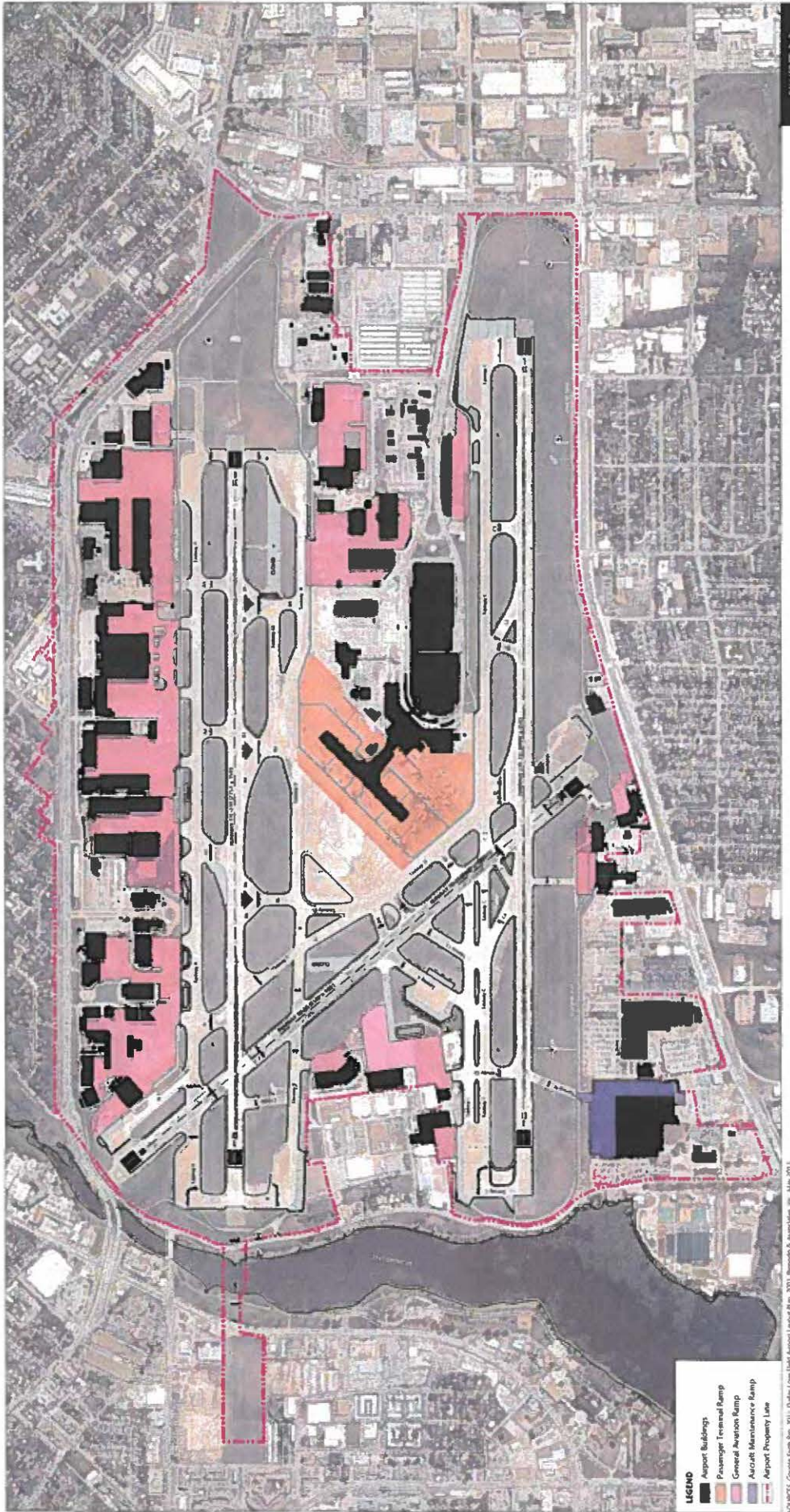
The City does not own or operate a public use general aviation ramp at the Airport. All general aviation aircraft use ramp space exclusive to tenants, such as FBOs and corporate aviation tenants. These tenants lease ramp space appropriate to their respective uses and needs. The overall condition of the pavement used by general aviation tenants is good.

2.1.4 FENCING AND SECURITY GATES

A Transportation Security Administration (TSA) approved Comprehensive Airport Security Plan has been adopted for the Airport, and is regularly reviewed and updated by the TSA for compliance with current regulations. At the time this Master Plan Update was being documented, an updated Comprehensive Airport Security Plan for the Airport had just been approved by the TSA.

The Airport is completely fenced, with controlled access to the Air Operations Area (AOA). Fencing consists mostly of chain link fencing 6 feet to 8 feet high and wrought iron fencing. A clear area of at least 5 feet on each side of the fence line ensures that objects cannot be used to aid in scaling the fence line or obscure the visibility of climbing devices. Access points are available through gates around the Airport and are controlled by a barrier system. Some gates are electronic; others are manually operated and some of the manually operated gates are staffed 24 hours per day. Characteristics of the gates depend on their location and on the type of personnel that use these gates. Closed circuit television camera coverage of the airfield is limited.

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- LEGEND**
- Airport Buildings
 - Passenger Terminal Ramp
 - General Aviation Ramp
 - Aircraft Maintenance Ramp
 - Airport Property Line



SOURCE: Google Earth Pro, 2011; Dallas Love Field Airport Layout Plan, 2011; Records & Archives, Inc., May 2015
 PREPARED BY: Records & Archives, Inc., May 2015

EXHIBIT 2-2

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 Ramp Areas

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2.2 Airspace Procedures

This section describes the airspace structure and the procedures used by the controllers at the various FAA Air Traffic Control (ATC) facilities serving the Airport. The structure of the airspace surrounding the Airport and the aircraft arrival and departure procedures in use at the Airport are intended to control the flow of aircraft into and out of the Airport.

2.2.1 AIR TRAFFIC CONTROL FACILITIES

In the United States, ATC services are provided by the FAA to ensure a safe, orderly, and efficient flow of traffic in the National Airspace System (NAS). The NAS consists of various components of airspace, all of which are monitored, controlled, and coordinated by FAA ATC personnel. Three-dimensional airspace areas are defined based on the types of activity occurring in each and its relationship to the rest of the NAS. The ATC facilities used to manage air traffic vary depending on the type of airspace. Coordination between facilities occurs when aircraft transition from one type of airspace to another.

The following facilities provide ATC services to pilots of aircraft arriving at or departing from the Dallas Metroplex:

- Fort Worth Air Route Traffic Control Center (ARTCC)
- Dallas/Fort Worth Terminal Radar Approach Control (DFW TRACON)
- Dallas/Fort Worth East and West ATCTs
- Dallas Love Field ATCT

The Fort Worth (ZFW) ARTCC is responsible for managing instrument flight rule (IFR) flights *en route* to or from the Metroplex airports, as well as aircraft that transit the Metroplex above the airspace controlled by the DFW TRACON. The Fort Worth ARTCC controllers' role is to maintain safe separation between aircraft before arrivals enter and after departures leave the DFW TRACON airspace.

FAA controllers at the DFW TRACON, located at Dallas/Fort Worth International Airport, are responsible for establishing efficient and safe sequencing of aircraft arrivals and departures to and from Metroplex airports. Additionally, DFW TRACON controllers provide separation services to pilots of aircraft that transit the Metroplex within TRACON airspace. The airspace controlled by the DFW TRACON extends approximately 40 to 60 miles around DFW. The DFW TRACON is based on four navigational aids (very high frequency omnidirectional range stations [VOR]) that form the four corner posts of the DFW TRACON airspace. Therefore, the flow of traffic in and out of Dallas Love Field is considered a "four-post" design. There are four corridors for arrival routes and four corridors for departure routes. The arrival routes are from the northeast, northwest, southeast, and southwest, whereas the departure routes are centered on north, south, east, and west. In other words, arriving aircraft pass over the corners of the TRACON airspace and departing aircraft exit the TRACON airspace on the sides between the corners.

The Dallas Love Field ATCT operates 24 hours per day every day and ATCT controllers are responsible for controlling arrivals transferred from the DFW TRACON on final approach to the airfield at DAL, clearing departures off the runways, and transferring departures back to the TRACON. ATCT controllers are also responsible for all aircraft ground movements on the runways and taxiways. Dallas Love Field is considered a secondary airport for ATC purposes, as DFW is the primary airport within the airspace above the Metroplex.

2.2.2 DFW AND DAL AIRSPACE INTERACTIONS

The DFW TRACON airspace serves four airports: Dallas/Fort Worth International Airport, Dallas Love Field, Addison Airport (ADS), and Dallas Executive Airport (RBD). Addison Airport and Dallas Executive Airport accommodate GA aircraft only. The airspace surrounding these four airports is structured and organized. Verbal communications between the DFW TRACON and the ATCTs are kept to a minimum because coordination and procedures have been prearranged. Procedures and automatic releases of aircraft are described in letters of agreement followed by controllers in each ATC facility. Occasionally, Dallas Love Field ATCT personnel must call for release if the procedure requested is not included in the letters of agreement. Two reasons for such a call are the weather and aircraft performance characteristics (for example, in case of serious weather conditions affecting usual routes or in case of a slow aircraft that cannot follow the typical procedures). If flights must be redirected because of bad weather in a certain area or if a departing aircraft has an unusual performance characteristic, such as slow speed, DAL ATC will call for release and coordinate with the DFW TRACON.

Most of the runways at DFW have a north-south orientation, whereas the active runways at Dallas Love Field are in a northwest-southeast orientation. Dallas Love Field is located 12 miles east of DFW and the runway orientations of the two airports conflict; therefore, the arrival and departure procedures in use at Dallas Love Field have been adjusted to the DFW north-south flow to eliminate any conflict with operations at DFW.

2.2.3 AIRFIELD OPERATING CONFIGURATIONS

Runways 13L-31R and 13R-31L are both available for arrivals and departures. Air traffic controllers established the use of each runway based on runway length, the relative location of the passenger Terminal and general aviation facilities, and the voluntary Airport noise control program. The two flow configurations (north and south) are generally dictated by weather conditions.

The runways at Dallas Love Field are not assigned based on aircraft destination. However, if two departures occur at the same time and one is heading to the north and the other to the south, the aircraft heading north will be assigned to Runway 13L and the aircraft heading south will be assigned to Runway 13R. Additionally, general aviation aircraft usually operate on Runway 13L because most of the GA facilities are located on the north side of the airfield.

2.2.3.1 North Flow Runway Assignments

Arriving and departing aircraft are assigned to Runway 31R or 31L when the airfield is operating in north flow. Airline and other aircraft that require a longer runway are assigned to Runway 31L. General aviation aircraft parked on the north side of the airfield are usually assigned to Runway 31R.

2.2.3.2 South Flow Runway Assignments

Arriving and departing aircraft are assigned to Runway 13L or 13R when the airfield is operating in south flow.

2.2.3.3 Noise Control Procedure Runway Assignments

A voluntary noise control procedure is in effect at the Airport to minimize noise exposure from aircraft overflights on the surrounding residential neighborhoods. According to the voluntary noise control program currently in effect at the Airport, between 9:00 p.m. and 6:00 a.m., Runway 13R-31L is the preferential runway for turbojet aircraft operations and aircraft weighing more than 12,500 pounds. For IFR flights, the TRINITY SIX, KRUMM FOUR, LOVE TWO, VENUS SEVEN, and BACHMAN SIX departure procedures are used by pilots of aircraft departing from the Airport between 9:00 p.m. and 6:00 a.m. The noise control program also includes a series of instructions that pilots of visual flight rule (VFR) flights must follow between 9:00 p.m. and 6:00 a.m. when departing from the Airport on Runway 13R.

2.2.4 INSTRUMENT FLIGHT RULE ARRIVAL PROCEDURES

The DFW TRACON provides approach control services for the region. Dallas Love Field shares approach control airspace and services with other airports in the Metroplex.

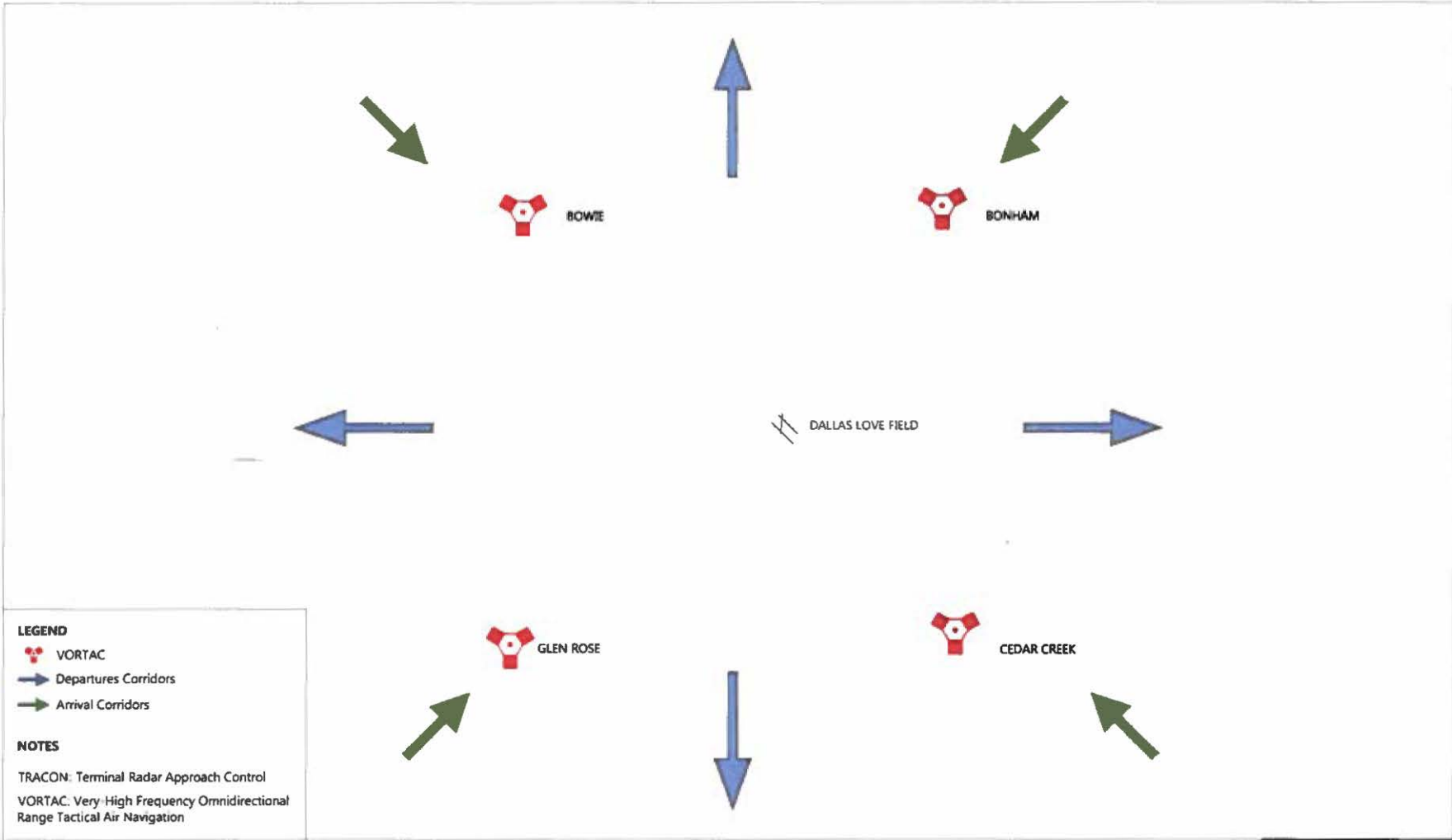
Arriving aircraft enter at the corners of the terminal (TRACON) airspace. The airspace fixes used to define the corners are four VORs combined with a tactical air navigation system (TACAN), called VORTACs. VORTACs are navigational aids used to define airspace routes and provide pilots with information regarding their positions and headings in flight. **Exhibit 2-3** depicts the following four VORTACs, which define the DFW TRACON airspace:

- Bowie (UKW)
- Glen Rose (JEN)
- Bonham (BYP)
- Cedar Creek (CQY)

The DFW TRACON controls arriving aircraft by issuing instructions known as radar vectors. A radar vector is a heading issued to a pilot to provide navigational guidance for the aircraft flight. Additionally, the DFW TRACON issues altitude clearances. Radar vectors and altitude clearances are necessary to position arriving aircraft in the proper traffic flow prescribed for landing at the Airport.

Aircraft are transitioned from the *en route* phase of flight to the DFW TRACON by the ZFW ARTCC just prior to reaching the VORTAC navigational aids mentioned above. Aircraft arrivals from the northwestern United States arrive over the Bowie VORTAC; arrivals from the northeastern United States arrive over the Bonham VORTAC; arrivals from the southwestern United States arrive over the Glen Rose VORTAC; and arrivals from the southeastern United States arrive over the Cedar Creek VORTAC. When weather and traffic conditions permit, ATC usually attempts to provide the most expeditious routing possible for arriving aircraft.

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SOURCE: Airnav.com, <http://www.airnav.com> (accessed May 2013); Ricondo & Associates, Inc., May 2013.
 PREPARED BY: Ricondo & Associates, Inc., May 2013.

EXHIBIT 2-3



DFW TRACON Airspace

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2.2.5 INSTRUMENT FLIGHT RULE DEPARTURE PROCEDURES

Departure procedures are defined by navigational aids, airspace fixes, and radar vectors. Four departure gates, associated with the four departure corridors mentioned previously, serve the DFW TRACON and departing aircraft are guided to these gates. To reach these gates, pilots of departing aircraft are guided to the vector of the specific departure procedure. The departure procedure assigned depends on the destination, the type of aircraft (jet or propeller), and time of departure (the preferential runway procedure is to be used between 9:00 p.m. and 6:00 a.m.). The DFW TRACON vectors departing aircraft toward the departure gates and provides separation from traffic arriving to and departing from DFW and other airports within the Metroplex. The objective is for all departing aircraft to be on the route of a procedure before they leave the DFW TRACON airspace. Prior to aircraft passing the gates, the DFW TRACON transfers control of the departing aircraft to the ZFW ARTCC as the aircraft moves from the terminal environment to the *en route* airspace.

The following four primary standard instrument departures (SIDs) are available for aircraft departing from the Airport and each is associated with a departure gate:

- North Quadrant: TEXOMA SID
- East Quadrant: DALLAS SID
- South Quadrant: JOE POOL SID
- West Quadrant: WORTH SID

Additional SIDs are available, including those dedicated to the voluntary noise control program in effect at the Airport between 9:00 p.m. and 6:00 a.m.

2.2.6 AIRFIELD MOVEMENT PROCEDURES

The ATCT is also responsible for the safe, efficient, and expeditious flow of traffic in the movement area of the airfield. The movement area consists of the runways, taxiways, and other areas of an airport used for aircraft taxiing or hover taxiing, takeoff, and landing. Loading ramps, taxilanes, and aircraft parking areas are not considered movement areas and movements in such areas are the responsibility of the aircraft and vehicle operators. Approval for entry onto the movement areas must be obtained from ATCT personnel.

Ground movement procedures have not been adopted for Dallas Love Field.

2.2.7 ENGINE RUN-UPS

The primary location for engine run-up tests is the midfield area north of Taxiway K and west of Runway 18-36. This area is considered a nonmovement area and coordination with the ATCT is required to taxi to and from this area. Secondary locations for engine run-up tests are runway ends 13L and 31R. Prior approval from Airport Operations and coordination with ATCT controllers is required to use these secondary

run-up areas and to taxi to and from these areas. However, engine run-up activities are not controlled by ATCT controllers. Engine maintenance run-up activities are prohibited between midnight and 6:00 a.m. in accordance with City ordinance⁴ and between 9:00 p.m. and 6:00 a.m. in accordance with the adopted noise control program for the Airport. In addition, with the exception of high priority circumstances, a voluntary moratorium on engine run-ups is in effect between 10:00 p.m. and midnight.

2.3 Passenger Terminal Facilities

This section provides a brief overview of the Main Terminal facilities. The Terminal facilities at Dallas Love Field were constructed or renovated as part of the LFMP and opened in three main phases between 2012 and 2014. Existing conditions as defined in this Master Plan Update incorporate the completion of development plans as of April 2014. These plans were completed in October 2014.

The Terminal facility inventory was prepared based on information available at the time this document was prepared, such as as-built drawings, current design documents, discussions with LFMP staff, and onsite investigations. This section is organized into seven main subsections. The first two subsections provide background on the political decisions and construction history of the passenger Terminal and a general overview of the Terminal facility. The following four subsections discuss spaces in the passenger Terminal by level, beginning with the Basement Level (Level 0), and followed by the Main Level (Level 1), the Passenger Level (Level 2), and the Office Tower (Levels 3 through 8). The final subsection discusses the concession space in the Terminal. The exhibits that accompany the respective subsections are presented by level and are typically separated into Terminal and Concourse, unless all spaces on a level are able to be presented legibly on one exhibit.

2.3.1 POLITICAL REQUIREMENTS AND CONSTRAINTS

To understand how the Main Terminal ultimately took shape, a review of the political environment and constraints at the Airport is necessary. In 1979, the Wright Amendment (**Appendix B**) restricted nonstop commercial air service by aircraft departing from Dallas Love Field with more than 56 seats from flying to destinations beyond the states of Texas, Arkansas, Louisiana, New Mexico, and Oklahoma. In 1997, the Shelby Amendment allowed for nonstop service from DAL to Alabama, Kansas, and Mississippi. Then, in 2001, an Airport Impact Analysis/Master Plan was prepared to clarify Airport constraints based on these amendments. It was determined that the capacity of the Airport was limited to a total of 334,000 annual aircraft operations and a maximum of 32 aircraft passenger boarding gates. In 2005, Missouri Senator Kit Bond introduced an amendment that passed to exempt Missouri from the Wright Amendment restrictions. In April 2006, the Terminal Area Redevelopment Program Study (TARPS) and Revised Capital Improvement Program (CIP) for the Airport were completed and presented to the City of Dallas. The recommended facility improvements were based on revised forecasts of enplaned passengers for 2009, 2014, and 2024. However, at the same

⁴ *The Dallas City Code*, Volume I, Chapter 5, Section 5-25, "Maintenance Run-Ups," May 2014.

time, ongoing discussions for repealing the Wright Amendment were under way. This led to a reevaluation of the TARPS and Revised CIP and development of the Five Party Agreement (FPA). (**Appendix C** contains a copy of the Five Party Agreement and the LFMP Term Sheet.)

The parties that were signatory to the FPA included the City of Dallas, the City of Fort Worth, the Dallas/Fort Worth International Airport Board, Southwest Airlines, and American Airlines. The main provisions of the FPA consisted of eliminating the restrictions on nonstop service from DAL in 2014, as stipulated in the Wright and Shelby Amendments, as well as reducing the number of gates at DAL that accommodated 10 aircraft operations per day from 32 to 20 as soon as practicable. This set in motion the LFMP to reduce the number of available gates to 20 and to repeal the Wright Amendment.

During the LFMP Terminal Schematic Design Process in 2007-2008, several alternative solutions to redevelopment of the Terminal complex were identified and evaluated based on basic principles that were agreed upon by the key project stakeholders. The results were the basis for the LFMP Terminal, including:

- Demolition and complete replacement of the ticketing wing
- Renovation of the Main Lobby
- Renovation and expansion of the main security screening checkpoint (SSCP)
- Demolition and complete replacement of three concourses (32 gates) with a new double-sided Concourse and connector stem with 20 gates and new concessions
- Demolition and complete replacement of the baggage claim area
- New inline screening and baggage handling system
- Renovation of the Office Tower

2.3.2 TERMINAL FACILITY OVERVIEW

The Main Terminal building consists of two distinct sections, the Terminal and the Concourse. The Terminal generally consists of all of the areas before and including the SSCP. The Concourse typically includes the area past the SSCP. The Terminal building as a whole consists of nine levels. Level 0, also known as the Basement Level, primarily contains mechanical space and support for TSA baggage. Level 1, typically referred to as the Main Level, includes all of the pre- and post-flight passenger processing components, such as ticketing, passenger security screening, inbound and outbound baggage handling, concessions, the Main Lobby, and airline support space. Level 2 is typically referred to as the Passenger Level and primarily includes the seating and boarding areas for passengers at aircraft gates, also known as holdrooms. Other components on Level 2 include concessions, office, and various Airport and airline support space. The levels above Level 2 are reserved for Airport and airline functions. Level 3 is the lower level of the area referred to as the Office Tower. The spaces in the Office Tower include concessions support, Airport support, and mechanical/electrical/plumbing (MEP) space. Level 4, also part of the Office Tower, contains room for the Dallas Police Department, Airport office space, and MEP space. Levels 5 through 8 of the Office Tower mostly provide for storage and MEP space. An FAA Weather office is located on Level 5.

The passenger Terminal facilities combined consist of more than 758,460 square feet of enclosed and covered unenclosed space on a 26-acre site that includes aircraft parking at the gates. Major Terminal area categories are listed in **Table 2-5**. The Terminal facility and aircraft parking positions are illustrated on **Exhibit 2-4**. The passenger Terminal facility discussed in this section is currently designated as Terminal 2. Terminal 1 is a separate facility located southeast of Terminal 2. Once Terminal 2 is fully constructed, the airlines operating in Terminal 1 will either relocate to Terminal 2 or cease operations at Dallas Love Field and Terminal 1 will be decommissioned. The Terminal 2 designation for the Main Passenger Terminal facility will also be discontinued at that time.

