

## Airport Plans Report



*Prepared by:*  
AECOM



**Illinois Department  
of Transportation**  
Division of Aeronautics

*Prepared for:*  
Illinois Department of Transportation

## Table of Contents

<u>Topic</u>	<u>Page Number</u>
Cover Sheet.....	Cover Sheet
Table of Contents .....	i
List of Tables .....	ii
List of Appendices.....	ii
<b>Section 1 – Introduction .....</b>	<b>1</b>
<b>Section 2 – Previous Airport Layout Plan Coordination.....</b>	<b>2</b>
<b>Section 3 – Airport Design Standards and Guidance .....</b>	<b>3</b>
3.1 Airport Reference Code.....	3
3.2 Federal Guidance Used In Preparing the Inaugural Airport Layout Plan Drawing .....	3
3.3 Federal Guidance Used In Preparing the Future Airport Layout Plan Drawing.....	8
3.4 Terminal Facilities and NAVAID Site Analysis .....	9
3.4.1 Airport Traffic Control Tower .....	9
3.4.2 Low Level Windshear Alert System .....	10
<b>Section 4 – Airport Layout Plan .....</b>	<b>11</b>
4.1 Sheet 1 – Title Sheet.....	11
4.2 Sheet 2 – Vicinity Aerial – Existing Land Use Drawing.....	11
4.3 Sheet 3 – Inaugural Airport Layout Plan Drawing .....	12
4.4 Sheet 4 – Inaugural Airport Data Sheet.....	12
4.5 Sheet 5 – Inaugural Terminal Area Drawing.....	13
4.6 Sheet 6 – Inaugural Airport Airspace Drawing .....	13
4.7 Sheet 7 – Inaugural Runway 9R Inner Portion of the Approach Surface Drawing .....	15
4.8 Sheet 8 – Inaugural Runway 27L Inner Portion of the Approach Surface Drawing.....	15
4.9 Sheet 9 – Inaugural Runway 9L Inner Portion of the Approach Surface Drawing.....	15
4.10 Sheet 10 – Inaugural Runway 27R Inner Portion of the Approach Surface Drawing .....	15
4.11 Sheet 11 – Inaugural Airport Land Use Drawing .....	16
4.12 Sheet 12 – Inaugural Airport Property Map.....	16
4.13 Sheet 13 – Inaugural Property Map Data Tables .....	16
4.14 Sheet 14 – Future Airport Layout Plan Drawing.....	16
4.15 Sheet 15 – Future Airport Data Sheet .....	17
4.16 Sheet 16 – Future Terminal Area Drawing .....	18
4.17 Sheet 17 – Future Airport Airspace Drawing.....	18
4.18 Sheet 18 – Future Runway 9L Inner Portion of the Approach Surface Drawing .....	20
4.19 Sheet 19 – Future Runway 27R Inner Portion of the Approach Surface Drawing.....	20
4.20 Sheet 20 – Future Runway 8R Inner Portion of the Approach Surface Drawing.....	20
4.21 Sheet 21 – Future Runway 26L Inner Portion of the Approach Surface Drawing .....	20
4.22 Sheet 22 – Future Airport Land Use Drawing.....	21
4.23 Sheet 23 – Future Airport Property Map .....	21
<b>Section 5 – Runway Safety Area Determination .....</b>	<b>22</b>
<b>Section 6 – Modification to Standards .....</b>	<b>23</b>
<b>Section 7 – Declared Distances .....</b>	<b>24</b>
<b>Section 8 – Airport Layout Plan Checklist.....</b>	<b>25</b>
<b>Section 9 –Non-Design Related Airport Classifications .....</b>	<b>26</b>
9.1 Airport Classifications Based on Passenger Boardings.....	26
9.2 Airport Classifications Based on Air Cargo Landed Weight .....	26
<b>Section 10 – AGIS/eALP Preparation .....</b>	<b>27</b>

## List of Tables

Table 3-1	FAA Airport Reference Code System .....	3
Table 3-2	AC 150/5300-13, <i>Airport Design</i> Dimensional Standards for the Inaugural ALP Drawing .....	4-5
Table 3-3	AC 150/5300-13, <i>Airport Design</i> Dimensional Standards for the Future ALP Drawing.....	8-9
Table 7-1	Inaugural Runways Declared Distance Analysis.....	24
Table 7-2	Future Runways Declared Distance Analysis .....	24

## List of Appendices

Appendix A - Acronyms .....	28-29
Appendix B - Exhibits .....	30
Exhibit 3-1 – Inaugural Low Level Wind Shear Alert System .....	31
Exhibit 3-2 – Future Low Level Wind Shear Alert System .....	32
Exhibit 4-1 – Title Sheet .....	33
Exhibit 4-2 – Vicinity Aerial – Existing Land Use Drawing .....	34
Exhibit 4-3 – Inaugural Airport Layout Plan Drawing .....	35
Exhibit 4-4 – Inaugural Airport Data Sheet .....	36
Exhibit 4-5 – Inaugural Terminal Area Drawing .....	37
Exhibit 4-6 – Inaugural Airport Airspace Drawing .....	38
Exhibit 4-7 – Inaugural Runway 9R Inner Portion of the Approach Surface Drawing .....	39
Exhibit 4-8 – Inaugural Runway 27L Inner Portion of the Approach Surface Drawing.....	40
Exhibit 4-9 – Inaugural Runway 9L Inner Portion of the Approach Surface Drawing.....	41
Exhibit 4-10 – Inaugural Runway 27R Inner Portion of the Approach Surface Drawing.....	42
Exhibit 4-11 – Inaugural Airport Land Use Drawing .....	43
Exhibit 4-12 – Inaugural Airport Property Map.....	44
Exhibit 4-13 – Inaugural Airport Property Map Data Tables .....	45
Exhibit 4-14 – Future Airport Layout Plan Drawing.....	46
Exhibit 4-15 – Future Airport Data Sheet .....	47
Exhibit 4-16 – Future Terminal Area Drawing .....	48
Exhibit 4-17 – Future Airport Airspace Drawing.....	49
Exhibit 4-18 – Future Runway 9L Inner Portion of the Approach Surface Drawing .....	50
Exhibit 4-19 – Future Runway 27R Inner Portion of the Approach Surface Drawing.....	51
Exhibit 4-20 – Future Runway 8R Inner Portion of the Approach Surface Drawing.....	52
Exhibit 4-21 – Future Runway 26L Inner Portion of the Approach Surface Drawing .....	53
Exhibit 4-22 – Future Airport Land Use Drawing.....	54
Exhibit 4-23 – Future Airport Property Map .....	55
Appendix C – Runway Safety Area Determination .....	56
Exhibit 5-1 – Draft Runway Safety Area Determination for Runway 9L-27R .....	57-58
Appendix D – Modification to Standards.....	59
Exhibit 6-1 – Inaugural Runway 9L-27R Object Free Area Penetrations Map.....	60
Exhibit 6-2 – Draft Modification to Standards for Runway 9L-27R .....	61-64
Appendix E – Declared Distances .....	65
Exhibit 7-1 – Inaugural Runway 9R-27L Declared Distances Map .....	66
Exhibit 7-2 – Inaugural Runway 9L-27R Declared Distances Map .....	67
Appendix F – Airport Layout Plan Checklist.....	68
Exhibit 8-1 – South Suburban Airport Layout Plan Checklist.....	69-83

## Section 1 – Introduction

The purpose of this report is to document the aeronautical facilities (runways, taxiways, aprons, buildings, roads, Navigational and Visual Aids [NAVAIDS], etc.) that are graphically depicted on the South Suburban Airport (SSA) Layout Plan. An Airport Layout Plan (ALP) is a set of drawings that include detailed illustrations representing the existing and future airfield facilities of an airport. The ALP is usually portrayed in both paper and electronic media. The airfield facilities depicted on the SSA ALP are defined by the aeronautical infrastructure needs listed in the *South Suburban Airport Facilities Requirements Report, October 25, 2011*. The airfield configuration's placement is further defined by the findings of the *South Suburban Airport Alternatives Development and Evaluation Report, June 29, 2012*. The SSA ALP uses applicable Federal Aviation Administration (FAA) guidelines in designing pertinent clearances and airfield dimensions. The primary FAA guidance documents used in the preparation of the SSA ALP are Advisory Circular (AC) 150/5300-13, *Airport Design*,<sup>1</sup> and AC 150/5070-6B, Change 1, *Airport Master Plans*.<sup>2</sup> The SSA ALP also shows physical features and land uses both on and off airport property that may affect navigable airspace.

An ALP is a public document and serves as a record of existing and future aeronautical resources for an airport. The ALP is also a reference document that should be used by local communities in their planning activities. The Illinois Department of Transportation - Division of Aeronautics (IDOT) is submitting the SSA ALP to the FAA for airspace review. Once the ALP is reviewed and found compliant, Federal ALP approval requirements stipulate that:

- all development programs should be reasonably consistent with the plans of local and state planning agencies for the development in the airport vicinity;
- fair consideration has been given to the interest of communities in or near the airport; and
- development programs provide for the protection and enhancement of the environment.

The FAA uses an approved ALP as a planning tool for reviewing requests for federally funded airport development grants. FAA also refers to the ALP during their review of proposed on and off airport construction projects that may affect navigable airspace.

---

<sup>1</sup> FAA, Advisory Circular 150/5300-13, *Airport Design, through Change 17 Errata* dated December 2, 2011.

<sup>2</sup> FAA, Advisory Circular 150/5070-6B, *Airport Master Plans, through Change 1* dated May 1, 2007.

## Section 2 – Previous Airport Layout Plan Coordination

Planning for SSA started in the late 1980's with a series of site selection and feasibility studies. The first submittal of an ALP for SSA was made in November 1994. IDOT submitted a six sheet ALP to the FAA and requested the agency conduct an Airspace Feasibility Study (Airspace Case Number 1994-AGL-0115-NRA). FAA responded to IDOT in January 1995 and stated that *"the airport development is feasible and FAA will provide airspace protection and will consider the subject airport layout plan (ALP) as a plan on file."*<sup>3</sup>

Subsequently, IDOT prepared a full ALP set for SSA. This complete sixteen sheet ALP set was submitted to FAA in June, 1995. IDOT requested in this submittal that the FAA conduct a formal Airspace Determination Study (Airspace Case Number 1995-AGL-0062-NRA) on the subject layout. In September 1995, FAA conducted an Airspace Circularization public review of the document. FAA responded with a positive airspace determination in April 1997.<sup>4</sup> In July 1997, IDOT submitted a revised complete ALP set to the FAA for their "conditional approval". At that time, FAA declined to approve the SSA ALP stating a lack of "regional consensus" on airport issues.

After further study and reconciliation of "regional consensus" issues, IDOT submitted a revised ALP in March 2008. This four sheet ALP submittal included a narrative report entitled *Selection of IDOT's Preferred Inaugural Airport Configuration, March 7, 2008* and a companion FAA checklist. FAA declined to review the SSA ALP, stating their desire to see a revalidation of the approved 2004 forecasts of aeronautical operations.

Subsequently, FAA reviewed and approved the *South Suburban Airport Forecasts 2009: Verification of 2004 Forecast, January 6, 2011*. On March 23, 2011, FAA has also accepted for master planning purposes the *South Suburban Airport Existing Conditions Report, December 14, 2011*, the *South Suburban Airport Facilities Requirements Report, October 25, 2011* and the *South Suburban Airport Alternatives Development and Evaluation Report, June 29, 2012*. The airport plans discussed in this report reflect the FAA approval of the subject forecasts and FAA acceptance of other master planning documents.

---

<sup>3</sup> Letter from FAA (Louis Yates) to IDOT dated January 30, 1995.

<sup>4</sup> Letter from FAA (Denis Rewerts) to IDOT dated April 3, 1997.

## Section 3 – Airport Design Standards and Guidance

### 3.1 Airport Reference Code

The Airport Reference Code (ARC), as defined in FAA AC 150/5300-13, *Airport Design*,<sup>5</sup> is used to classify an airport and determine the FAA airport planning criteria to which the airport must comply. As stated in the FAA AC, the ARC is a coding system used to relate airport design criteria to the operational and physical characteristics of the aircraft intended to operate at the airport. The ARC is based on two components. The first is an operational characteristic called the Aircraft Approach Category (aircraft arrival air speed in knots), which is depicted by a letter. This classification includes Categories A to E, with “A” corresponding to the slowest speed and “E” to aircraft with the fastest approach speeds.

The second component, depicted by a Roman numeral, is the Airplane Design Group (ADG), which is defined by the aircraft’s wingspan. The combination of the two components defines the ARC for the airport. For example, aircraft identified by the moniker C-III or smaller are single-aisle, narrowbody aircraft, whereas aircraft D-IV and larger are generally dual-aisle, widebody aircraft. **Table 3-1: FAA Airport Reference Code System** provides the FAA criteria for the ARC system, relating airport design criteria with the operational and physical characteristics of the most demanding aircraft expected to operate at that airport.

Aircraft Approach Category <sup>6</sup>	Aircraft Approach Speed (knots)	Airplane Design Group	Aircraft Wingspan (ft)
A	Less than 91	I	Less than 49
B	91 or more but < 121	II	49 but < 79
C	121 or more but < 141	III	79 < 118
D	141 or more but < 166	IV	118 < 171
E	166 or more	V	171 < 214
		VI	214 < 262

Source: FAA Advisory Circular 150/5300-13, *Airport Design*.

The Inaugural Airport’s ARC was formulated in the *South Suburban Airport’s Forecasts 2009: Verification of 2004 Forecasts, January 6, 2011* and finalized in the *South Suburban Airport Facility Requirements Report, October 25, 2011*. The Inaugural commercial runway’s critical aircraft family is the Boeing 737-800/Airbus A-320 and the ARC is C-III. The ARC for the General Aviation (GA)/Corporate runway is B-I, which includes a broad spectrum of GA aircraft. For planning purposes the future ALP drawing shall use various ARCs that range from Approach Group C to D and Design Group III to VI.

### 3.2 Federal Guidance Used In Preparing the Inaugural Airport Layout Plan Drawing

Since the SSA ALP is a part of the Airport Master Plan, the primary FAA planning tool used in preparing the ALP is AC 150/5070-6B, Change 1, *Airport Master Plans*.<sup>7</sup> Appendix F of that AC includes guidance on ALP preparation. In addition to the FAA Headquarters guidance, FAA Great Lakes Region-Airports Division has issued a Regional Guidance Letter (RGL) 5070.1, *Preparation and Review of Airport Layout Plans (ALPs), June 28, 2011*. This RGL includes assistance in ALP preparation by providing a regionalized “checklist” for ALPs submitted to Great Lakes Regional and district offices for review. Both of these guidance documents help define the ALP drawing nomenclature and expected data depictions. The SSA ALP Checklist is discussed further in **Section 8 – Airport Layout Plan Checklist** of this report.

<sup>5</sup> FAA, Advisory Circular, 150/5300-13, Change 18, *Airport Design*.

<sup>6</sup> Certificated maximum flap setting and maximum landing weight at standard atmospheric conditions.

<sup>7</sup> Ibid.

Table 7-1 - IAP Summary of Facility Requirements for DBO+5 of the *South Suburban Airport Facility Requirements Report, October 25, 2011* lists the inaugural airport facilities that are considered part of the Inaugural Airport Program (IAP). To properly depict those facilities on an ALP, FAA has issued several advisory circulars and orders. The following is a listing and discussion of those ACs and orders that pertain to the SSA ALP.

### FAA AC 150/5300-13 – Airport Design<sup>8</sup>

Section 103 of the Federal Aviation Act of 1958 states in part, “In the exercise and performance of his power and duties under this Act, the Secretary of Transportation shall consider the following, among other things, as being in the public interest: (a) The regulation of air commerce in such manner as to best promote its development and safety and fulfill the requirements of defense; (b) The promotion, encouragement, and development of civil aeronautics...” This public charge, in effect, requires the development and maintenance of a national system of safe, delay-free, and cost-effective airports. The use of the standards and recommendations contained in FAA AC 150/5300-13 supports this public charge. AC 150/5300-13 provides a majority of the airfield design parameters that are depicted on the SSA ALP. Some of the items include runway and taxiway dimensional safety areas and associated building setback distances. Aircraft parking aprons and critical areas for specific NAVAIDS is also included. Using Table 7-1 - IAP Summary of Facility Requirements for DBO+5 of the *South Suburban Airport Facility Requirements Report, October 25, 2011* as the facilities template, **Table 3-2: AC 150/5300-13 Airport Design Dimensional Standards for the Inaugural ALP Drawing** provides the appropriate dimensional criteria.

**Table 3-2: AC 150/5300-13, Airport Design Dimensional Standards for the Inaugural ALP Drawing**

Airport Facility	Dimensions (ft)
Primary Commercial Runway 9R-27L Length	9,500 ft
Primary Commercial Runway 9R-27L Width	150 ft
Primary Commercial Runway 9R-27L Paved Shoulder Widths	25 ft
Primary Commercial Runway 9R-27L Blast Pad	150 ft wide x 200 ft long
GA/Corporate Runway 9L-27R Length	5,001 ft (existing)
GA/Corporate Runway 9L-27R Width	75 ft (existing)
Taxiways A, B, B1 and C Width	75 ft
Taxiways A, B, B1 and C Paved Shoulder Widths	25 ft
Taxiway C1, D, D1, D2 and D3 Width	35 ft (D, D1, D2 & D3 existing)
Taxiway C1, D, D1, D2 and D3 Paved Shoulders Width	Not Applicable
Primary Commercial Runway 9R-27L Centerline to Taxiway “B” Centerline	600 ft
GA/Corporate Runway 9L-27R Centerline to Taxiway “D” Centerline	150 ft (existing)
Building Restriction Line	Numerous Criteria <sup>9</sup>
Primary Commercial Runway 9R Runway Object Free Area <sup>10</sup>	800 ft wide x 1,000 ft long
Primary Commercial Runway 27L Runway Object Free Area <sup>11</sup>	800 ft wide x 1,000 ft long
GA/Corporate Runway 9L Runway Object Free Area <sup>12</sup>	400 ft wide x 240 ft long
GA/Corporate Runway 27R Runway Object Free Area <sup>13</sup>	400 ft wide x 240 ft long
Primary Commercial Runway 9R Runway Safety Area <sup>14</sup>	500 ft x 1,000 ft
Primary Commercial Runway 27L Runway Safety Area <sup>15</sup>	500 ft x 1,000 ft
GA/Corporate Runway 9L Runway Safety Area <sup>16</sup>	120 ft x 240 ft
GA/Corporate Runway 27R Runway Safety Area <sup>17</sup>	120 ft x 240 ft
Primary Commercial Runway 9R Runway Safety Area Prior to Runway Threshold <sup>18</sup>	500 ft x 600 ft

<sup>8</sup> Ibid.

<sup>9</sup> BRL encompass the runway protection zones, the runway object free areas, the runway visibility zone, NAVAID critical areas, areas required for terminal instrument procedures and airport traffic control tower clear line of sight.

<sup>10</sup> End dimension listed. ROFA extends entire runway length.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> End dimension listed. RSA extends entire runway length.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

**Table 3-2: AC 150/5300-13, Airport Design Dimensional Standards for the Inaugural ALP Drawing**

Airport Facility	Dimensions (ft)
Primary Commercial Runway 27L Runway Safety Area Prior to Runway Threshold <sup>19</sup>	500 ft x 600 ft
GA/Corporate Runway 9L Runway Safety Area Prior to Runway Threshold <sup>20</sup>	120 ft x 240 ft
GA/Corporate Runway 27R Runway Safety Area Prior to Runway Threshold <sup>21</sup>	120 ft x 240 ft
Primary Commercial Runway 9R Displaced Threshold	Not Applicable
Primary Commercial Runway 27L Displaced Threshold	Not Applicable
GA/Corporate Runway 9L Displaced Threshold	Not Applicable
GA/Corporate Runway 27R Displaced Threshold	151 ft
Primary Commercial Runway 9R-27L Runway Obstacle Free Zone <sup>22</sup>	200 ft x 400 ft
GA/Corporate Runway 9L-27R Runway Obstacle Free Zone <sup>23</sup>	200 ft x 250 ft
Primary Commercial Runway 27L Inner-Approach OFZ <sup>24</sup>	400 ft wide x 2,400 ft long
Primary Commercial Runway 27L Inner-Transitional OFZ <sup>25</sup>	H = 48 ft
Primary Commercial Runway 9R Precision Obstacle Free Zone	Not Applicable
Primary Commercial Runway 27L Precision Obstacle Free Zone	200 ft wide x 800 ft long
GA/Corporate Runway 9L Precision Obstacle Free Zone	Not Applicable
GA/Corporate Runway 27R Precision Obstacle Free Zone	Not Applicable
Primary Commercial Runway 9R Runway Protection Zone <sup>26</sup>	1,000 ft x 1,750 ft x 2,500 ft
Primary Commercial Runway 27L Runway Protection Zone <sup>27</sup>	1,000 ft x 1,750 ft x 2,500 ft
GA/Corporate Runway 9L Runway Protection Zone <sup>28</sup>	500 ft x 700 ft x 1,000 ft
GA/Corporate Runway 27R Runway Protection Zone <sup>29</sup>	500 ft x 700 ft x 1,000 ft
Primary Commercial Runway 9R FAR Part 77 Surface <sup>30</sup>	1,000 ft x 1,750 ft x 10,000 ft @ 50:1
Primary Commercial Runway 27L FAR Part 77 Surface <sup>31</sup>	1,000 ft x 1,750 ft x 10,000 ft @ 50:1
GA/Corporate Runway 9L FAR Part 77 Surface <sup>32</sup>	500 ft x 3,500 ft x 10,000 ft @ 34:1
GA/Corporate Runway 27R FAR Part 77 Surfaces <sup>33</sup>	500 ft x 3,500 ft x 10,000 ft @ 34:1
Primary Commercial Runway 9R Threshold Siting Dimensions	Criteria 7 <sup>34</sup>
Primary Commercial Runway 27L Threshold Siting Dimensions	Criteria 7 <sup>35</sup>
GA/Corporate Runway 9L Threshold Siting Dimensions	Criteria 5 <sup>36</sup>
GA/Corporate Runway 27R Threshold Siting Dimensions	Criteria 5 <sup>37</sup>
Parallel runway centerline separation <sup>38</sup>	4,300 feet
Parallel Taxiway "A" to Runway 9R-27L Taxiway Safety Area Width	118 ft
Parallel Taxiway "D" to Runway 9L-27R Taxiway Safety Area Width	49 ft
Parallel Taxiway "A" to Runway 9R-27L Taxiway Object Free Area Width	186 ft
Parallel Taxiway "D" to Runway 9L-27R Taxiway Object Free Area Width	89 ft

Source: South Suburban Airport Facility Requirements Report, October 25, 2011.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Defined volume of airspace centered above the runway centerline.

<sup>23</sup> Ibid.

<sup>24</sup> Only applies to runways with approach light systems.

<sup>25</sup> Only applies to runways with approach minimums less than ¾ mile visibility.

<sup>26</sup> Inner width x outer width x length

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Additional 40,000 feet @ 40:1 extension beyond stated limits.

<sup>31</sup> Ibid. Assumption that a satellite-based precision instrument approach procedure will be implemented.

<sup>32</sup> Non-precision instrument approach procedure exists to this runway end.

<sup>33</sup> Ibid.

<sup>34</sup> See AC 150/5300-13, Change 18, Appendix 2, Table A2-1.

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

<sup>38</sup> Simultaneous radar-controlled approaches/departures

**FAA Order 6480.4A – Airport Traffic Control Tower Siting Process**<sup>39</sup>

Consistent with the FAA’s mission to foster a safe, secure, and efficient aviation system is the need for an effective and efficient process to accurately construct new and replacement Airport Traffic Control Towers (ATCT). Determining the optimum height and location of an ATCT is the result of balancing many requirements and considerations, both internal and external to the FAA. FAA Order 6480.4A defines the methods used to complete the ATCT siting process in a consistent manner, and establishes the criteria and procedures for evaluation and approval for the height and location of an ATCT to ensure safety within the National Airspace System (NAS). It prescribes policy, delegates authority and assigns responsibility to ensure that the ultimate goal of providing the shortest possible ATCT meeting all the siting criteria is achieved. It also establishes the criteria and procedures for evaluation and approval for the height and location of an ATCT in an effort to ensure safety within the NAS. See **Section 3.4.1 - Airport Traffic Control Tower Site Analysis.**

**FAA Order 6820.10 – VOR, VOR/DME and VORTAC Siting Criteria**<sup>40</sup>

FAA Order 6820.10 provides guidance and reference material to be used in certain practical applications of the Very High Frequency Omnidirectional Radio Range (VOR), VOR Distance Measuring Equipment (VOR/DME), and VOR Tactical Air Navigation (VORTAC). The guidance deals with the procedures and techniques that apply to the initial evaluation, selection, and acquisition of sites for these navigational aids. Finally, FAA Order 6820.10 provides direction for the consolidation of buildings and antenna structures when such consolidation involves VOR, VOR/DME, or VORTAC installations. Where the facilities consolidation program requires the relocation, consolidation, or establishment of a new VOR, VOR/DME, or VORTAC installation, this order provides technical guidance for the selection and acquisition of a site for the installation. The guidance provided in this order applies to new establishments, relocated facilities, and consolidated facilities as specified by the FAA’s facilities consolidation program. As part of the SSA development, area has been set aside to allow for the possible relocation of the FAA’s Peotone VORTAC to the airfield.

**FAA AC 150/5340-30F – Design and Installation Details for Airport Visual Aids**<sup>41</sup>

Numerous airport visual aids provide information and guidance to pilots maneuvering on or near airports. These aids may consist of single units or complex systems composed of many parts. FAA AC 150/5340-30F provides installation details for all airport visual aids. The SSA ALP includes installation of the following airfield lighting aids: runway and taxiway edge lighting; runway centerline and touchdown zone lighting; runway guard lights; airport rotating beacons; lighted wind cones; Medium Intensity Approach Light System-Runway Alignment Indicator Lights; Runway End Indicator Lights; and Precision Approach Path Indicators.

**FAA Order 6750.16D – Siting Criteria for Instrument Landing Systems**<sup>42</sup>

Presently the aviation industry’s standard for providing precision instrument approaches to a commercial runway end is through the use of an Instrument Landing System (ILS). The ILS, available since the middle of the 20<sup>th</sup> century, provides guidance to a pilot in inclement weather to almost zero cloud height and zero visibility minima. The ILS is composed of two parts: Localizer Antenna Array and the Glide Slope Antenna. These two instruments give the pilot a spatial vertical and horizontal reference to the runway threshold. These instruments are also aided by an appropriate approach light system that provides a visibility reference. FAA Order 6750.1D was used as a reference in depicting an ILS for Runway 27L. It must be noted that the FAA is moving away from ground based instrument approach systems, such as the ILS, and toward satellite based technology known as NextGEN.<sup>43</sup> Under NextGEN, the FAA has developed and approved both Wide Area Augmentation Systems (WAAS) and Local Area Augmentation Systems (LAAS) systems. These systems have been installed and tested as prototype systems at numerous airports. The FAA has adopted the International Civil Aviation Organization terminology of Satellite Based Augmentation System for WAAS and Ground Based Augmentation System (GBAS) for LAAS systems. Prototype systems have been installed and tested at Memphis, Atlantic City, Cedar Rapids, Minneapolis, Chicago,

<sup>39</sup> [http://www.faa.gov/documentLibrary/media/Order/ND/6480\\_4A.pdf](http://www.faa.gov/documentLibrary/media/Order/ND/6480_4A.pdf)

<sup>40</sup> <http://www.faa.gov/documentLibrary/media/Order/6820.10.pdf>

<sup>41</sup> [http://www.faa.gov/documentLibrary/media/Advisory\\_Circular/150\\_5340\\_30F.pdf](http://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5340_30F.pdf)

<sup>42</sup> [http://www.faa.gov/documentLibrary/media/Order/ND/6750\\_16D.pdf](http://www.faa.gov/documentLibrary/media/Order/ND/6750_16D.pdf)

<sup>43</sup> <http://www.faa.gov/nextgen/>

Seattle, Moses Lake and Guam. The Honeywell, SmartPath Precision Landing System, a Category I non-federal GBAS system received FAA approval on September 3, 2009. The Port Authority of New York and New Jersey has installed a CAT I GBAS system at Newark Liberty Airport and FAA has published Category I approach procedures at Newark. For planning purposes, the SSA ALP includes ILS based precision approaches for Runway 27L. IDOT would be prepared to implement NextGEN systems should they become available for SSA.

#### **FAA Advisory Circular 150/5340-5C – Segmented Circle Airport Marker System<sup>44</sup>**

The segmented circle performs two functions: it aids the pilot in locating an airport; and it provides a centralized location for such indicators and signal devices as may be required for a particular airport. “L” shaped indicators, formed by using the landing strip and traffic pattern indicators, are required for compliance with Title 14 CFR part 91, *General Operating and Flight Rules*. Segmented Circles are only used on runways implementing right-hand traffic patterns. SSA requires the installation of a segmented circle to depict to pilots the expected right pattern traffic for Runways 9R and 27R. Since it is not anticipated that SSA would have a 24-hour ATCT through Date of Beneficial Occupancy (Fifth Year After Opening Day) (DBO+5), the segmented circle notification shall be necessary for aircraft operating at SSA outside of normal ATCT hours.

#### **FAA Order 6560.21A – Siting Guidelines for Low Level Windshear Alert System Remote Facilities<sup>45</sup>**

Low Level Windshear Alert Systems (LLWAS) are monitors designed to detect the existence of horizontal windshear conditions on an airport and around its perimeter and to alert controllers/pilots when conditions may become hazardous. This order provides the siting guidelines for locating and determining the tower heights for remote anemometer stations. A review of potential LLWAS locations was conducted for both the Inaugural and Future airport configurations. LLWAS siting is discussed further in **Section 3.4.2 – Low Level Windshear Alert System**.

#### **FAA Order 6560.20B – Siting Criteria For Automated Weather Observing Systems<sup>46</sup>**

Automated Weather Observation Stations and their companion Automated Surface Observation Stations (owned and operated by the National Oceanic and Atmospheric Administration), collect and report weather conditions on airport facilities. These automated units collect data such as: wind direction and speed, atmospheric pressure, ambient and dew point temperatures, visibility, sky conditions, precipitate by type and amount, snowfall depths and lightning detection. This FAA Order provides guidance on location for the sensors and their proximity to other facilities on an airfield.

#### **FAA Order 6310.6 – Primary/Secondary Terminal Radar Siting Handbook<sup>47</sup>**

Airport Surveillance Radar (ASR) is an approach control radar system that is used to detect and display an aircraft's position in a terminal area, such as the Chicago airspace system. ASR provides range and azimuth information and coverage can extend up to 60 nautical miles from the antenna site. ASR interfaces with both legacy and digital automation systems and provides six-level national weather service calibrated weather capability. An ASR system consists of two integrated electronic subsystems: primary surveillance radar and secondary surveillance radar. The primary surveillance radar uses a continually rotating antenna mounted on a tower to transmit electromagnetic waves that reflect, or backscatter, from the surface of aircraft up to 60 miles from the radar. The radar system measures the time required for a radar echo to return and the direction of the signal. From this, the system can then measure the distance of the aircraft from the radar antenna and the azimuth, or direction, of the aircraft in relation to the antenna. The secondary radar uses a second radar antenna attached to the top of the primary radar antenna to transmit and receive area aircraft data for barometric altitude, identification code, and emergency conditions. Military, commercial, and GA aircraft, operating in Class B airspace, have transponders that automatically respond to a signal from the secondary radar by reporting an identification code and altitude. The air traffic control uses this system to verify the location of aircraft within a 60-mile radius of the radar site. The beacon radar also provides rapid identification of aircraft in distress. As part of the SSA development, area east of the runway configuration has been set aside for installation of an ASR.

<sup>44</sup> [http://www.faa.gov/documentLibrary/media/advisory\\_circular/150-5340-5C/150\\_5340\\_5c.pdf](http://www.faa.gov/documentLibrary/media/advisory_circular/150-5340-5C/150_5340_5c.pdf)

<sup>45</sup> <http://www.faa.gov/documentLibrary/media/Order/6560.21A.pdf>

<sup>46</sup> <http://www.faa.gov/documentLibrary/media/directives/ND/ND6560-20b.PDF>

<sup>47</sup> <http://www.faa.gov/documentLibrary/media/Order/6310.6.pdf>

**FAA Advisory Circular 97-1A – Runway Visual Range**<sup>48</sup>

A Runway Visual Range (RVR) is visual device that supports precision landing and takeoff operations at an airport. The system measures visibility, background luminance, and runway light intensity to determine the distance a pilot should be able to see down the runway. RVRs are needed to support increased landing capacity at existing airports and new airport construction. Each RVR system consists of the following elements: Visibility Sensor, Ambient Light Sensor, Runway Light Intensity Monitor, Data Processing Unit and Controller Display(s). The RVR interfaces with the Automated Surface Observing System, Enhanced Traffic Management System, and Maintenance Processing System. These interfaces enhance safety, increase system capacity, and improve maintenance within the NAS.

## 3.3 Federal Guidance Used In Preparing the Future Airport Layout Plan Drawing

Table 8-10: Summary of Facility Requirements – Ultimate Airport of the *South Suburban Airport Facility Requirements Report, October 25, 2011* lists the airfield facilities identified for inclusion on the Future ALP Drawing. It is anticipated that planning for the construction of a second commercial runway would be initiated within the future forecast horizon (prior to DBO+20). Also, it is expected that the planning for a second commercial runway would include the review of the potential decommissioning of the existing GA/Corporate aviation runway. The airport master plan anticipates that all future runway ends have precision instrument approach procedures. Most of the previous guidance listed in **Section 3.2 - Federal Guidance Used In Preparing the Inaugural Airport Layout Plan Drawing** is also applicable for use in preparing the Future ALP Drawing. Additional guidance needed for the Future ALP Drawing is discussed below. **Table 3-3: AC 150/5300-13 Airport Design Dimensional Standards for the Future ALP Drawing** lists the various criteria dimensions for planning purposes.

<b>Airport Facility</b>	<b>Dimensions</b>
Runway 9L-27R Length (Former Runway 9R-27L)	12,000 ft <sup>49</sup>
Runway 9L-27R Width (Former Runway 9R-27L)	200 ft <sup>50</sup>
Former Runway 9L-27R Length (GA/Corporate)	Decommissioned
Former Runway 9L-27R Width (GA/Corporate)	Decommissioned
Runway 8R-26L Length	12,000 ft <sup>51</sup>
Runway 8R-26L Width	200 ft <sup>52</sup>
Runway Paved Runway Shoulder Widths (variable)	25-40 ft
Runway Blast Pads Widths (variable)	200-280 ft
Runway Blast Pads Lengths (variable)	200-400 ft
Taxiway Widths (variable)	75-82 ft
Taxiway Shoulder Widths	25-40 ft
Runway Centerlines to Taxiway Centerlines	600 ft
Building Restriction Line (variable)	Numerous Criteria <sup>53</sup>
Runway Object Free Areas <sup>54</sup>	800 ft wide x 1,000 ft long
Runway Safety Areas <sup>55</sup>	500 ft x 1,000 ft
Runway Safety Areas Prior to Runway Threshold <sup>56</sup>	500 ft x 600 ft

<sup>48</sup> [http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgAdvisoryCircular.nsf/list/AC%2097-1A/\\$FILE/ac97-1a.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/list/AC%2097-1A/$FILE/ac97-1a.pdf)

<sup>49</sup> Used for planning purposes.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> Building Restriction Line encompasses all runway protection zones, runway object free areas, runway visibility zone, NAVAID critical areas, areas required for terminal instrument procedures and ATCT clear line of sight.

<sup>54</sup> End dimension listed. ROFA extends entire runway length.

<sup>55</sup> End dimension listed. RSA extends entire runway length.

<sup>56</sup> Ibid.

**Table 3-3: AC 150/5300-13 Airport Design Dimensional Standards for the Future ALP Drawing**

Airport Facility	Dimensions
Runway Displaced Thresholds	Not Applicable
Runway Obstacle Free Zones <sup>57</sup>	200 ft x 400 ft
Runway Inner-Approach OFZs <sup>58</sup>	H = variable
Runway Precision Obstacle Free Zones	200 ft wide x 800 ft long
Future Runway Protection Zones <sup>59</sup>	1,000 ft x 1,750 ft x 2,500 ft
Future Runway FAR Part 77 Surfaces <sup>60</sup>	1,000 ft x 1,750 ft x 10,000 ft @ 50:1
Future Runway Threshold Siting Dimensions	Criteria 7 <sup>61</sup>
Parallel runway centerline separations <sup>62</sup>	Variable (5,000 ft minimum)
Parallel Taxiway Safety Area Widths (variable)	171-262 ft
Parallel Taxiway Object Free Area Widths (variable)	259-386 ft

### FAA Order 6850.35 – High Intensity Approach Lighting System With Sequenced Flashing Lights Project Implementation Plan<sup>63</sup>

Approach Lighting Systems (ALS) provides the basic means to transition from instrument flight to visual flight for landing. Operational requirements dictate the sophistication and configuration of the approach light system for a particular runway. The High Intensity Approach Lighting System With Sequenced Flashing Lights (ALSF-II) is an ALS that provides visual information on runway alignment, height perception, roll guidance, and horizontal references for Category II/III instrument approaches. ALS are a configuration of signal lights starting at the landing threshold and extending into the approach area a distance of 2,400 feet for precision instrument runways. A typical ALSF-II system consists of 247 steady burning lights: including green threshold lights (49 lights), red side row-bar lamps (9 rows, 54 lamps), and high intensity steady burning white lights (144), plus an additional 15 flashing lights commonly referred to as strobes. The strobes flash in sequence starting with the strobe farthest from the runway and ending with the strobe closest to the runway threshold. The lights are spaced at 100 feet intervals from the runway threshold outward to 2,400 feet. For planning purposes ALSF-II systems shall be depicted on all future runway ends.<sup>64</sup>

## 3.4 Terminal Facilities and NAVAID Site Analysis

Separate and specific siting analysis was conducted for the following terminal facilities: ATCT and the LLWAS. Both facilities require further analysis by the FAA prior to final location siting. These facilities are discussed herein.

### 3.4.1 – Airport Traffic Control Tower

The ATCT is the focal point for controlling flight operations within an airport's designated airspace, as well as all aircraft and vehicle movement on the Aircraft Operations Area (AOA). To allow for commercial service activity it is anticipated an ATCT be constructed and operational on Opening Day, also known as Date of Beneficial Occupancy (DBO). Any future ATCT facility must meet FAA's planning and design standards and should be located equal distance from all planned operational areas, particularly the runway ends. The elevation of the tower should be adequate to ensure unobstructed views to all runway approaches, airside and terminal facilities that are under ATCT control. Convenient access by the ATCT personnel and maintenance staff is also important in locating the ATCT facility. The tower structure design follows the guidelines described in FAA Order 6480.7D, *Airport Traffic Control Tower and Terminal Radar Approach Control Facility Design Guidelines*.<sup>65</sup> The ATCT elevation would be determined in accordance with FAA Order

<sup>57</sup> Defined volume of airspace centered above the runway centerline.

<sup>58</sup> Only applies to runways with approach light systems.

<sup>59</sup> Inner width x outer width x length

<sup>60</sup> Additional 40,000 feet @ 40:1 extension beyond stated limits.

<sup>61</sup> See AC 150/5300-13, Change 18, Appendix 2, Table A2-1.

<sup>62</sup> Simultaneous radar-controlled approaches/departures

<sup>63</sup> [http://www.faa.gov/documentLibrary/media/Order/6850\\_35.pdf](http://www.faa.gov/documentLibrary/media/Order/6850_35.pdf)

<sup>64</sup> [http://www.faa.gov/about/office\\_org/headquarters\\_offices/ato/service\\_units/techops/navservices/lsg/als/](http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/lsg/als/)

<sup>65</sup> <http://www.faa.gov/documentLibrary/media/Order/6480.7D.pdf>

6480.4, *Airport Traffic Control Tower Siting Criteria*. Line of Sight from the ATCT to all appropriate SSA facilities would be depicted on the Inaugural and Future ALP Drawings.

Taking into consideration the location of the air passenger terminal complex, the inaugural and future runway ends, visual depth of field and any shadowing, several potential ATCT sites were considered along with other evaluation criteria. The sponsor-selected ATCT site is on an east-west line through the centroid of the airfield and is near the midpoint of the inaugural commercial runway. This location is based on appropriate tower height and provides proper sight distances to all runway thresholds, taxiways and the passenger and cargo parking aprons. The central location also provides adequate security setbacks for the tower and base buildings and discrete landside access for tower personnel. It should be noted that the proposed ATCT site is defined herein for airport planning purposes. The FAA would conduct its own ATCT siting study to determine the final location and cab height elevation.