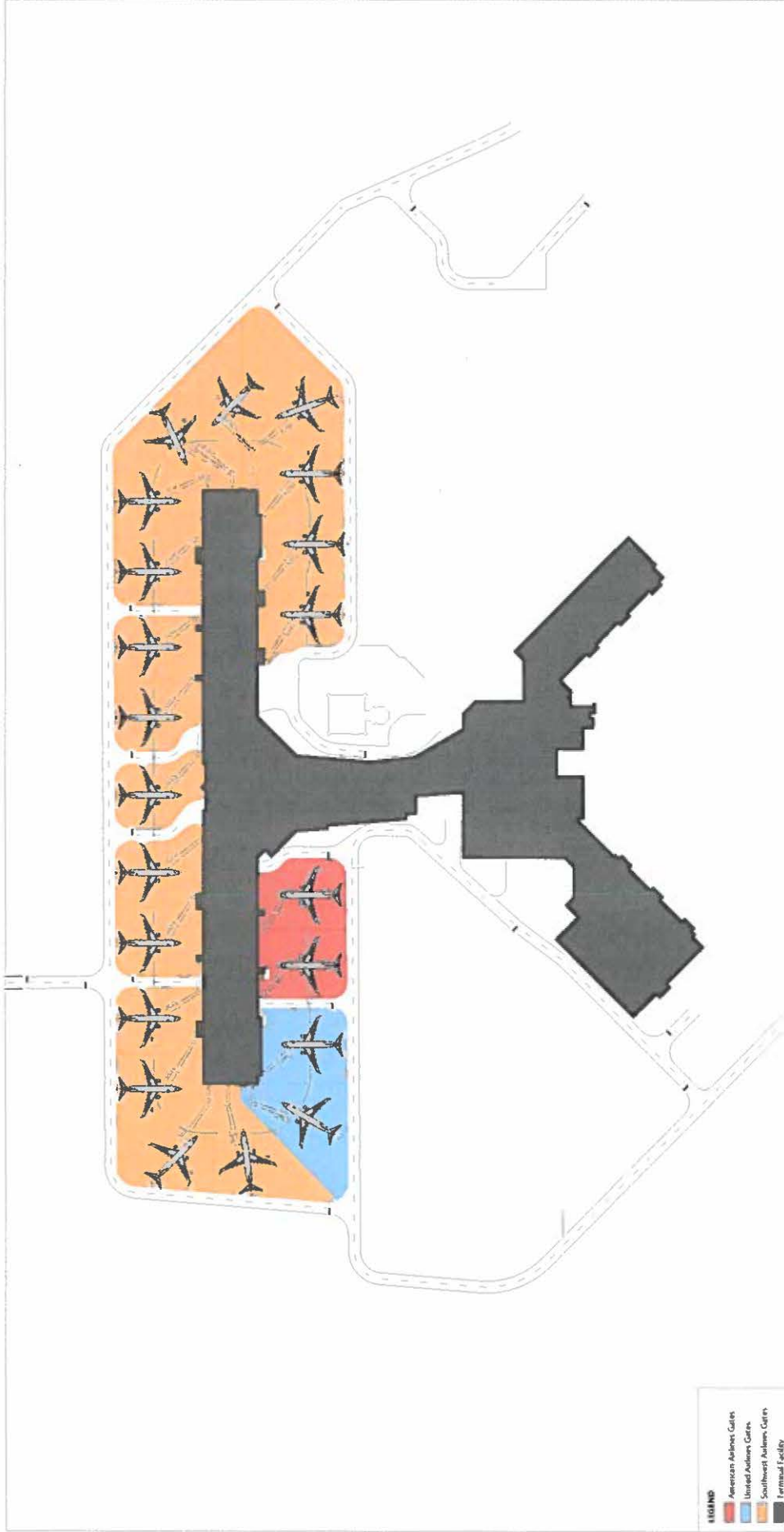
Table 2-5: Overall Facility Space Summary

BUILDING CATEGORY	TOTAL SPACE (SQURE FEET)
Circulation (All)	219,550
Building Systems and Maintenance	127,930
Airline Support Facilities	80,820
Concessions (including concession support)	51,970
Transportation Security Administration	49,290
Holdroom	47,910
Airport Facilities	46,490
Outbound Baggage	40,280
Baggage Claim	24,080
Vacant Space	23,700
Other Agencies and Contractors	13,090
Inbound Baggage	12,880
Restrooms (Public and Nonpublic)	10,560
Ticketing and Check-in	9,360
Amenities	550
Total Facility Space	758,460

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.



LEGEND

- American Airlines Gates
- United Airlines Gates
- Southwest Airlines Gates
- Terminal Facility

SOURCE: AECOM, LLC (December 2013)
 PREPARED BY: BECHTEL & ASSOCIATES, INC. (January 2014)



EXHIBIT 2-4

Terminal Facility Overview
 Gate Allocation

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The major Terminal facility areas are categorized by specific functional space and lease assignments. Space is leased to the airlines operating at the Airport through exclusive-, preferential-, or common-use agreements with the City. An exclusive-use agreement relates to those Airport areas and facilities leased to an airline for its sole use and occupancy. A preferential-use agreement relates to facilities leased by a primary airline and shared with a secondary airline, provided that the primary airline does not require the space at the time and that the secondary airline is subject to the rules, regulations, and conditions of the agreement executed by the primary airline. A common-use agreement relates to areas and facilities that are shared by multiple airlines on a scheduled basis; airlines are not allowed to install proprietary equipment in common-use space and the City's flexibility is preserved to reassign the space as needed. Major Terminal space categories are defined below.

2.3.2.1 Circulation/Restrooms

Circulation space encompasses areas dedicated to secure, nonsecure, and egress circulation of passengers throughout the Terminal and includes areas such as hallways, escalators, stairs, and elevators. Restrooms are provided under the provisions of governing building code standards and are available in public as well as nonpublic areas.

2.3.2.2 Building Systems and Maintenance

This category includes areas dedicated to MEP, communication, and life safety operations and functions within the Terminal facilities. It may include areas with dedicated spaces for components such as:

- **Baggage Right-of-Way:** Area dedicated to the in-line baggage handling system (BHS), a mechanical conveyor system designed to carry checked baggage from the ticketing and check-in areas to baggage screening, and finally to the outbound baggage carousels.
- **Compressor:** Room used to house the compressed air pumps that generate compressed air for various Airport systems.
- **Emergency Fuel Shut Off:** Room containing the emergency fuel shut off switches and components related to gate area aircraft refueling.
- **Facilities Maintenance:** Space dedicated to various maintenance components at the Airport.
- **Fire Riser:** Room used to house the fire sprinkler system components for the Terminal.
- **Intermediate Distribution Frame:** Room used to connect cables, etc; another type of Information Technology (IT) room.
- **IT Closet:** IT room used to store various computer cables and hardware.
- **Janitorial Room:** Storage space for cleaning supplies and equipment.
- **Key Shop:** Room devoted to providing support and control of the various Airport room keys.
- **Lighting Vault:** Room dedicated to providing and controlling the lighting for all areas of the passenger Terminal.
- **Mechanical Chase:** Areas devoted to mechanical ductwork.

- **MEP Rooms:** Rooms dedicated to the mechanical, electrical, and plumbing components of the passenger Terminal.
- **Pre Action:** Room used to prevent accidental activation of the passenger Terminal fire suppression system.
- **Radio:** Room housing the various radio equipment and antennas.

2.3.2.3 Airline Support Facilities

The areas leased to the airlines on an exclusive-, preferential-, or common-use basis and used for outbound/inbound passenger processing may include:

- **Airline Ticket Office:** Back-of-house office space dedicated to airline administrative functions associated with the check-in process.
- **Airline Office, Support, and Storage:** Space dedicated to airline administrative and operating functions.
- **Baggage Service Office:** Space dedicated to airlines for addressing issues related to checked baggage.
- **Ticketing Area:** Space dedicated for passengers obtaining boarding passes and checking baggage.
- **Airline Club/Lounge Room:** Club space provided for airline passengers who are members.

2.3.2.4 Concessions

Concessions are area(s) leased to vendors for merchandise, retail, or food and beverage sales. They may also include:

- **Concessions Office and Storage Area:** Space used for administrative and operating functions.
- **Retail Area:** Space used by concessionaires to store and present merchandise for sale.
- **Food and Beverage Area:** Space used for kitchen operations, food storage, customer service, and customer seating.

2.3.2.5 Transportation Security Administration

These areas dedicated to the TSA for screening passengers and baggage prior to aircraft boarding may include:

- **SSCP:** Space used to conduct security screening of passengers and their carry-on possessions prior to such passengers entering a sterile or secure area; includes screening equipment, queuing area, recomposure zone, and manual search areas or rooms.
- **Offices, Storage, and Support Areas:** Space dedicated to the TSA for administrative and operating functions.
- **Baggage Screening Area:** Space dedicated to outbound baggage conveyance and screening rooms; includes enclosed and nonenclosed rooms, baggage conveyance equipment, and rights-of-way.

2.3.2.6 Holdroom

These areas past the SSCP are provided for airline passengers as they wait to board an aircraft. Holdrooms are typically part of an exclusive-, preferential-, or common-use agreement.

2.3.2.7 Airport Facilities

These areas used for the Department of Aviation/Airport staff administration and operations may include:

- **Airport Offices:** Space dedicated to Airport personnel/the Department of Aviation for administrative and operating functions may include conference rooms, copy rooms, offices, Department of Aviation storage rooms, and the mail room.
- **Maintenance:** Space dedicated to Airport staff for functions related to maintaining building systems, such as the loading dock and the trash room.
- **Miscellaneous:** All other space used by Airport personnel for a specific administrative and operating function, including Lost and Found, the Airport information kiosk known as Love Info, and the Valet.

2.3.2.8 Outbound Baggage

This area is used to sort and transfer checked baggage from the ticketing/check-in and baggage screening areas to the respective gates for loading onto an aircraft.

2.3.2.9 Baggage Claim

This space includes the baggage carousels and queuing areas used by passengers to identify and retrieve their checked baggage.

2.3.2.10 Vacant Space

Several areas at the Airport are currently vacant and awaiting a prospective tenant or concessionaire.

2.3.2.11 Other Agencies and Contractors

Areas dedicated to third-party agencies and contractors handling Airport- or airline-related operations, maintenance, or special projects include office, conference room, storage, and other miscellaneous spaces for administrative or operating support for:

- **ARINC:** Provider of airport/airline/aircraft communications (subsidiary of Rockwell Collins).
- **AT&T:** Provider of airport Wi-Fi systems.
- **Dallas Police Department:** As DAL is a City-run airport, policing is provided by the Airport subdivision of the City of Dallas Police Department (DPD).
- **FAA Weather:** Area provided for FAA Weather observation technologies and systems.
- **Rental Car Companies:** The counters and storage rooms used by the Airport's rental car providers.
- **United Service Organization (USO):** Provider of lounge space for America's military servicemen and servicewomen.

2.3.2.12 Inbound Baggage

This area is used to sort and transfer checked baggage from an aircraft to baggage claim.

2.3.2.13 Ticketing and Check-in

These areas and facilities are provided to assist passengers with checking in for their flights, printing boarding passes, and checking baggage. Specific components within these areas may include:

- **Ticketing and Queuing:** Space dedicated for passengers waiting in line for and obtaining boarding passes and checking baggage.
- **Group Check-in:** Area devoted to pre-arranged check-in of large groups.
- **Self-Service Check-in Kiosks:** Stand-alone kiosks providing self-service check-in options for airline flights.

2.3.2.14 Amenities

Several areas used for nonairline, non-Airport, or nongovernment agency leaseholders providing special services to passengers may include:

- Vending machines, courtesy telephones, shoeshine services, automated teller machines (ATMs), etc.
- All other spaces used to provide special services to passengers.

2.3.3 BASEMENT LEVEL

The Basement Level, which is also referred to as Level 0, of the nine-level Terminal building supports the systems and maintenance components of the Airport, as well as various Airport facilities components. The TSA is also allocated some space on this level. **Exhibit 2-5** depicts the space allocation on the Basement Level. **Table 2-6** provides a summary of the Basement Level square footage.

Table 2-6: Basement Level Space Summary

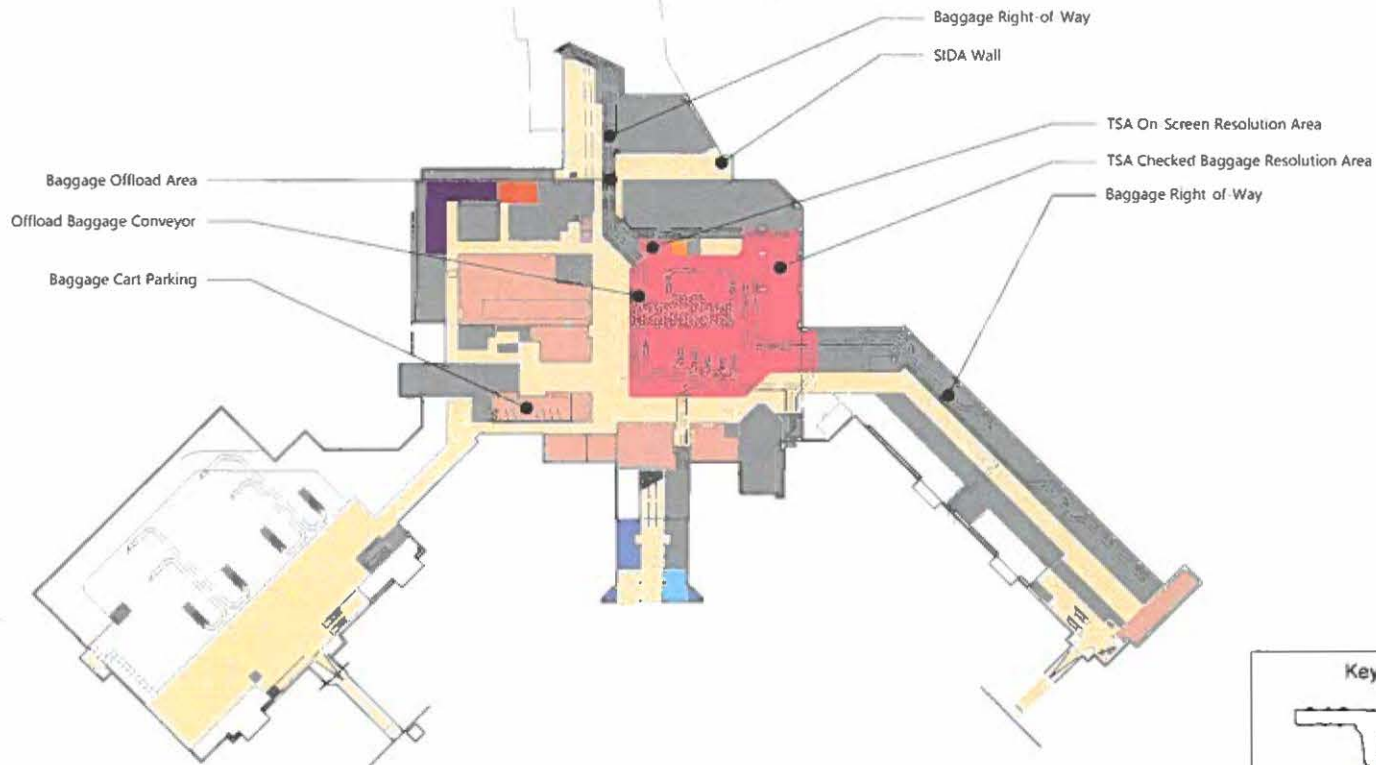
BUILDING CATEGORY	TOTAL SPACE (SQUARE FEET) ^{1/}
Circulation (Secure, Nonpublic)	47,680
Building Systems and Maintenance	40,960
Airport Facilities	17,860
Transportation Security Administration	17,620
Airline Support Facilities	1,080
Ticketing and Check-in	570
Other Agencies and Contractors	530
Restrooms (Nonpublic)	160
Total Basement Level Space	126,460

NOTE:

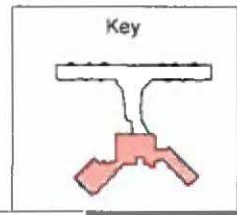
^{1/} Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.



- LEGEND**
- Restroom
 - Airline Support Space
 - Airline Ticketing and Check-In
 - Transportation Security Administration
 - Storage
 - Mechanical/Electrical/Plumbing/Building Systems
 - Circulation
 - Vault
 - AT&T Space



SOURCE: A+Qm, LLC, December 2013
 PREPARED BY: Riondo & Associates, Inc., January 2014



Airport Master Plan Update
 Inventory

Terminal Space Allocation
 Basement Level

EXHIBIT 2-5

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2.3.3.1 Circulation

The Basement Level includes a number of access hallways not available to the public to provide Airport staff access to various mechanical and office/support spaces.

2.3.3.2 Building Systems and Maintenance

The Airport-related building systems and storage spaces on the Basement Level include rights-of-way for baggage handling systems, mechanical rooms and chases, electrical rooms, Intermediate Distribution Frame rooms to support the Airport's IT system, IT closets, janitorial rooms, and the lighting vault.

Table 2-7 lists the specific building systems and maintenance areas on the Basement Level.

Table 2-7: Building Systems and Maintenance Space - Basement Level

BUILDING CATEGORY	TOTAL SPACE (SQURE FEET)
Mechanical Room	13,790
Baggage Right of Way	13,200
Electrical Room	4,570
Intermediate Distribution Frame Room	2,920
Pump Room	2,440
Mechanical Chase	2,120
Lighting Vault	1,620
Information Technology Closet	130
Elevator Mechanical Room	120
Janitorial Room	50
Total Building Systems and Maintenance Space – Basement Level	40,960

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC., December 2013

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.3.3 Airport Facilities

The Airport facilities spaces on the Basement Level include multiple Department of Aviation storage rooms and loading dock/covered parking area.

2.3.3.4 Transportation Security Administration

The TSA leases baggage screening space on the Basement Level, including an on-screen resolution area, the TSA checked baggage resolution area, and space for baggage screening equipment and operations.

2.3.3.5 Airline Support Facilities

Several airline support facilities are located on the Basement Level. The space is held by Southwest Airlines and includes a breakroom, office space for sublessee ERMC to provide facilities services, and office space for sublessee International RAM (IRAM) to provide additional customer services.

2.3.3.6 Ticketing and Check-in

This area includes curbside ticketing and queuing space leased by Southwest Airlines and located outside the building footprint. Although technically on the Basement Level, public access to Basement Level spaces is not available. After using the curbside features, the passenger walks up a ramp to the Main Level.

2.3.3.7 Other Agencies and Contractors

AT&T leases space on the Basement Level for its telecommunications and Wi-Fi services.

2.3.3.8 Restrooms (Nonpublic)

A pair of restrooms is provided on the Basement Level.

2.3.4 MAIN LEVEL

The Main Level, which is also referred to as Level 1, supports passenger ticketing, check-in, processing, and security screening, as well as baggage handling, Airport support, and airline support. **Table 2-8** provides a summary of the square footage on the Main Level. **Exhibit 2-6** depicts the space allocation on the Terminal side (pre-security) of the Main Level and **Exhibit 2-7** depicts the space allocation on the Concourse side (post-security) of the Main Level.

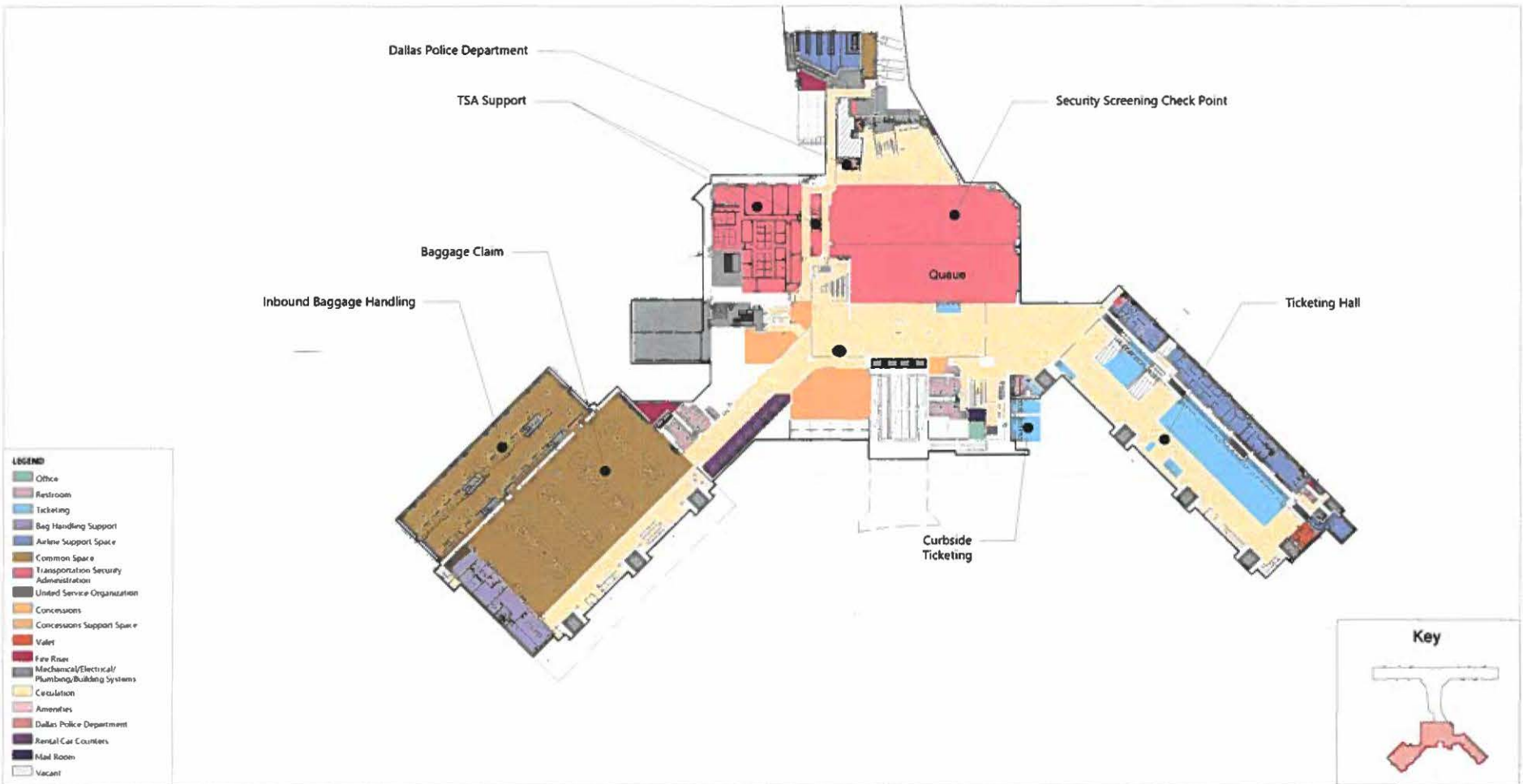
Table 2-8: Main Level Space Summary

BUILDING CATEGORY	TOTAL SPACE (SQARE FEET)
Airline Support Facilities	77,270
Circulation (All)	73,160
Outbound Baggage	40,280
Transportation Security Administration	31,670
Building Systems and Maintenance	24,490
Baggage Claim	24,080
Vacant Space	14,290
Inbound Baggage	12,880
Ticketing and Check-in	8,790
Airport Facilities	8,100
Concessions (including Concessions Support)	7,190
Other Agencies and Contractors	5,820
Restrooms (Public and Nonpublic)	2,720
Amenities	140
Total Main Level Space	330,880

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.