#### 3.4.2 – Low Level Windshear Alert System

A LLWAS measures wind speed and direction at remote sensor station sites situated around an airport. Each equipped airport has several remote anemometer stations that transmit sensor data to a master station, which then generates warnings when windshear or microburst conditions are detected. Current wind speed, direction data and warnings are provided to approach controllers in the Terminal Radar Approach Control Facility and to ATCT ground controllers. Air Traffic Controllers relay the LLWAS runway specific alerts to pilots via voice radio/data communication links. LLWAS alerts assist pilots during critical portions of flight when they must determine whether to attempt to land or take off in hazardous weather conditions.

**FAA Order 6560.21A – Siting Guidelines For Low Level Windshear Alert System Remote Facilities**<sup>66</sup> was used in siting LLWAS facilities at SSA. It is anticipated that the Inaugural ALP would have 11 anemometers covering the runways' protected regions. Aircraft on either runway, whether landing or taking off, would be able to be warned about problematic wind shear and microbursts. See **Exhibit 3-1 - Inaugural Low Level Wind Shear Alert System**. Assumptions used in this analysis include:

- Sheltering from three-dimensional objects, such as trees, buildings or billboards, of the candidate sites should be less than 20 percent.
- Logistical constraints such as Federal Aviation Regulations (FAR) Part 77 Surfaces, proximity to high voltage powerlines, access to AC power are not an issue. The height of the anemometers would be determined during the in-depth validation study.
- It is assumed the airport could provide the property necessary to site the LLWAS locations.

LLWAS identified on the Future ALP would remove three anemometers from the Inaugural proposal to allow for future airfield improvements. After new facilities are constructed, approximately eight new anemometers would be added. Other sensors installed during the inaugural phase of the project would remain in place. **Exhibit 3-2 – Future Low Level Wind Shear Alert System** depicts the locations for the future phasing of the airport.

The proposed LLWAS layouts do not have any “blind spots” that affect the vulnerable areas of aircraft operations. Inaugural and future runways would be protected and coverage for future airfield improvements can be easily assimilated. The geographic siting contained herein only determines proposed locations of the LLWAS equipment. An in-depth study shall be conducted to determine the optimal performance of the system and validate the candidate site locations.

---

<sup>66</sup> Ibid.

## Section 4 – Airport Layout Plan

The ALP for SSA depicts the inaugural and future airport plans which were generated from the *South Suburban Airport Facilities Requirements Report, October 25, 2011* and the *South Suburban Airport Alternatives Development and Evaluation Report, June 29, 2012*. The SSA ALP set consists of the following sheets:

- Sheet 1 – Title Sheet
- Sheet 2 – Vicinity Aerial – Existing Land Use Drawing
- Sheet 3 – Inaugural Airport Layout Plan Drawing
- Sheet 4 – Inaugural Airport Data Sheet
- Sheet 5 – Inaugural Terminal Area Drawing
- Sheet 6 – Inaugural Airport Airspace Drawing
- Sheet 7 – Inaugural Runway 9R Inner Portion of the Approach Surface Drawing
- Sheet 8 – Inaugural Runway 27L Inner Portion of the Approach Surface Drawing
- Sheet 9 – Inaugural Runway 9L Inner Portion of the Approach Surface Drawing
- Sheet 10 – Inaugural Runway 27R Inner Portion of the Approach Surface Drawing
- Sheet 11 – Inaugural Airport Land Use Drawing
- Sheet 12 – Inaugural Airport Property Map
- Sheet 13 – Inaugural Airport Property Map Data Tables
- Sheet 14 – Future Airport Layout Plan Drawing
- Sheet 15 – Future Airport Data Sheet
- Sheet 16 – Future Terminal Area Drawing
- Sheet 17 – Future Airport Airspace Drawing
- Sheet 18 – Future Runway 9L Inner Portion of the Approach Surface Drawing
- Sheet 19 – Future Runway 27R Inner Portion of the Approach Surface Drawing
- Sheet 20 – Future Runway 8R Inner Portion of the Approach Surface Drawing
- Sheet 21 – Future Runway 26L Inner Portion of the Approach Surface Drawing
- Sheet 22 – Future Airport Land Use Drawing
- Sheet 23 – Future Airport Property Map

### 4.1 Sheet 1 – Title Sheet

The Title Sheet is the first page of the ALP and contains the airport name, date of the ALP, designated space for the FAA approval letter and signature blocks for IDOT and AECOM. Sheet 1 also includes a location map, vicinity map, index to sheets and the required FAA Airport Layout Plan Review Statement. **Exhibit 4-1 – Title Sheet** depicts the Title Sheet for SSA's ALP.

### 4.2 Sheet 2 – Vicinity Aerial – Existing Land Use Drawing

The Vicinity Aerial – Existing Land Use Plan provides an aerial view of the airfield and its environs. This sheet depicts land uses, both natural and manmade, on and in the area around the airport and contains all lands within the expected 65 Day-Night noise contour. On-airport land uses depicted include the air passenger terminal area, airfield (runway, taxiway, aircraft parking aprons) pavements, support facilities, air cargo facilities, GA/Corporate aviation facilities, auto access and parking, airfield maintenance facilities, streams, wetlands, ATCT, airport property line and AOA. Off-airport features depicted include boundaries of local communities, other transportation infrastructure such as interstate highways, arterial roadways and local roads. Passenger and freight railroads and a local privately-owned private-use airfield are also shown. **Exhibit 4.2 – Vicinity Aerial – Existing Land Use Plan Drawing** depicts the Vicinity Aerial – Existing Land Use Plan for SSA's ALP.

#### 4.3 Sheet 3 – Inaugural Airport Layout Plan Drawing

The Inaugural ALP is a drawing that represents airfield facilities expected to either be in operation on DBO and/or before DBO+5. The drawing includes inaugural airfield pavements, buildings, safety areas, clearances, critical areas, support facilities, NAVAIDS and service roads. Key elements of the Inaugural ALP include:

- ➔ *Airfield* – The inaugural airfield consists of a parallel runway configuration Runways 9L-27R and 9R-27L. Runway 9L-27R is an existing GA/Corporate runway that is 5,001 feet long and 75 feet wide. Runway 9L-27R's ADG is Group I and the Aircraft Approach Category is B. Runway 9R-27L is a commercial service runway that will be 9,500 feet long and 150 feet wide. The ADG for Runway 9R-27L is Group III and the Aircraft Approach Category is C. Both runways have complete parallel taxiways serving all runway thresholds. A precision instrument approach is identified for Runway 27L and all other runway thresholds have non-precision instrument approaches. Visual and electronic NAVAIDS are illustrated for each runway end and an approach light system is shown to the threshold of Runway 27L. Appropriate safety areas, AOA and land boundary limits are shown on this sheet.
- ➔ *Terminal Facilities* – The inaugural airfield includes the development of an air passenger terminal and air cargo facilities. These structures include aircraft parking aprons adjacent to the terminals. At DBO, air cargo aircraft parking would be co-located on the air passenger ramp. By DBO+5 a new air cargo terminal would be constructed in the airfield's eastern quadrant. Existing GA/Corporate aviation hangars shall remain adjacent to Runway 9L-27R.
- ➔ *Support/Ancillary Facilities* – Support facilities are depicted between the parallel runways. The airport maintenance area and the Aircraft Rescue and Fire Fighting (ARFF) facilities are centrally located between the air passenger terminal and the DBO+5 air cargo terminal. The ATCT and the airport rotating beacon are also located in this area. The airport fuel farm is located north of the DBO+5 air cargo terminal.

*Ground Access Facilities* – An airport entrance road from Interstate 57 and Illinois Route 50 (Governors Highway) to the air passenger terminal is depicted. The drawing identifies those roadways that would be severed to allow for construction of Runway 9R-27L. Local access to the Inaugural airport would be provided via the local county road system. Ashland Avenue and Eagle Lake Road would be reconstructed to offset the severed roads on the east side of the airport and provide a connection to Illinois Route 394 and Illinois Route 1. Public parking in the inaugural air passenger terminal area shall be provided using surface lots. Portions of the surface parking shall be available for rental car and employee parking. **Exhibit 4-3 – Inaugural Airport Layout Plan Drawing** depicts the Inaugural Airport Layout Plan for SSA's ALP.

#### 4.4 Sheet 4 – Inaugural Airport Data Sheet

The Inaugural Data Sheet includes pertinent information on key airport facilities depicted on the Inaugural ALP. Information contained on the sheet includes wind rose and wind coverage tables, airport and runway data tables, declared distances table, general notes, data sources and document abbreviations. Key elements of the Inaugural Data Sheet include:

- ➔ *Wind Rose and Wind Coverage Tables* – The Inaugural Data Sheet depicts an All Weather Wind Rose, VFR Weather Wind Rose and an IFR Wind Rose. Wind coverage for each wind rose is documented in an associated table. Historical wind data was obtained for Chicago Midway International Airport (MDW) for ten years from 2000 to 2009.
- ➔ *Airport Data Table* – The Airport Data Table includes a summary of geographic (Inaugural Airport Reference Point (ARP) and airfield elevation), meteorological (Mean Maximum Temperature) and operational (critical aircraft) data for the Inaugural ALP. The local magnetic variation and inaugural NAVAIDS are also listed.

→ *Runway Data Table* – The Runway Data Table defines specific physical, geometric and operational information for each runway end contained on the Inaugural ALP. The table includes approach category and design group parameters, physical runway lengths and widths, pavement strengths, and runway end coordinates and elevations. The table also contains dimensions for Runway Safety Areas (RSA), ROFA, Runway Protection Zones (RPZ) and Precision Obstacle Free Zones (POFZ). Taxiway Safety Areas and dimensions are also listed in the table.

*Declared Distances Table* – Appendix 14 of the FAA’s AC 150/5300-13, *Airport Design* defines the use of Declared Distances for airfield development. Declared Distances use an aircraft’s runway performance to independently check: Takeoff-Run Available (TORA), Takeoff Distance Available (TODA), Accelerated-Stop Distance Available (ASDA) and Landing Distance Available (LDA). Declared Distances are implemented at “constrained” airfields where RSAs are comprised. SSA is designed not to be a “constrained” airport and would meet current RSA criteria. FAA guidelines require analysis of Declared Distances at all facilities. Runway 9L-27R was designed to meet IDOT safety standards for a privately-owned, public use airport and not FAA design standards. Specific improvements are depicted on the plans to bring that runway into RSA compliance. Declared Distances for the Inaugural ALP are included in a table on this sheet and discussed further in **Section 7 – Declared Distances**. **Exhibit 4-4 - Inaugural Airport Data Sheet** depicts the Inaugural Airport Data Sheet for SSA’s ALP.

#### 4.5 Sheet 5 – Inaugural Terminal Area Drawing

The Inaugural Terminal Area Plan is an expanded view drawing of the Inaugural ALP and focuses on the areas where aprons, buildings, hangars, and parking lots are located. Inaugural airport facilities depicted on the terminal plan include the air passenger terminal, air cargo facilities (DBO and DBO+5), existing GA hangars, support facilities and the ATCT. Buildings shown on this sheet are listed in a table that include existing or inaugural top of structure elevations. **Exhibit 4-5 - Inaugural Terminal Area Drawing** depicts the Inaugural Terminal Area Plan for SSA’s ALP.

#### 4.6 Sheet 6 – Inaugural Airport Airspace Drawing

Inaugural airspace planning depicted in the ALP is illustrated through two drawing series: the Inaugural Airport Airspace Plan and the individual Inner Portion of the Approach Surface Drawings. Inaugural Airport Airspace Plan is a **holistic airspace view of the** airfield configuration. Inner Portion of the Approach Surface Drawings are localized graphics for each runway end and are discussed in **Section 4.7 - Sheet 7 - Inaugural Runway 9R Inner Portion of the Approach Surface Drawing; Section 4.8 – Sheet 8 – Inaugural Runway 27L Inner Portion of the Approach Surface Drawing; Section 4.9 – Sheet 9 – Inaugural Runway 9L Inner Portion of the Approach Surface Drawing and Section 4.10 – Sheet 10 – Inaugural Runway 27R Inner Portion of the Approach Surface Drawing**. Airspace criteria used by FAA for airspace drawings is contained in CFR Part 77 – *Safe, Efficient Use, And Preservation of the Navigable Airspace*,<sup>67</sup> commonly referred to as Part 77.

The Inaugural Airport Airspace Plan is a drawing that depicts the Part 77 imaginary surfaces, or heights that define navigable airspace surrounding an airport’s runway system. Part 77 imaginary surface dimensions are defined by the weight of the aircraft using the runway (utility aircraft ≤12,500 pounds; greater than utility aircraft >12,500 pounds) and by the type of standard instrument approach procedures (visual, non-precision, precision) that are expected on each end of that runway. Penetration(s) of Part 77 surfaces by a fixed or moveable object(s) constitutes an obstruction to air navigation.

The airspace plan uses United States Geological Survey topographic sheets as its base map and depicts the entire inaugural airfield configuration. Smaller scaled profile views of inaugural approaches and obstruction data tables are also included. Runway numerals label the location of the airfield configuration and airspace slopes are defined at 50 foot elevation intervals. An extended runway centerline ground profile, based on the highest terrain across the width and along the length of the approach surface, has been depicted. Specific Part 77 surfaces shown on the Inaugural Airport Airspace Plan include:

<sup>67</sup> <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&rgn=div5&view=text&node=14:2.0.1.2.9&idno=14>

→ *Primary Surface* is a flat plane longitudinally centered on a runway. For runways with specially prepared hard surfaces, the primary surface extends 200 feet beyond each end of that runway; but when the runway has no specially prepared hard surface (turf, water, etc.), the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface is:

- (1) 250 feet for utility runways having only visual approaches;
- (2) 500 feet for utility runways having non-precision instrument approaches;
- (3) For other than utility runways, the width is:
  - (i) 500 feet for visual runways having only visual approaches;
  - (ii) 500 feet for non-precision instrument runways having visibility minimums greater than  $\frac{3}{4}$  statute mile;
  - (iii) 1,000 feet for a non-precision instrument runway having a non-precision instrument approach with visibility minimums as low as  $\frac{3}{4}$  of a statute mile and for precision instrument runways.

The width of the primary surface of a runway shall be that width prescribed for the most precise approach existing or planned for either end of that runway.

→ *Approach Surfaces* are imaginary planes longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.

- (1) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:
  - (i) 1,250 feet for that end of a utility runway with only visual approaches;
  - (ii) 1,500 feet for that end of a runway other than a utility runway with only visual approaches;
  - (iii) 2,000 feet for that end of a utility runway with a non-precision instrument approach;
  - (iv) 3,500 feet for that end of a non-precision instrument runway other than utility, having visibility minimums greater than  $\frac{3}{4}$  of a statute mile;
  - (v) 4,000 feet for that end of a non-precision instrument runway, other than utility, having a non-precision instrument approach with visibility minimums as low as  $\frac{3}{4}$  statute mile; and
  - (vi) 16,000 feet for precision instrument runways.
- (2) The approach surface extends for a horizontal distance of:
  - (i) 5,000 feet at a slope of 20 to 1 for all utility and visual runways;
  - (ii) 10,000 feet at a slope of 34 to 1 for all non-precision instrument runways other than utility; and
  - (iii) 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.
- (3) The outer width of an approach surface to an end of a runway shall be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.

→ *Transitional Surfaces* are imaginary planes that extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces. Transitional surfaces for those portions of the precision approach surface which project through and beyond the limits of the conical surface extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline.

→ *Horizontal Surface* is a flat plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:

- (1) 5,000 feet for all runways designated as utility or visual; and
- (2) 10,000 feet for all other runways.

The radius of the arc specified for each end of a runway shall have the same arithmetical value. That value would be the highest determined for either end of the runway. When a 5,000-foot arc is encompassed by tangents connecting two adjacent 10,000-foot arcs, the 5,000-foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.

- *Conical Surface* is a plane extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

**Exhibit 4-6 - Inaugural Airport Airspace Drawing** depicts the Inaugural Airport Airspace Plan for the SSA's ALP.

#### 4.7 Sheet 7 – Inaugural Runway 9R Inner Portion of the Approach Surface Drawing

The Inaugural Runway 9R Inner Portion of the Approach Surface Drawing is a close up view of the immediate runway end approach area for the commercial runway. Safe aircraft operations require the removal and restriction of obstructions to air navigation. Penetrations to traverse ways (FAR Part 77, Threshold Siting Criteria, Departure Surface-One-Engine Inoperative obstacle identification surface, etc.) are numerically identified in a table with elevations, computed vertical clearances and object disposition. This sheet also depicts safety areas (RPZs, RSAs, ROFAs, POFZs, etc.) and identifies any penetrations to those criteria. The coverage of this drawing is limited to the RPZ area. Additional geographic features include ground contours, roads, railroads and airport boundary limits are also depicted. **Exhibit 4-7 - Inaugural Runway 9R Inner Portion of the Approach Surface Drawing** depicts the Inaugural Runway 9R Inner Portion of the Approach Surface Drawing for SSA's ALP.

#### 4.8 Sheet 8 – Inaugural Runway 27L Inner Portion of the Approach Surface Drawing

The Inaugural Runway 27L Inner Portion of the Approach Surface Drawing is a close up view of the immediate runway end approach area for the commercial runway. Safe aircraft operations require the removal and restriction of obstructions to air navigation. Penetrations to traverse ways (FAR Part 77, Threshold Siting Criteria, Departure Surface-One-Engine Inoperative obstacle identification surface, etc.) are numerically identified in a table with elevations, computed vertical clearances and object disposition. This sheet also depicts safety areas (RPZs, RSAs, ROFAs, POFZs, etc.) and identifies any penetrations to those criteria. The coverage of this drawing is limited to the RPZ area. Additional geographic features include ground contours, roads, railroads and airport boundary limits are also depicted. **Exhibit 4-8 - Inaugural Runway 27L Inner Portion of the Approach Surface Drawing** depicts the Inaugural Runway 27L Inner Portion of the Approach Surface Drawing for the South Suburban Airport's ALP.

#### 4.9 Sheet 9 – Inaugural Runway 9L Inner Portion of the Approach Surface Drawing

The Inaugural Runway 9L Inner Portion of the Approach Surface Drawing is a close up view of the immediate runway end approach area for the GA/Corporate aviation runway. Safe aircraft operations require the removal and restriction of obstructions to air navigation. Penetrations to traverse ways (FAR Part 77, Threshold Siting Criteria, Departure Surface, etc.) are numerically identified in a table with elevations, computed vertical clearances and object disposition. This sheet also depicts safety areas (RPZs, RSAs, ROFAs, POFZs, etc.) and identifies any penetrations to those criteria. The coverage of this drawing is limited to the RPZ area. Additional geographic features include ground contours, roads, railroads and airport boundary limits are also depicted. **Exhibit 4-9 – Inaugural Runway 9L Inner Portion of the Approach Surface Drawing** depicts the Inaugural Runway 9L Inner Portion of the Approach Surface Drawing for SSA's ALP.

#### 4.10 Sheet 10 – Inaugural Runway 27R Inner Portion of the Approach Surface Drawing

The Inaugural Runway 27R Inner Portion of the Approach Surface Drawing is a close up view of the immediate runway end approach area for the GA/Corporate aviation runway. Safe aircraft operations require the removal and restriction of obstructions to air navigation. Penetrations to traverse ways (FAR Part 77, Threshold Siting

Criteria, Departure Surface, etc.) are numerically identified in a table with elevations, computed vertical clearances and object disposition. This sheet also depicts safety areas (RPZs, RSAs, ROFAs, POFZs, etc.) and identifies any penetrations to those criteria. The coverage of this drawing is limited to the RPZ area. Additional geographic features include ground contours, roads, railroads and airport boundary limits are also depicted. **Exhibit 4-10 – Inaugural Runway 27R Inner Portion of the Approach Surface Drawing** depicts the Inaugural Runway 27R Inner Portion of the Approach Surface Drawing for SSA's ALP.