SOURCE: AirOps, LLC, December 2013
PREPARED BY: Records & Associates, Inc., January 2014



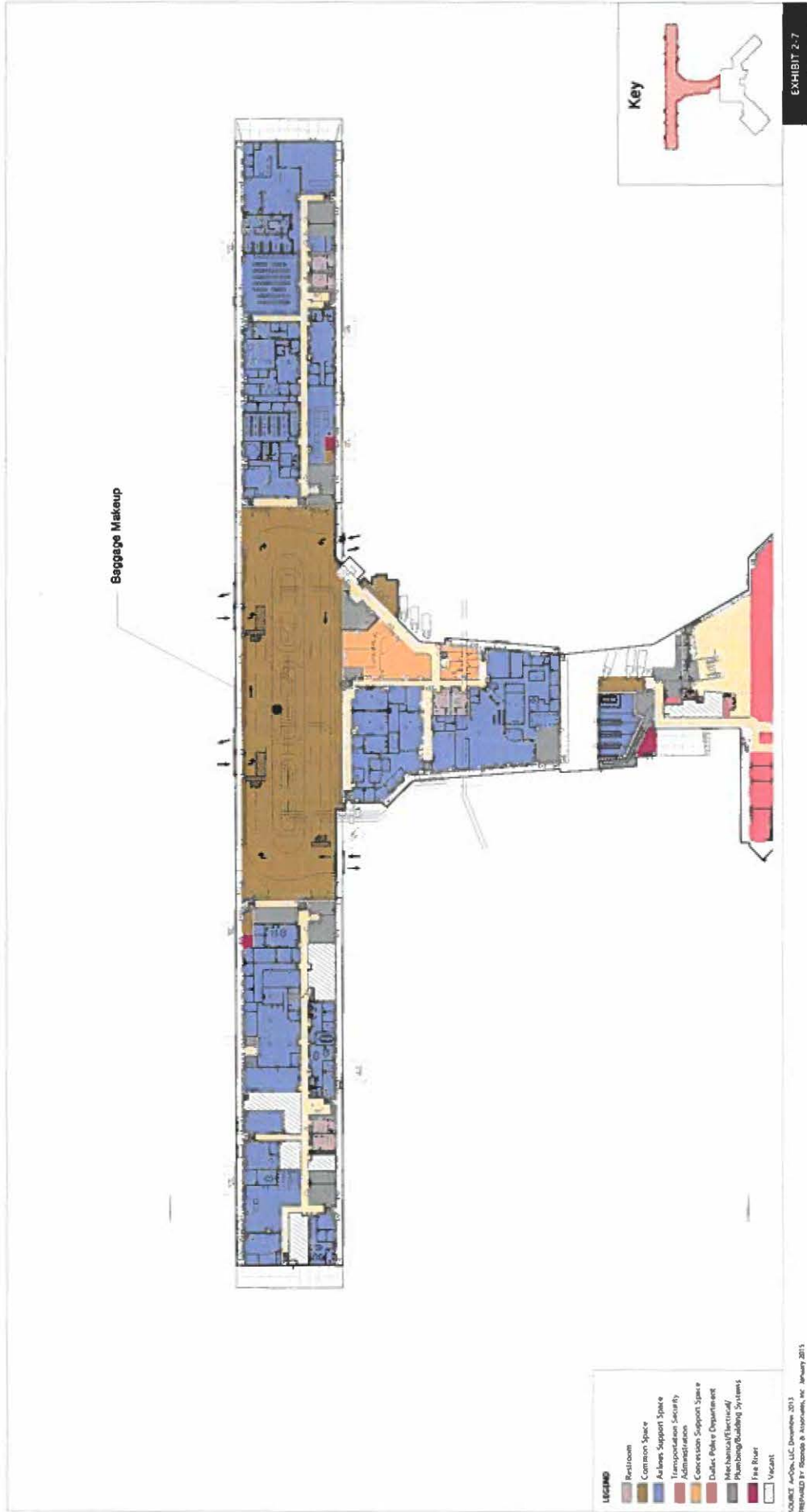
Airport Master Plan Update
Inventory

Terminal Space Allocation
Main Level - Terminal Side

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- LEGEND**
- Restroom
 - Common Space
 - Airline Support Space
 - Transportation Security
 - Administration
 - Concessions Support Space
 - Dallas Police Department
 - Maintenance Offices
 - Baggage/Building Systems
 - Fire Room
 - Vault

SOURCE: AECOM, LLC, December 2013
 REVISIONS BY: ROSSINI & ASSOCIATES, INC., January 2015



Airport Master Plan Update
 Inventory

EXHIBIT 2-7
Terminal Space Allocation
Main Level - Concourse Side

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2.3.4.1 Airline Support

Airline support space on the Main Level includes airline ticket offices (ATOs), baggage service offices (BSOs), and various support and storage spaces for each airline. It should be noted that information related to the ATOs may also be discussed with ticketing/check-in space and information related to the BSOs may also be discussed with baggage claim space. For this Master Plan Update, both types of space are categorized as airline support because the space is considered office space; however, these spaces support the ticketing/check-in and baggage claim functions, respectively.

Table 2-9 lists the specific airline support facilities space on the Main Level.

Table 2-9: Airline Support Space - Main Level

BUILDING CATEGORY	TOTAL SPACE (SQURE FEET)
Support Space (Southwest)	66,750
Airline Ticketing Office (Southwest)	4,580
Baggage Service Office (Southwest)	2,860
International RAM Sublease (Southwest)	210
Storage (Southwest)	130
Support Space (United)	1,460
Baggage Service Office (United)	610
Airline Ticketing Office (United)	580
Storage (United)	90
Total Airline Support Space – Main Level	77,270

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.4.2 Circulation

Several categories of circulation space are provided on the Main Level. Areas of public nonsecure circulation include the hallways and open space not designated to a tenant or a specific function, located prior to the SSCP (on all levels). A primary area within the public nonsecure circulation space is the Central Lobby.

The Central Lobby has historically been the symbolic "heart" of the Dallas Love Field Terminal building and a vital component in passenger processing. As part of the LFMP, the Lobby was completely renovated and expanded; however, the basic configuration remained the same. The main features of the approximately 94,000-square-foot Lobby includes access points to ticketing and baggage claim, concessions, general seating, restrooms, the information desk known as Love Info, and the SSCP.

The main entrance/exit, providing access/egress to and from the upper and lower curbsides and the parking garages, was modified to accommodate Americans with Disabilities Act requirements for the ramp. The ceiling was replaced and the old terrazzo floor was overlaid with new terrazzo with one exception; the world map terrazzo floor, originally installed in 1958, was preserved during the renovation, as required by the FAA and the Texas Historical Commission (THC). **Appendix D** provides additional information on the FAA/THC requirements.

Nonpublic nonsecure circulation space includes those hallways and corridors reserved for use by tenants and Airport staff only, prior to the SSCP.

Only a small amount of public secure circulation space is located on the Concourse Main Level. This space is located immediately after the SSCP leading to the stairs/escalators/elevators to the Passenger Level.

Nonpublic nonsecure circulation space on the Main Level consists of the hallways and corridors leading to various airline and support spaces. Nonpublic secure circulation space also consists of the hallways and corridors leading to various airline and support space, but is located after the SSCP.

2.3.4.3 Outbound Baggage

The outbound baggage makeup area is located in the center of the Concourse on the Main Level, and consists of three carousels. Exhibit 2-7 shows the general layout of this area and **Table 2-10** summarizes the allocation of space in the outbound baggage makeup area.

Table 2-10: Outbound Baggage Makeup Area - Main Level

BUILDING CATEGORY	INVENTORY
Number of Devices	3
Device Presentation Frontage (linear feet)	561 (187 x 3)
Device Area (square feet)	9,760
Staging Area (square feet)	9,580
Tug Circulation (square feet)	20,940
Total Outbound Baggage Makeup Area Space (square feet) - Main Level	40,280

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.4.4 Transportation Security Administration

The TSA SSCP, dedicated to screening passengers before they enter the secure Concourse, is located in the Lobby on the Main Level (see Exhibit 2-6). Detailed SSCP information is not provided on the exhibit to comply with the TSA's Sensitive Security Information directives. During the schematic design process, the TSA provided information and long-term facility requirements for the SSCP area. The Lobby area was enlarged to accommodate a total of 13 screening lanes, which include 7 walk-through metal detectors, 7 advanced imaging technology scanners, and 13 baggage x-ray machines. **Table 2-11** lists the TSA SSCP facilities on the Main Level.

Table 2-11: Transportation Security Administration Space - Main Level

BUILDING CATEGORY	INVENTORY (SQUARE FEET)
Security Screening Checkpoint Lanes	11,410
Queuing Area	10,550
Offices	8,720
Support Space	720
Storage Space	140
Oversized Baggage Space	130
Total TSA Space – Main Level	31,670

NOTES:

Numbers are rounded to the nearest 10 square feet.

TSA = Transportation Security Administration

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.4.5 Building Systems and Maintenance

Similar to the Basement Level, the Airport-related building system and storage spaces on the Main Level include various MEP spaces.

Table 2-12 lists the building systems and maintenance spaces on the Main Level.

Table 2-12: Building Systems and Maintenance Space - Main Level

BUILDING CATEGORY	TOTAL SPACE (SQUARE FEET)
Mechanical Chase	5,740
Baggage Right-of-Way	4,850
Electrical Room	4,770
Janitorial Room	2,310
Intermediate Distribution Frame Room	2,150
Mechanical Room	1,730
Fire Riser Room	1,130
Facilities Maintenance	680
Compressor Room	380
Elevator Mechanical Room	330
Key Shop	330
Emergency Fuel Shut Off Room	80
Pre-Action Room	10
Total Building Systems and Maintenance Space – Main Level	24,490

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.4.6 Baggage Claim

The baggage claim hall is located on the west side of the Terminal and consists of four carousels with space for an additional carousel in the future.

Exhibit 2-6 shows the layout of the carousels in the baggage claim hall. The International Air Transport Association (IATA) defines a 12-foot band around the presentation face of a baggage claim carousel as the retrieval area where passengers wait to retrieve bags or are in the act of retrieving bags. Circulation space allows for passenger movement between adjacent devices. **Table 2-13** summarizes the allocation of space in the baggage claim hall on the Main Level.

Table 2-13: Baggage Claim Hall Space - Main Level

BUILDING CATEGORY	INVENTORY
Number of Carousels	4
Device Presentation Frontage (linear feet)	700 (175 x 4)
Retrieval Area (square feet)	10,980
Bag Claim Circulation (square feet)	6,580
Device Area (square feet)	6,520
Total Baggage Claim Hall Space - Main Level (square feet)	24,080

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.4.7 Vacant Space

The vacant space on the Main Level is primarily reserved for new or expanding concessionaires or airlines.

2.3.4.8 Inbound Baggage

Each baggage claim device requires an offload area within the Security Identification Display Area (SIDA) for general baggage cart circulation, parking of baggage carts while they are being offloaded, a work aisle, and an offload conveyor.

The offload area shown on Exhibit 2-6 includes the following components:

- **Offload Baggage Conveyor:** Conveyor equipment is used to transport bags from the baggage carts onto the baggage claim device. The device presentation frontage provided dictates the number of carts able to be parked in front of the device.
- **Staging Area:** The staging area accommodates baggage cart parking and the baggage offload area.
- **Baggage Cart Parking:** An area typically the width of a tug road, approximately 10 feet to 12 feet wide, is provided for carts to be parked and bags offloaded. Carts are usually parked parallel to the flat plate claim device.
- **Baggage Offload Area:** An area directly between the staging area and the flat plate device, typically 3 feet wide, is provided as a work area for baggage agents to manually load bags from the cart onto the claim device.
- **Baggage Right-of-Way:** This area is occupied by baggage conveyance systems.
- **SIDA Wall:** The SIDA wall separates the secure airside from the unsecure landside to prevent unauthorized persons from accessing the SIDA.

Table 2-14 summarizes the inbound baggage space on the Main Level.

Table 2-14: Inbound Baggage Space - Main Level

BUILDING CATEGORY	INVENTORY
Number of Devices	4
Device Presentation Frontage (linear feet)	456 (114 x 4)
Tug Circulation (square feet)	9,180
Staging Area (square feet)	2,690
Device Area (square feet)	1,010
Total Inbound Baggage Space - Main Level (square feet)	12,880

NOTE: Numbers are rounded to the nearest 10 square feet

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.4.9 Ticketing and Check-in

To maximize the efficiency of the existing Terminal and the geometry of the site, the LFMP included the demolition and replacement of the ticketing wing to return to the original operating paradigm of the Terminal. All private vehicle traffic is accommodated on the upper (Main Level) roadway for passenger dropoff, while commercial vehicle traffic is accommodated on the lower (Basement Level) roadway.

The new ticketing/check-in facility opened on November 1, 2012. It consists of approximately 38,000 square feet, with an exposed structure, and clerestory windows that result in an open and spacious ticketing hall. The soft northern light filtered through the roof and ceiling reduces the need for artificial lighting during the day while mitigating potential heat gain.

Exhibit 2-6 depicts the general layout of the ticketing hall, with three primary ticket counters in the traditional linear configuration, general ATO areas, outbound baggage belts, kiosks, and a valet parking office. In addition, a charter/group check-in counter is located at the exterior of the building, allowing buses to drop passengers off behind the building. Valet parking is located adjacent to the Terminal building, with offices located in the building.

Southwest Airlines operates two of the ticketing counters and United Airlines operates the third. **Table 2-15** presents a summary of the areas leased to airlines in the ticketing hall. **Table 2-16** presents a summary of the check-in devices by airline.

Table 2-15: Total Passenger Check-in Area - Main Level (in square feet)

	AIRLINES				TOTAL SPACE
	SOUTHWEST	UNITED	TOTAL LEASED	VACANT ^{1/}	
Ticketing Queue	3,510	370	3,880	960	4,840
Ticket Counters	2,310	300	2,610	790	3,400
Curbside Queuing ^{1/}	470	130	600	130	730
Curbside Ticketing ^{1/}	320	90	410	90	500
Kiosks	490	N/A	490	N/A	490
Group Check-in Queue	480	N/A	480	N/A	480
Group Check-in	320	N/A	320	N/A	320
Total Check-in Area Space – Main Level	7,900	890	8,790	1,970	10,760

NOTES:

N/A = Not Applicable

Numbers are rounded to the nearest 10 square feet.

^{1/} Curbside queuing and ticketing are located outside of the building footprint.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

Table 2-16: Check-in Devices - Main Level

	AIRLINES				TOTAL DEVICES
	SOUTHWEST	UNITED	TOTAL LEASED	VACANT	
Kiosks	34	N/A	34	N/A	34
Ticket Counters	13	4 ^{1/}	17	10 ^{1/}	27
Curbside Check-in	4	1	5	1	6
Group Check-in	Unknown	N/A	--	N/A	--
Total Check-in Devices – Main Level	51	5	56	11	67

NOTES:

N/A = Not Applicable

^{1/} Based on 4.5 linear feet per position.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

Passengers using the covered curbside check-in area adjacent to the ticketing hall can directly enter the Terminal building Lobby and approach the SSCP.

Passengers have several options to access the ticketing hall:

- **Valet Entry:** An entry vestibule located at the end of the ticketing hall provides access for valet parking passengers and group check-in passengers.
- **Curbside Dropoff:** Three entry vestibules equally spaced along the front of the ticketing hall provide direct access to the Terminal building from the curbside.
- **East Tunnel:** Stairs, an "up" escalator, and an elevator from the East Tunnel provide access to the ticketing hall from the commercial vehicle curbside and the parking garage.

2.3.4.10 Airport Support Facilities

Table 2-17 lists the areas used primarily for Airport support on the Main Level.

Table 2-17: Airport Support Facilities Space - Main Level

BUILDING CATEGORY	TOTAL SPACE (SQUARE FEET)
Loading Dock/Covered Parking	5,670
Receiving Dock	930
Trash Room	700
Valet Office	460
Mail Room	210
Love Information Kiosk	130
Total Airport Support Facilities Space – Main Level	8,100

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.4.11 Concessions

Concessions space is discussed in Subsection 2.3.7.

2.3.4.12 Other Agencies and Contractors

Table 2-18 lists the agencies and contractors that occupy space on the Main Level.

Table 2-18: Other Agencies and Contractors Space - Main Level

BUILDING CATEGORY	TOTAL SPACE (SQUARE FEET)
Dallas Police Department	460
Dallas Police Department Storage	180
Rental Car Agency Counters	2,190
United Service Organization	2,990
Total Space	5,820

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.4.13 Restrooms

Both public and nonpublic restrooms are provided on the Main Level.

2.3.4.14 Amenities

An amenities area containing an ATM, a teletypewriter (TTY) telephone for the hearing impaired, and a pay telephone bank is located in the Lobby of the Main Level next to the escalator/stair bank leading to the parking garages.

2.3.5 PASSENGER LEVEL

The Passenger Level, which is also referred to as Level 2, supports the accommodation of passengers prior to boarding their flights in gate areas referred to as holdrooms. Comforts for enplaning passengers (and deplaning passengers) on the Passenger Level include restaurants and retail stores (i.e., concessions; more information is provided in Subsection 2.3.7). This level also includes nonpublic areas, such as offices and support areas. **Exhibit 2-8** depicts the space allocation on the Passenger Level of the Concourse. **Table 2-19** provides a summary of the square footage on the Passenger Level.

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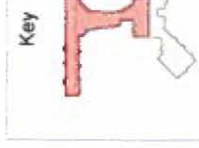
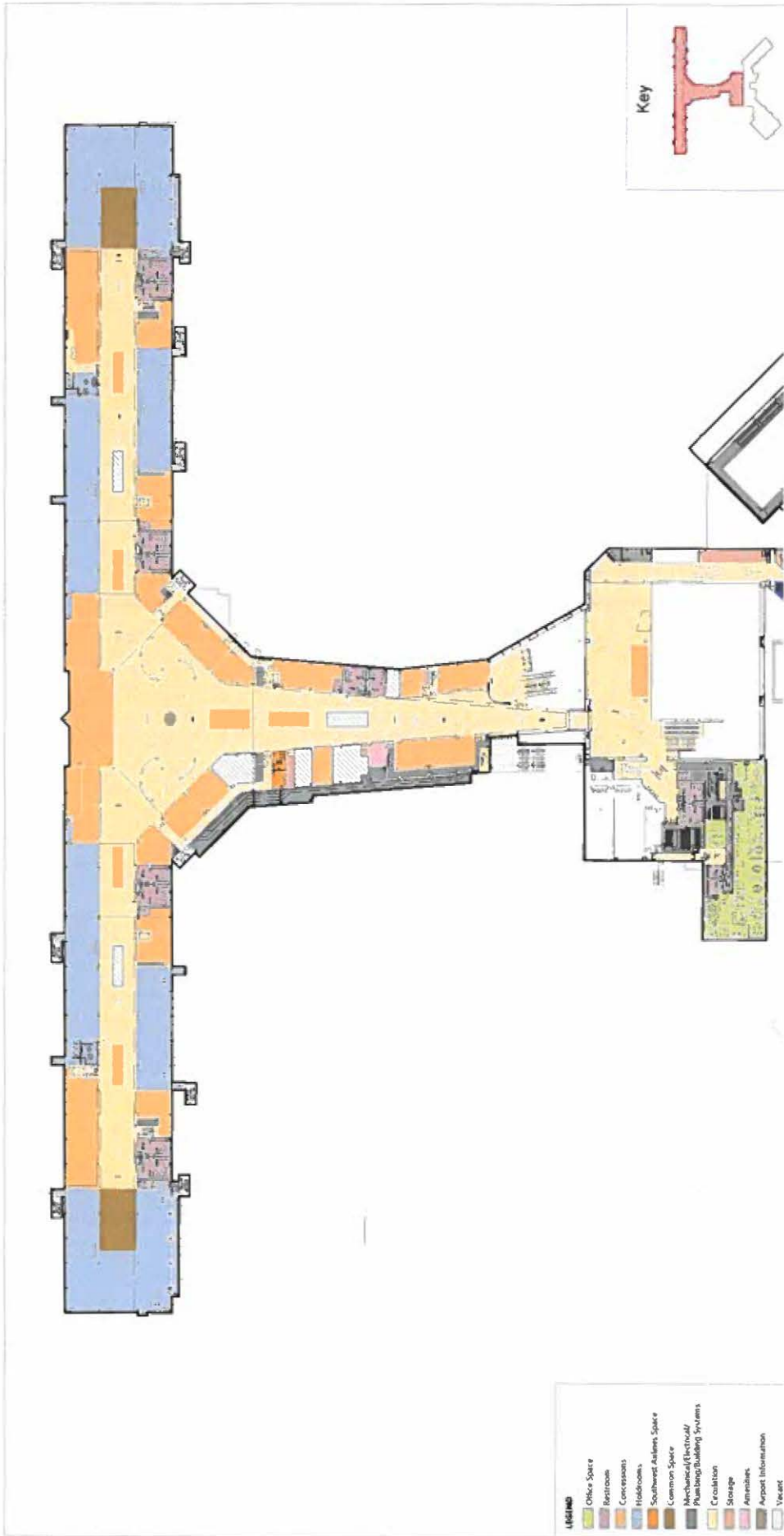


EXHIBIT 2.8

Concourse Space Allocation
Passenger Level

SOURCE: AECOM, INC., December 2014
PREPARED BY: AECOM & SUBSIDIARY, INC., January 2015



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Table 2-19: Passenger Level Space Summary

BUILDING CATEGORY	TOTAL SPACE (SQUARE FEET)
Circulation (All)	92,860
Holdroom	47,910
Concessions (including Concessions Support)	40,980
Building Systems and Maintenance	19,960
Airport Facilities	13,840
Vacant Space	9,410
Restrooms (Public and Nonpublic)	6,910
Airline Support Facilities	2,370
Amenities	410
Total Passenger Level Space Summary	234,650

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.5.1 Circulation

The majority of circulation space on the Passenger Level is public secure space. A few corridors and Love Landing are public nonsecure space.

A key component of the LFMP was reconfiguration of the space directly above the SSCP for use as a meeter/greeter area. Originally designed as a luau dining room in the 1950s, this area was subsequently enclosed and used as Airport Administration offices from the 1970s through 2010. With all arriving passengers exiting through one location, the LFMP incorporated a redesign of this area into open space for the general public to meet passengers, with a direct connection to the parking garage. Referred to as Love Landing, this space consists of approximately 12,610 square feet and offers comfortable furniture and concessions. An observation window in the corner of the space overlooks the ramp and east section of the new Concourse.

In addition, some conference room and office spaces west of Love Landing is also provided on the Passenger Level. These spaces are accessible via public nonsecure and nonpublic nonsecure corridors.

2.3.5.2 Holdrooms

There are a total of 20 airline contact gates sized to accommodate Boeing 737-700 aircraft. The number of gates is restricted by the Five Party Agreement and additional hardstand operations are not allowed. Two gates can accommodate larger aircraft, up to a Boeing 777. All passenger boarding bridges are owned by the City. Several passenger boarding bridge models are used among the 20 gates. All of the boarding bridges are of the Jetway type and the models include A3 58/116, A3 61/127, A3 64/131, A3 65/133, and A3 68/144.

Holdrooms are designed to provide passenger convenience and follow the Southwest Airlines model for passenger boarding. To accommodate passenger needs for easy access to electrical power for tablets and other personal electronic devices and cell phones, more than 90 percent of all holdroom seats are equipped with individual electrical receptacles, fed from floor outlets, for passenger use via a traditional power cord or Universal Serial Bus (USB) cable.

Some of the holdrooms, specifically those at the ends of the Concourse (Gates 1 through 5, 15, and 17 through 20), are common-use space. This space was considered in the calculation of each gate area because passengers occupy this common-use space prior to boarding at their respective gates.

Table 2-20 lists the preferential use of each gate on the Concourse.

Table 2-20: Preferred Airline Gate Assignments and Holdroom Space – Passenger Level

GATE	PREFERRED AIRLINE USER ^{1/}	SIZE (SQUARE FEET) ^{2/}	NOTES	LARGEST AIRCRAFT
1	Southwest	2,800	includes common use gate area	Boeing 737
2	Southwest	2,800	includes common use gate area	Boeing 737
3	Southwest	2,800	includes common use gate area	Boeing 737
4	Southwest	2,800	includes common use gate area	Boeing 737
5	Southwest	2,800	includes common use gate area	Boeing 737
6	Southwest	2,450		Boeing 737
7	Southwest	2,320		Boeing 737
8	Southwest	2,450		Boeing 737
9	Southwest	2,320		Boeing 737
10	Southwest	2,550		Boeing 737
11	American	2,320		Boeing 737
12	Southwest	2,550		Boeing 737
13	American	2,320		Boeing 737
14	Southwest	2,450		Boeing 737
15	United	3,000	includes common use gate area	Boeing 777
16	Southwest	2,630		Boeing 737
17	United	3,000	includes common use gate area	Boeing 777
18	Southwest	2,730	includes common use gate area	Boeing 737
19	Southwest	2,730	includes common use gate area	Boeing 737
20	Southwest	2,730	includes common use gate area	Boeing 737
Total Holdroom Space		52,550		

NOTES:

1/ All Southwest gates are preferential-use gates; United's and American's gates are exclusive-use gates

2/ Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.5.3 Concessions

Concessions space is discussed in Section 2.3.7.

2.3.5.4 Building Systems and Maintenance

Table 2-21 lists the specific building systems and maintenance space on the Passenger Level.

Table 2-21: Building Systems and Maintenance Space - Passenger Level

BUILDING CATEGORY	TOTAL SPACE (SQUARE FEET)
Mechanical Chase	12,740
Baggage Right of Way	3,600
Mechanical Room	1,790
Intermediate Distribution Frame Room	690
Janitorial Room	620
Electrical Room	440
IT Closet	80
Total Building Systems and Maintenance Space	19,960

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.5.5 Airport Support Facilities

Table 2-22 lists the space on the Passenger Level that is used primarily by Airport management and staff.

Table 2-22: Airport Support Facilities Space - Passenger Level

BUILDING CATEGORY	TOTAL SPACE (SQUARE FEET)
Airport Offices	7,220
Conference Rooms	3,890
Airport Storage	1,980
Copy Room	260
Airport Systems Manager (ASM) Space	190
Lost and Found	170
Love Information Kiosk	130
Total Airport Support Facilities Space - Passenger Level	13,840

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.5.6 Vacant Space

The vacant space on the Passenger Level includes Gates 11 and 13, as well as expansion/additional space for concessionaires.

2.3.5.7 Restrooms

Both public and nonpublic restrooms are provided on the Passenger Level.

2.3.5.8 Airline Support Facilities

The airline support facilities on the Passenger Level include airline staff breakrooms, flight crew holding rooms, and storage and office space for both airline and airline support subcontractors, such as IRAM.

Table 2-23 lists the space on the Passenger Level leased to specific airlines for support purposes.

Table 2-23: Airline Support Facilities Space - Passenger Level

BUILDING CATEGORY	TOTAL SPACE (SQUARE FEET)
Southwest Airlines Breakroom	850
Southwest Airlines Support	710
Southwest Airlines Flight Crew	570
Southwest Airlines Subcontractor IRAM	240
Total Airline Support Facilities Space	2,370

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.5.9 Amenities

On the Passenger Level, an amenities area containing an ATM, a TTY, a pay telephone bank, high-end vending machines, and shoe shining services is located just past the Flight Information Display System (FIDS) on the left when walking to the gates.