#### 4.11 Sheet 11 – Inaugural Airport Land Use Drawing

The Inaugural Airport Land Use Plan depicts on-airport and off-airport land uses. On-airport land uses include: airfield pavements, terminal areas, ancillary and support facilities, GA/Corporate aviation facilities, property boundaries, aircraft operations areas, etc. Present day off-airport land uses include: airport lands, municipal boundaries, cemeteries, commercial uses, industrial uses, institutional uses, residential uses, recreational uses, vacant/agricultural uses and open water. Public facilities such as schools, parks, forest preserves and other similar developments are shown on the plan. Inaugural airport features (runways, taxiways, aprons, RPZs, buildings, navigational aids, etc.) are graphically included on the plan. **Exhibit 4-11 – Inaugural Airport Land Use Drawing** depicts the Inaugural Airport Land Use Plan for SSA's ALP.

#### 4.12 Sheet 12 – Inaugural Airport Property Map

From the start of the land acquisition process, IDOT has maintained an Exhibit "A" Property Line Map of all acquired land and property. That document is the basis of the Inaugural Property Line Map. This sheet, which is the same size and scale as the Inaugural ALP Sheets, includes a map of land parcels overlaid on top of inaugural airport features (runways, taxiways, terminals, roadways, NAVAIDS, safety areas etc.). A title block, revision block and legend are also contained on this sheet. **Exhibit 4-12 – Inaugural Airport Property Map** depicts the Inaugural Airport Property Map for SSA's ALP.

#### 4.13 Sheet 13 – Inaugural Airport Property Map Data Tables

As a companion to Sheet 12, a table listing the date of acquisition and previous land owner is depicted on Sheet 13. A numerical identification system has also been listed in the table to categorize the parcel tracts. At present no Federal funds have been used in the acquisition of airport property and that criteria requirement is not applicable at this time. **Exhibit 4-13 – Inaugural Airport Property Map Data Tables** depicts the Inaugural Property Map Data Tables for SSA's ALP.

#### 4.14 Sheet 14 – Future Airport Layout Plan Drawing

The Future ALP is a drawing that represents airfield facilities expected to either be in operation beyond DBO+5. The drawing includes airfield pavements, structures safety areas, clearances, critical areas and dimensions for passenger and cargo terminal areas, support facilities, aircraft hangars, NAVAIDS and service roads. Key elements of the Inaugural ALP include:

- ➔ *Airfield* – The Future ALP continues to fulfill the requirements of FAA's approved Tier I Environmental Impact Statement's Record of Decision by depicting a quadruple simultaneous runway configuration. The airfield shall be divided into a north and south complex centered on the air passenger and cargo core. In the southern complex, the future airfield builds from the inaugural runway by maintaining and extending Runway 9R (future Runway 9L) to 12,000 feet. An additional independent Runway 9R-27L would be constructed 5,000 feet south of the future Runway 9L-27R. A dependent Runway 9C-27C is located between the two main runways to allow for aircraft departure overflow capability. In the northern airfield complex two independent Runways 8L-26R and 8R-26L are depicted and shall be separated by 5,000 feet. A dependent Runway 8C-26C is included for future overflow departure needs. Construction and operation of Runway 8R-26L necessitates the closure of the GA/Corporate aviation runway. Runways 8R-26L and 9L-27R shall be separated by 7,400 feet. All independent runways are planned to accommodate ADG VI aircraft and Aircraft Approach Category

D. Safety areas and taxiway centerline locations are placed to meet D-VI requirements. All independent runways are designed to be capable of handling Category IIIc precision instrument approach procedures. Visual and electronic NAVAIDS are shown for each independent runway end. Appropriate safety areas, AOA and land boundary limits are shown on this sheet. End around taxiways are depicted for aircraft transitioning from the most external independent runway to the terminal core.

- *Terminal Facilities* – The future airfield would continue to develop air passenger terminal and air cargo facilities constructed during the airfield’s inaugural phase. These structures include commensurate air passenger terminals, air cargo terminals and aircraft parking aprons. At DBO, air cargo aircraft parking would be co-located on the air passenger ramp. By DBO+5 a new air cargo terminal shall be constructed in the airfield’s eastern quadrant. Existing GA/Corporate aviation hangars would remain adjacent to Runway 9L-27R.
- *Support/Ancillary Facilities* – Support facilities are depicted between the parallel runways. The airport maintenance area and the ARFF facilities are centrally located between the air passenger terminal and the DBO+5 air cargo terminal. The siting of the ATCT and the airport rotating beacon are also located in this area. The airfield fuel farm is located north of the DBO+5 air cargo terminal.
- *Ground Access Facilities* – An airport entrance road from Interstate 57/Illinois Route 50 (South Governors Highway) to the air passenger terminal is depicted. Direct access is also shown from Illinois Route 394/Illinois Route 1 to the Future Terminal Area. The drawing also denotes those roadways that have been severed. Local road improvements to support future airport plans would be achieved through the IDOT/CMAP transportation improvement planning and programming process. Public parking in the inaugural air passenger terminal area would be provided using surface lots. Portions of the surface parking shall be available for rental car and employee parking.

**Exhibit 4-14 – Future Airport Layout Plan Drawing** depicts the Future ALP for SSA’s ALP.

#### 4.15 Sheet 15 – Future Airport Data Sheet

The Future Data Sheet includes pertinent information on key airport facilities depicted on the Future ALP. Information contained on the sheet includes wind rose and wind coverage tables, airport and runway data tables, declared distances table, general notes, data sources and document abbreviations. Key elements of the Inaugural Data Sheet include:

- *Wind Rose and Wind Coverage Tables* – The Future Data Sheet depicts an All Weather Wind Rose, VFR Weather Wind Rose and an IFR Wind Rose. Wind coverage for each wind rose is documented in an associated table. Historical wind data was obtained for MDW for ten years from 2000 to 2009.
- *Airport Data Table* – The Airport Data Table includes a summary of geographic (ARP and airfield elevation), meteorological (Mean Maximum Temperature) and operational (critical aircraft) data for the Future ALP. The local magnetic variation and inaugural NAVAIDS are also listed.
- *Runway Data Table* – The Runway Data Table defines specific physical, geometric and operational information for each runway end contained on the Future ALP. The table includes approach category and design group parameters, physical runway lengths and widths, pavement strengths, and runway end coordinates and elevations. The table also contains dimensions for RSA, ROFA, RPZs and POFZ. Taxiway safety areas and dimensions are also listed in the table.
- *Declared Distances Table* – Appendix 14 of the FAA’s AC 150/5300-13, *Airport Design* defines the use of Declared Distances for airfield development. Declared Distances use an aircraft’s runway performance to independently check: TORA, TODA, ASDA and LDA. Declared Distances are implemented at “constrained” airfields where RSAs are comprised. SSA is designed not to be a “constrained” airport and would meet current RSA criteria. FAA guidelines require analysis of Declared Distances at all facilities. Runway 9L-27R was

designed to meet IDOT’s safety standards and not FAA design standards. Specific improvements are depicted on the plans to bring that runway into RSA compliance. Declared Distances for the Future ALP are included in a table on this sheet and discussed further in **Section 7 – Declared Distances**.

**Exhibit 4-15 – Future Airport Data Sheet** depicts the Future Airport Data Sheet for SSA’s ALP.

#### 4.16 Sheet 16 – Future Terminal Area Drawing

The Future Terminal Area Plan is an expanded view drawing of the Future ALP and focuses on the areas where aprons, buildings, hangars, and parking lots are located. Future airport facilities depicted on the terminal plan include the air passenger terminal, air cargo facilities, existing GA hangars, support facilities and the ATCT. Buildings shown on this sheet are also listed in a table that includes existing or future top of structure elevations.

**Exhibit 4-16 – Future Terminal Area Drawing** depicts the Future Terminal Area Plan for SSA’s ALP.

#### 4.17 Sheet 17 – Future Airport Airspace Drawing

Future airspace planning depicted in the ALP is illustrated through two drawing series: the Future Airport Airspace Plan and the individual Inner Portion of the Approach Surface Drawings. Future Airport Airspace Plan is a holistic airspace view of the airfield configuration. Inner Portion of the Approach Surface Drawings are localized graphics for each runway end and are discussed in **Section 4.17 – Sheet 17 – Future Airport Airspace Drawing; Section 4.18 – Sheet 18 – Future Runway 9L Inner Portion of the Approach Surface Drawing; Section 4.19 – Sheet 19 – Future Runway 27R Inner Portion of the Approach Surface Drawing and Section 4.20 – Sheet 20 – Future Runway 8R Inner Portion of the Approach Surface Drawing**. Airspace criteria used by FAA for airspace drawings is contained in CFR Part 77 – *Safe, Efficient Use, And Preservation of the Navigable Airspace*,<sup>68</sup> commonly referred to as Part 77.

The Future Airport Airspace Plan is a drawing that depicts the Part 77 imaginary surfaces that define navigable airspace surrounding an airport’s runway system. Part 77 imaginary surface dimensions are defined by the weight of the aircraft using the runway (utility aircraft  $\leq 12,500$  pounds; greater than utility aircraft  $>12,500$  pounds) and by the type of standard instrument approach procedures (visual, non-precision, precision) that are expected on each end of that runway. Penetration(s) of Part 77 surfaces by a fixed or moveable object(s) constitutes an obstruction to air navigation.

The airspace plan uses United States Geological Survey topographic sheets as its base map and depicts the entire inaugural airfield configuration. Smaller scaled profile views of inaugural approaches and obstruction data tables are also included. Runway numerals label the location of the airfield configuration and airspace slopes are defined at 50 foot elevation intervals. An extended runway centerline ground profile, based on the highest terrain across the width and along the length of the approach surface has been depicted. Specific Part 77 surfaces shown on the Future Airport Airspace Plan include:

→ *Primary Surface* is a flat plane longitudinally centered on a runway. For runways with specially prepared hard surfaces, the primary surface extends 200 feet beyond each end of that runway; but when the runway has no specially prepared hard surface (turf, water, etc.), the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface is:

- (1) 250 feet for utility runways having only visual approaches;
- (2) 500 feet for utility runways having non-precision instrument approaches;
- (3) For other than utility runways, the width is:
  - (i) 500 feet for visual runways having only visual approaches;

<sup>68</sup> <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&rgn=div5&view=text&node=14:2.0.1.2.9&idno=14>

- (ii) 500 feet for non-precision instrument runways having visibility minimums greater than  $\frac{3}{4}$  statute mile; and
- (iii) 1,000 feet for a non-precision instrument runway having a non-precision instrument approach with visibility minimums as low as  $\frac{3}{4}$  of a statute mile and for precision instrument runways.

The width of the primary surface of a runway shall be that width prescribed for the most precise approach existing or planned for either end of that runway.

→ *Approach Surfaces* are imaginary planes longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.

- (1) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:
  - (i) 1,250 feet for that end of a utility runway with only visual approaches;
  - (ii) 1,500 feet for that end of a runway other than a utility runway with only visual approaches;
  - (iii) 2,000 feet for that end of a utility runway with a non-precision instrument approach;
  - (iv) 3,500 feet for that end of a non-precision instrument runway other than utility, having visibility minimums greater than  $\frac{3}{4}$  of a statute mile;
  - (v) 4,000 feet for that end of a non-precision instrument runway, other than utility, having a non-precision instrument approach with visibility minimums as low as  $\frac{3}{4}$  statute mile;
  - (vi) 16,000 feet for precision instrument runways.
- (2) The approach surface extends for a horizontal distance of:
  - (i) 5,000 feet at a slope of 20 to 1 for all utility and visual runways;
  - (ii) 10,000 feet at a slope of 34 to 1 for all non-precision instrument runways other than utility;
  - (iii) 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.
- (3) The outer width of an approach surface to an end of a runway would be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.

→ *Transitional Surfaces* are imaginary planes that extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces. Transitional surfaces for those portions of the precision approach surface which project through and beyond the limits of the conical surface extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline.

→ *Horizontal Surface* is a flat plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:

- (1) 5,000 feet for all runways designated as utility or visual; and
- (2) 10,000 feet for all other runways.

The radius of the arc specified for each end of a runway would have the same arithmetical value. That value shall be the highest determined for either end of the runway. When a 5,000-foot arc is encompassed by tangents connecting two adjacent 10,000-foot arcs, the 5,000-foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.

→ *Conical Surface* is a plane extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

**Exhibit 4-17 – Future Airport Airspace Drawing** depicts the Future Airport Airspace Plan for SSA’s ALP.

#### 4.18 Sheet 18 – Future Runway 9L Inner Portion of the Approach Surface Drawing

The Future Runway 9L Inner Portion of the Approach Surface Drawing is a close up view of the immediate runway end approach area. Safe aircraft operations require the removal and restriction of obstructions to air navigation. One of the most critical parts of a flight is on approach to a runway end. Penetrations to traverse ways (FAR Part 77, Threshold Siting Criteria, Departure Surface-One-Engine Inoperative obstacle identification surface, etc.) are numerically identified in a table with elevations, computed vertical clearances and object disposition. This sheet also depicts safety areas (RPZs, RSAs, ROFAs, POFZs, etc.) and identifies any penetrations to those criteria. The coverage of this drawing is limited to the RPZ area. Additional geographic features include ground contours, roads, railroads and airport boundary limits are also depicted. **Exhibit 4-18 – Future Runway 9L Inner Portion of the Approach Surface Drawing** depicts the Future Runway 9L Inner Portion of the Approach Surface Drawing for SSA’s ALP.

#### 4.19 Sheet 19 – Future Runway 27R Inner Portion of the Approach Surface Drawing

The Future Runway 27R Inner Portion of the Approach Surface Drawing is a close up view of the immediate runway end approach area. Safe aircraft operations require the removal and restriction of obstructions to air navigation. One of the most critical parts of a flight is on approach to a runway end. Penetrations to traverse ways (FAR Part 77, Threshold Siting Criteria, Departure Surface-One-Engine Inoperative obstacle identification surface, etc.) are numerically identified in a table with elevations, computed vertical clearances and object disposition. This sheet also depicts safety areas (RPZs, RSAs, ROFAs, POFZs, etc.) and identifies any penetrations to those criteria. The coverage of this drawing is limited to the RPZ area. Additional geographic features include ground contours, roads, railroads and airport boundary limits are also depicted. **Exhibit 4-19 – Future Runway 27R Inner Portion of the Approach Surface Drawing** depicts the Future Runway 27R Inner Portion of the Approach Surface Drawing for SSA’s ALP.

#### 4.20 Sheet 20 – Future Runway 8R Inner Portion of the Approach Surface Drawing

The Future Runway 8R Inner Portion of the Approach Surface Drawing is a close up view of the immediate runway end approach area. Safe aircraft operations require the removal and restriction of obstructions to air navigation. One of the most critical parts of a flight is on approach to a runway end. Penetrations to traverse ways (FAR Part 77, Threshold Siting Criteria, Departure Surface, etc.) are numerically identified in a table with elevations, computed vertical clearances and object disposition. This sheet also depicts safety areas (RPZs, RSAs, ROFAs, POFZs, etc.) and identifies any penetrations to those criteria. The coverage of this drawing is limited to the RPZ area. Additional geographic features include ground contours, roads, railroads and airport boundary limits are also depicted. **Exhibit 4-20 – Future Runway 8R Inner Portion of the Approach Surface Drawing** depicts the Future Runway 8R Inner Portion of the Approach Surface Drawing for SSA’s ALP.

#### 4.21 Sheet 21 – Future Runway 26L Inner Portion of the Approach Surface Drawing

The Future Runway 26L Inner Portion of the Approach Surface Drawing is a close up view of the immediate runway end approach area. Safe aircraft operations require the removal and restriction of obstructions to air navigation. One of the critical parts of a flight is on approach to a runway end. Penetrations to traverse ways (FAR Part 77, Threshold Siting Criteria, Departure Surface, etc.) are numerically identified in a table with elevations, computed vertical clearances and object disposition. This sheet also depicts safety areas (RPZs, RSAs, ROFAs, POFZs, etc.) and identifies any penetrations to those criteria. The coverage of this drawing is limited to the RPZ area. Additional geographic features include ground contours, roads, railroads and airport boundary limits are also depicted. **Exhibit 4-21 – Future Runway 26L Inner Portion of the Approach Surface Drawing** depicts the Future Runway 26L Inner Portion of the Approach Surface Drawing for SSA’s ALP.

#### 4.22 Sheet 22 – Future Airport Land Use Drawing

The Future Airport Land Use Plan depicts on-airport and off-airport land uses. On-airport land uses include: airfield pavements, terminal areas, ancillary and support facilities, GA/Corporate aviation facilities, property boundaries, aircraft operations areas, etc. Future off-airport land uses include: airport lands, municipal boundaries, cemeteries, commercial uses, industrial uses, institutional uses, residential uses, recreational uses, vacant/agricultural uses and open water. Public facilities such as schools, parks, forest preserves and other similar developments are shown on the plan. Future airport features (runways, taxiways, aprons, RPZs, buildings, NAVAIDS, etc.) are graphically included on the plan. **Exhibit 4-22 – Future Airport Land Use Drawing** depicts the Future Airport Land Use Plan for SSA's ALP.

#### 4.23 Sheet 23 – Future Airport Property Map

From the start of the land acquisition process, IDOT has maintained an Exhibit "A" Property Line Map of all acquired land and property. That document is the basis of the Future Property Line Map. This sheet includes a map of land parcels overlaid on top of inaugural airport features (runways, taxiways, terminals, roadways, NAVAIDS, safety areas etc.). **Exhibit 4-23 – Future Airport Property Map** depicts the Future Airport Property Map for SSA's ALP.

## Section 5 – Runway Safety Area Determination

FAA describes a RSA as “A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot or excursion from the runway”.<sup>69</sup> RSA dimensions are defined in FAA’s AC 150/5300-13, *Airport Design* and are based on the runway’s Approach Category and ADG. FAA has instituted a national RSA monitoring plan that is defined in FAA’s Order 5200.8, *Runway Safety Area Program*.<sup>70</sup> The objective of the Runway Safety Area Program is that all RSAs at federally obligated airports and at airports certificated under 14 Code of Federal Regulations Part 139 shall conform to the standards contained in AC 150/5300-13, *Airport Design*, to the extent practicable.

Inaugural Runway 9R-27L RSA<sup>71</sup> is designed to be 500 feet, 250 feet on either side of the runway centerline and extends the full runway length to a point 1,000 feet beyond both runway ends. Runway 9R-27L would be constructed to be compliant with FAA RSA design criterion. The existing GA/Corporate Inaugural Runway 9L-27R RSA<sup>72</sup> is 120 feet wide, 60 feet either side of the runway centerline, and extends the full runway length to a point 240 feet beyond both ends. Presently Kedzie Avenue penetrates Inaugural Runway 9L RSA by 141 feet and Western Avenue penetrates Inaugural 27R RSA by 137 feet. The Inaugural ALP depicts relocation of Kedzie Avenue outside of the RSA and the closure of Western Avenue. These actions provide compliant RSAs for Inaugural Runway 9L-27R.

A Runway Safety Area Determination request is normally submitted to FAA during an airport master plan or ALP review. As part of the ALP airspace determination study and to fulfill the requirements of the RSA Program, a draft RSA Determination for Inaugural Runway 9L-27R is included in this report. See **Exhibit 5-1 – Draft Runway Safety Area Determination for Inaugural Runway 9L-27R**.

<sup>69</sup> FAA Advisory Circular 150/5300-13, “Airport Design”.

<sup>70</sup> [http://www.faa.gov/airports/resources/publications/orders/media/Construction\\_5200\\_8.pdf](http://www.faa.gov/airports/resources/publications/orders/media/Construction_5200_8.pdf)

<sup>71</sup> FAA Advisory Circular 150/5300-13, “Airport Design”, Table 3-3. Runway design standards for aircraft approach categories C & D.

<sup>72</sup> FAA Advisory Circular 150/5300-13, “Airport Design”, Table 3-1 Runway design standards for aircraft approach category A & B visual runways and runways with not lower than 3/4-statute mile (1,200 m) approach visibility minimums.

## Section 6 – Modification to Standards

FAA Great Lakes Region issued a **Policy and Procedures Memorandum 5320.1G** on February 13, 2001 entitled *General Processing of Modifications to Agency Airport Design and Construction Standards*.<sup>73</sup> This guidance document provides a framework for FAA review and action regarding the issuance of Modification to Standards. A Modification to Standards request is normally submitted to FAA during an airport master plan or ALP review.

The proposed airfield facilities for the SSA ALP are designed to meet and/or exceed FAA design criteria and thereby no modification to standards for those improvements is required. However, there are specific safety areas, associated with the existing GA/Corporate aviation runway, which do not meet FAA criteria. From inspection of the Inaugural ALP Drawing (**Exhibit 4-3 – Inaugural Airport Layout Drawing**), the ROFA and the RPZ for Inaugural Runway 9L-27R are traversed by existing roadways.

FAA describes an Object Free Area as “An area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.”<sup>74</sup> As noted previously, the ROFA beyond both thresholds of Inaugural Runway 9L-27R are crossed by existing roadways. Specifically, the Inaugural Runway 9L ROFA is penetrated 99 feet by Kedzie Avenue and Runway 27R ROFA is penetrated 103 feet by Western Avenue. **Exhibit 6-1 – Inaugural Runway 9L-27R Object Free Area Penetrations Map** includes an expanded view that depicts the ROFA surface penetrations. A modification to standards action is required for this safety issue. **Exhibit 6-2 – Draft Modification to Standards for Runway 9L-27R** provides a draft Modification to Standards request to FAA for the ROFA penetrations.

FAA describes an RPZ as “An area off the runway end to enhance the protection of people and property on the ground.” Adherence to these criteria is normally achieved through airport ownership and control of the RPZ. Such controls include clearing RPZ areas and maintain them clear of incompatible objects and activities. Paragraph 212(a)(2)(b) of FAA AC 150/5300-13, *Airport Design* states those land uses that are not compatible with a RPZ are:

*“Land uses prohibited from the RPZ are residences and places of public assembly. (Churches, schools, hospitals, office buildings, shopping centers, and other uses with similar concentrations of persons typify places of public assembly.) Fuel storage facilities may not be located in the RPZ.”*

The location of the roadways through the Runway 9L-27R RPZ's, while not desirable, are not a specific prohibited activity and as such a modification to standards is not required.

To resolve these safety issues, the Inaugural ALP Drawing depicts the relocation of Kedzie Avenue outside of the ROFA and RPZ and the closure of Western Avenue. These combined actions include proper grading and provides compliant ROFA's for Inaugural Runway 9L-27R.

<sup>73</sup> [http://www.faa.gov/airports/great\\_lakes/airports\\_resources/ppms/media/5320-1G.pdf](http://www.faa.gov/airports/great_lakes/airports_resources/ppms/media/5320-1G.pdf)

<sup>74</sup> [http://www.faa.gov/documentLibrary/media/Advisory\\_Circular/150\\_5300\\_13\\_chg18\\_consolidated.pdf](http://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5300_13_chg18_consolidated.pdf)

## Section 7 – Declared Distances

Appendix 14 of the FAA’s AC 150/5300-13, defines the use of Declared Distances for airfield development. Declared Distances use an aircraft’s runway performance to independently check: TORA, TODA, ASDA and LDA. Declared Distances are implemented at “constrained” airfields where RSAs are comprised. SSA is designed to not be a “constrained” airport and shall meet or exceed current RSA criteria. The FAA’s ALP Checklist discussed in **Section 8 – Airport Layout Plan Checklist** of this report requires the inclusion of Declared Distances for all runways.

Inaugural Runway 9L-27R was originally designed and constructed to meet IDOT safety standards and not FAA design standards. Inclusion of this runway into the SSA airfield configuration requires specific improvements depicted on the Inaugural ALP that bring Runway 9L-27R into complete RSA compliance. Declared Distances for both Inaugural runways are listed in **Table 7-1: Inaugural Runways Declared Distance Analysis**. For a graphically portrayal of the declared distances criteria see **Exhibit 7-1 – Inaugural Runway 9R-27L Declared Distances Map** and **Exhibit 7-2 - Inaugural Runway 9L-27R Declared Distances Map**.

**Table 7-1: Inaugural Runways Declared Distance Analysis**

Airport Facility	TORA	TODA	ASDA	LDA
Runway 9L-27R	5,001 ft	5,001 ft	5,001 ft	5,001 ft/4,850 ft
Runway 9R-27L	9,500 ft	9,500 ft	9,500 ft	9,500 ft

For planning purposes, the declared distances for the runways depicted on the Future ALP drawing are contained in **Table 7-2: Future Runways Declared Distance Analysis**. The Declared Distances for these runways are depicted in the following exhibits:

**Table 7-2: Future Runways Declared Distance Analysis**

Airport Facility	TORA	TODA	ASDA	LDA
Runway 8L-26R	7,500 ft	7,500 ft	7,500 ft	7,500 ft
Runway 8C-26R	10,000 ft	10,000 ft	10,000 ft	10,000 ft
Runway 8R-26L	12,000 ft	12,000 ft	12,000 ft	12,000 ft
Runway 9L-27R	12,000 ft	12,000 ft	12,000 ft	12,000 ft
Runway 9C-27C	10,000 ft	10,000 ft	10,000 ft	10,000 ft
Runway 9R-27L	10,000 ft	10,000 ft	10,000 ft	10,000 ft

## Section 8 – Airport Layout Plan Checklist

All Federally obligated airports are required as part of their grant assurances to “keep up to date at all times an airport layout plan of the airport showing:

- boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto;
- the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and roads), including all proposed extensions and reductions of existing airport facilities; and
- the location of all existing and proposed non-aviation areas and of all existing improvements thereon”.<sup>75</sup>

The FAA’s Great Lakes Regional Guidance Letter 5070.1<sup>76</sup> further states that: *“Such airport layout plans and each amendment, revision, or modification thereof, shall be subject to the approval of the Secretary by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make or permit any changes or alterations in the airport or any of its facilities which are not in conformity with the airport layout plan as approved by the Secretary and which might, in the opinion of the Secretary, adversely affect the safety, utility, or efficiency of the airport.”*

FAA AC 150/5070-6B, Change 1, *Airport Master Plans*<sup>77</sup> provides guidance on the preparation of ALPs. In order to maximize clarity, minimize costs and optimize the process of FAA review and approval of ALPs, the FAA Great Lakes Region has developed a supplemental RGL 5070-1 to provide a standardized checklist to be used for all ALPs prepared in the Great Lakes Region. SSA’s ALP Checklist is contained in **Exhibit 8-1 – South Suburban Airport Layout Plan Checklist**.

This Airport Plans Report, as a companion document to the full-size ALP set, is being submitted to the FAA-Chicago Airports District Office for their review. IDOT, as a part of this ALP submittal, has requested that the FAA conduct an Airspace Determination Study (airside landing area development per 14 CFR Part 77, Part 152 and Part 157) on the subject ALP. IDOT has also requested that the FAA accept the SSA ALP as a “Plan on File” for the purposes of 14 CFR Part 77, *Obstruction Evaluations* and potentially 14 CFR Part 152, *Airport Aid Program*, subject to appropriate NEPA approvals.

---

<sup>75</sup> [http://www.faa.gov/airports/great\\_lakes/airports\\_resources/ppms/media/5070-1.pdf](http://www.faa.gov/airports/great_lakes/airports_resources/ppms/media/5070-1.pdf)

<sup>76</sup> Ibid.

<sup>77</sup> [http://www.faa.gov/documentLibrary/media/advisory\\_circular/150-5070-6B/150\\_5070\\_6b\\_chg1.pdf](http://www.faa.gov/documentLibrary/media/advisory_circular/150-5070-6B/150_5070_6b_chg1.pdf)

## Section 9 –Non-Design Related Airport Classifications

The *South Suburban Airport Forecasts 2009: Verification of 2004 Forecasts*,<sup>78</sup> approved by the FAA, estimated approximately 471,000 annual passenger enplanements in DBO+5. To uniformly compare public-use, aeronautical facilities in the United States that may be eligible for federal funding, several airport categories have been created. Most categories are dependent on the type and amount of passengers and air cargo served at a specific location. Federal funding, commonly referred to as Airport Improvement Program funds, is for civil use only.

### 9.1 Airport Classifications Based on Passenger Boardings

Airports who enplane (board) 10,001 or more passengers in a single year are classified as Primary Airports. Airports who enplane 2,500 passengers, up to 10,000 passengers are called Commercial Service Airports.<sup>79</sup> Smaller airfields that have no commercial service (or less than 2,500 passengers annually) are normally identified as GA and/or corporate aviation airports. Certain GA/Corporate aviation airports in large metropolitan areas such as Chicago, that provide alternative GA access to an existing commercial airport and thereby relieve congestion at that facility, are called GA Reliever Airports. Based on the approved Forecast Report it is anticipated that SSA would become a Primary Airport (19,575 enplanements) after its first year of operation. SSA also provides a convenient regional entry point for GA/Corporate aviation users desiring to access the southern Chicago metropolitan area. It is expected that SSA would also have an added dual classification as a GA Reliever Airport to MDW.

To classify airports by the magnitude of passenger levels, FAA has created the definitions of Large Hub, Medium Hub, Small Hub, Non-Hub (Primary) and Non-Hub Commercial Service Airports. A Large Hub Airport is defined as having 1% or more of all national passenger boardings. Examples of a large hub airport include Chicago O’Hare International Airport and MDW. A Medium Hub Airport is defined of having at least 0.25% of the national boarding but less than 1%. Two examples of Medium Hub Airports include Indianapolis International Airport and Nashville International Airport. Small Hub Airports are defined as having at least 0.05% of the national boardings but less than 0.25%. Examples of Small Hub Airports include Quad City International Airport in Moline, Illinois and Santa Barbara Airport in California. The Non-Hub Airport category has been subdivided into two sections: Non-Hub Primary Airport and Non-Hub Commercial Service Airport. Airports that enplane less than 0.05% of the national passenger levels but greater than 10,000 in a single year are called Non-Hub Primary Airports. Examples of Non Hub Primary Airports include Central Illinois Regional Airport in Bloomington, Peoria International Airport and Abraham Lincoln Capital Airport in Springfield. Airports that enplane at least 2,500 passengers, but less than 10,000 on annual basis, are called Non Hub Commercial Service Airports. Examples of Non Hub Commercial Service Airports include Decatur Airport in Decatur, Illinois and the Quincy Regional Airport in Quincy, Illinois. The forecast report anticipates that SSA would be placed in the Small Hub Airport category by DBO+5.

### 9.2 Airport Classifications Based on Air Cargo Landed Weight

Cargo Service Airports are those facilities that are served by aircraft providing air cargo transportation flights that have an annual total landed weight of more than 100 million pounds. “Landed Weight” is defined as the weight of an aircraft transporting only cargo in intrastate, interstate or foreign air transportation. An airport may be both a commercial service and cargo service airport. Examples of Cargo Service Airports that are also commercial service facilities include Chicago O’Hare International Airport and Chicago Rockford International Airport. Based on the *South Suburban Airport Forecasts 2009: Verification of 2004 Forecasts* it is anticipated that SSA will not be eligible for consideration as a Cargo Service Airport through DBO+20.

---

<sup>78</sup> Ibid.

<sup>79</sup> [http://www.faa.gov/airports/planning\\_capacity/passenger\\_allcargo\\_stats/categories/](http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/categories/)

## Section 10 – AGIS/eALP Preparation

The FAA has begun a new initiative to streamline the airport survey process and centralize airport data storage into one integrated web-based Geographic Information System (GIS) called “Airports-GIS (AGIS).” The AGIS program defines the FAA process for the collection and maintenance of airport and aeronautical data. This new process was developed in large part to meet the demands of the FAA’s “next generation” NAS which requires accurate survey data. The AGIS system is designed to be a complete “one-stop-shopping” site for obtaining and maintaining airport data. FAA’s initiative to centralize data storage through AGIS, combined with new AC requirements for geospatial and aeronautical data formulation, has created a change in the way survey data is gathered and processed.

Specifically FAA has issued three AC’s that help guide the AGIS process. **AC 150/5300-16A, General Guidance Specifications for Aeronautical Surveys Establishment of Geodetic Control and Submission of the National Geodetic Survey**<sup>80</sup> defines the geodetic control necessary in surveys conducted on or near an airport. **AC 150/5300-17C, Standards For Using Remote Sensing Technologies in Airport Surveys.**<sup>81</sup> as the title states, provides specifications for the imagery used to support the aeronautical information and surveys outlined in AC 16A. **AC 150/5300-18B, General Guidance And Specifications For Submission Of Aeronautical Surveys To NGS: Field Data Collection And Geographic Information System (GIS) Standards**<sup>82</sup> is the final piece that provides the specifications for the collection of airport data and explains how to submit data to the FAA.

FAA Great Lakes Region issued a **RGL 5300.4, Airports GIS Data Collection Implementation Policy**<sup>83</sup> on August 11, 2010 regarding implementation of AGIS and specifically ACs -16, -17 and -18. **RGL 5300.4** states that: “*Airport Master Plans and ALP’s using ACs -16, -17, and -18 should be limited to Large and Medium Hub airports, pilot program airports, and those airports desiring to fully implement Airports GIS by FY-2012*”. In addition FAA Great Lakes also issued **RGL 5070.1 “Preparation and Review of Airport Layout Plans**”. This RGL also requires airports who desire new or modified instrumental approach procedures to conduct surveys that comply with ACs -16, -17, and -18.

As noted in **Section 9 – Non-Design Related Airport Classifications** of this report, SSA is anticipated to be listed in the Small Hub Airport category by DBO+5. Also, the GA/Corporate aviation runway (Inaugural Runway 9L-27R) presently has standard instrument approach procedures already in place to both runway ends. These two items in themselves do not require additional survey actions to meet the requirements of RGL 5300.4. However, creation of new standard instrument approach procedures to both ends of the new Inaugural Runway 9R-27L require appropriate surveys and data collection compliant with the requirements of RGL 5300.4. Since Runway 9R-27L has not yet been constructed and due to the limited shelf-life of the survey data to be used for creating the new instrument approach procedures, it is anticipated that as the Runway 9R-27L is built, RGL-5300.4 survey and data collection shall be accomplished.

<sup>80</sup> [http://www.faa.gov/documentlibrary/media/advisory\\_circular/150-5300-16a/150\\_5300\\_16a.pdf](http://www.faa.gov/documentlibrary/media/advisory_circular/150-5300-16a/150_5300_16a.pdf)

<sup>81</sup> [http://www.faa.gov/documentLibrary/media/Advisory\\_Circular/150\\_5300\\_17c.pdf](http://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5300_17c.pdf)

<sup>82</sup> [http://www.faa.gov/documentLibrary/media/Advisory\\_Circular/150\\_5300\\_18b.pdf](http://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5300_18b.pdf)

<sup>83</sup> [http://www.faa.gov/airports/great\\_lakes/airports\\_resources/ppms/media/5300-4.pdf](http://www.faa.gov/airports/great_lakes/airports_resources/ppms/media/5300-4.pdf)