2.3.6 OFFICE TOWER

The Office Tower begins on Level 3, above the Passenger Level, and extends to Level 8. The Office Tower contains mostly Airport building systems, offices, storage space, and support space. However, Level 3 also includes approximately 3,800 square feet of concessions office and storage space.

Table 2-24 summarizes the allocation of space in the Office Tower. **Exhibits 2-9** and **2-10** show the space allocation on each level of the Office Tower.

Table 2-24: Office Tower Space Allocation (Levels 3 through 8)

BUILDING CATEGORY	TOTAL SPACE (SQUARE FEET)
Building Systems and Maintenance	42,520
Other Agencies and Contractors	6,740
Airport Facilities	6,680
Circulation	5,850
Concessions Support	3,800
Restrooms	770
Airline Support Facilities	100
Total Office Tower Space	66,460

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.6.1 Building Systems and Maintenance

Table 2-25 lists the specific building systems and maintenance areas in the Office Tower.

2.3.6.2 Other Agencies and Contractors

Table 2-26 lists the nonairline and non-Airport entities and subcontractors with space in the Office Tower. Note that levels that house no other agency or contractor space were omitted from the table.

2.3.6.3 Airport Support Facilities

Table 2-27 lists the Airport support facilities spaces within the Office Tower. Levels that house no Airport support facilities space were omitted from the table.

2.3.6.4 Circulation

All of the circulation space in the Office Tower is nonpublic nonsecure or nonpublic secure.

2.3.6.5 Concessions

No food and beverage or retail concessionaires are located in the Office Tower; however, concessions support space in the form of offices is located in the Office Tower. Concessions space is discussed in Section 2.3.7.

2.3.6.6 Restrooms

All restrooms in the Office Tower are nonpublic and measure 770 square feet.

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LEGEND

- Concessions/Support Space
- Office Space
- Corridor
- Mechanical/Electrical/Plumbing/Building Systems
- Restroom

SOURCE: AECOM, LLC, December 2013
 PREPARED BY: BROWN & CALDWELL, INC., January 2014



EXHIBIT 2-9

Office Tower Allocation (Level 3)

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DALLAS LOVE FIELD

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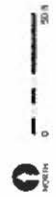
Airport Master Plan Update
Inventory

(2-56)



LEGEND
 Crestation
 Federal Aviation Administration
 Mechanical/Electrical/Pumbing Building Systems
 Storage

SOURCE: Jacobs, LLC, December 2013
 PREPARED BY: Record & Associates, Inc., January 2015



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Table 2-25: Building Systems and Maintenance - Office Tower (in square feet)

BUILDING CATEGORY	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8	TOTAL AREA
Mechanical Room	37,470	390	90	0	290	0	38,240
Mechanical Chase	2,460	290	60	70	40	0	2,920
Elevator Mechanical Room	60	0	0	460	0	0	520
Intermediate Distribution Frame Room	230	160	0	0	0	0	390
Radio Room	260	0	0	0	0	0	260
Electrical Room	40	90	0	0	0	0	130
Janitorial Room	20	20	20	0	0	0	60
Total Building Systems and Maintenance Space - Office Tower	40,540	950	170	530	330	0	42,520

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

Table 2-26: Other Agencies and Contractors Space - Office Tower (in square feet)

BUILDING CATEGORY	LEVEL 3	LEVEL 4	LEVEL 5	TOTAL AREA
Dallas Police Department		6,390		6,390
FAA Weather Room			330	330
ARINC	20			20
Total Other Agencies and Contractors Space - Office Tower	20	6,390	330	6,740

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

Table 2-27: Airport Support Facilities Space - Office Tower (in square feet)

BUILDING CATEGORY	LEVEL 3	LEVEL 4	LEVEL 6	LEVEL 8	TOTAL AREA
Airport Offices	4,010	1,190			5,200
Airport Storage		840	350	290	1,480
Total Airport Support Facilities Space - Office Tower	4,010	2,030	350	290	6,680

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.3.6.7 Airline Support Space

The only airline support space in the Office Tower, measuring 100 square feet, is on the Level 3 roof above the East Concourse area for Southwest Airlines' communications antennas.

2.3.7 CONCESSIONS

The food and beverage, retail, and concessions support spaces in the passenger Terminal facility are only located on the Main Level, the Passenger Level, and on Level 3 of the Office Tower. As concessions space often has a critical role in airport operating budgets and operations, the concessions spaces in the passenger Terminal facility are discussed in this separate section.

Exhibits 2-6 through 2-8 identify the Airport areas that are leased under food and beverage, retail, or concession support agreements.

2.3.7.1 Food and Beverage Concessionaires

Table 2-28 lists the food and beverage concessionaires and their leased space. Note that some concessionaires may have space on multiple levels. These spaces are combined and noted in the table.

2.3.7.2 Retail Concessionaires

Table 2-29 lists the retail concessionaires and their leased space. Note that some concessionaires may be have space on multiple levels. These spaces are combined and noted in the table.

2.3.7.3 Concessions Support

Table 2-30 presents the concessions support space at the Airport.

Table 2-28: Food and Beverage Concessionaire Space

NAME	USE	LEVEL	LEASED AREA (SQUARE FEET)
Cool River (Restaurant)	Full-service Restaurant	Passenger Level	4,310
Chili's Too	Full-service Restaurant	Passenger Level	2,710
Cantina Laredo	Full-service Restaurant	Passenger Level	2,440
Sky Canyon	Full-service Restaurant	Passenger Level	1,750
Dunkin' Donuts	Coffee Kiosk	Passenger Level	1,650
Cru Wine Bar	Quick-service Restaurant with Alcohol	Passenger Level	1,470
Bruegger's Bagels	Quick-service Restaurant	Main Level	1,380
Jason's Deli	Quick-service Restaurant	Passenger Level	1,200
LaMadeleine	Quick-service Restaurant	Passenger Level	1,200
Moe's Southwestern Grill	Full-service Restaurant	Passenger Level	1,060
Chick-fil-A	Quick-service Restaurant	Passenger Level	1,120
Campisi's Pizza	Quick-service Restaurant	Passenger Level	1,110
Manchu Wok	Quick-service Restaurant	Passenger Level	1,110
Whataburger	Quick-service Restaurant	Passenger Level	1,060
Dickey's BBQ Pit	Quick-service Restaurant	Passenger Level	950
Cool River (Kitchen)	Restaurant Kitchen	Passenger Level	860
Starbucks	Coffee Kiosk	Passenger Level	800
Baskin-Robbins	Ice Cream Kiosk	Passenger Level	730
Paciugo Gelato	Quick-service Restaurant	Passenger Level	730
Texpress Gourmet	Quick-service Restaurant	Passenger Level	580
Total Food and Beverage Concessionaire Space			28,220

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

Table 2-29: Retail Concessionaire Space

NAME	USE	LEVEL	LEASED AREA (SQURE FEET)
Hudson News	Newsstand	Passenger Level	1,790
West End News	Newsstand	Passenger Level	1,360
CNN Newsstand	Newsstand	Passenger Level	1,290
D Magazine News	Newsstand	Passenger Level	1,280
Fair Park Texas	Retail	Passenger Level	1,030
Tech on the Go	Retail	Passenger Level	1,000
Desigual	Retail	Passenger Level	910
Travel and Leisure Store	Newsstand	Passenger Level	910
Soybu Bliss	Retail	Passenger Level	900
Creative Kidstuff	Interactive	Passenger Level	790
Billy Bob's Texas	Retail	Passenger Level	690
The Cowboy Store	Retail	Passenger Level	690
Mallasadi Men's Boutique	Retail	Passenger Level	630
Fire CZ	Kiosk	Passenger Level	410
Spectacles	Kiosk	Passenger Level	410
Texas Monthly News	Newsstand	Main Level	310
Advertisement Kiosk	Kiosk	Passenger Level	50
Total Retail Concessionaire Space			14,450

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

Table 2-30: Concessions Support Space

	TOTAL SPACE (SQURE FEET)
Main Level	5,500
Passenger Level	0
Office Tower	3,800
Total Concession Support Space	9,300

NOTE: Numbers are rounded to the nearest 10 square feet.

SOURCE: AirOps, LLC, December 2013.

PREPARED BY: Ricondo & Associates, Inc., February 2014.

2.4 Landside

The landside components of the Airport include parking and Airport access roads. Public parking, employee parking, and other off-Airport parking options, as well as Airport access and Airport roadways, are discussed in this subsection.

2.4.1 PUBLIC PARKING

Two public parking garages (A and B) are provided at the Airport, as well as valet storage and a cell phone lot, all of which are owned and operated by the City. In addition, privately owned remote public parking facilities are available in the vicinity of the Airport. **Exhibit 2-11** shows the locations of these parking areas, which are discussed below.

Exhibit 2-11: On-Airport Parking Facilities and Capacities



SOURCES: Google Earth Pro, October 2013; Ricondo & Associates, Inc., June 2013.
 PREPARED BY: Ricondo & Associates, Inc., June 2013.

2.4.1.1 On-Airport Public Parking

Public parking at the Airport is provided in two locations, Garage A and Garage B. Garage A serves as a short-term premium parking product and Garage B serves as a long-term economy parking product. To make garage parking payment easier, patrons may use TollTag – a cashless tolling service administered by the North Texas Tollway Authority – by entering designated lanes where the appropriate parking rate is deducted from the patron's TollTag account or associated credit card. All public Airport parking facilities are compliant with the Americans with Disabilities Act.

Garage A

Garage A is a structured four-level building with 2,980 parking spaces located across from the Airport Terminal and connected to the Terminal by crosswalks and elevated pedestrian walkways. Garage A also provides dedicated parking spaces for electric vehicles, six charging stations on Level 1, and an additional six charging stations on Level 3. As of August 1, 2014, the maximum daily rate for Garage A was \$17.

Garage B

Garage B is a structured four-level building with 4,000 parking spaces located next to Garage A, but farther from the Terminal. To reduce walk times to and from the Terminal, a 1,500-foot climate-controlled pedestrian corridor connects Garage B with Garage A and the Terminal via 10 moving walkways. This corridor features public art displays. Garage B also provides six charging stations for electric vehicles. As of August 1, 2014, the maximum daily rate for Garage B was \$13.

2.4.1.2 Valet Parking

The City also operates a valet parking service at the Airport. Currently, 69 valet parking spaces are available. As of August 1, 2014, the maximum daily rate for valet parking was \$24. The rate is \$6 for the first hour, up to 2 hours is \$13, from 2 to 3 hours is \$16, and from 3 to 5 hours is \$19, after which the daily maximum rate of \$24 is charged. Drivers of vehicles that are to be valet-parked enter the dropoff area from the upper level curbside roadway prior to the ticketing hall, and enter one of four designated dropoff lanes adjacent to the east side entrance of the ticketing hall.

2.4.1.3 Off-Airport Public Parking

In addition to the two on-Airport parking garages, privately owned off-Airport parking alternatives are available near the Airport. Three privately operated off-Airport parking facilities are located just outside of Airport property. The operators of these off-Airport parking facilities include The Parking Spot, Best Parking, and Thrifty Airport Parking Dallas. All three facilities are located east of Herb Kelleher Way between Tom Braniff Lane and Mockingbird Lane. The three sites occupy a combined area of approximately 21 acres and provide approximately 2,560 parking spaces. Off-Airport parking operators provide independent courtesy shuttles between the Terminal and their respective facilities.

The two largest off-Airport parking facilities are The Parking Spot and Thrifty Airport Parking Dallas. In 2014, the net daily rates at The Parking Spot were \$8.61 for covered parking and \$6.77 for open air parking. The net daily rate at the Thrifty parking facility was \$8.95 per day.

Table 2-31 provides a summary of the capacity of each parking facility and the associated rate structure.

2.4.1.4 Cell Phone Lot

A free-to-use cell phone lot for drivers waiting to pick up arriving passengers is provided off inbound Herb Kelleher Way, just after the National/Alamo/Enterprise rental car facilities. The cell phone lot has 65 marked parking spaces at 90-degree angles on both sides of a dual-direction drive aisle, with a large turning circle at the end of the lot. Lot access and egress are via right turn in/right turn out movements from and to Herb Kelleher Way.

Table 2-31: 2014 Public Parking Supply and Rates

LOCATION	SPACES	RATE STRUCTURE					
		ON AIRPORT					
Garage A	2,980	0 - 0.5 hour	0.5 - 1 hour	1 - 2 hours	2 - 3 hours	3 - 5 hours	5 - 24 hours
		FREE	\$4.00	\$6.00	\$10.00	\$13.00	\$17.00
Garage B	4,000	0 - 0.5 hour	0.5 - 1 hour	1 - 2 hours	2 - 3 hours	3 - 5 hours	5 - 24 hours
		FREE	\$3.00	\$5.00	\$7.00	\$10.00	\$13.00
Valet Parking	69	0 - 1 hour	1 - 2 hours	2 - 3 hours	3 - 5 hours	5 - 24 hours	
		\$8.00	\$13.00	\$16.00	\$19.00	\$24.00	
Subtotal	7,049						
OFF AIRPORT							
	SPACES	BASIC DAILY RATE	TAXES	NET DAILY RATE	PERCENT OF DAILY MAXIMUM GARAGE B PARKING RATE		
The Parking Spot and Best Parking (Covered)	1,835 ^{1/}	\$7.95	8.25%	\$8.61	86.1%		
The Parking Spot (Open Air)	830 ^{2/}	\$6.25	8.25%	\$6.77	67.7%		
Thrifty Airport Parking Dallas	400 ^{3/}	\$5.50	8.25%	\$8.95	89.5%		
Subtotal	3,065						

NOTES:

1/ Counted from Google Earth Pro, August 12, 2013. Spaces were counted by counting rows and assuming a width of 9 feet per space (475 uncovered, 725 covered, 635 on Best Parking site). Parking grouped together due to similar rate structure.

2/ Counted from Google Earth Pro, August 12, 2013.

3/ Approximate based on vehicle count from Google Earth Pro, August 12, 2013.

SOURCES: Google Earth Pro, August 12, 2013; <http://www.dallas-lovefield.com/pdf/ParkingRateChange.pdf> (accessed September 2014); <http://www.dallas-lovefield.com/parking-transportation.html> (accessed September 2014); <http://www.theparkingspot.com/locations/locations.aspx?ID=11> (accessed June 2013); <http://www.parkrideflyusa.com/dal-dallas-airport-parking/thrifty/> (accessed June 2013).

PREPARED BY: Ricondo & Associates, Inc., September 2014.

2.4.2 EMPLOYEE PARKING

Currently, airline employees and employees working in the Terminal park in Garage B, as well as in surface lots near the Terminal, as shown on Exhibit 2-11. Some Airport tenants also provide parking spaces at their respective facilities.

2.4.3 TERMINAL CURBSIDE ALLOCATIONS

Lane configurations and curbside allocations for passenger dropoff and pickup and pedestrian crossings at Dallas Love Field were also inventoried. The inventory of the Terminal curbside discussed herein reflects the final build conditions of the LFMP.

Curbside access to the passenger Terminal is provided via a two-level roadway system. The lower-level curbside roadway is designated for commercial vehicle use only (known as the Ground Transportation curbside roadway), while the upper level curbside roadway is designated for private vehicles picking up arriving passengers and dropping off departing passengers and for taxicabs and limousines that are dropping off passengers.

The upper level (private vehicle) curbside roadway is 795 feet long. The passenger dropoff area begins directly in front of the ticketing hall and continues to the curbside check-in area. After the curbside check-in area, a transitional area serves as an overlap between the check-in and baggage claim areas, and is adjacent to the Terminal Lobby and SSCP. The final section of the upper level roadway is for arriving passenger pickup in front of the baggage claim hall. The upper level roadway has four continuous through lanes in the Terminal area, with a 20-foot-wide stopping lane in front of the ticketing hall, curbside check-in, and baggage claim hall areas, and a typical 12-foot-wide stopping lane in front of the Terminal Lobby. No crosswalks are provided on the upper level roadway, as connection between the Terminal and Garages A and B is provided via an overhead pedestrian walkway.

The lower level (Ground Transportation) curbside roadway is divided into a 920-foot-long inner curbside roadway and a 204-foot-long outer curbside roadway. The inner curbside roadway consists of five well-defined zones: the Dallas Area Rapid Transit (DART) stop, a green zone for hotel/parking shuttle dropoff, a blue zone for rental car shuttle pickup/dropoff, a yellow zone for taxicab loading, and another green zone for hotel/parking shuttle pickup. The inner curbside roadway has two through lanes and a single stopping lane for commercial vehicle loading and unloading. The outer curbside is used for limousine staging in the purple zone and shared ride vans in the orange zone. The outer curbside has a single loading lane and one bypass lane.

A channelized taxicab queuing lane on the left side of Herb Kelleher Way as it approaches the Terminal is provided for approved taxicabs dispatched from the remote taxicab staging area. This remote area is approximately 300 feet long and accommodates 12 to 15 taxicabs waiting to be directed to the designated yellow curbside area to pick up passengers.

The lower level curbside has three pedestrian crosswalks connecting the three main areas of the Terminal building with Garage A. The first crosswalk is in the hotel/parking shuttle dropoff area, connecting to the East Tunnel, which leads to the ticketing hall. The second crosswalk connects the Terminal Lobby via the central tunnel with the outer commercial curbside and Garage A. The third pedestrian crosswalk is adjacent to the baggage claim hall tunnel between the taxicab pickup and hotel/parking shuttle pickup zones and connects with Garage A.

Employee shuttle, charter bus, and group check-in areas are provided outside at the east end of the ticketing hall. Two hundred linear feet are provided for charter bus staging and employee shuttle loading/unloading at the back of the ticketing hall on Aviation Place. This location allows for four to five large charter buses to stage while removing congestion from the Terminal curbside.

Table 2-32 summarizes the curbside allocation length for each assigned zone. **Exhibit 2-12** depicts the curbside zones, corresponding color codes, and linear curb length for each designated zone.

2.4.4 AIRPORT ACCESS AND ON-AIRPORT ROADWAY SYSTEM

Since initiation of the LFMP, several roadway alignments and functions have changed, resulting in new traffic patterns and traffic control devices. Operation of the completed on-Airport roadway system, vehicle circulation, and other Airport-related service areas are described in this subsection. **Exhibit 2-13** provides a map of the areas discussed below.

2.4.4.1 Cedar Springs Road/Herb Kelleher Way

Cedar Springs Road serves as the primary public entrance roadway to the Airport. Cedar Springs Road becomes Herb Kelleher Way northwest of Mockingbird Lane. Herb Kelleher Way is an eight-lane divided roadway from Mockingbird Lane to Tom Braniff Lane, and a six-lane divided roadway from Tom Braniff Lane to the Terminal Loop Road, which begins at Aviation Place. The intersections of Herb Kelleher Way with Tom Braniff Lane and Aviation Place are signalized. The T-intersection of Herb Kelleher Way and Hawes Avenue is unsignalized and stop-controlled only on the Hawes Avenue approach. A dedicated left-turn lane is provided for outbound Airport traffic on Herb Kelleher Way turning left onto Hawes Avenue. The posted speed limit on Herb Kelleher Way is 30 miles per hour in both directions.

2.4.4.2 Terminal Loop Road

The inbound segment of Terminal Loop Road, which begins at Aviation Place, provides access to the Terminal curbsides and Garages A and B. Access to both parking garages is provided via a single-lane left exit from Terminal Loop Road just north of Aviation Place. Terminal Loop Road inbound to the curbside also provides access on the right to valet parking located off the east end of the ticketing hall.

The inbound segment of Terminal Loop Road splits to provide access to the upper and lower level curbside roadways described in Section 2.4.3 above. The speed limit on all inbound and curbside areas of Terminal Loop Road is 20 miles per hour.

The outbound segment of Terminal Loop Road begins where two lanes from the upper level roadway merge with a single lane from the lower level curbside roadway, providing three continuous outbound lanes before the roadway joins additional outbound lanes from the consolidated exit plaza serving both parking garages. Two recirculation roads are provided for vehicles returning to the Terminal, parking garages, or Aviation Place. The first recirculation road diverges from Terminal Loop Road and travels along the south side of Garage B. This roadway provides for vehicles to return to the Terminal area without entering the signalized intersection with Aviation Place. The second recirculation road is located just past Howard Megredy Circle, and provides access from the Terminal curbsides and parking garages to Aviation Place and the Spirit of Flight monument.

Table 2-32: Linear Curbside Length by Zone

CURBSIDE ALLOCATION	LINEAR FEET
Upper Level Curbside	
Check-in/Departures	315
Overlap	162
Baggage Claim/Arrivals	318
Charter and Employee Bus Curb ^{1/}	200
Subtotal	995
Lower Level – Inner Curbside	
Dallas Area Rapid Transit	60
Hotel/Parking Shuttle Dropoff	244
Rental Car Shuttle	187
Taxicab Loading ^{2/}	227
Hotel/Parking Shuttle Pickup	192
Subtotal	910
Lower Level – Outer Curbside	
Limousine Pickup	124
Shared Ride Van Pickup	80
Subtotal	204
Total	2,109

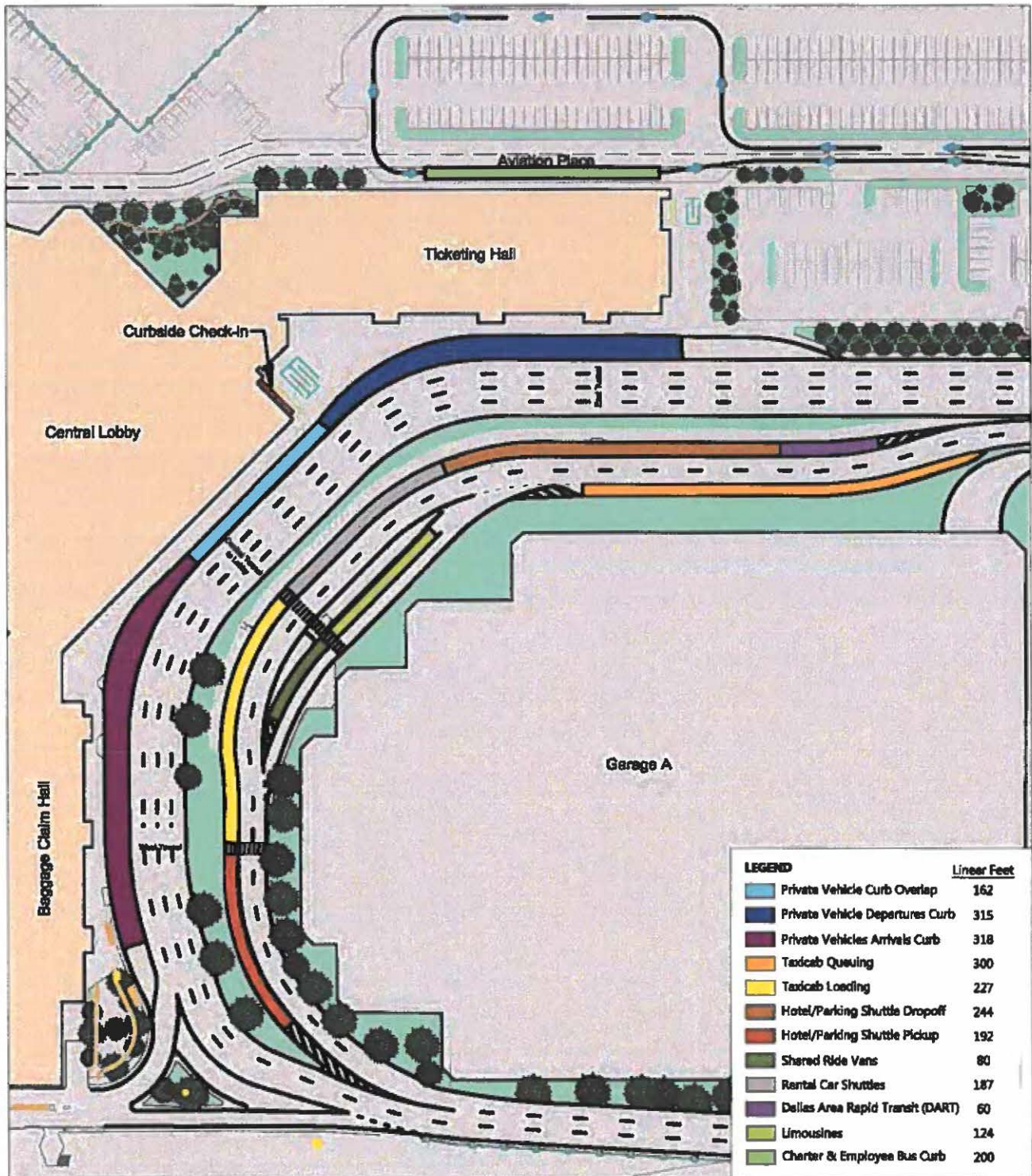
NOTES:

1/ Charter bus staging is provided at the back of the ticketing hall on Aviation Place.

2/ Taxicab queuing is not accounted for in the table as it is not considered a "curbside" function.

SOURCE: Ricondo & Associates, Inc., June 2013.

PREPARED BY: Ricondo & Associates, Inc., June 2013.



SOURCE: Ricondo & Associates, Inc., February 2014.
 PREPARED BY: Ricondo & Associates, Inc., February 2014.