## Appendix A - Acronyms

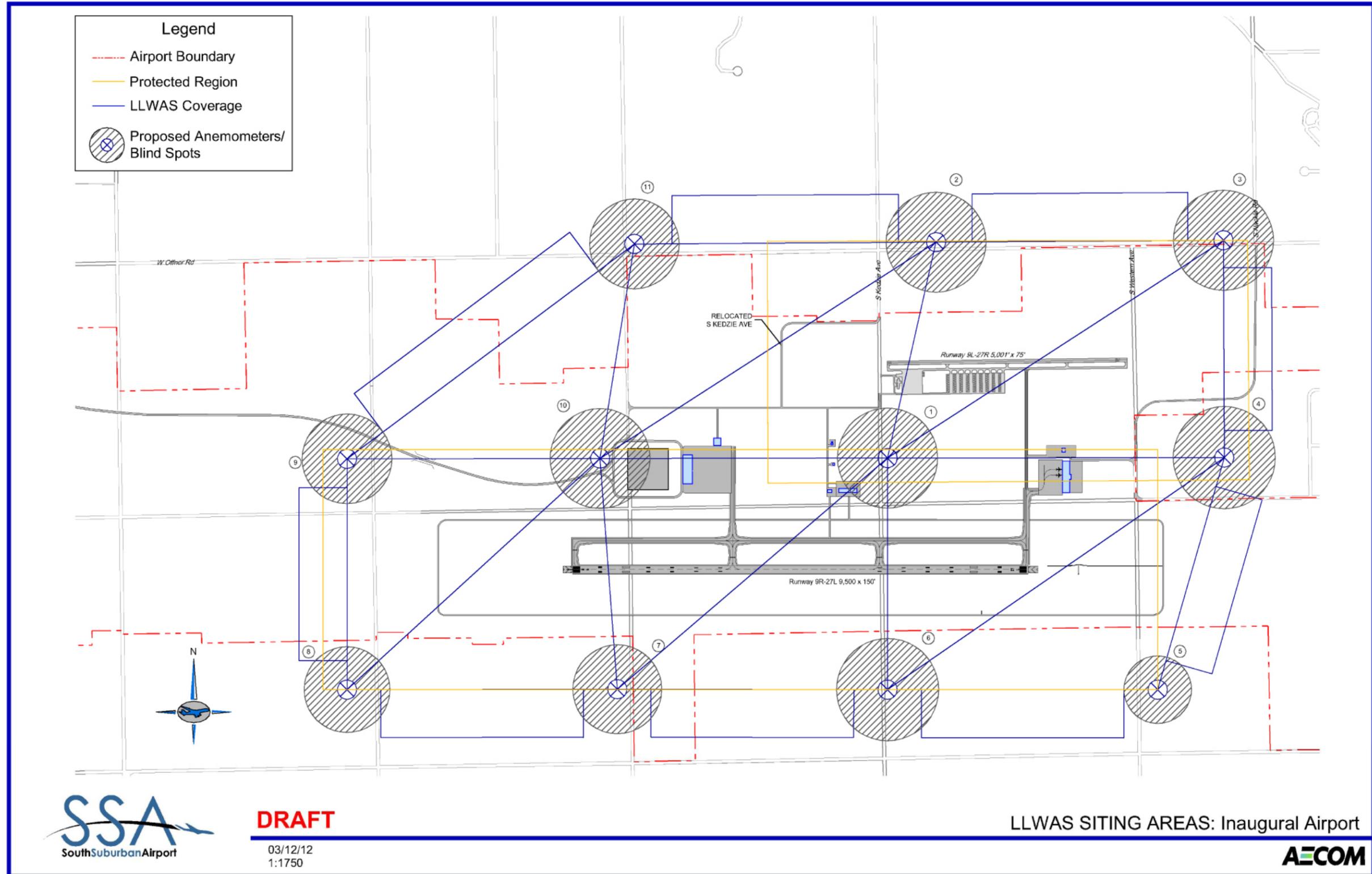
### Definition of Terms

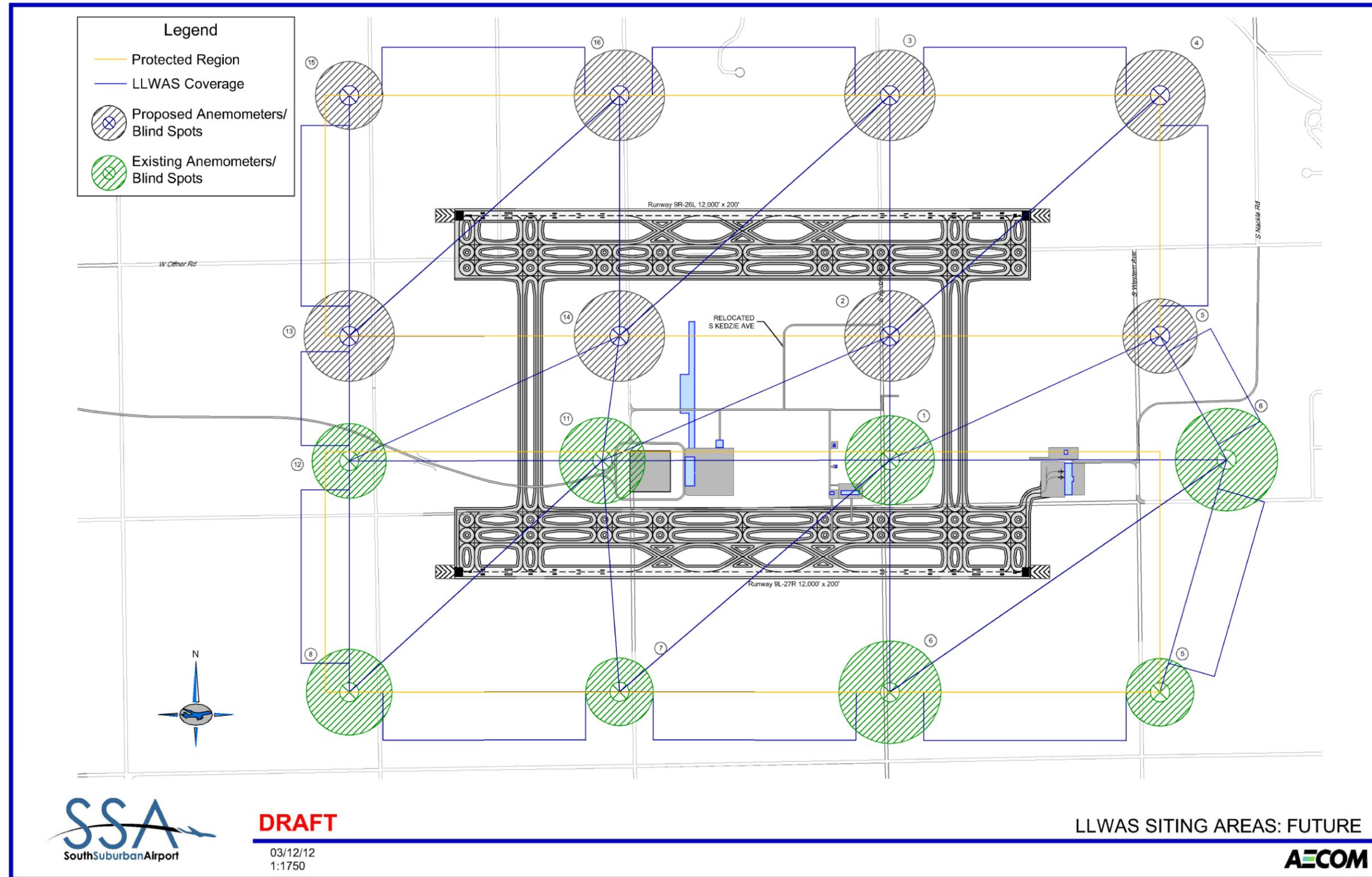
AC	Advisory Circular
ADG	Airplane Design Group
AGIS	Airport Geographic Information Systems
ALP	Airport Layout Plan
ALS	Approach Lighting Systems
ALSF-II	High Intensity Approach Lighting System With Sequenced Flashing Lights
AOA	Aircraft Operations Area
ARC	Airport Reference Code
ARFF	Aircraft Rescue and Fire Fighting
ARP	Airport Reference Point
ASDA	Accelerated-Stop Distance Available
ASR	Airport Surveillance Radar
ATCT	Airport Traffic Control Tower
DBO	Date of Beneficial Occupancy (Opening Day)
DBO+5	Date of Beneficial Occupancy (Fifth Year After Opening Day)
DH	Decision Height
eALP	Electronic Airport Layout Plan
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
GA	General Aviation
GBAS	Ground Based Augmentation System
IAP	Inaugural Airport Program
IDOT	Illinois Department of Transportation, Division of Aeronautics
ILS	Instrument Landing System
LDA	Landing Distance Available
LLWAS	Low Level Wind Shear Alert System
LAAS	Local Area Augmentation Systems
MALSR	Medium Intensity Approach Light System-Runway Alignment Indicator Lights
MDW	Chicago Midway International Airport
NAS	National Airspace System
NAVAIDS	Navigational and Visual Aids
TODA	Takeoff Distance Available
TORA	Takeoff Run Available
PAPI	Precision Approach Path Indicators
POFZ	Precision Obstacle Free Zone
REIL	Runway End Identifier Lights
RGL	Regional Guidance Letter
RPZ	Runway Protection Zone
ROFA	Runway Object Free Area

RSA	Runway Safety Area
RVR	Runway Visual Range
SSA	South Suburban Airport
TODA	Take-off Distance Available
TORA	Take-off Run Available
TSA	Taxiway Safety Area
VOR	Very High Frequency Omnidirectional Radio Rangefinder
VOR/DME	Very High Frequency Omnidirectional Radio Rangefinder/Distance Measuring Equipment
VORTAC	Very High Frequency Omnidirectional Radio Rangefinder/Tactical Air Navigation
WAAS	Wide Area Augmentation Systems

## Appendix B - Exhibits

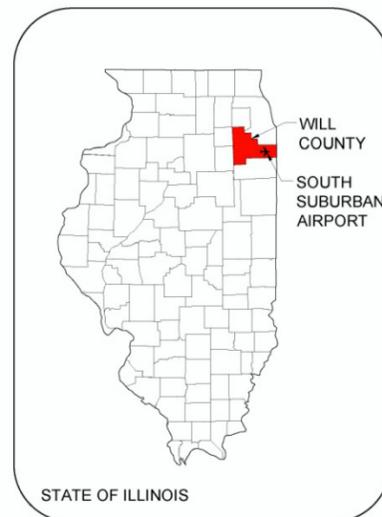
Exhibit 3-1 – Inaugural Low Level Wind Shear Alert System  
Exhibit 3-2 – Future Low Level Wind Shear Alert System  
Exhibit 4-1 – Title Sheet  
Exhibit 4-2 – Vicinity Aerial – Existing Land Use Drawing  
Exhibit 4-3 – Inaugural Airport Layout Plan Drawing  
Exhibit 4-4 – Inaugural Airport Data Sheet  
Exhibit 4-5 – Inaugural Terminal Area Drawing  
Exhibit 4-6 – Inaugural Airport Airspace Drawing  
Exhibit 4-7 – Inaugural Runway 9R Inner Portion of the Approach Surface Drawing  
Exhibit 4-8 – Inaugural Runway 27L Inner Portion of the Approach Surface Drawing  
Exhibit 4-9 – Inaugural Runway 9L Inner Portion of the Approach Surface Drawing  
Exhibit 4-10 – Inaugural Runway 27R Inner Portion of the Approach Surface Drawing  
Exhibit 4-11 – Inaugural Airport Land Use Drawing  
Exhibit 4-12 – Inaugural Airport Property Map  
Exhibit 4-13 – Inaugural Airport Property Map Data Tables  
Exhibit 4-14 – Future Airport Layout Plan Drawing  
Exhibit 4-15 – Future Airport Data Sheet  
Exhibit 4-16 – Future Terminal Area Drawing  
Exhibit 4-17 – Future Airport Airspace Drawing  
Exhibit 4-18 – Future Runway 9L Inner Portion of the Approach Surface Drawing  
Exhibit 4-19 – Future Runway 27R Inner Portion of the Approach Surface Drawing  
Exhibit 4-20 – Future Runway 8R Inner Portion of the Approach Surface Drawing  
Exhibit 4-21 – Future Runway 26L Inner Portion of the Approach Surface Drawing  
Exhibit 4-22 – Future Airport Land Use Drawing  
Exhibit 4-23 – Future Airport Property Map  
Exhibit 5-1 – Draft Runway Safety Area Determination for Runway 9L-27R  
Exhibit 6-1 – Inaugural Runway 9L-27R Object Free Area Penetrations Map  
Exhibit 6-2 – Draft Modification to Standards for Runway 9L-27R  
Exhibit 7-1 – Inaugural Runway 9R-27L Declared Distances Map  
Exhibit 7-2 – Inaugural Runway 9L-27R Declared Distances Map  
Exhibit 8-1 – South Suburban Airport Layout Plan Checklist





# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF AERONAUTICS AIRPORT LAYOUT PLAN SOUTH SUBURBAN AIRPORT

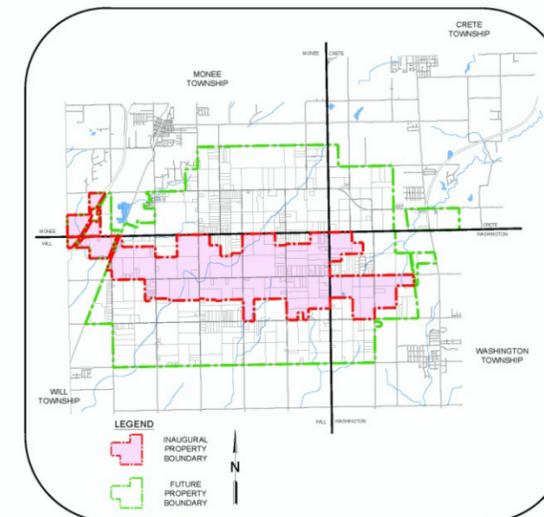
September 27, 2012



LOCATION MAP

**INDEX TO SHEETS**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. Title Sheet</li> <li>2. Vicinity Aerial - Existing Land Use Drawing</li> <li>3. Inaugural Airport Layout Plan Drawing</li> <li>4. Inaugural Airport Data Sheet</li> <li>5. Inaugural Terminal Area Drawing</li> <li>6. Inaugural Airport Airspace Drawing</li> <li>7. Inaugural Runway 9R Inner Portion of the Approach Surface Drawing</li> <li>8. Inaugural Runway 27L Inner Portion of the Approach Surface Drawing</li> <li>9. Inaugural Runway 9L Inner Portion of the Approach Surface Drawing</li> <li>10. Inaugural Runway 27R Inner Portion of the Approach Surface Drawing</li> <li>11. Inaugural Airport Land Use Drawing</li> <li>12. Inaugural Airport Property Map</li> </ol> | <ol style="list-style-type: none"> <li>13. Inaugural Airport Property Map Data Tables</li> <li>14. Future Airport Layout Plan Drawing</li> <li>15. Future Airport Data Sheet</li> <li>16. Future Terminal Area Drawing</li> <li>17. Future Airport Airspace Drawing</li> <li>18. Future Runway 9L Inner Portion of the Approach Surface Drawing</li> <li>19. Future Runway 27R Inner Portion of the Approach Surface Drawing</li> <li>20. Future Runway 8R Inner Portion of the Approach Surface Drawing</li> <li>21. Future Runway 26L Inner Portion of the Approach Surface Drawing</li> <li>22. Future Airport Land Use Drawing</li> <li>23. Future Airport Property Map</li> </ol> |
|---|--|



VICINITY MAP



**FAA APPROVAL LETTER**

**FAA AIRPORT LAYOUT PLAN REVIEW STATEMENT**  
On behalf of AECOM, this Airport Layout Plan (ALP) was prepared for the South Suburban Airport according to the applicable Advisory Circulars, the current version of the Great Lakes Region ALP Checklist and accurately depicts the proposed use of airspace at the time of submittal. The ALP conforms with FAA design standards, except as noted.

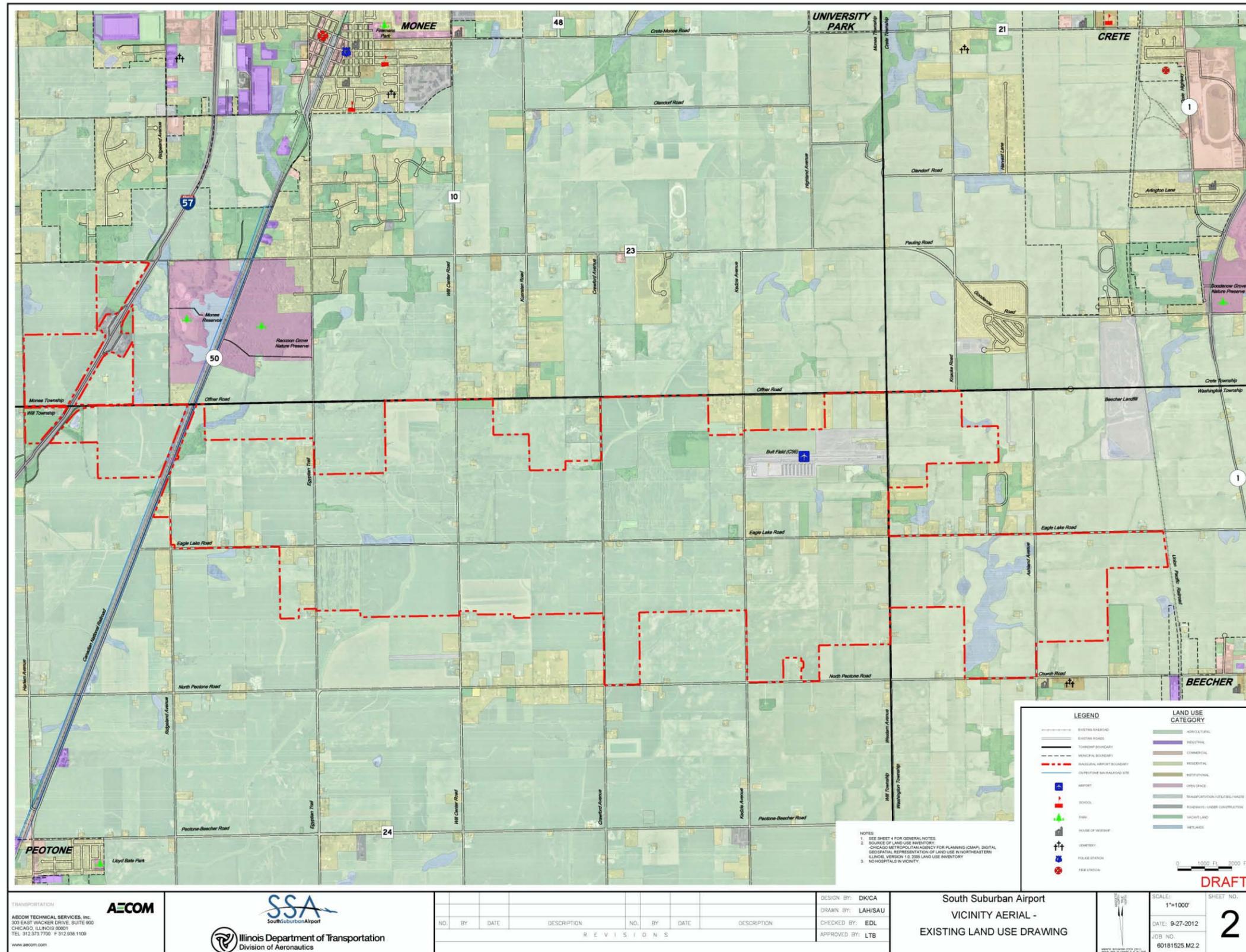


APPROVED \_\_\_\_\_ DIRECTOR  
DATE \_\_\_\_\_ 20\_\_

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ 20\_\_

APPROVED \_\_\_\_\_ CHIEF ENGINEER  
DATE \_\_\_\_\_ 20\_\_

DRAFT



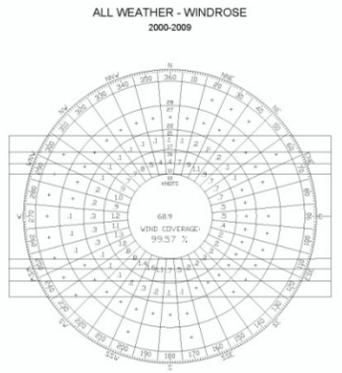


AIRPORT DATA TABLE	
AIRPORT DATA	INAUGURAL
Airport Elevation (MSL)	760.0'
Airport Reference Point (NAD 83)	41° 22' 10.89" N 87° 41' 24.41" W
Longitude	87° 41' 24.41" W
Mean Max. Temperature of Hottest Month	84.7°F
Airport Navigational Aids	ARB, ASR, VOR, ASDE, RNAV(GPS/WAAS), ILS, GS, LOC, OM
Magnetic Variation	2° 26' W, changing by 0.2" W/year
Date of Magnetic Variation	01/1/2011
Airport Reference Code	C-4
Taxiway	60'
Critical Design Aircraft	B737-800
Microclimate Facilities	ILLUVA, AVOS, MALSR, HRL, MRL, Wind cones, REILS
County	Will
Township	Will, Monro, Washington

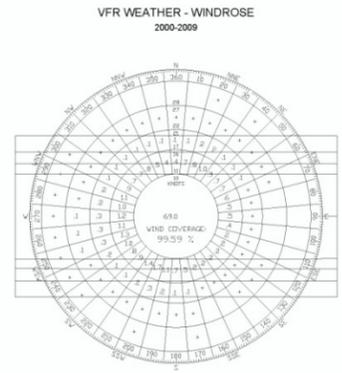
DECLARED DISTANCES									
Stage	Runway End ID	TORA	TODA	ASDA	LDA	Approach End RSA Length	Stop end RSA Length	ILS Length	Date of Approval
Existing	9	5,001'	5,001'	5,001'	5,001'	240'	240'	5,481'	N/A
Inaugural	9L	5,001'	5,001'	5,001'	5,001'	240'	240'	5,481'	N/A
Existing	27	5,001'	5,001'	5,001'	4,850'	240'	240'	5,481'	N/A
Inaugural	27R	5,001'	5,001'	5,001'	4,850'	240'	240'	5,481'	N/A
Inaugural	9R	9,500'	9,500'	9,500'	9,500'	1,000'	1,000'	11,500'	N/A
Inaugural	27L	9,500'	9,500'	9,500'	9,500'	1,000'	1,000'	11,500'	N/A

RUNWAY DATA TABLE				
ITEM	Inaugural Runway 9R - 27L		Existing Runway 9-27 / Inaugural 9L-27R	
	Inaugural 9R	Inaugural 27L	Existing 9	Existing 27
Approach Category and Design Group	C-4		B-1	
Critical Aircraft	B737-800		Cessna Citation Mustang	
Aircraft Tail Height	42'		14'	
Runway Length	5,000'		5,000'	
Runway Width	150'		75'	
Pavement Surface Type	Concrete		Concrete	
Maximum Pavement Strength (ksi)	800,000		60,000 (Single Wheel)	
Runway True Bearing	N 90° 0' 00" E		N 89° 18' 21" W	
Runway End Coordinates (NAD83)	Latitude: 41° 21' 56.58" N Longitude: 87° 42' 46.38" W		Latitude: 41° 22' 38.86" N Longitude: 87° 41' 18.88" W	
Runway End Elevation (MSL)	761.0'		772.4'	
Displaced Threshold From Runway End	None		151'	
Displaced Threshold Coordinates (NAD83)	Latitude: N/A Longitude: N/A		Latitude: 41° 22' 38.87" N Longitude: 87° 40' 12.30" W	
Displaced Threshold Elevation (MSL)	N/A		N/A	
Effective Gradient (%)	0.0%		0.8%	
Wind Coverage (%)	99.57%		98.58%	
Approach Visibility Minimum (RVR)	2,400'		5,000'	
Runway Lighting Type	HRL, RCL, REL, MALSR	HRL, RCL, REL, MALSR	MRL, REL	MRL, REL
Runway Marking Type	Precision	Precision	Non-Precision	Non-Precision
14 CFR Part 77 Approach Type	Precision	Precision (CAT I)	Non-Precision (Utility)	Non-Precision (Utility)
14 CFR Part 77 Approach Category	50.1	50.1	20.1	20.1
14 CFR Part 77 Approach Dimensions	1,000x18,000x50,000	1,000x18,000x50,000	500x2,000x5,000	500x2,000x5,000
Type of Aeronautical Survey Required for Approach	Vertically Guided	Vertically Guided	Not Vertically Guided	Not Vertically Guided
Runway Departure Surface	Yes	Yes	N/A	N/A
Appendix 2 Threshold Sloping Surface Type	7	7	4	4
Appendix 2 Threshold Sloping Surface Slope	34.1	34.1	20.1	20.1
Appendix 2 Threshold Sloping Surface Dimensions	200x800x3,800x10,000	200x800x3,800x10,000	200x400x3,800x10,000	200x400x3,800x10,000
Visual NAVAIDS	PAPI(4)	PAPI(4)	VOR/DME	VOR/DME
Instrument NAVAIDS	RNAV(GPS/WAAS)	ILS, GS, LOC, OM, RNAV(GPS/WAAS)	RNAV(GPS/WAAS)	RNAV(GPS/WAAS)
Runway Safety Area (RSA)	1,000'	1,000'	240'	240'
Length Beyond Runway	500'	500'	120'	120'
Width	500'	500'	120'	120'
Runway Protection Zone (RPZ)	2,500'	2,500'	1,000'	1,000'
Length	1,000'	1,000'	500'	500'
Inner Width	1,000'	1,000'	500'	500'
Outer Width	1,750'	1,750'	700'	700'
Runway Object Free Area (ROFA)	1,000'	1,000'	240'	240'
Length Beyond Runway	800'	800'	400'	400'
Width	400'	400'	250'	250'
Runway Obstacle Free Zone (ROFZ)	200'	200'	200'	200'
Length Beyond Runway	400'	400'	250'	250'
Width	400'	400'	250'	250'
Precision Obstacle Free Zone (POFZ)	200'	200'	N/A	N/A
Length	800'	800'	N/A	N/A
Width	800'	800'	N/A	N/A
Taxiway Object Free Area Width	250'	250'	80'	80'
Taxiway Safety Area (TSA) Width	111'	111'	40'	40'
Taxiway Lighting	MRL	MRL	None	None

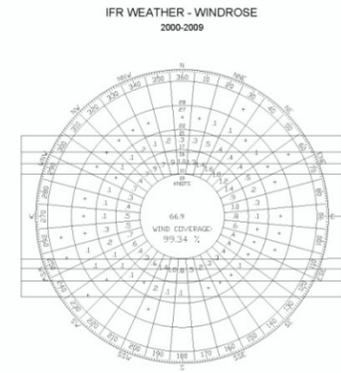
MODIFICATION OF DESIGN STANDARDS					
NO.	DESCRIPTION	FAA STANDARDS	EXISTING CONDITION	PROPOSED ACTION	DATE APPROVED
1.	Runway to Taxiway separation for Runway 9L-27R does not meet separation criteria for Airport Design Group I	ADG I Separation - 225'	150'	To Remain	Proposed
2.	No shoulders exist on Runway 9L-27R	ADG I - 10' Shoulders	None	To Remain	Proposed



ALL WEATHER WIND COVERAGE				
Runway	10.5 Knot	13 Knot	16 Knot	20 Knot
9-27 (8-26)	86.13%	92.50%	97.91%	99.57%



VFR WIND COVERAGE				
Runway	10.5 Knot	13 Knot	16 Knot	20 Knot
9-27 (8-26)	86.36%	92.67%	97.98%	99.59%



IFR WIND COVERAGE				
Runway	10.5 Knot	13 Knot	16 Knot	20 Knot
9-27 (8-26)	82.67%	88.03%	96.96%	99.34%

**ABBREVIATIONS:**

ALSF-2 HIGH INTENSITY APPROACH LIGHTS WITH SEQUENCED FLASHERS  
 ARB AIRPORT ROTATING BEACON  
 ARP AIRPORT ROTATING POINT  
 ARFF AIRPORT RESCUE AND FIRE FIGHTING FACILITY  
 ACCELERATE-STOP DISTANCE AVAILABLE  
 ASDE AIRPORT SURFACE DETECTION EQUIPMENT  
 ASR AIRPORT SURVEILLANCE RADAR  
 ASOS AUTOMATED SURFACE OBSERVING SYSTEM  
 ATCT AIRPORT TRAFFIC CONTROL TOWER  
 AWOS AUTOMATED WEATHER OBSERVATION STATION (NOAA)  
 DBO DATE OF BIENNIAL OCCUPANCY  
 DME DISTANCE MEASURING EQUIPMENT  
 GPS GLOBAL POSITIONING SYSTEM  
 GS GLIDE SLOPE  
 HIRL HIGH INTENSITY RUNWAY EDGE LIGHTS  
 ILS INSTRUMENT LANDING SYSTEM  
 IM INNER MARKER  
 LOC LOCALIZER  
 LPV LOCALIZER PERFORMANCE WITH VERTICAL GUIDANCE  
 LDA LANDING DISTANCE AVAILABLE  
 LLWAS LOW LEVEL WIND SHEAR ALERT SYSTEM  
 OM OUTER MARKER  
 MALSR MEDIUM INTENSITY APPROACH LIGHT SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS  
 MTL MEDIUM INTENSITY TAXIWAY EDGE LIGHTS  
 MRL MEDIUM INTENSITY RUNWAY EDGE LIGHTS  
 MTCW MAXIMUM TAKE-OFF WEIGHT  
 NDB NON-DIRECTIONAL BEACON  
 PAPI PRECISION APPROACH PATH INDICATOR  
 PAPI PASSENGERS  
 PRM PRECISION RUNWAY MONITORS  
 RCL RUNWAY CENTERLINE LIGHTS  
 REL RUNWAY END IDENTIFIER LIGHTS  
 RNAV AREA NAVIGATION  
 RVG RUNWAY VISUAL RANGE  
 SMGC SURFACE MOVEMENT GUIDANCE CONTROL SYSTEM  
 SRE SNOW REMOVAL EQUIPMENT  
 SSR SECONDARY SURVEILLANCE RADAR  
 TOCA TAKEOFF DISTANCE AVAILABLE  
 TORA TAKEOFF RUNWAY AVAILABLE  
 TCH THRESHOLD CROSSING HEIGHT  
 TCL TAXIWAY CENTERLINE LIGHTS  
 TDZE TOUCH-DOWN ZONE ELEVATION  
 TVOR TERMINAL VERY HIGH FREQUENCY OMNI RANGE  
 WAAS WIDE AREA AUGMENTATION SYSTEM  
 WDI WIND DIRECTION INDICATOR  
 VOR VERY HIGH FREQUENCY OMNI-DIRECTIONAL RANGEFINDER

**GENERAL NOTES:**

- LATITUDE AND LONGITUDE ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83)
- VERTICAL CONTROL IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
- ELEVATIONS SHOWN ARE IN "MEAN SEA LEVEL" (MSL) UNLESS NOTED OTHERWISE, AND ARE NOT INTENDED FOR DESIGN PURPOSES
- ALL DIMENSIONS ARE IN UNITED STATES CUSTOMARY UNITS UNLESS NOTED OTHERWISE
- TAXIWAYS FOR THE NEW RUNWAY 9R-27L ARE DESIGNED FOR GROUP IV IN THE INAUGURAL AIRPORT LAYOUT PLAN. SEPARATION BETWEEN RUNWAY AND TAXIWAY IS 800' FOR THE FUTURE UPGRADE TO GROUP VI
- NO OFZ OR TSS PENETRATIONS EXIST
- ALP PREPARED USING DESIGN CRITERIA FROM FAA ADVISORY CIRCULAR 150/300-13, "AIRPORT DESIGN CHANGE 11 & PART 77, OBJECTS AFFECTING NAVIGABLE AIRSPACE"
- ALL ELEVATIONS AND DISTANCES ARE IN FEET APPROXIMATE
- FUTURE NAVAIDS TO BE SITED UNDER FUTURE PROJECTS
- BUILDING RESTRICTION LINE HEIGHT IS 29' AGL
- ASR-1 IS PROPOSED TO BE LOCATED 4870' EAST OF RUNWAY 27L THRESHOLD AND 210' SOUTH OF RUNWAY 27L EXTENDED CENTERLINE
- VOR IS PROPOSED TO BE LOCATED 49,680' WEST OF RUNWAY 9R THRESHOLD, DIRECTLY ON RUNWAY 9R EXTENDED CENTERLINE

**OBSTRUCTION NOTES:**

- OBSTRUCTIONS TO BE REMOVED OR RELOCATED AS PART OF FUTURE PROJECTS
- PER FAR PART 77, "OBJECTS AFFECTING NAVIGABLE AIRSPACE": ANY HIGHWAY, RAILROAD, OR OTHER TRAVERSE WAY FOR MOBILE OBJECTS, OF A HEIGHT WHICH IF ADJUSTED UPWARD 17 FEET FOR AN INTERSTATE HIGHWAY THAT IS PART OF THE NATIONAL SYSTEM OF MILITARY AND INTERSTATE HIGHWAYS WHERE OVERCROSSINGS ARE DESIGNED FOR A MINIMUM OF 17 FEET VERTICAL DISTANCE, 15 FEET FOR ANY OTHER PUBLIC ROADWAYS, 10 FEET OR THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE THE ROAD, WHICHEVER IS GREATER FOR A PRIVATE ROAD, 23 FEET FOR A RAILROAD, AND FOR A WATERWAY OR OTHER TRAVERSE WAY NOT PREVIOUSLY MENTIONED, AN AMOUNT EQUAL TO THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE IT.

**SOURCES:**

- WINDS - NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) NATIONAL CLIMATIC DATA CENTRE - PERIOD: MIDWAY AIRPORT - PERIOD: 2000 TO 2009
- MAGNETIC DECLINATION - NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) NATIONAL GEOPHYSICAL DATA CENTRE
- TEMPERATURE - MONTHLY MEAN OF THE DAILY MAXIMUM TEMPERATURE OF THE HOTTEST MONTH OF THE YEAR, PROCESSED FROM 30 YEARS OF HOURLY OBSERVATIONS COLLECTED BY NOAA BETWEEN THE YEARS 1911 AND 2000 AT MIDWAY INTERNATIONAL AIRPORT AND ARCHIVED BY NOAA
- BASE MAPPING - ILLINOIS DEPARTMENT OF TRANSPORTATION
- AERIAL PHOTOGRAPHY - WILL COUNTY, DATED 2008. SAME AS THE EXHIBIT "A" PROPERTY LINE MAP FOR SOUTH SUBURBAN AIRPORT, JUNE 30, 2012.
- LAND USE INVENTORY - CHICAGO METROPOLITAN AGENCY FOR PLANNING (CMAP), DIGITAL GEOSPATIAL REPRESENTATION OF LAND USE IN NORTHEASTERN ILLINOIS, VERSION 1.0, 2005 LAND USE INVENTORY
- PROPERTY MAP - EXHIBIT "A" PROPERTY LINE MAP FOR SOUTH SUBURBAN AIRPORT, JUNE 30, 2012, ILLINOIS DEPARTMENT OF TRANSPORTATION
- LATITUDE AND LONGITUDE CONVERSIONS BETWEEN GEOGRAPHIC AND GRID (STATE PLANE) COORDINATE SYSTEMS - CORPCON 8.0.1
- TOPOGRAPHIC INFORMATION - WILL COUNTY, 2005

TRANSPORTATION  
**AECOM**  
 AECOM TECHNICAL SERVICES, INC.  
 303 EAST WACKER DRIVE, SUITE 800  
 CHICAGO, ILLINOIS 60601  
 TEL: 312.373.7700 F: 312.338.1109  
 www.aecom.com

**SSA**  
 South Suburban Airport  
 Illinois Department of Transportation  
 Division of Aeronautics

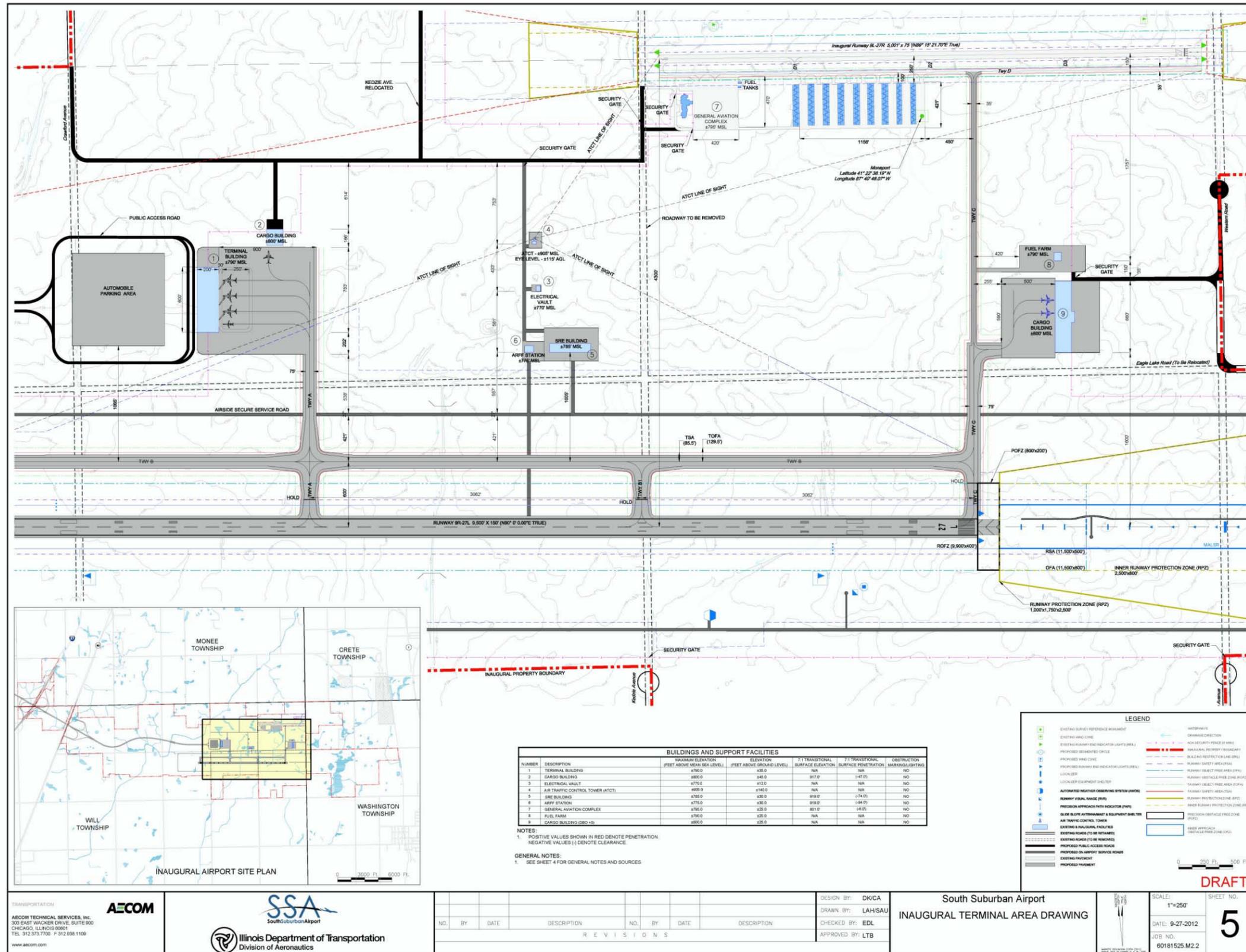
NO.	BY	DATE	DESCRIPTION	NO.	BY	DATE	DESCRIPTION
R E V I S I O N S							

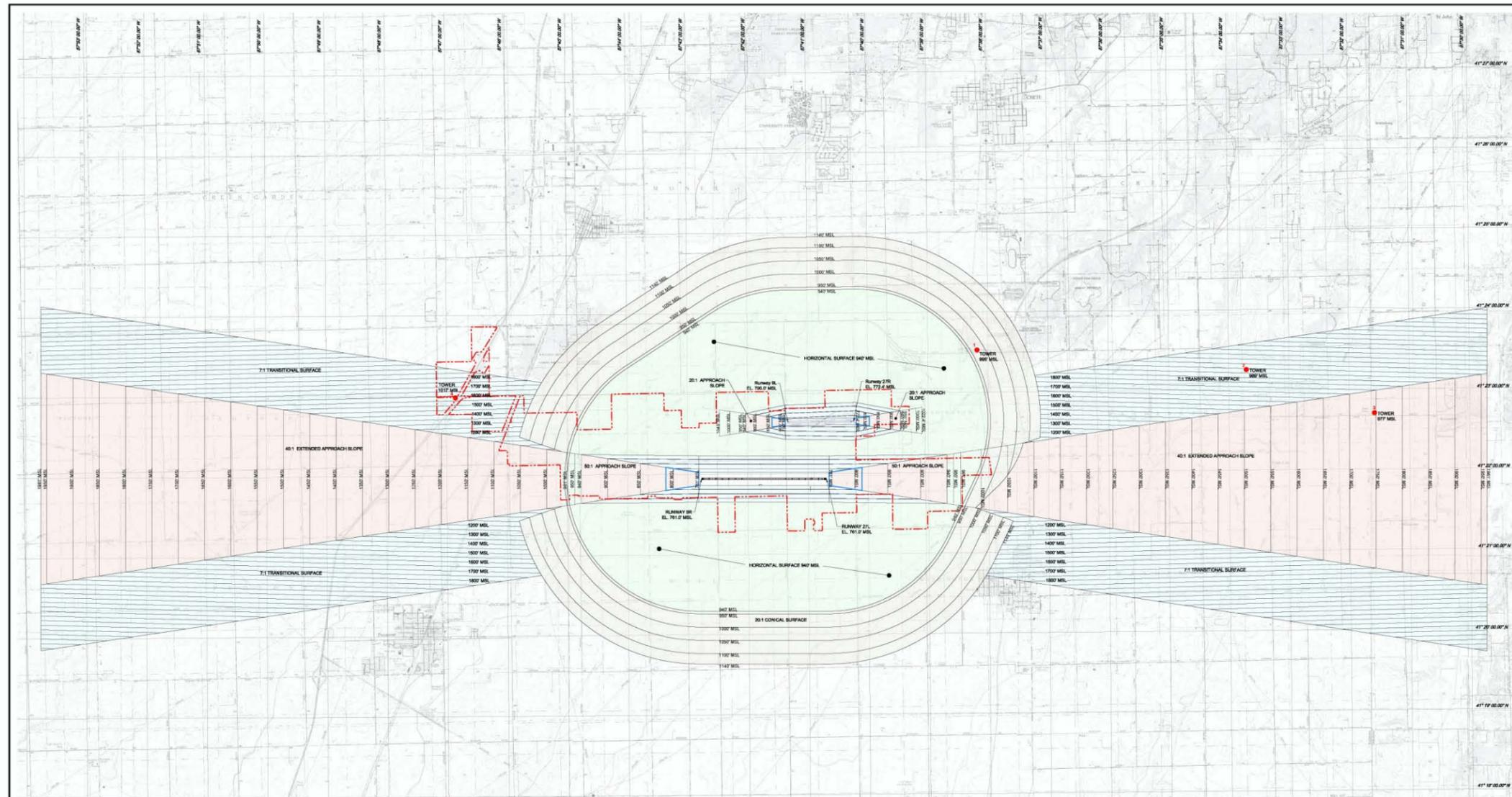
DESIGN BY: DKICA  
 DRAWN BY: LAH/SAU  
 CHECKED BY: EDL  
 APPROVED BY: LTB

South Suburban Airport  
 INAUGURAL AIRPORT DATA SHEET

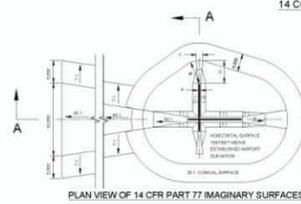
SCALE: NOT TO SCALE  
 SHEET NO. 4  
 DATE: 9-27-2012  
 JOB NO. 60181525.M2.2

DRAFT



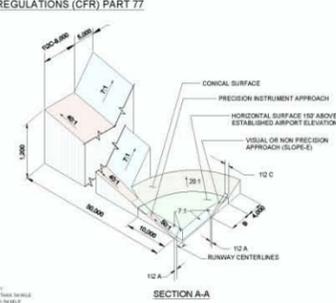


OBSTRUCTION IDENTIFICATION SURFACES  
14 CODE FEDERAL REGULATIONS (CFR) PART 77



NO.	ITEM	DESCRIPTION	MINIMUM DIMENSION	MAXIMUM DIMENSION	ELEVATION
1	APPROACH SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
2	TRANSITION SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
3	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
4	EXTENDED APPROACH SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
5	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
6	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
7	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
8	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
9	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
10	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
11	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
12	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
13	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT
14	CONICAL SURFACE	1000 FT WIDE	1000 FT	1000 FT	1000 FT

14 CFR PART 77 IMAGINARY SURFACE DIMENSIONS



ISOMETRIC VIEW OF 14 CFR PART 77 IMAGINARY SURFACES

NO.	DESCRIPTION	OBJECT ELEVATION	OBJECT TYPE	OBJECT ID	OBJECT CLASS	OBJECT STATUS	OBJECT DATE
1	TOWER	100	100	100	100	100	100
2	TOWER	100	100	100	100	100	100
3	TOWER	100	100	100	100	100	100
4	TOWER	100	100	100	100	100	100
5	TOWER	100	100	100	100	100	100

NOTE: POSITIVE VALUES SHOWN IN RED DENOTE PENETRATION, NEGATIVE VALUES IN DENOTE CLEARANCE.  
SOURCE: FAA OBSTACLE REPOSITORY SYSTEM (ORIS) DIGITAL OBSTACLE FILE DATED JULY 24, 2011