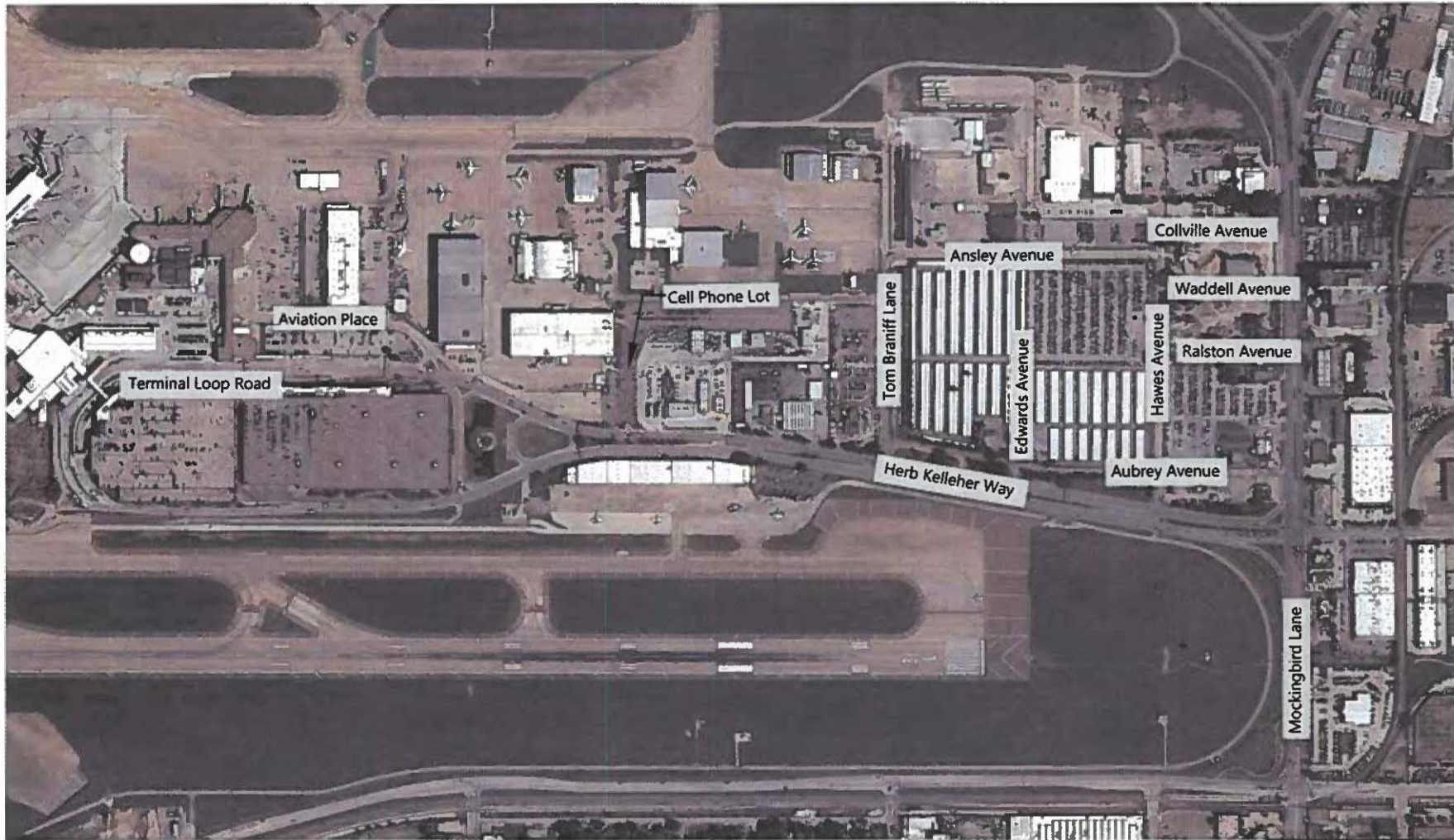
EXHIBIT 2-12



Curbside Allocations

Drawing: N:\Love Field\08 Master Plan Update 2013\02 Demand Capacity Analysis\05 CAO\LANDSIDE SITE PLAN Final_V3.dwg, Layout: Exhibit 2-12, May 18, 2015, 7:00pm

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SOURCES: Google Earth Pro, October 2013; Ricondo & Associates, Inc., February 2014
 PREPARED BY: Ricondo & Associates, Inc., February 2014

EXHIBIT 2-13



On-Airport Terminal Roadways

Drawn: N Love Field08 Master Plan Update 201302 Demand Capacity Analysis05 CAD/Dr Airport_Roads.dwg Layout: On Airport Terminal Roadways, Mar 25, 2015, 4:27pm

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A new signal has been installed on the outbound Terminal Loop Road at the intersection with Conrail Lane to provide access to a controlled airfield gate.

The speed limit on outbound Terminal Loop Road increases to 30 miles per hour after the merge between the upper and lower level curbside areas, and continues at 30 miles per hour onto outbound Herb Kelleher Way.

2.4.4.3 Aviation Place

Aviation Place is a two-lane undivided roadway that provides access to the Airport's air cargo facilities, General Use Building (GUB), FAA ATCT, and employee parking areas between the Terminal and the airside apron area. A signalized intersection with Herb Kelleher Way allows outbound traffic to either cross inbound Herb Kelleher Way to access the outbound roadway or turn right to access the Terminal curbside and parking garages.

2.4.4.4 Local Access Roads

Numerous local access roads east of Herb Kelleher Way and north of Mockingbird Lane provide access to the rental car facilities, off-Airport privately operated parking facilities, taxicab staging area, and other Airport facilities. These roads include Tom Braniff Lane, Hawes Avenue, Collville Avenue, Waddell Avenue, Ralston Avenue, Aubrey Avenue, Ansley Avenue, Edwards Avenue, and Aviation Place (at Tom Braniff Lane).

2.4.5 OTHER GROUND TRANSPORTATION FACILITIES

Other ground transportation facilities considered in this Master Plan Update include the taxicab staging area and rental car facilities, as discussed below.

2.4.5.1 Taxicab Staging Area

The drivers of all taxicabs picking up passengers at the Airport must first report to the taxicab staging area located in a lot on Edwards Avenue off Ansley Avenue. Taxicabs are staged within this lot until they are called to the terminal curbside by a dispatcher when needed. Approximately 2,100 linear feet of taxicab staging space is available at this site to accommodate 120 taxicabs; generally, 400 to 800 linear feet (approximately 23 to 45 taxicabs) are required at this site on a typical day. At the Terminal curbside, a 300-linear-foot taxicab queuing lane is located on the left side of the entrance to the lower level roadway. This queuing lane typically accommodates 12 to 15 taxicabs and was designed to feed 180 linear feet of curbside space, or 10 active taxicab loading spaces at the curb.

2.4.5.2 Rental Car Facilities

Customer counters are available for nine rental car companies in the Terminal area adjacent to the baggage claim area. The rental car ready/return area is located remotely and is accessible to airline passengers via shuttle buses from the inner commercial vehicle curbside roadway. Each rental car company operates individual or shared facilities on Herb Kelleher Way, ranging from 0.5 to 1.0 mile from the Terminal area. In total, an estimated 16 acres at the Airport are occupied by the rental car companies.

2.5 Airport Tenant Facilities

Tenant facilities at the Airport are shown on **Exhibit 2-14**. Various FBO, fueling, corporate tenant, and support facilities are located within the perimeter fence delimiting Airport property. Support facilities include aircraft maintenance facilities, air cargo facilities, and other Airport support facilities.

Airport tenants other than airlines are primarily businesses and government agencies that provide a full range of services to meet the operational and safety needs of scheduled commercial, private, and general aviation aircraft operators. The tenants are grouped into the following categories: FBOs, aircraft maintenance, air cargo, and other Airport tenants, such as the Frontiers of Flight Museum and rental car companies. See **Appendix E** for a list of Airport tenants by building number, street address, description of the facilities, and other general information.

2.5.1 FIXED BASE OPERATORS

Fixed base operators are business entities that offer general aviation services, such as aircraft rentals, aircraft charters, parking, hangars, refueling, flight instruction, and light maintenance, at public-use airports. Of the five FBOs located at the Airport. They are well equipped to accommodate needs for first-class amenities, such as private meeting rooms, restaurants, rental cars, and limousine services. The facilities for the five FBOs currently located at the Airport are shown on **Exhibit 2-15**. The FBOs are as follows:

- Landmark Aviation
- Business Jet Center
- Jet Aviation
- Signature Flight Support
- Textar Aviation

Most of the general aviation facilities are located on the northeast side of the Airport along Lemmon Avenue. Associated Air Center-Landmark Aviation facilities include a Terminal building along George Coker Circle, a fuel farm, and two hangars. Additional facilities include a hangar and storage facility, located along Lemmon Avenue, adjacent to the Frontiers of Flight Museum. Business Jet Center facilities are located on the northwest side of the Airport and include 11 hangars, an office building, a fuel farm, and a Terminal building. Jet Aviation is located along Herb Kelleher Way.

MAY 2015

DALLAS LOVE FIELD



- LEGEND**
- Airport Buildings
 - Airport Property Line
 - ① Business Jet Center
 - ② Raytheon Aircraft Services
 - ③ Signature Flight Support
 - ④ Gulfstream Aerospace Services Corporation
 - ⑤ Bombardier Aerospace Services
 - ⑥ Associated Air Center - Landmark Aviation
 - ⑦ Dallas Aerospace
 - ⑧ U.S. Customs and Border Protection
 - ⑨ Dufford Fueling
 - ⑩ Associated Air Center
 - ⑪ Frontier of Flight Museum
 - ⑫ Alamo Rent A Car
 - ⑬ Hertz Rent A Car
 - ⑭ National Car Rental Service Center
 - ⑮ Enterprise Rent A Car
 - ⑯ Tempy Industries
 - ⑰ Learjet LP
 - ⑱ Holytombe Corporation
 - ⑲ Southwest Airlines Cargo Building
 - ⑳ Jet Aviation
 - ㉑ Avis Rent A Car
 - ㉒ Allard Fuel Farm
 - ㉓ Reeves Street, LLC
 - ㉔ Southwest Airlines Building
 - ㉕ Southwest Airlines Headquarters
 - ㉖ Southwest Airlines Maintenance
 - ㉗ M/I Development Company
 - ㉘ Fictax Aviation

SOURCES: Imagery/Building Inventory: Google Earth Pro 2011; Dallas Love Field Airport Layout Plan: SCF, Revised & Amended, Inc. April 2014; reprinted in: Ricardo & Associates, Inc., April 2011.



Airport Tenant Facilities

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MAY 2015

DALLAS LOVE FIELD



- LEGEND**
- Landmark Aviation
 - Business Jet Center
 - Air Aviation
 - Signature Flight Support
 - Fixed Aviation
 - Other Airport Buildings
 - Airport Property Line



EXHIBIT 2-15

Fixed Base Operator Facilities

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The Signature Flight Support facilities include 18 hangars, fuel farms, and Terminal buildings along Lemmon Avenue. The Dalfort Fueling facility is part of Signature Flight Support and is located on the western side of Runway 31R and is served by Taxiway A. The facility can be accessed via Lemmon Avenue. Jet Aviation facilities are located southwest of Herb Kelleher Way and include a hangar, a fuel farm, and a Terminal building. Textar Aviation is the sole FBO on the northwest side of airfield, adjacent to Runway 13R. It is served by Taxiway C on the airside and by a road accessible via Love Field Drive on the landside.

2.5.2 CORPORATE HANGAR FACILITIES

Corporate aviation facilities at the Airport are used to store aircraft on ramp areas and in hangars when they are not being utilized. These facilities typically do not allow for on-site fueling facilities or heavy maintenance, although some light maintenance can be performed. Four companies operate corporate aviation facilities:

- Trinity Industries
- Reeves Street, LLC
- MLT Development Company
- Holly Frontier Aviation

The corporate tenants are located south and east of the Airfield. Two tenants are located between the 31R and 31L thresholds, south of the terminal area. Trinity Industries can be accessed via Tom Braniff Drive and Holly Frontier Aviation can be accessed via Aviation Place. Two tenants are located on the northwest side of the Airport along the property line east of the Runway 13R threshold and southwest of the 13R threshold, adjacent to the Allied fuel farm. The Reeves Street LLC hangar can be accessed from Brookfield Avenue and MLT Development Company Hangars are located along Weiss Street. **Exhibit 2-16** depicts the corporate aviation tenants currently operating at the Airport.

2.5.3 AIRCRAFT MAINTENANCE

Maintenance, Repair, and Overhaul (MRO) Facilities

Typical MRO operations include a mix of light and heavy aircraft maintenance operations. These functions may include airframe, engine, aircraft fuselage repair and inspections. The Airport also houses airport tenants completing aircraft interior finish-out work within their leaseholds. Additionally, some MRO tenants perform avionics testing and repair work in addition to maintenance functions within their leaseholds. MRO facilities present at the Airport include:

- Raytheon Aircraft Services
- Bombardier Aerospace Services
- Associated Air Center
- Gulfstream Aerospace
- Learjet, Inc.

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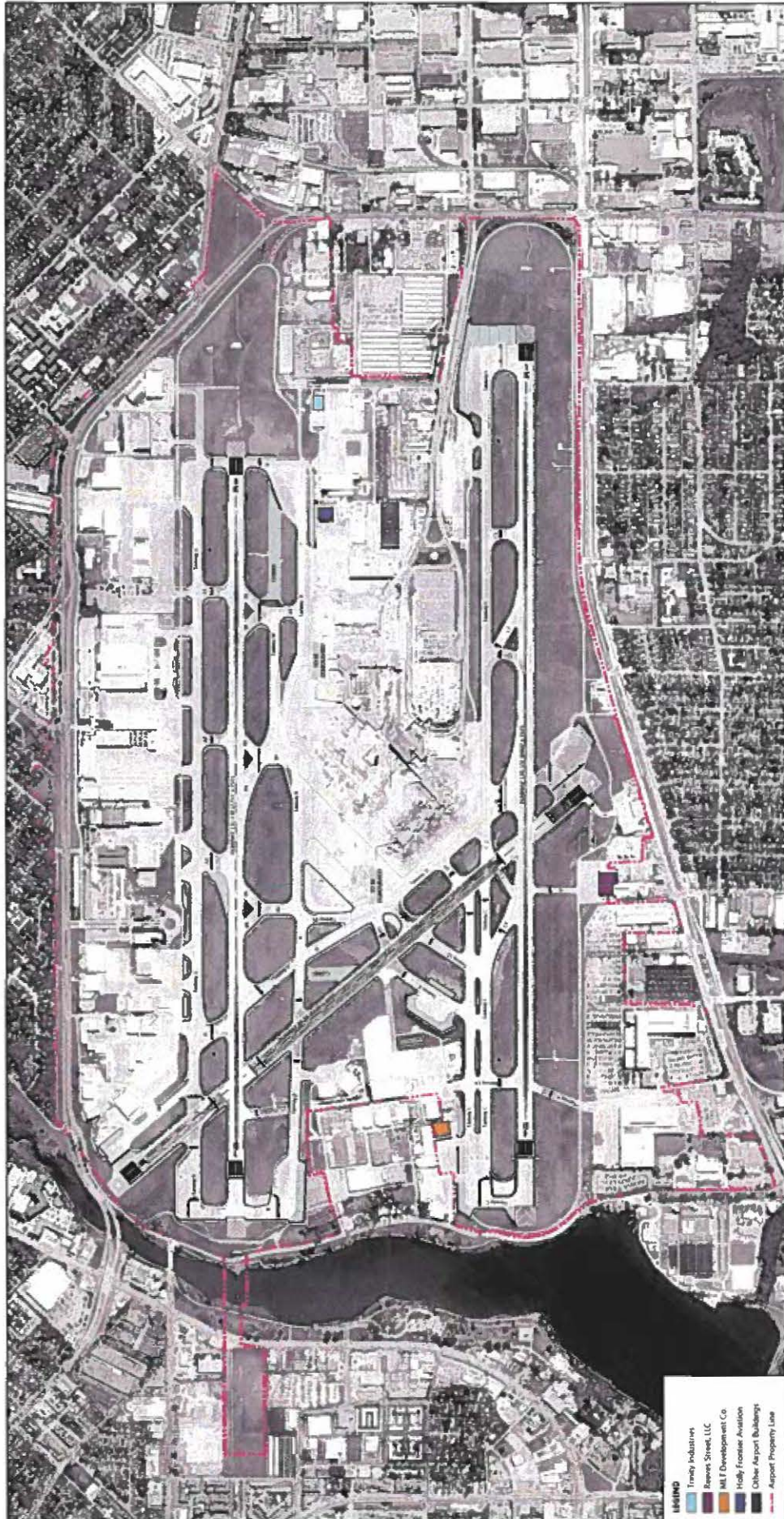


EXHIBIT 2.15

181354
Corporate Aviation Facilities



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Most MRO facilities are located along Lemmon Avenue in the northeast quadrant of the Airport, east of Runway 13L-31R. Raytheon Aircraft Services and Associated Air Center facilities can be accessed from an entrance road adjacent to Lemmon Avenue while Gulfstream Aerospace and one of Bombardier Aerospace Services hangars can be accessed from George Cocker Road. Additional MRO facilities are located southeast and west of the Runway 31R threshold adjacent to the terminal area and Flight Museum. Two Associated Air Center buildings can be accessed from Lemmon Avenue. Gulfstream Aerospace and an additional Bombardier Aerospace Services hangar can be accessed from Tom Braniff Drive; Learjet Inc., hangars can be accessed via Aviation Place.

Southwest Airlines

The Southwest Airlines maintenance hangar is located in Buildings D01 and D02. Buildings D01 and D02 consist of approximately 304,000 square feet. Approximately 330,000 square feet are available for aircraft parking. Southwest Airlines also stores ground support equipment (GSE) and performs maintenance functions in the GUB, with approximately 55,000 square feet dedicated to these activities. The locations of the Southwest Airlines maintenance hangar and MRO facilities are depicted on **Exhibit 2-17**.

2.5.4 AIR CARGO

Southwest Airlines is the sole cargo operator at the Airport. Its cargo facility, located at the GUB, encompasses approximately 55,000 square feet, with a cargo area for public air freight shipping, a provisioning area for on-board food and beverage service, and a GSE area to serve equipment other than aircraft for Southwest Airlines. Surface access is provided via Aviation Place. The location of the GUB is illustrated on **Exhibit 2-18**.

2.5.5 OTHER AIRPORT TENANTS

2.5.5.1 Frontiers of Flight Museum

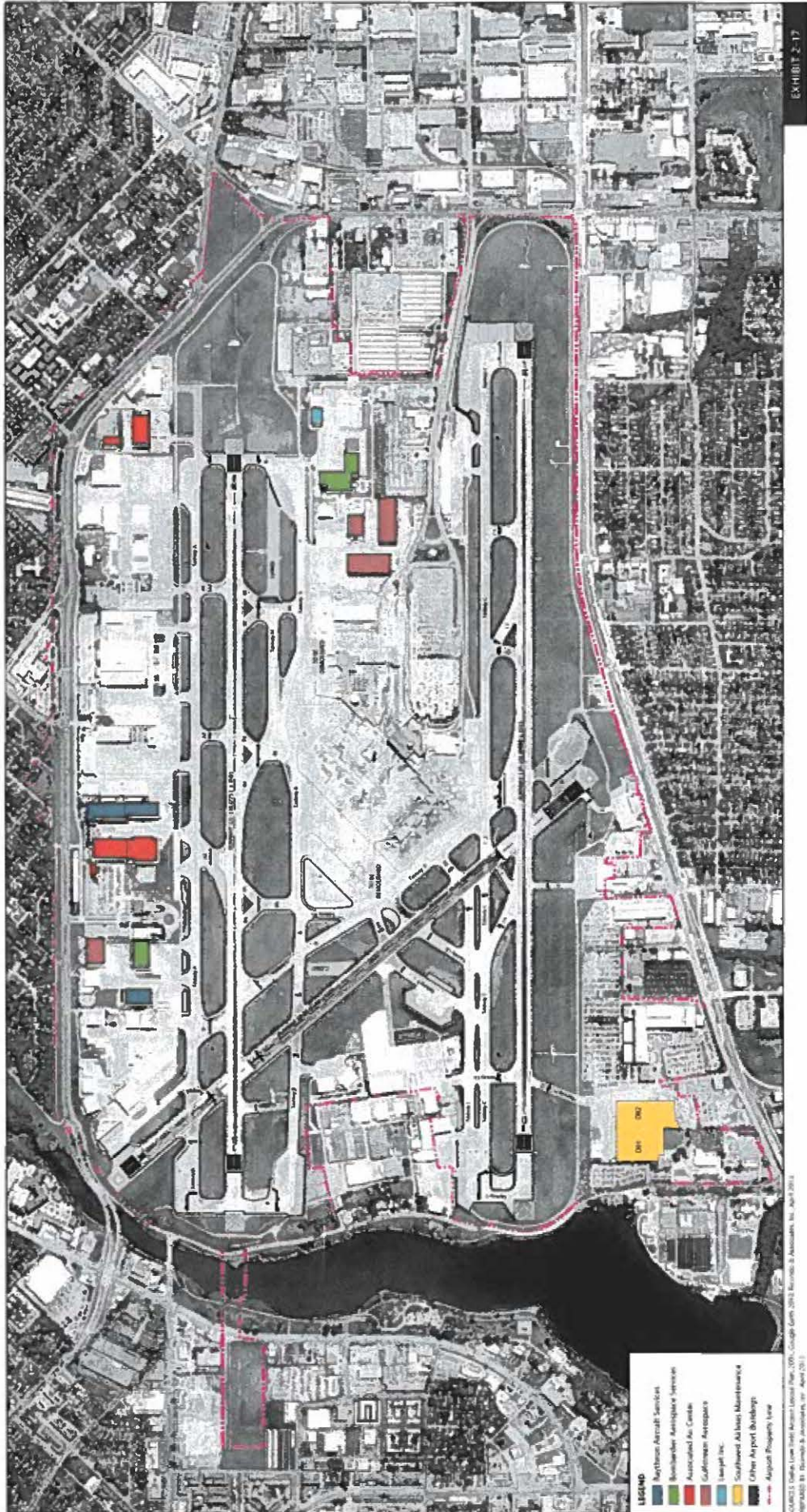
The Frontiers of Flight Museum is located on 6 acres of land at the southeastern corner of the Airport on Lemmon Avenue. The 100,000-square-foot museum opened in June 2004, and houses several aviation and aerospace-related exhibits. The museum also contains a 200-seat auditorium, dedicated classrooms and conference rooms, a children's discovery area, and two climate-controlled hangars for event rentals.

The northern portion of the structure integrates the original foundation and framework of the historic Mustang Aviation hangar, an aircraft service facility built in the 1940s. In addition, 370 vehicle parking spaces are available at the facility.

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MAY 2015

DALLAS LOVE FIELD



Southwest Airlines Maintenance Hangar and MRO Facilities

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MAY 2015

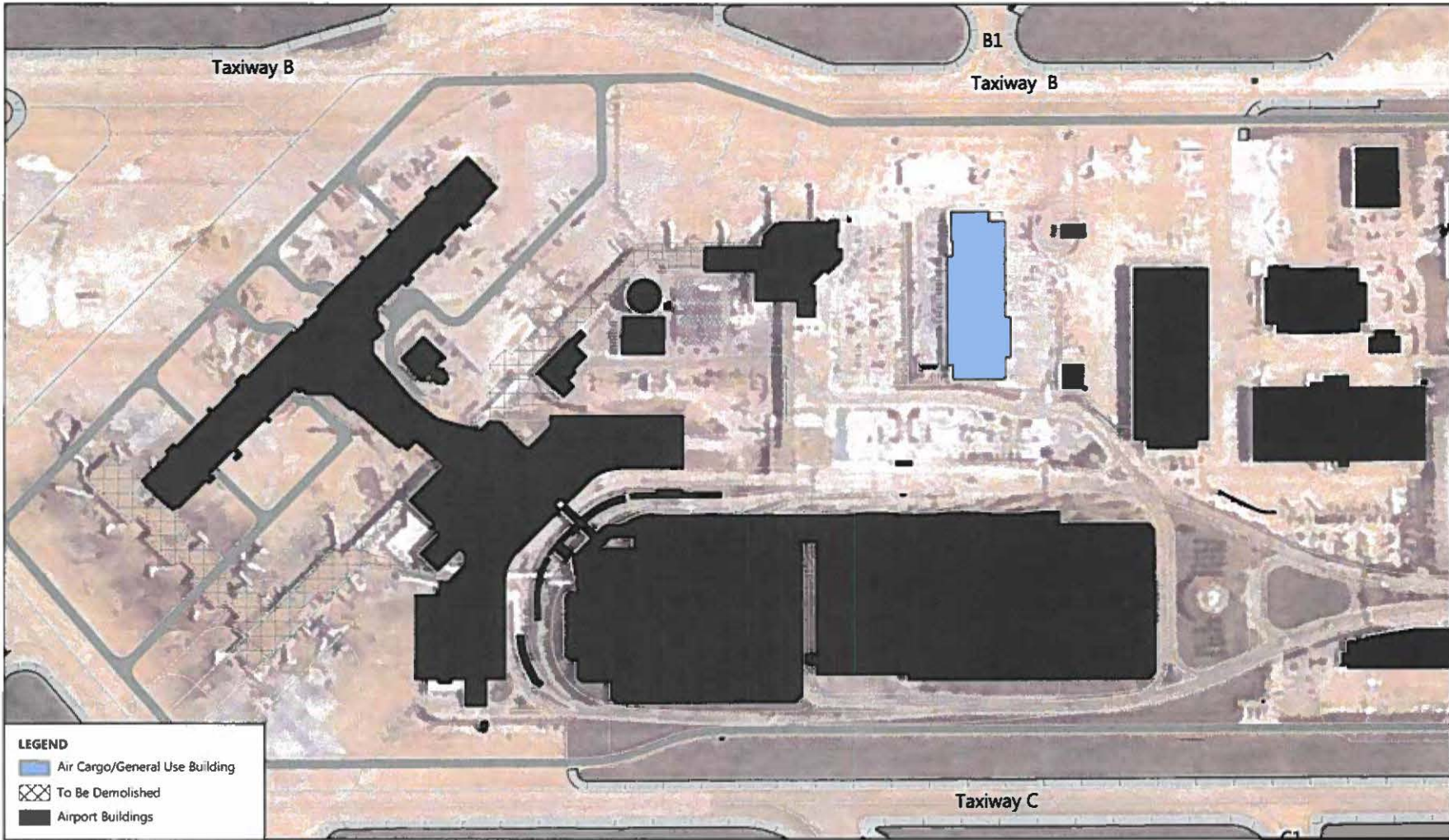
DALLAS LOVE FIELD

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Airport Master Plan Update
Inventory

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181354



SOURCES: Google Earth Pro, 2011; Dallas Love Field Airport Layout Plan, 2001, Ricardo & Associates, Inc., February 2014
 PREPARED BY: Ricardo & Associates, Inc., February 2014

EXHIBIT 2-18



Southwest Airlines Cargo/General Use Hangar

Drawing: P:\Dallas Airport System\On-Call Planning\2012-2014\07 Master Plan\7.2 Inventory\Draw Collection\CAD\Ex2 14 2-17_AirCargo_ConnctUseBuilding_v2.dwg, Linout: 2-17_Air Cargo Exhibit, May 21, 2015 10:57am

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2.5.5.2 Rental Car Companies

Nine companies have rental car facilities on Airport property. They are Advantage Rent A Car, Alamo Rent A Car, Avis Rent A Car System, Budget Rent A Car System, Dollar Rent A Car, Enterprise Rent-A-Car, Hertz Rent a Car, National Car Rental, and Thrifty Car Rental. Advantage, Alamo, Avis, Budget, Enterprise, Hertz, and National operate along the northeast side of Herb Kelleher Way, southeast of the Terminal. Dollar and Thrifty operate on the northwest side of West Mockingbird Lane, northeast of Herb Kelleher Way, southeast of the Terminal. Each company's leasehold includes a rental car ready/return area, vehicle storage parking, employee parking, fueling facilities, wash bays, light maintenance bays, administrative area, and vehicle stacking/staging spaces. With the exception of Alamo, all of the rental car companies maintain counter space in the Terminal. All of the companies transport their customers between the Terminal building and their facilities via courtesy shuttle buses.

2.6 Airport Support Facilities

Airport facilities that provide services to the Airport Terminal and associated operations include an aircraft rescue and fire fighting (ARFF) station, Airport maintenance facilities, and ground and airport traffic control towers.

2.6.1 AIRCRAFT RESCUE AND FIRE FIGHTING

The ARFF station (Fire Station #21) is located west of Runway 13R. The station is sized to meet the requirements of Title 14, Code of Federal Regulations (CFR) Part 139.315, "Aircraft rescue and firefighting: Index determination," Index C aircraft operations. The ARFF equipment are operated and maintained by the Dallas Fire Department. The station has four bays, and one fire engine can be maneuvered to the midpoint of the Airport in less than 3 minutes, thus meeting the FAA-mandated 3-minute response time. The equipment used at Fire Station #21 consists of one Rosenbauer Panther 6x6 and three Oshkosh TI-3000s, which include reserve ARFF apparatus. Three vehicles are based at the station for incident/accident response. **Table 2-33** lists the ARFF equipment at DAL.

2.6.2 AIRPORT MAINTENANCE FACILITIES

The City's Airport maintenance facilities are located in Buildings C13 and C14 off Hawes Avenue, as depicted on **Exhibit 2-19**. The facilities encompass approximately 204,000 square feet and are primarily used for repairing passenger and service vehicles. Activities include light repairs, such as oil changes, lubrication, and tire changes. Other activities include the repair and maintenance of larger equipment, such as snow removal equipment. Other areas on the Airport are dedicated to parts storage, office and administration, locker rooms, and training rooms.

In addition to the facilities described above, many maintenance and storage functions are performed in the Basement Level of the Main Terminal. There are no current plans to expand or relocate Airport maintenance facilities/functions.

Table 2-33: Aircraft Rescue and Fire Fighting Response Capabilities

CALL SIGN	VEHICLE TYPE	MODEL YEAR	MODEL	CONDITION	PERSONS ASSIGNED	RESPONSE TIME	GALLONS OF WATER	GALLONS OF AFFF ^{1/}
RED 1	Twin Agent ^{2/}	2011	Rosenbauer Panther 6x6	Excellent	3	Less than 3 minutes	3,000	380 ^{3/}
RED 2	Twin Agent	1999	Oshkosh T3000	Fair	2	Less than 2 minutes	3,000	420
RED 3	Twin Agent	2001	Oshkosh T3000	Fair	2	Less than 2 minutes	3,000	420
RED 42	Twin Agent	1999	Oshkosh T3000	Fair	0	Less than 3 minutes	3,000	420

NOTES:

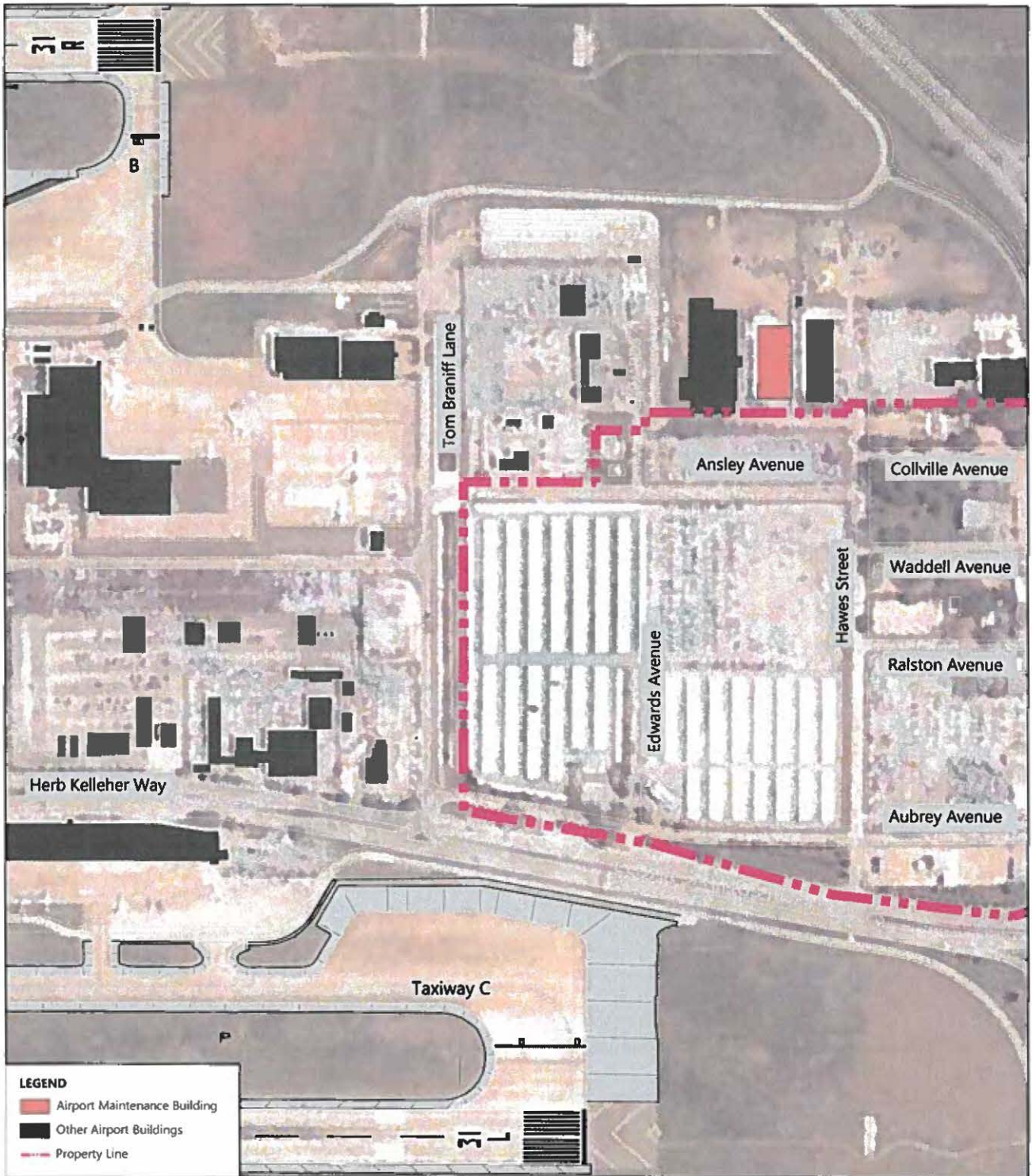
1/ AFFF = Aqueous Film Forming Foam, which is used to extinguish fires.

2/ Twin-agent refers to the fire extinguishing system, which can be configured to be used with a dry chemical agent and AFFF, or both.

3/ Contains 3 percent of foam concentrate

SOURCES: City of Dalles, *Dallas Love Field, Airport Certification Manual*, October 2013, Ricondo & Associates, Inc., March 2013.

PREPARED BY: Ricondo & Associates, Inc., October 2013.



SOURCES: Google Earth Pro, 2011, Dallas Love Field Airport Layout Plan, 2001, Ricondo & Associates, Inc., February 2014.
PREPARED BY: Ricondo & Associates, Inc., February 2014

EXHIBIT 2-19



Airport Maintenance Facilities

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2.6.3 CONTROL TOWERS

An ATCT and a ground control tower are located at the Airport.

2.6.3.1 Airport Traffic Control Tower

The FAA ATCT is located central to the airfield adjacent to the Main Terminal building. The tower is 136 feet high at the line of sight. FAA ATCT personnel are responsible for clearing pilots to take off or land and providing ground clearances to taxiing aircraft operating within the aircraft movement area. Additionally, FAA ATCT personnel also provide separation between departing and arriving aircraft, and transfer/receive control of aircraft to and from the TRACON facilities.

The FAA ATCT encompasses the tower and the adjacent base building. The tower consists of seven levels, which mostly house the elevator shaft and equipment associated with ATCT functions. The tower cab is located on the uppermost level, and access to the main tower cab is provided via a flight of stairs. Additionally, a small area is allocated for a breakroom and restrooms on this level.

The base building consists of a large breakroom, restrooms, and administrative offices for technical operations staff associated with maintenance of the ATCT.⁶

2.6.3.2 Ground Control Towers

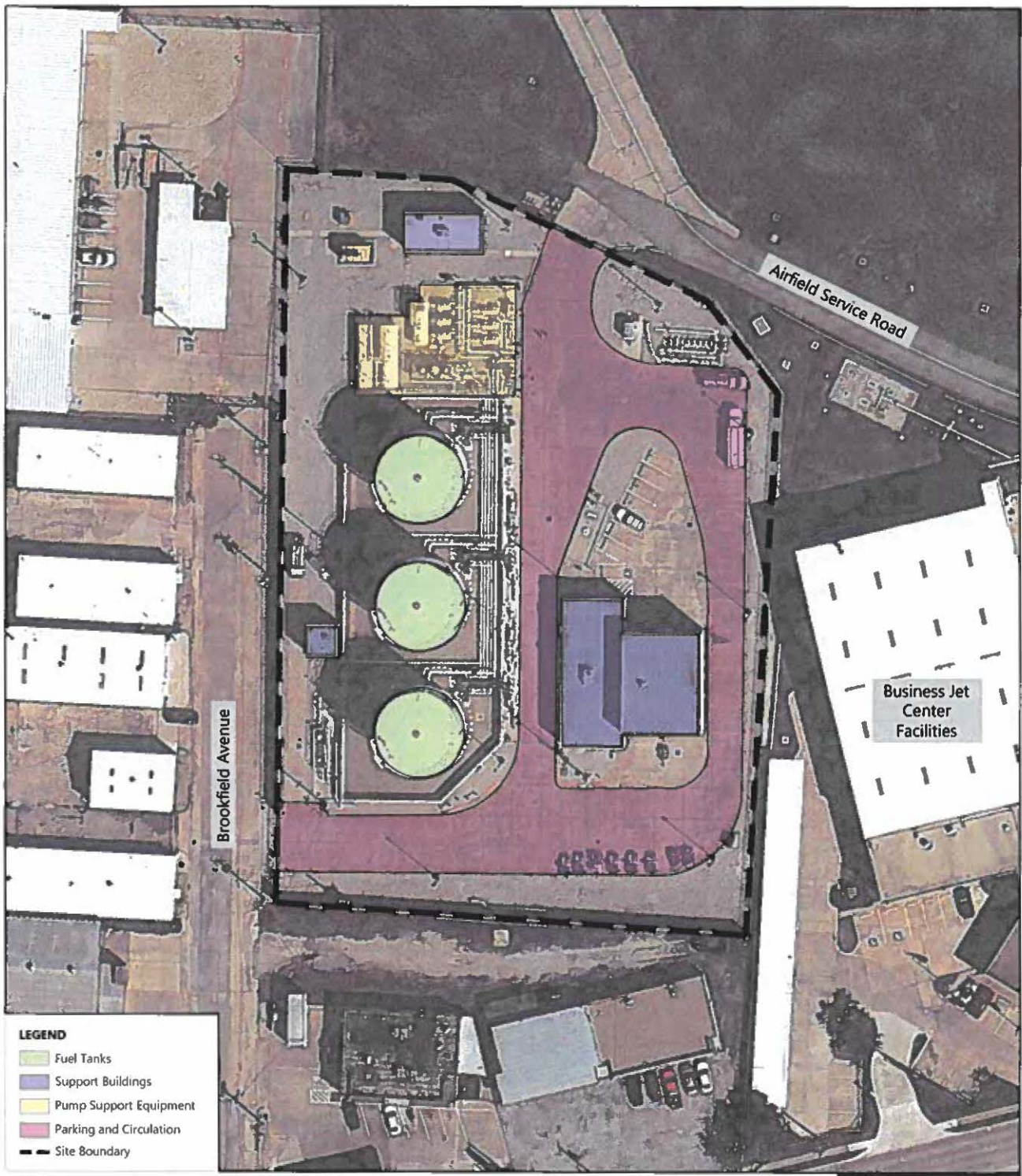
At one point, there were two ground control towers located at the East and West Concourses of the former Airport Terminal Building. The East Concourse tower was demolished as part of the LFMP. The West Concourse ground control tower is located central to the new Main Terminal Lobby. It is currently being retrofitted. It should be noted that the tower itself begins on the fifth level. The levels below are considered offices and spaces supplemental to the Main Terminal Lobby.

- Fifth Level – FAA Weather room, various mechanical spaces
- Sixth Level – Department of Aviation storage, restrooms, mechanical rooms, etc.
- Seventh Level – Miscellaneous mechanical spaces
- Eighth Level – Department of Aviation storage

2.6.4 FUEL FARM

The Allied Fuel Farm is located near the intersection of Brookfield Avenue and Denton Drive, in the southwest area of the Airport, as depicted on **Exhibit 2-20**. The existing aircraft hydrant fueling system was built in 1957 and is owned by the City of Dallas, leased to Southwest Airlines, and operated by Allied Aviation (formerly Ogden Aviation). Fuel is delivered to the Airport via two pipelines by Exxon and Equilon. The Exxon system operates on a 10-day cycle and provides fuel through a 4-inch line at a rate of 240 gallons per minute (gpm). The Equilon system operates on a 7-day cycle and provides fuel through a 6-inch line at a rate of 540 gpm. The fuel farm also has the capability of receiving fuel via transport trucks at a single loading position.

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SOURCE: Dallas Love Field Airport Engineering Department, January 2014, Google Earth Pro, October 2013
PREPARED BY: Ricondo & Associates, Inc. January 2014

EXHIBIT 2-20



Allied Fuel Farm

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Fuel is stored in 18 50,000-gallon underground storage tanks (USTs). As the result of tank configuration and fuel level limits, the net fuel capacity of each tank is actually 39,000 gallons. Therefore, the total usable fuel storage capacity is 702,000 gallons. Of the 18 tanks, 4 are dedicated to fuel receipt, while the remaining 14 serve the hydrant system.

All USTs have internal floating suction arms, cathodic protection, high-level controls, inventory monitoring, and a level alarm system. Currently, the daily requirement for jet fuel at DAL is approximately 200,000 gallons; therefore, a 3.5-day fuel reserve is available at the Airport.

The distribution system that connects the storage facility to the hydrant system consists of eight individual lines: two 10-inch lines, four 8-inch lines, and two 6-inch lines. The pipeline is welded carbon steel, externally coated and cathodically protected. Three fuel manifolds connect the hydrant system to selected distribution supply lines. Only two 10-inch lines and one 8-inch line are in operation.

A new fuel hydrant system was installed as part of the LFMP. The hydrant system is a 14-inch loop around the Concourse that includes isolation valve pits, high-point vent pits, low-point drain pits, multiple hydrant pits at each aircraft gate position, and an emergency shutoff system.

2.7 Utility Infrastructure

Five utility infrastructure systems serve Dallas Love Field. Utility infrastructure information was obtained through review and consultation with Airport staff and is listed with current service providers in **Table 2-34**. **Exhibits 2-21** through **2-25** present the utility line information that was provided by the Department of Aviation staff. In addition, an *Electrical Systems Inventory and Conditions Assessment* was prepared Parsons Brinkerhoff in 2014.

Table 2-34: Utility Service Providers

UTILITY TYPE	SERVICE PROVIDER
Electricity	TXU Energy
Water	City of Dallas
Communications	City of Dallas, Information Technology Department and AT&T
Gas	Atmos Energy
Sanitary Sewer	City of Dallas, Water Utilities

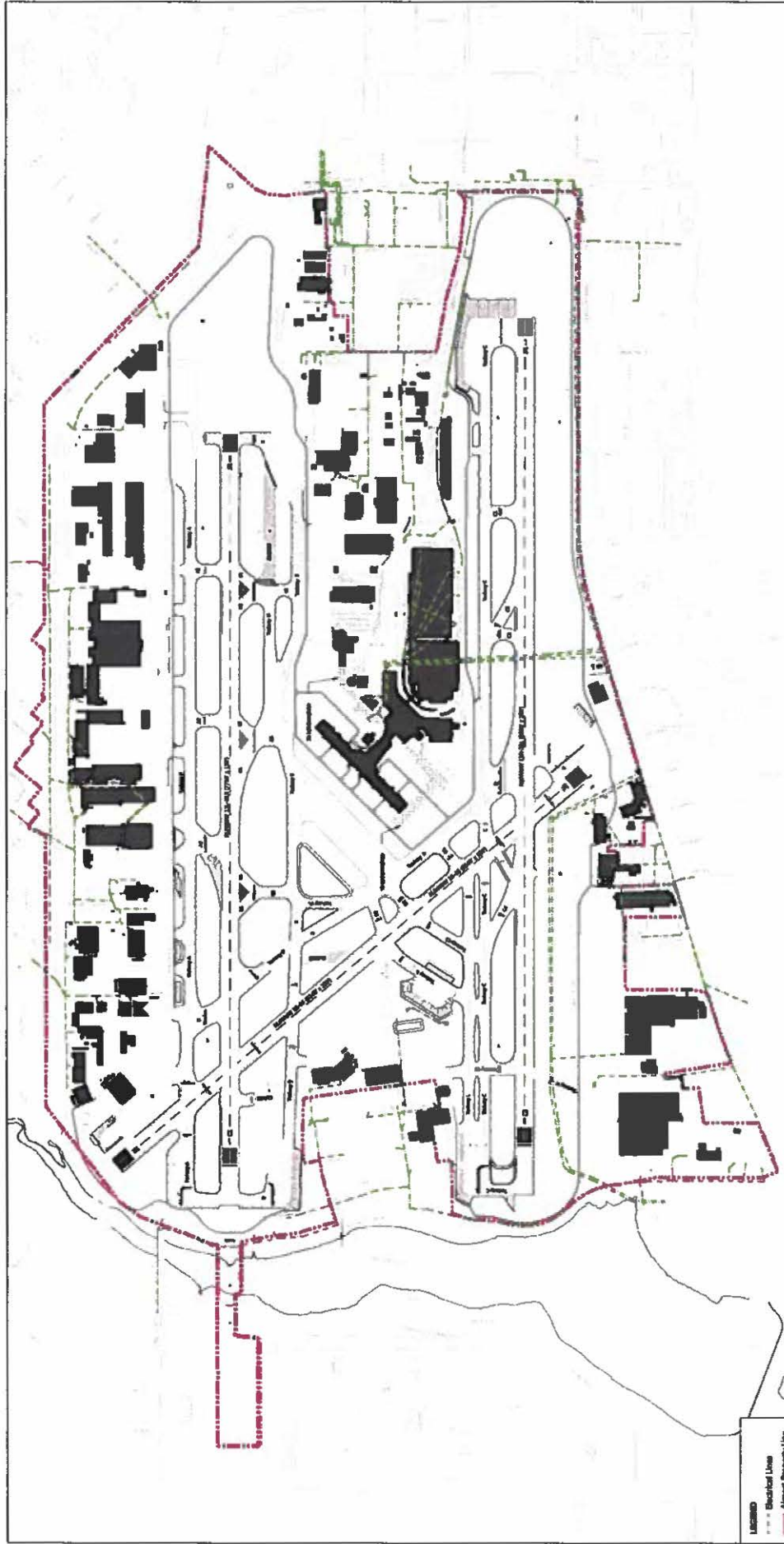
SOURCES: City of Dallas, Department of Aviation, June 2013; Ricondo & Associates, Inc., July 2013.

PREPARED BY: Ricondo & Associates, Inc., July 2013.

Nineteen separate outfall locations (basins) have been identified at the Airport. Of the 19 basins, 7 are connected to the City of Dallas Municipal Separate Storm Sewer Systems and 12 are connected to Bachman Lake. A comprehensive *Dallas Love Field Stormwater Drainage Master Plan (SDMP)* was prepared by CDM Smith in August 2012, following a review and analysis of the stormwater system at the Airport. The SDMP addressed existing flooding issues at the Airport, including identification and development of future improvements to address stormwater management concerns. **Appendix F** depicts the existing (and planned) drainage systems at the Airport, as presented in the SDMP.

MAY 2015

DALLAS LOVE FIELD



LEGEND
 - - - - - Electrical Lines
 - - - - - Airport Property Line

SOURCE: City of Dallas Aviation Department, Dallas Love Field Airport Layout Plan, 2003, Modified by Associates, Inc. July 2014.
 PREPARED BY: Richards & Associates, Inc. Aug 2014.



EXHIBIT 2-2A

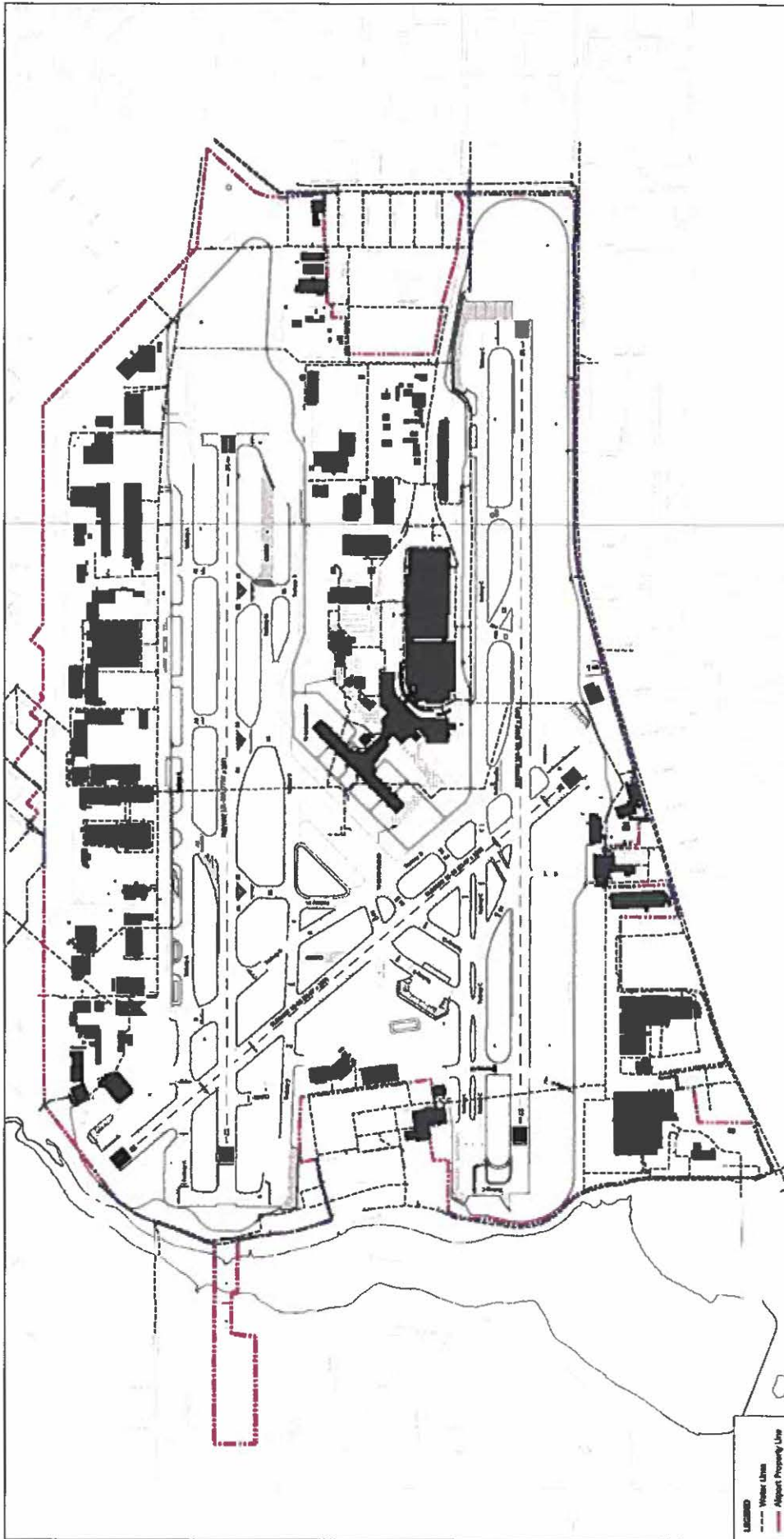
Electrical Systems

Airport Master Plan Update Inventory

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MAY 2015

DALLAS LOVE FIELD



- LEGEND**
- Water Lines
 - Airport Property Line



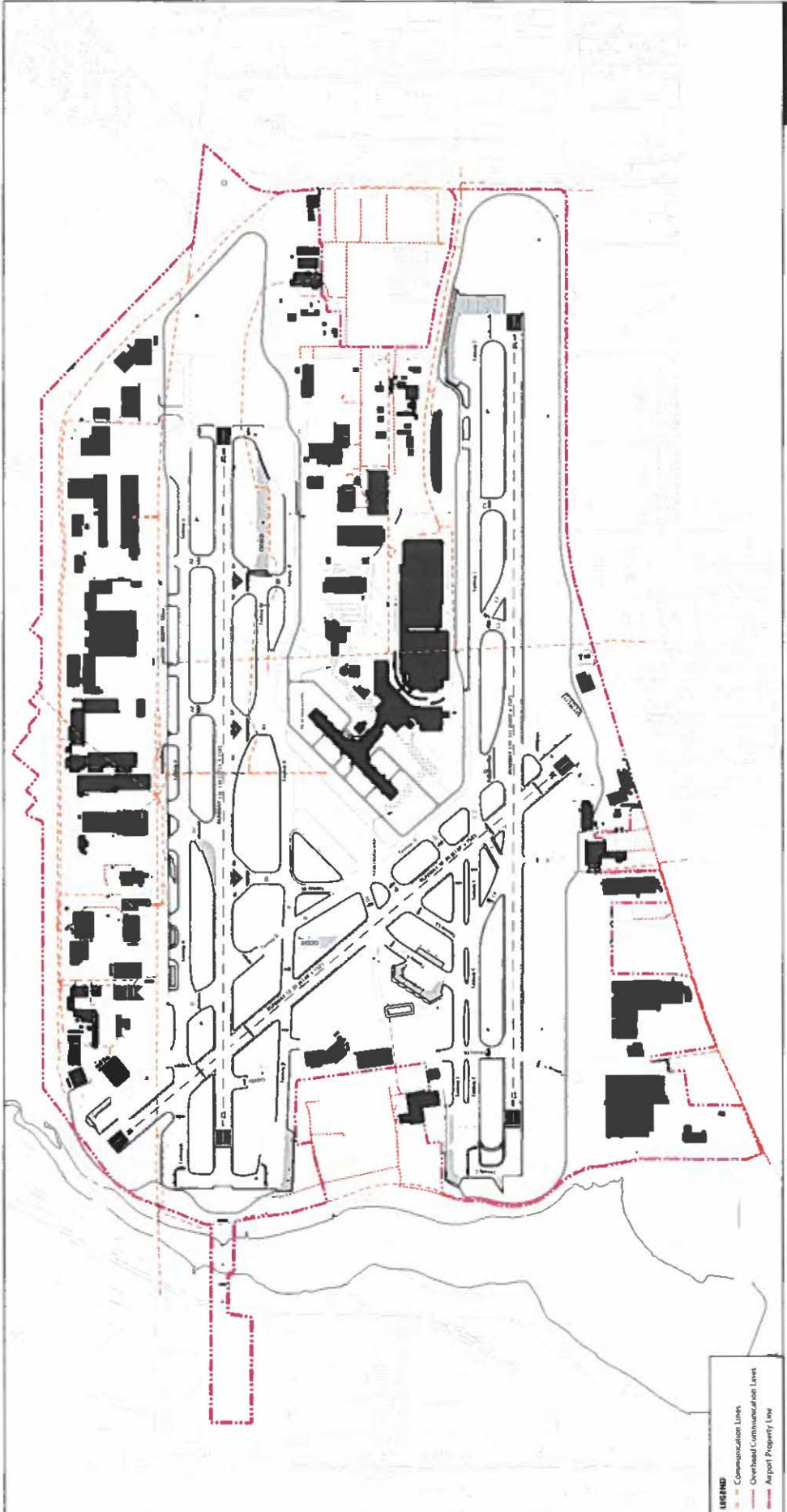
SOURCE: City of Dallas Aviation Department, Dallas Love Field Airport Layout Plan, 2005, Swinick & Associates, Inc., May 2005.
REVISED BY: Swinick & Associates, Inc., May 2015.

EXHIBIT 2-22

Water Systems

Airport Master Plan Update Inventory

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LEGEND

- Communication Lines
- - - Overhead Communication Lines
- Airport Property Line

SOURCES: City of Dallas Aviation Department, Dallas Love Field Airport Layout Plan, 2011; Bureau & Associates, Inc., May 2013; prepared by Ricardo & Associates, Inc., May 2013.



EXHIBIT 2.23

Communication Systems

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MAY 2015

DALLAS LOVE FIELD

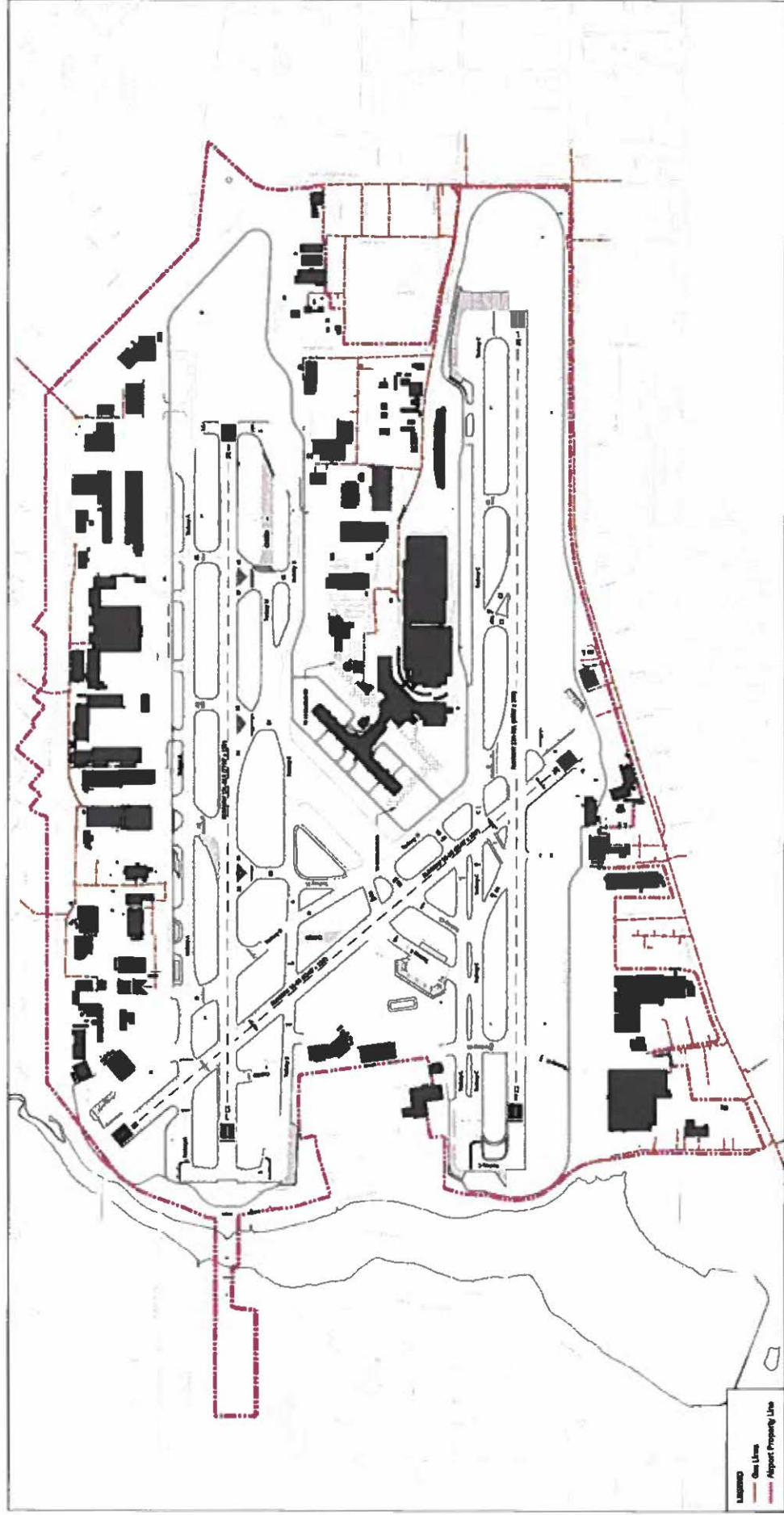


EXHIBIT 2-24

Gas Systems

LEGEND

- Gas Lines
- Airport Propane Line

0 1,000 ft

NORTH

SOURCE: City of Dallas Aviation Department, Dallas Love Field Airport Layout Plan, 2010; Records & Assessments, Inc., May 2013.
 PREPARED BY: RECORDS & ASSESSMENTS, INC., May 2015.

Airport Master Plan Update
 Inventory

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EXHIBIT 2-25

Sanitary Sewer Systems

LEGEND
 — Sanitary Sewer Lines
 - - - Airport Property Line
 - - - All other Property Line

SOURCES: City of Dallas, Aviation Department, Dallas Love Field Airport Layout Plan, 2011; Roberts & Associates, Inc., May 2013
 PREPARED BY: Roberts & Associates, Inc., May 2013



Airport Master Plan Update
 Inventory

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2.8 Land Uses

2.8.1 ON-AIRPORT LAND USES

The Airport is situated on 1,256 acres of land approximately 4 miles north-northwest of downtown Dallas and is the only commercial service airport within the Dallas city limits. As previously mentioned, airfield facilities consist of two parallel runways (Runways 13R-31L and 13L-31R) 8,800 feet and 7,752 feet long, respectively, and one crosswind runway (Runway 18-36) 6,147 feet long, which is currently used as a taxiway. Airfield facilities also include associated taxiways and support facilities, including the ATCT, the ARFF station, and GA facilities. The Airport can be divided into the following land areas:

- **Central Terminal Area:** The area between Runways 13R-31L and 13L-31R primarily accommodates the Airport Terminal building and aircraft gates along with associated commercial aviation facilities. Two large parking garages are located adjacent to the Terminal at the center of the Herb Kelleher Way Terminal loop.
- **Southeast Central Area:** The area southeast of the Central Terminal Area between Runways 13R-31L and 13L-31R accommodates Airport-related businesses and FBO facilities for GA aircraft and rental car facilities.
- **Northwest Central Area:** The area northwest of the Central Terminal Area between Runways 13R-31L and 13L-31R accommodates Airport-related businesses and industrial land uses.
- **North Side:** The north side of Runway 13L-31R primarily accommodates FBO facilities for GA aircraft located along Lemmon Avenue.
- **South Side:** The south side of Runway 13R-31L accommodates Southwest Airlines corporate headquarters, aviation, and training facilities, as well as other FBO facilities for GA aircraft. Additionally, the DART green and orange line light rail routes and the DART Burbank station are located on the south side of the Airport along Denton Drive outside the Airport property boundary.

2.8.2 OFF-AIRPORT LAND USES

The area surrounding the Airport consists of various land uses, including single- and multi-family homes, commercial and industrial land uses, and several mixed-use developments. The Airport surroundings are described in the following paragraphs, aligned with the north, south, west, and east quadrants of the Airport.

- **North:** Immediately outside the Airport boundary is Bachman Lake and its associated park facilities, located west of Shorecrest Road. The area farther west of Bachman Lake and Northwest Highway consists primarily of commercial/industrial development. Single- and multi-family family homes are located in the land bordering Webb Chapel Road, Denton Drive, and Lombardy Lane. Residential land use are predominant north of Lombardy Lane and the Calvary Hill Cemetery and east of Harry Hines Boulevard. Additional commercial and industrial development is located farther west, along the corridors of Denton Drive and Harry Hines Boulevard bounded by I-35E and the Northwest Highway.
- **South:** Mockingbird Lane is located directly south of the Airport, and accommodates commercial and industrial uses along the corridor leading to Lemmon Avenue. Several multi-family housing complexes and commercial/industrial uses are situated in the area between Mockingbird Lane and Inwood Road.

The area enclosed by Harry Hines Boulevard, the Dallas North Tollway, and Lemmon Avenue becomes predominantly residential south of Inwood Road. The neighborhoods of Oak Lawn Heights, Perry Heights, and Oak Lawn Place also lie within these boundaries. The area remains mostly residential and extends into Highland Park, east of Lemmon Avenue. Highland Park's northernmost boundary borders University Park.

- **West:** The Dallas Love Field West Neighborhood is located directly west of the Airport, and is bounded by Harry Hines Boulevard, Mockingbird Lane, Denton Drive, and Burbank Street. The neighborhood consists of predominantly single-family housing with several multi-family housing complexes. Some commercial strip developments are also located along Denton Drive and Harry Hines Boulevard, west of the Airport. The Brook Hollow Country Club is west of Harry Hines Boulevard and east of the Stemmons Freeway, and is surrounded by a mix of commercial and industrial land uses south to Record Crossing. A pocket of residential development is bounded by Harry Hines Boulevard to the east, Record Crossing to the north, the railroad and Stemmons Freeway to the west, and Inwood Road to the south.
- **East:** Lemmon Avenue is located along the eastern edge of the Airport. Several residential neighborhoods, including Shorecrest Estates, North Park Love Field, Greenway Park, and Bluffview, are located east of Lemmon Avenue, bounded by Mockingbird Lane, the Dallas North Tollway, and the Northwest Highway. North and east of the Northwest Highway, land uses remain predominantly single-family residential.

In addition to general land use categories, environmentally sensitive sites, such as schools, medical facilities, and churches are also located near the Airport, as presented in **Tables 2-35, 2-36, and 2-37.**

2.9 Environmental Overview

An environmental overview of the categories considered during the planning process for any airport master plan was conducted for Dallas Love Field. To provide a baseline for the environmental overview, existing conditions related to the following environmental categories in the Airport environs were inventoried:

- Aircraft Noise
- Compatible Land Use
- Socioeconomic Conditions
- Air Quality
- Water Quality
- Department of Transportation Act, Section 4(f) Lands
- Historical, Architectural, Archaeological, and Cultural Resources
- Biotic Communities
- Wetlands
- Floodplains
- Coastal Zone Management Program
- Wild and Scenic Rivers
- Farmland
- Energy Supply and Natural Resources
- Light Emissions
- Solid Waste and Hazardous Materials

Table 2-35 (1 of 2): Neighboring Schools

SCHOOL NAME	SCHOOL ADDRESS
Amelia Earhart Learning Center	3531 North Westmoreland Road
Arlington Park Community Learning Center	5606 Wayside Drive
Armstrong Elementary School	3600 Cornell Avenue
Ben Milam Elementary School	4200 McKinney Avenue
Bradfield Elementary School	4300 Southern Avenue
C F Carr Elementary School	1952 Bayside Street
Callier Center Pre-School for the Deaf (0-5)	1966 Inwood Road
Christ The King Catholic School	4100 Colgate Avenue
Dallas Christian Academy	4025 N. Central Expressway
Dallas Environmental Science Academy	3635 Greenleaf Street
David G Burnet Elementary School	3200 Kinkaid Drive
Edward H. Cary Middle School	3978 Killion Drive
Eladio R. Martinez Learning Center	4500 Bernal Drive
Episcopal School of Dallas	4100 Merrell Road
Esperanza Medrano Elementary School	2221 Lucas Drive
Everette Lee Degolyer Elementary School	3453 Flair Drive
F P Caillet Elementary School	3033 Merrell Road
Francisco Medrano Middle School	9815 Brockbank Drive
George Bannerman Dealey International Academy	6501 Royal Lane
George Bannerman Dealey Montessori Vanguard	6501 Royal Lane
George W. Carver Learning Center	3719 Greenleaf Street
Good Shepherd Episcopal School	11110 Midway Road
Grace Academy of Dallas	11306a Inwood Road
Harry C Withers Elementary School	3959 Northaven Road
Heights Preparatory School	2650 Canada Drive
Henry W Longfellow Career Exploration Academy	5314 Boaz Street
Herbert Marcus Elementary School	2911 Northaven Road
Highland Park High School	4220 Emerson Avenue
Highland Park Middle School	3555 Granada Avenue
Highland Park Presbyterian Day School	3821 University Boulevard
Holy Cross Lutheran School	11425 Marsh Lane
Holy Trinity Catholic School	3815 Oak Lawn Avenue
Hyer Elementary School	3920 Caruth Boulevard
John J Pershing Elementary School	5715 Meaders Lane
Julian T Saldivar Elementary School	9510 Brockbank Drive
K B Polk Center for Academically Talented and Gifted	6911 Victoria Avenue
L G Pinkston High School	2200 Dennison Street
Leonides Gonzalez Cigarroa M.D. Elementary School	9990 Webb Chapel Road
Letot Campus	10505 Denton Drive
Lorenzo De Zavala Elementary School	3214 North Winnetka Avenue

Table 2-35 (2 of 2): Neighboring Schools

SCHOOL	ADDRESS
Maple Lawn Elementary School	3120 Inwood Road
McCulloch Intermediate School	3555 Granada Avenue
Middle Campus	1750 Viceroy Drive
North Dallas High School	3120 North Haskell Avenue
Notre Dame School	2018 Allen Street
Oak Hill Academy	9407 Midway Road
Obadiah Knight Elementary School	2615 Anson Road
Onesimo Hernandez Elementary School	5555 Maple Avenue
Our Lady of Perpetual Help Catholic School	7625 Cortland Avenue
Pegasus Charter High School	601 North Akard Street
Preston Hollow Elementary School	6423 Walnut Hill Lane
Preston Hollow Presbyterian School	9800 Preston Road
Pri Campus	1750 Viceroy Road
Providence Christian School of Texas	5002 W Lovers Lane
Sam Houston Elementary School	2827 Throckmorton Avenue
Sequoyah Learning Center	3635 Greenleaf Street
St. Mark's School of Texas	10600 Preston Road
St. Mary Of Carmel School	1716 Singleton Boulevard
St. Monica School	4140 Walnut Hill Lane
Stephen C. Foster Elementary School	3700 Clover Lane
Sudie L. Williams Elementary School	4518 Pomona Road
The Cambridge School of Dallas	3877 Walnut Hill Lane
The Hillier School	3821 University Boulevard
The Hockaday School	11600 Welch Road
The Lamplighter School	11611 Inwood Road
The Winston School	5707 Royal Lane
Thomas A. Edison Middle Learning Center	2940 Singleton Boulevard
Thomas C. Marsh Middle School	3838 Crown Shore Drive
Thomas J. Rusk Middle School	2929 Inwood Road
Thomas Jefferson High School	4001 Walnut Hill Lane
Tom W. Field Elementary School	2151 Royal Lane
University Park Elementary School	3505 Amherst Avenue
Ursuline Academy of Dallas	4900 Walnut Hill Lane
Walnut Hill Elementary School	10115 Midway Road
Wesley Preparatory School	9200 Inwood Road
West Dallas Community School	2300 Canada Drive
Westminster Presbyterian Preschool	8200 Devonshire Drive
William B. Travis Academy	3001 McKinney Avenue
Williams Preparatory School	1750 Viceroy Road

SOURCES: Dallas Schools, www.nces.ed.gov (accessed April 2013); Ricondo & Associates, Inc., April 2013.

PREPARED BY: Ricondo & Associates, Inc., April 2013.

Table 2-36: Neighboring Medical Facilities

MEDICAL FACILITY	ADDRESS
Baylor Medical Center at Uptown	2727 E. Lemmon Avenue
Children's Medical Centre - Dallas	1935 Motor Street
Dallas Rehabilitation Institute	9713 Harry Hines Boulevard
Life Care Hospital of Dallas	1950 Record Crossing Road
Parkland Memorial Hospital	5201 Harry Hines Boulevard
Pine Creek Medical Center	9032 Harry Hines Boulevard
St. Paul University Hospital	5909 Harry Hines Boulevard
Texas Health Presbyterian Hospital	8200 Walnut Hill Lane
Texas Scottish Rite Hospital	2222 Welborn Street
University of Texas-Southwestern Medical Center	5323 Harry Hines Boulevard
Zale Lipshy University Hospital	5151 Harry Hines Boulevard

SOURCE: www.healthgrades.com (accessed April 2013).

PREPARED BY: Ricondo & Associates, Inc., April 2013.

Table 2-37 (1 of 2): Neighboring Churches

RELIGIOUS FACILITY	ADDRESS
All People's Assembly of God	2814 Oak Lawn Avenue
Bethany Missionary Baptist Church	6710 Webster Street
Bethany Presbyterian Church	4523 Cedar Springs Road
Cathedral of Hope	5738 Cedar Springs Road
Cathedral of Hope	5910 Cedar Springs Road
Catholic Diocese of Dallas	3725 Blackburn Street
Central Christian Church	4711 Westside Drive
Church of God - Dallas Love Field	2634 Langdon Avenue
Church of Jesus Christ of Latter Day Saints	9509 Midway Road
Church of the Holy Cross	4052 Herschel Avenue
Coaches Outreach Ministry	2621 West Mockingbird Lane
Deeper Life Bible Church	10414 Harry Hines Boulevard
Diocese - South Orthodox Church	4222 Wycliff Avenue
El Buen Samaritano Methodist Church	2903 Cherrywood Avenue
Faith Tabernacle Church	7523 Thurston Street
Gilford Avenue Missionary Baptist	2146 Gilford Street
Grant Lorene	2519 Oak Lawn Avenue
Greater Zion Baptist Church	4751 Hopkins Avenue
Holy Spirit Association for the Unification of World Christianity	1922 Anson Road
Holy Trinity Catholic Church	3826 Oaklawn Avenue

Table 2-37 (2 of 2): Neighboring Churches

RELIGIOUS FACILITY	ADDRESS
Iglesia de Cristo	2145 Empire Central
Jehovah's Witnesses	5308 W. Mockingbird Lane
Knights Chapel Methodist Church	6615 Tyree Street
Korean Dallas Christian Service	2829 W. Northwest Highway #625
Letot Baptist Church	2687 Lombardy Lane
Macedonia Missionary Church	6635 Roper Street
Migration Refugee Service	5415 Maple Avenue #414
North Dallas Baptist Church	4231 Maple Avenue
North Park Church of God	6533 Victoria Avenue
North Park CME Church	6725 Tyree Street
North Park Missionary Baptist Church	6927 Roper Street
Oak Lawn Church United	3811 Oak Lawn Avenue
Oak Lawn United Methodist Church	3014 Oak Lawn Avenue
Our Lady of Perpetual Help Church	7617 Cortland Avenue
Park Cities Presbyterian Church	4124 Oak Lawn Avenue
Reach the World Ministries	10505 Shady Trail
River of Life Church	5202 Wateka Drive
Soka Gakki International USA	2733 Oak Lawn Avenue
St. Luke's Baptist Church	6702 Victoria Avenue
St. Luke's Love Field United Methodist Church	2408 Gilford Street
St. Seraphim Orthodox	4112 Throckmorton Street
St. Thomas the Apostle Church	6525 Inwood Road
Templo El Redentor	8519 Craighill Avenue
Texas Presbyterian Foundation	3500 Oak Lawn Avenue #300
Third Church - Christ Scientist	4419 Oak Lawn Avenue
United in Christ Baptist Church	7715 Denton Drive
University Church of Christ	6540 Victoria Avenue
Whitlow Missionary Baptist Church	3810 Thedford Avenue

SOURCE: www.yellowpages.com (accessed April 2013).

PREPARED BY: Ricondo & Associates, Inc., April 2013.

The recommended Master Plan Update alternatives may affect environmental aspects of the Airport environs.

2.9.1 AIRCRAFT NOISE

The FAA has developed specific guidelines and requirements for assessing aircraft noise to comply with the National Environmental Policy Act (NEPA). FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, establishes the standard methodology for conducting aircraft noise analyses. The FAA has determined that the cumulative noise exposure on noise-sensitive land uses resulting from aircraft noise are to be evaluated using the yearly day-night average sound level (DNL) metric.

DNL is used to describe existing and predicted cumulative aircraft noise exposure for communities in airport environs in most of the United States, and to estimate the effects of airport operations on land use compatibility. DNL has been widely accepted as the best available method to describe aircraft noise exposure and is the noise descriptor required by all federal agencies, including the FAA, for use in aircraft noise exposure analyses and noise compatibility planning.

The Dallas Love Field Noise Abatement Program was officially adopted by the Dallas City Council in December 1981 to provide a voluntary noise abatement and mitigation program for the Airport. To balance the operating needs of the Airport and land use compatibility with the surrounding communities, the City adopted the Dallas Love Field Policies. These policies recognize the Airport's importance to the Dallas community at large while establishing a goal to reduce the effects of noise from aircraft operations at the Airport on the surrounding neighborhoods.

Sensitive noise receptors (residences, schools, hospitals, etc.) in proximity to the Airport were examined. A list of sensitive noise receptors is provided in Section 9.2. The City of Dallas conducted noise analyses in 2001 for the Airport Master Plan and in 2006 to assess effects of the future repeal of the Wright and Shelby Amendments.

According to the 2001 noise analysis, the population exposed to DNL 65 (expressed in A-weighted decibels) was projected to decrease from nearly 27,000 people in 1998 to 23,000 in 2010 as a result of new, quieter aircraft that were scheduled to replace older models, along with mandatory and voluntary noise abatement procedures.

The 2006 noise analysis determined the following:

- The level of noise exposure for the 20-Gate No Wright Amendment scenario would decrease from that estimated for the 2001 Master Plan 32-Gate scenario, while the 32-Gate No Wright Amendment scenario would increase noise exposure. See Section 7 for further information.
- The DNL 65 noise exposure area for the 20-Gate No Wright Amendment scenario would be approximately 4.3 percent smaller than the noise exposure area associated with the 2001 Master Plan 32-Gate scenario and affect approximately 3,800 fewer people.

- The DNL 65 noise exposure area for the 32-Gate No Wright Amendment scenario would be approximately 4 percent larger than the noise exposure area associated with the 2001 Master Plan 32-Gate scenario and affect approximately 4,350 additional people.

The Department of Aviation conducted an analysis of 2013 aircraft operations to determine noise exposure in preparation for this Master Plan Update. The 2013 DNL noise exposure area reflects aircraft operations during the entire calendar year. Operations totals were obtained from the FAA Air Traffic Activity Data System (ATADS), also referred to as the tower counts.

Results of the 2013 noise exposure analysis showed that a total area of 6.01 square miles were within the area exposed to DNL 60, including a total of 30,049 residents. The existing DNL 65 noise exposure area encompasses approximately 2.17 square miles and 3,091 residents.

2.9.2 COMPATIBLE LAND USE

Land in the vicinity of the Airport is densely developed because of the Airport's proximity to downtown Dallas. The primary land uses immediately surrounding the Airport site are institutional, residential, commercial, light industrial, and manufacturing. No historic or landmark districts exist within the vicinity of the Airport. The nearest landmark district is Magnolia Station, located approximately 3 miles southeast of the Airport.

Fifty sensitive land uses are located within 1 mile of the Airport property boundary. Of these land uses, 13 locations are schools, 30 locations are religious institutions, 6 locations are healthcare facilities and the remaining 13 locations are parks. The following five sensitive land uses are located within the 2013 area exposed to DNL 65: Obadiah Knight Elementary School, Thomas J Rusk Middle School, Bethany Missionary Baptist Church, El Buen Samaritano Methodist Church, and the United in Christ Baptist Church.

2.9.2.1 Surrounding Areas

Land uses north of the Airport are predominantly single-family residential neighborhoods alongside several commercial parcels. Bachman Lake and Bachman Lake Park are located to the immediate northwest of the Airport. A small area to the northwest has been developed in industrial (mostly aviation-related) and single-family residential uses. Land southwest of the Airport is dominated by industrial uses with a mix of commercial developments along Mockingbird Lane and Lemmon Avenue. The area southeast of the Airport is mostly single-family residential development surrounded by industrial development. East of the Airport along Lemmon Avenue is a small corridor of commercial use, with predominantly residential use farther east.

2.9.2.2 Zoning

Zoning in the City of Dallas is planned and mapped by the City's Development Services Department. The Airport is currently zoned as Industrial Research. Zoning in the immediate areas surrounding the Airport tends to be multi-family and single-family residential or industrial, which is consistent with the current land uses for these areas. Several areas in the immediate vicinity of the Airport consist of Planned Development District zoning. This zoning has specific stipulations and requirements particular to each district. These specific designations vary in development intensity, the mix of uses, and types of uses allowed.

2.9.2.3 Regional Planning and Development

A number of planning projects in the Airport vicinity and in the Dallas-Fort Worth metroplex merit consideration in this Master Plan Update. Applicable plans and planning studies currently under way are discussed below.

forwardDallas! Comprehensive Plan

The 2006 *forwardDallas! Comprehensive Plan* is the City's most inclusive planning effort, having been developed through more than 11 public workshops, more than 100 public meetings, and a 75-member Advisory Committee appointed by the City Council. The *forwardDallas!* plan identifies action plans for several key areas of the City.

The Stemmons Corridor-Southwestern Medical District Area Plan is one of nine identified plans in the *forwardDallas!* initiative, and encompasses land south of Dallas Love Field along both sides of Harry Hines Boulevard. Many organizations in the Stemmons Corridor, such as the Stemmons Corridor Business Association and the University of Texas Southwestern Medical Center, have initiated their own master planning projects. As a result, the *forwardDallas! Comprehensive Plan* focuses on overlapping and collaborative efforts to ensure the Corridor's continued success.

Downtown Dallas 360, The Downtown Dallas Action Plan

The *Downtown Dallas 360* plan was completed as a collaborative effort between the City of Dallas, Downtown Dallas Incorporated, and other downtown residents, business owners, and related stakeholders. Its primary goal is to facilitate a more pedestrian-friendly and transit-connected Central Business District in the City. The plan's goals include urban design standards, zoning recommendations, and guidelines for various forms of public transportation. The plan emphasizes the importance of light rail DART service connecting DFW and Dallas Love Field with downtown Dallas and, in particular, Union Station.⁵

2.9.3 SOCIOECONOMIC CONDITIONS

Socioeconomics relate to the activities and resources associated with the human environment, particularly population centers, their demographics, and economic activities generated. Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was enacted in 1994. This Executive Order was adopted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment is defined to mean that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations, or the execution of federal, state, tribal, and local programs and policies. Consideration of environmental justice concerns must be given to populations in the vicinity of a proposed project.

⁵ City of Dallas, *Downtown Dallas 360, The Downtown Dallas Action Plan*, April 2011, p. 43.

A series of U.S. Census tracts, including the Airport and immediately adjacent areas, were identified for socioeconomic analysis. The Airport and adjacent tracts include U.S. Census Tracts 4.06, 71.02, 73.02, and 9801. The Airport and adjacent Census tracts encompass a population that is predominantly white (46.2 percent), with Hispanics or Latinos accounting for the next largest ethnic group.⁶ A mix of median household incomes, ranging from \$38,419 in Census Tract 4.06 to \$131,477 in Census Tract 73.02, is represented in the Airport and adjacent tracts. No data are provided for Census Tract 9801 because the tract consists mainly of Airport property, on which there are no residents.

2.9.4 AIR QUALITY

2.9.4.1 Regulatory Requirements

The federal Clean Air Act, as amended, requires individual states to identify general geographic areas where the National Ambient Air Quality Standards (NAAQS) are not met for seven criteria pollutants (listed below). The U.S. Environmental Protection Agency (EPA) has designated such areas as nonattainment areas. A state with a nonattainment area must prepare a State Implementation Plan (SIP) that stipulates the programs and requirements that the state will implement to attain the NAAQS by the deadlines specified in the Clean Air Act Amendments of 1990 (CAAA) and subsequent rules promulgated by the U.S. EPA. In Texas, the Texas Commission on Environmental Quality (TCEQ) is responsible for formulating and maintaining the SIP.

NAAQS have been established for the following seven air contaminants or criteria pollutants:

- Carbon monoxide (CO)
- Nitrogen dioxide (NO₂)
- Ozone (O₃)
- Sulfur dioxide (SO₂)
- Lead (Pb)
- Particulate matter (PM₁₀)
- Fine particulates (PM_{2.5})

The primary standards were established at levels sufficient to protect public health with a satisfactory margin of safety. The regulation and management of ambient (i.e., outdoor) air quality conditions in Dallas County is the combined responsibility of federal, State, and local governmental agencies.

On the federal level, the U.S. EPA establishes the guiding principles and policies for protecting air quality conditions throughout the nation. Relevant to this assessment, the EPA is also responsible for promulgating the NAAQS, approving the SIP, and regulating aircraft emissions.

⁶ This calculation is representative of "race alone or in combination with another race" of the total population.

On the State level, the Texas SIP helps ensure that federal air quality requirements and guidelines are met. The Texas Emissions Reduction Program (TERP) monitors air quality and regulates mobile sources of emissions (i.e., on-road and off-road motor vehicles and equipment). The TCEQ operates 11 permanent ambient air quality monitoring sites scattered throughout the Dallas/Fort Worth TCEQ Region as part of its ongoing State and local air quality monitoring programs.⁷ The closest of these air quality monitoring stations to DAL is located approximately 1.3 miles southwest of the Airport in Dallas. No air quality monitoring stations are located directly on or adjacent to the Airport.

2.9.4.2 Existing Conditions

The Airport is located in the Dallas-Fort Worth Intrastate Air Quality Control Region, which is currently designated as a severe nonattainment area for O₃ (8-hour).⁸ Therefore, the applicable *de minimis* emission levels are 25 tons per year for nitrogen oxides (NO_x) and volatile organic compounds (VOCs). NO_x and VOCs are ozone precursors, and their emissions are regulated to control the creation of ozone.

2.9.5 WATER QUALITY

The regional hydrogeologic gradient of the Airport is presumed to flow toward the south-southwest. However, the actual hydrogeologic gradient may be affected by local influencing factors, such as the topography of the bedrock geology, underground structures, and other variables.

The City of Dallas currently obtains water from the following area reservoirs: Lake Ray Hubbard, Lake Lewisville, Lake Grapevine, Lake Ray Roberts, and Lake Tawakoni. Because of its poor quality, groundwater underlying the Airport is not used for drinking, irrigation, or industrial supply purposes. The City of Dallas approved the *Municipal Setting Designation Ordinance* in 2005, which restricts the use of groundwater in areas designated as contaminated for potable water by ordinance/restrictive covenant.⁹ The City of Dallas is in the process of obtaining a Municipal Setting Designation (MSD) Ordinance for the entire Airport.

Surface water in the vicinity of the Airport consists primarily of Bachman Lake to the northwest. Rainfall on runways, taxiways, and industrial and commercial sites picks up a multitude of pollutants when it reaches the ground. These pollutants dissolve in the runoff or adsorb onto soil particles and are quickly transported by gravity flow through the network of concrete channels and underground pipes that compose the Airport storm drain conveyance systems. These systems ultimately discharge the polluted runoff, without treatment, directly to the City's stormwater system, Bachman Lake, or nearby streams and drainage channels.

⁷ State of Texas, Texas Commission on Environmental Quality. *Geographical Texas Air Monitoring*, online mapping database. http://www.tceq.texas.gov/airquality/monops/sites/mon_sites.html (accessed June 21, 2012).

⁸ U.S. Environmental Protection Agency, *Criteria Pollutant Reports*, <http://www.epa.gov/air/oaqps/greenbk/multi/pol.html> (accessed August 23, 2012).

⁹ City of Dallas, Office of Environmental Quality, *Municipal Setting Designation Ordinance*, <http://www.dallascityhall.com/oeq/msd.html> (accessed June 7, 2012).

Dallas Love Field requires authorization for storm water discharges under the Texas Pollutant Discharge Elimination System (TPDES) permit. The requirement is based on the Airport's Standard Industrial Classification (SIC) code. The TPDES permit provides authorization for point source discharges of storm water associated with industrial activity and certain non-storm-water discharges to surface water.

2.9.6 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(f) LANDS

Section 4(f) of the Department of Transportation (DOT) Act of 1966, which was recodified and renumbered as Section 303(c) of the DOT Act, dictates that, for any program or project undertaken or approved by the U.S. DOT, impacts on the use of any publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance or land from a historic site of national, state, or local significance must be considered. The Act prohibits the Secretary of Transportation from approving actions that would result in use of these properties for transportation purposes unless no prudent and feasible alternative exists and all efforts have been made to minimize impacts.

A number of parks and other recreational areas are located near the Airport. Midway Manor Park is located northeast of Runway 13L-31R on Airport property, but is maintained by the City of Dallas Park and Recreation Department. Other public parks northeast of the Airport include Field Frazier Park and Bluff View Park. Bachman Lake Park is immediately adjacent to the northwestern Airport property boundary and is the largest park in the vicinity of the Airport. To the east of Bachman Lake is the Bachman Creek Greenbelt, owned and maintained by the Dallas Park and Recreation Department. Other parks in the vicinity of the Airport include Grauwlyer Park to the southwest, which includes athletic fields, a recreation center, and the Grauwlyer Park Library. Weichsel Park is located south-southwest of the Airport and is associated with the Thomas J. Rusk Middle School. East of the Airport is Polk Park, a small neighborhood park associated with the K.B. Polk Elementary School. All public parks and lands in the vicinity of the Airport are operated and maintained by the Dallas Park and Recreation Department.

2.9.7 HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Historic, architectural, archaeological, and cultural resources are prehistoric and historic sites, districts, structures, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Numerous laws and regulations require that possible effects on these resources be considered during the planning and execution of federal undertakings.

The Texas Historical Commission's *Historic Sites Atlas* was consulted to determine the presence of previously designated or identified historic properties in and around the Airport, including National Register of Historic Places (NRHP) properties, State Archaeological Landmarks, and Official Texas Historical Markers, which include Recorded Texas Historic Landmarks, historic cemetery markers, thematic markers, and 1936 Centennial Markers. A records search found no previously designated historic properties in the vicinity of the Airport.

However, the Environmental Assessment (EA) of the redevelopment of the Dalfort site at the Airport required a historic structures survey at the former Dalfort Aerospace facilities located on Lemmon Avenue. Through consultation among the FAA, the THC, and the National Park Service, the 1958 Operations and Maintenance

Building on the Dalfort site was determined eligible for listing in the NRHP, as indicated by the Keeper of the NHRP in May 2013. The National Park Service determined that the building retains sufficient integrity to convey its historic and architectural significance and is, therefore, eligible for listing in the NRHP. No other sites or facilities at the Airport are known as historic, architectural, archaeological, or cultural resources.

2.9.8 BIOTIC COMMUNITIES

According to the U.S. Department of Agriculture Soil Conservation Service, *Soil Survey of Dallas County, Texas*, the soil located at and surrounding the Airport is classified as Urban Land. The Urban Land area identified on the map, consists of extensively built up areas where 75 percent or more of the surface is covered with buildings and pavement. The soils in these areas have been altered or covered during urban development; therefore, it was not feasible to identify and separate them in mapping.

The habitat surrounding and including the Airport supports a limited number of biological resources because much of the area is already extensively developed. The entire area within the perimeter of the Airport boundary is developed or disturbed in some manner, with no native vegetation existing on the site. According to the U.S. Fish and Wildlife Service (FWS) Critical Habitat Portal, no critical habitat has been found within Dallas County.¹⁰ Because of the lack of habitat and the developed condition of the Airport and vicinity, no threatened or endangered species are present or known.

2.9.9 WETLANDS

The U.S. Army Corps of Engineers' (ACE) *Wetland Delineation Manual* defines wetland areas that have positive indicators for hydrophytic vegetation, wetland hydrology, and hydric soils as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." The Airport is highly developed (i.e., buildings, paved surfaces, ornamental landscaping) and contains few areas with the potential to support wetlands. No wetlands or other waters of the United States are present within Airport property. Virtually all areas that would be affected by the Master Plan Update recommendations consist of bare earth, paved surfaces, structures, or ornamental (low habitat value) landscaping.

2.9.10 FLOODPLAINS

Executive Order 11988, *Floodplain Management*, was enacted to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practical alternative. Floodplains are defined as lowland and flat areas adjoining waters that are subject to a 1.0 percent or greater chance of flooding in any given year, i.e., a 100-year flood event.

¹⁰ U.S. Fish and Wildlife Service, *Critical Habitat Portal*, <http://criticalhabitat.fws.gov/crithab/> (accessed July 30, 2012).

The Airport lies outside of the 100-year flood zone as delineated by Federal Emergency Management Agency (FEMA) maps.¹¹ The Airport is located within Flood Zone X (area of minimal flood hazard, depicted on Flood Insurance Rate Maps as above the 500-year flood level).

2.9.11 COASTAL ZONE MANAGEMENT PROGRAM

The Coastal Barriers Resources Act of 1982 prohibits federal financial assistance for development within the Coastal Barrier Resources System, which contains undeveloped coastal barriers along the Atlantic and Gulf Coasts and the Great Lakes. The federal Coastal Zone Management Act of 1972 ensures effective management, beneficial use, protection, and development of the coastal zone. Coastal resources are identified in accordance with the Texas Coastal Public Lands Management Act of 1973 ("Management of Coastal Public Land," Texas Natural Resources Code, Chapter 33 *et seq.*). This Texas Act, which is consistent with the federal Coastal Zone Management Act, contains the State's adopted policies with regard to the protection of coastal resources.

The nearest coastal zone to the Airport is the Gulf of Mexico, over 200 miles to the southeast. No other coastal zones are located on or near the Airport. Coastal barriers are narrow islands or margins along the Texas Gulf Coast with active dunes (or structures built to replace them). The Airport is not located on a coastal barrier.

2.9.12 WILD AND SCENIC RIVERS

Wild and scenic rivers are designated by the U.S. Department of the Interior to protect the most beautiful and unspoiled rivers in the nation under the Wild and Scenic River Act. At the time that the Master Plan Update was initiated in 2012, the Wild and Scenic River system protected 12,598 miles of 203 rivers in 39 states and the Commonwealth of Puerto Rico.¹² These rivers are designated because of their beauty, historical and natural sources, aquatic and wildlife habitats, and geological values. Only one river in Texas, the Rio Grande at Big Bend National Park, is designated a wild and scenic river. The Airport is at least 300 miles north/northeast of this river.

2.9.13 FARMLAND

Preservation of prime farmland is a priority of the U.S. Department of Agriculture, and assessment of the impacts of projects with federal support on prime farmland is required. The Airport is located primarily in a commercial and industrial area of Dallas. No farmland is on or adjacent to the Airport. No impacts to farmland would occur as a result of recommended Master Plan Update development.

2.9.14 ENERGY SUPPLY AND NATURAL RESOURCES

The Airport is not an energy-producing location, nor does it produce mineral resources. The effects of Airport development on energy and natural resources are generally related to the amount of energy required for

¹¹ U.S. Department of Homeland Security, Federal Emergency Management Agency, FIRM Panel FM48113C0330J, accessed online: January 2015, <https://msc.fema.gov/portal>.

¹² National Wild and Scenic River System, <http://www.rivers.gov/national-system.php> (accessed August 8, 2014).

stationary facilities (i.e., Terminal building cooling or heating equipment, electrical lighting for building interiors and the airfield, and approach or radar control systems), and the movement of aircraft and ground vehicles.

Oncor Electric Delivery is the sole provider of electricity for the Airport. Oncor provides electrical power to the City of Dallas, Department of Aviation and to all on- and off-Airport customers. The Airport is a major consumer of petroleum-based fuels for aircraft.

2.9.15 LIGHT EMISSIONS

The primary sources of light emissions from airports are the FAA-required lighting for security, obstruction clearance, and navigation. An analysis of the impacts of light emissions on the surrounding environment is required when proposed projects include the introduction of new lighting that may affect residential or other sensitive land uses.

Lighting is used throughout the Airport to support existing operations during nighttime periods, and other periods of low visibility. Lighting consists of in-pavement high intensity runway edge lights and runway centerline lights, lights along taxiways, and lights mounted on towers used for the approach navigation system. Lighting systems in use at the Airport are in conformity with current land use and zoning designations for the Airport.

2.9.16 SOLID WASTE AND HAZARDOUS MATERIALS

2.9.16.1 Municipal Solid Waste Landfill Sites

The City of Dallas Sanitation Services provides solid waste disposal services throughout the Metroplex. One landfill and three waste transfer stations are located within the City of Dallas, the closest of which to DAL is the northwest transfer station (Bachman), located approximately 1,000 feet west-northwest of the Airport. The McCommas Bluff Landfill is more than 11 miles south-southeast of the Airport at 5100 Youngblood Road.¹³ As of a 2010 report from the City of Dallas, the McCommas Bluff Landfill had a remaining capacity of 104 million cubic yards.¹⁴ Wastes designated as hazardous or special wastes must be handled, transported, and disposed of at licensed facilities in accordance with all federal, State, and local regulations. The TCEQ provides assistance for permitting and regulation of these wastes.

2.9.16.2 Hazardous Materials

Hazardous materials are regulated by a number of federal laws and regulations, most of which are promulgated by the U.S. EPA. These regulations govern the storage, use, and transportation of hazardous and other regulated materials from their time of origin to their ultimate disposal. The recovery and cleanup of

¹³ City of Dallas Sanitation Services, *McCommas Bluff Landfill*, http://dallascityhall.com/sanitation/mccommas_bluff.html (accessed June 5, 2012).

¹⁴ City of Dallas, Sanitation Services, *Green Energy from McCommas Bluff Landfill*, February 2010.

environmental contamination resulting from the accidental or unlawful release of these materials and substances are also governed by these regulations.

At the State level, hazardous materials include substances or materials, including mixtures and solutions, that the TCEQ has identified as hazardous or dangerous wastes and that the U.S. EPA has designated for special consideration under federal laws and regulations. Hazardous materials also include constituents of petroleum products, marine pollutants, and elevated-temperature materials that have been determined by the U.S. Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. Locally, hazardous material regulations are overseen by the City of Dallas Office of Environmental Quality (OEQ).

Environmental Data Resources, Inc., conducted an environmental database search in 2008 for a portion of the Airport as well as some areas in the Airport vicinity. The nearest database listing to the Airport Terminal is the Dalfort Terminal, East Concourse Dallas Love Field, located from 7440 to 8036 along Aviation Place and registered as a Texas Voluntary Cleanup Program database site.

A number of sites and facilities located on, or adjacent to, Airport property are known, or have the potential, to contain environmental contamination of the soil and/or groundwater. Identification of these sites was based on documents and other sources of information from previous environmental reports on the Dalfort site; an electronic search of federal, State, and local agency databases; and an in-field survey of existing conditions. From this document review, six individual sites (five on Airport and one off Airport) were identified, as presented in **Table 2-38**. Of the on-Airport listings in Table 2-38, only the Dalfort Terminal site is known to have outstanding hazardous materials issues. This site is currently undergoing environmental investigations in coordination with the TCEQ and OEQ prior to redevelopment plans that are not part of the recommended development in the Master Plan Update.

Table 2-38: Environmental Database Listings for Properties Adjacent to or near the Area of Potential Effect

COMPANY NAME	ADDRESS	DATABASE LISTING	SUMMARY OF LISTING
Signature Flight Support	7515 Lemmon Avenue Building J	RCRA-CESQG ^{1/} TCEQ-LPST ^{2/}	Conditionally exempt, no violations. November 1989: leaking incident, contaminated soils. Status: closed.
Dallas Airmotive, Inc.	7515 Lemmon Avenue Hangar L	RCRA-NonGen ^{3/}	Conditionally exempt, no violations.
Signature Flight Support Regional Maintenance Center	7511 Lemmon Avenue Hangar C	RCRA-CESQG	Conditionally exempt, no violations.
Signature Flight Support	8001 Lemmon Avenue	RCRA-CESQG TCEQ-PST ^{4/} TCEQ-LPST	Conditionally exempt, one minor violation found. Currently nine 20,000 gallon tanks containing either gasoline or jet fuel. October 1993: leaking incident, contaminated soils. Corrective action plan issued.
Dalfort Terminal	7440-8036 Aviation Place	TCEQ-VCP ^{5/}	This facility is classified as a maintenance aircraft fueling facility. The contaminant reported as hydrocarbons. Currently in the investigation phase.
Sewell Village Cadillac	4350 West University Boulevard	TCEQ-VCP	Soils and groundwater are reported to be contaminated with total petroleum hydrocarbons. VCP has been completed for this facility.

NOTES:

- 1/ RCRA-CESQG: Resource Conservation and Recovery Act - Conditionally Exempt Small Quantity Generators.
- 2/ TCEQ-LPST: Texas Commission on Environmental Quality-Leaking Petroleum Storage Tank database.
- 3/ RCRA-NonGen: RCRA - Non Generators.
- 4/ TCEQ-PST: Texas Commission on Environmental Quality - Petroleum Storage Tank.
- 5/ TCEQ-VCP: Texas Commission on Environmental Quality-Voluntary Cleanup Program.

SOURCES: QORE, Inc., Draft Report, *Phase I Environmental Site Assessment and Additional Services, Dalfort Aerospace, 7701 Lemmon Avenue, Dallas, Dallas County, Texas 75209*, August 2003; Benchmark Environmental Consultants, *Phase I Environmental Site Assessment, City of Dallas, Dalfort Aerospace and Former Legend Terminal, 7701 and 7777 Lemmon Avenue, Dallas, Dallas County, Texas, November 17, 2008*.

PREPARED BY: Ricondo & Associates, Inc., August 2014.

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