- NOTES:
- SEE SHEET 4 FOR GENERAL NOTES AND SOURCES.
  - REFER TO SHEETS 7-10, INAUGURAL RUNWAY INNER PORTION OF THE APPROACH DRAWINGS, FOR DETAILS ON ANY CLOSE-IN APPROACH OBSTRUCTIONS.
  - REFER TO LAND USE DRAWINGS FOR DETAILS ON LAND USE.
  - DIGITAL RASTER GRAPHS FROM LIMITED STATES GEOLOGICAL SURVEY (USGS).
  - ELEVATIONS ARE APPROXIMATE FEET ABOVE MEAN SEA LEVEL.
  - HEIGHT RESTRICTIONS ARE GOVERNED BY THE FOLLOWING STATUTES:
    - 49 USC COMPILATED STATUTES (TITLE 49 "AIRPORT ZONING ACT")
    - 49 USC 30 "ZONING TO ELIMINATE AIRPORT HAZARDS ACT"
    - ILLINOIS ADMINISTRATIVE CODE, TITLE 92, CHAPTER 1, SUBCHAPTER B, PART 16 "AIRPORT HAZARD ZONING"

**LEGEND**

- EXISTING ELEVATION
- PROPOSED ELEVATION
- EXISTING OBSTRUCTION
- INAUGURAL PROPERTY BOUNDARY
- RUNWAY PROTECTION ZONE (RPZ)

TRANSPORTATION  
**AECOM**  
 AECOM TECHNICAL SERVICES, INC.  
 303 EAST WACKER DRIVE, SUITE 800  
 CHICAGO, ILLINOIS 60601  
 TEL: 312.375.7700 F: 312.358.1109  
 www.aecom.com

**SSA**  
 South Suburban Airport  
 Illinois Department of Transportation  
 Division of Aeronautics

NO.	BY	DATE	DESCRIPTION	NO.	BY	DATE	DESCRIPTION
REVISIONS							

DESIGN BY: DKCA  
 DRAWN BY: LAH/SAU  
 CHECKED BY: EDL  
 APPROVED BY: LTB

South Suburban Airport  
 INAUGURAL AIRPORT  
 AIRSPACE DRAWING

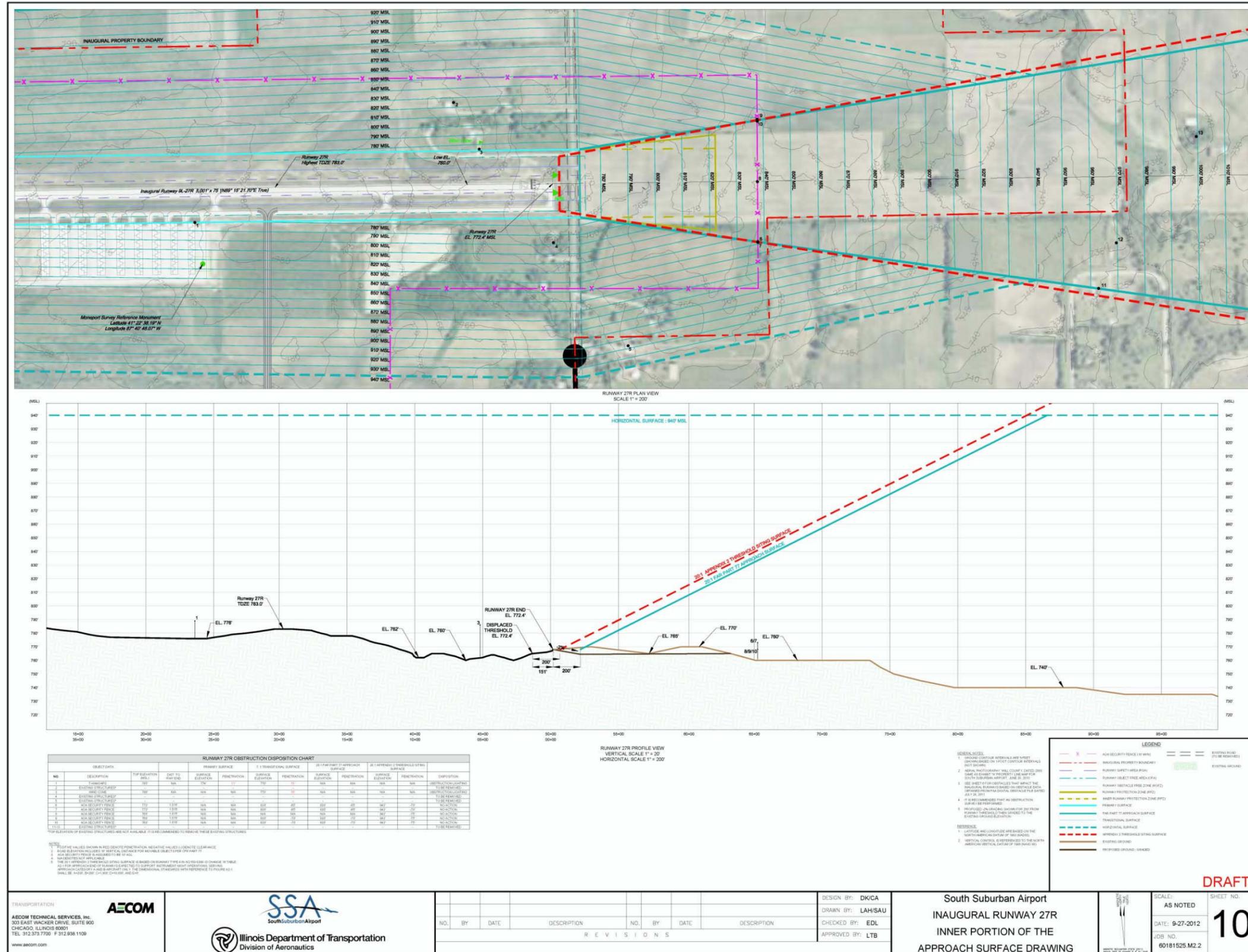
**DRAFT**

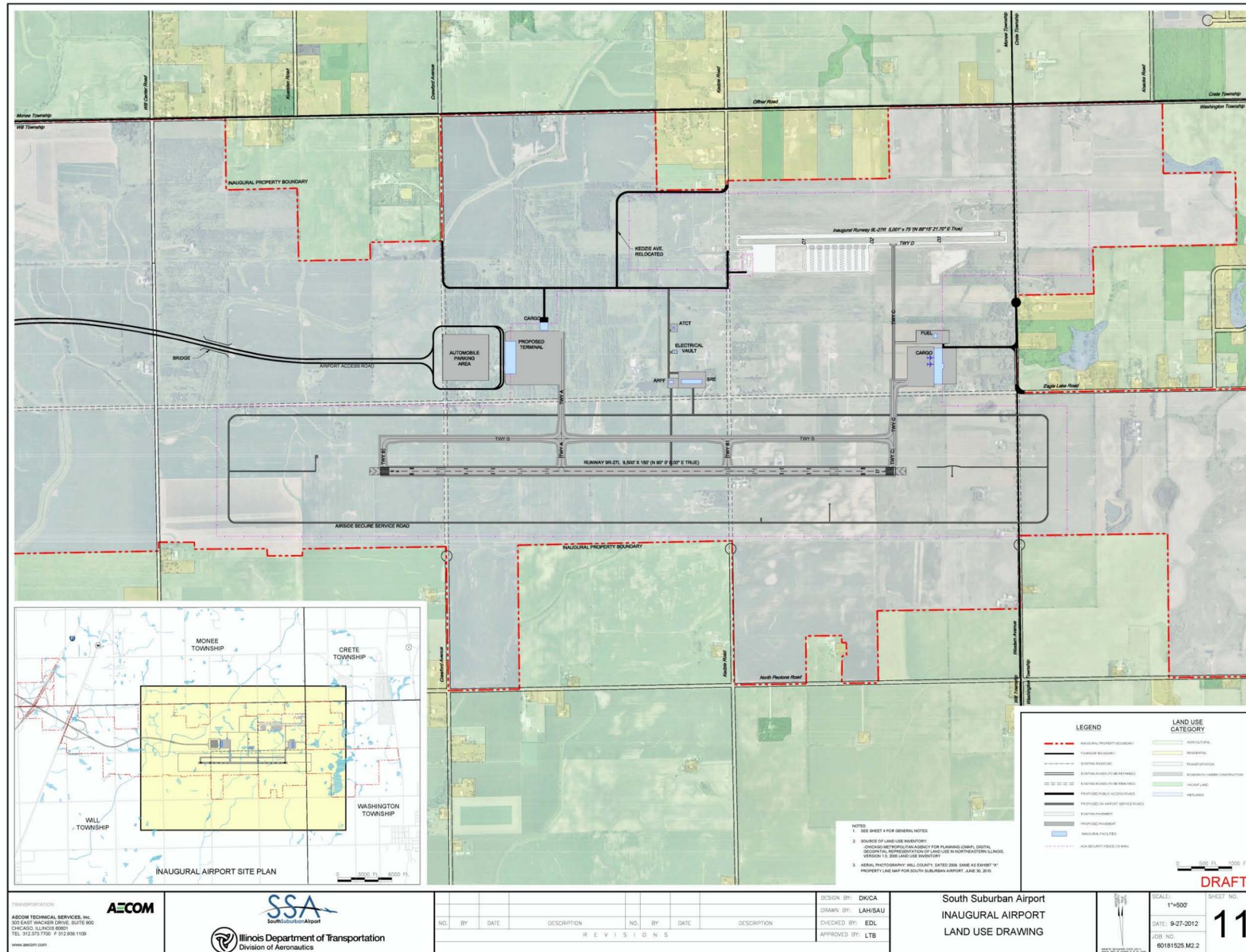
SCALE: 1"=2500'  
 SHEET NO. **6**  
 DATE: 9-27-2012  
 JOB NO. 60181525 M2.2

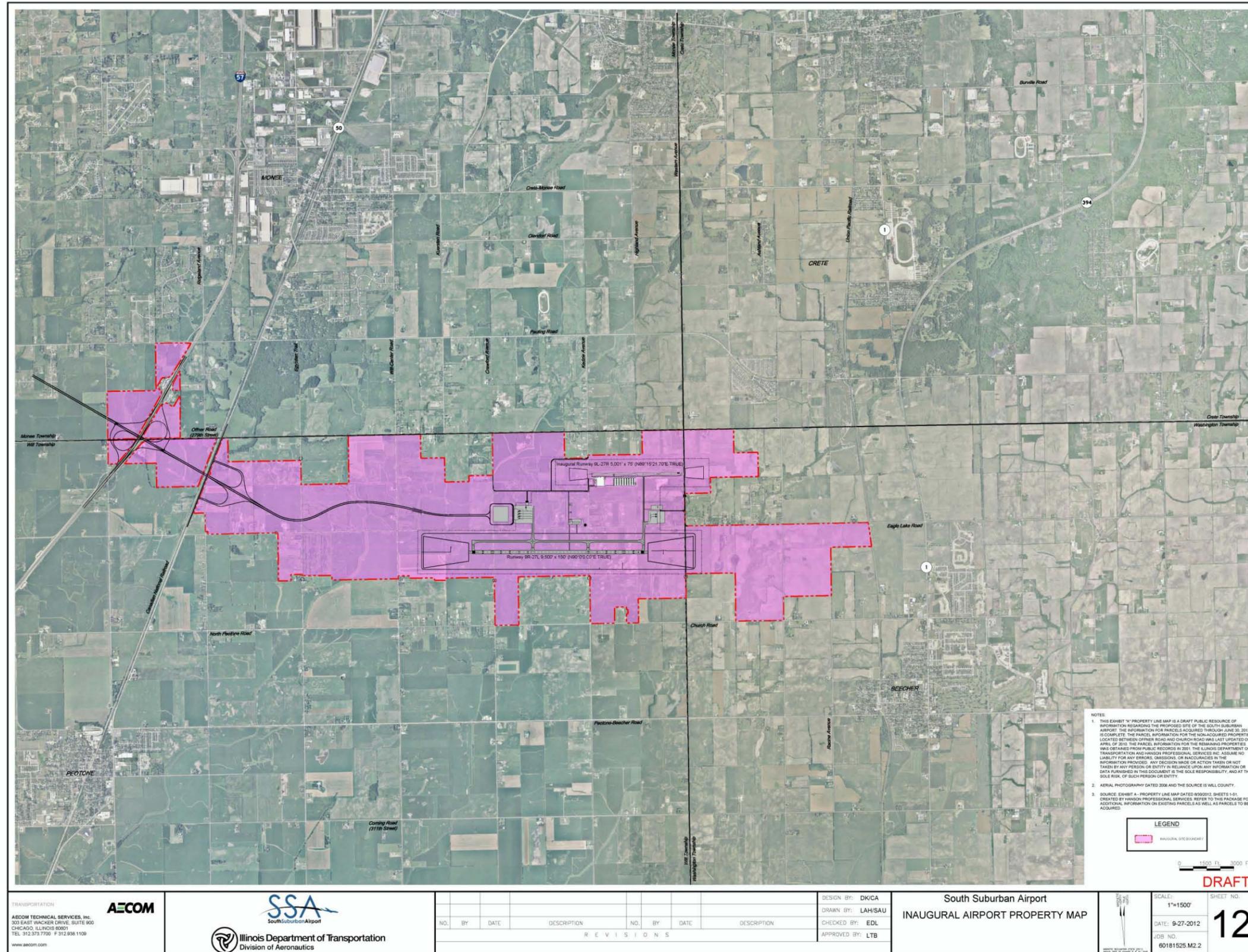










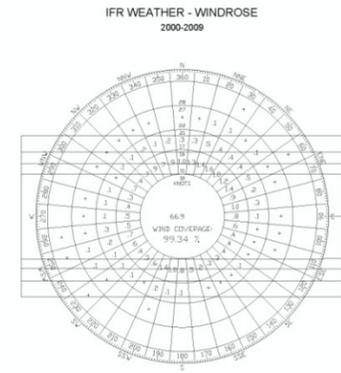
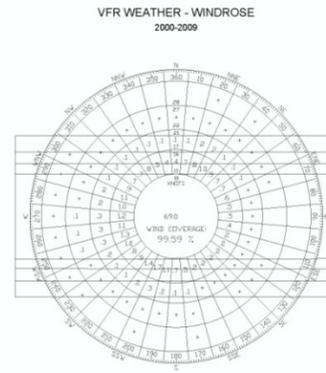
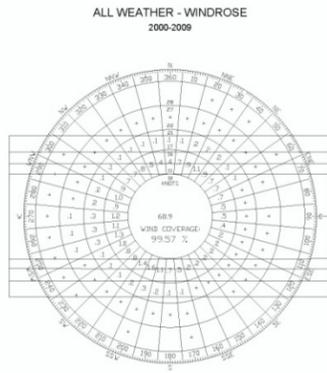


SUMMARY OF EXISTING AIRPORT OWNED LAND										
Parcel Number	Tax ID Number (Original)	Tax ID Number (Revised)	Acquired From	Fee Simple Acquired	F.A.A. Participation	NO F.A.A. Participation	F.A.A. PROJECT NUMBER	DATE ACQUIRED	DOCUMENT NUMBER	REMARKS
09RWNE214001	14-21-405-003-0000	14-21-405-009-0000	Enckson, Leona, Successor Trustee; Dennis Enckson; Richard Enckson	16,143		16,143		07-23-2002	R2002119042	FEE SIMPLE
09RWNE214016	14-28-176-006-0000	14-28-176-006-0000	Bonrema, Robert T. and Joan T.; Brokop, Diane and James	1,400		1,400		09-03-2002	R2002079184	FEE SIMPLE
09RWNE214020	14-28-201-008-0000	14-28-201-008-0000	Quillen, Ronald J. and Cynthia L.	1,900		1,900		08-11-2002	R2002104806	FEE SIMPLE
09RWNE214021	14-28-201-010-0000	14-28-201-010-0000	Bonrema, Robert T. and Joan T.	1,903		1,903		03-06-2002	R2002039973	FEE SIMPLE
09RWNE214022	14-28-201-012-0000	14-28-201-012-0000	Bonrema, Robert T. and Joan T.	1,410		1,410		03-06-2002	R2002039973	FEE SIMPLE
09RWNE214023	14-28-202-005-0000	14-28-202-005-0000	Earl, Susan	1,513		1,513		12-19-2001	R2001178959	FEE SIMPLE
09RWNE214024	14-28-202-006-0000	14-28-202-006-0000	Bonrema, Robert T. and Joan T.	4,228		4,228		03-06-2002	R2002039974	FEE SIMPLE
09RWNE214025	14-28-202-010-0000	14-28-202-010-0000	Bonrema, Robert T. and Joan T.	2,764		2,764		03-06-2002	R2002039973	FEE SIMPLE
09RWNE214026	14-28-202-014-0000	14-28-202-014-0000	Bonrema, Robert T. and Joan T.	4,566		4,566		03-06-2002	R2002039973	FEE SIMPLE
09RWNE214027	14-28-301-003-0000	14-28-301-003-0000	Bonrema, Robert T. and Joan T.	1,144		1,144		03-06-2002	R2002039972	FEE SIMPLE
09RWNE214028	14-28-301-010-0000	14-28-301-010-0000	Jordan, John C. and Edith M.	1,410		1,410		07-18-2002	R2002116270	FEE SIMPLE
09RWNE214029	14-28-302-018-0000	14-28-302-018-0000	Hagel, Robert and Etene	9,970		9,970		05-18-2002	R2002048101	FEE SIMPLE
09RWNE214030	14-28-302-043-0000	14-28-302-043-0000	Bonrema, Robert T. and Joan T.	2,864		2,864		03-06-2002	R2002039975	FEE SIMPLE
09RWNE214031	14-28-303-011-0000	14-28-303-011-0000	Bonrema, Robert T. and Joan T.	1,090		1,090		03-06-2002	R2002039975	FEE SIMPLE
09RWNE214032	14-28-402-014-0000	14-28-402-014-0000	Bonrema, Robert T. and Joan T.	5,609		5,609		03-06-2002	R2002039975	FEE SIMPLE
09RWNE214033	14-28-402-019-0000	14-28-402-019-0000	Bonrema, Robert T. and Joan T.	1,498		1,498		03-06-2002	R2002039975	FEE SIMPLE
09RWNE214034	14-28-401-003-0000	14-28-401-003-0000	Bonrema, Robert T. and Joan T.	3,882		3,882		03-06-2002	R2002039975	FEE SIMPLE
09RWNE214035	14-28-401-006-0000	14-28-401-006-0000	Bonrema, Robert T. and Joan T.	2,097		2,097		03-06-2002	R2002039975	FEE SIMPLE
09RWNE214036	14-28-402-006-0000	14-28-402-006-0000	Bonrema, Robert T. and Joan T.	4,516		4,516		03-06-2002	R2002039975	FEE SIMPLE
09RWNE214037	14-28-402-009-0000	14-28-402-009-0000	Bonrema, Robert T. and Joan T.	1,114		1,114		03-06-2002	R2002039975	FEE SIMPLE
09RWNE214038	14-28-401-015-0000	14-28-401-015-0000	Gaston, Jeffrey	1,050		1,050		08-23-2002	R2002142218	FEE SIMPLE
09RWNE214039	14-28-401-011-0000	14-28-401-011-0000	Gaston, Lisa M.	9,920		9,920		08-23-2002	R2002142217	FEE SIMPLE
09RWNE214040	14-29-401-009-0000	14-29-401-009-0000	Miller, Peter and Jacqueline; Gaston, Lisa	9,920		9,920		08-23-2002	R2002142217	FEE SIMPLE
09RWNE214041	14-33-200-012-0000	14-33-200-012-0000	Peotone Bank and Trust Company, as Trustee; Ruder, Louis A.; Henner, Lois; Ruder, Gregory A.; Ruder, Robert; Ruder, Sheryl L.; NIKIA Sheryl L.; Treacy; Ruder, Robert; Ruder, Richard J.; Henner, Paul J.; Ruder, Ronald J.; Ruder, Norma Kay; Henner, Paul T.; Henner, David	62,890		62,890		07-23-2002	R2002119043	FEE SIMPLE
09RWNE214042	14-34-300-024-0000	14-34-300-024-0000	Hammern, L. Walter (Skip) and Sharon L.	5,110		5,110		03-01-2002	R2002016774	FEE SIMPLE
09RWNE214043	14-35-400-006-0000	14-35-400-006-0000	Peotone Bank and Trust Company; McKay, Gerry M.; McKay, Donna M.	5,020		5,020		03-18-2002	R2002048099	FEE SIMPLE
09RWNE214044	22-06-300-015-0000	22-06-300-015-0000	Fugman, John J. & Diane S., husband and wife	15,500		15,500		10-29-2010	R2010121839	FEE SIMPLE
09RWNE214045	22-06-300-019-0000	22-06-300-019-0000	Bloch, Stephen L. & Arlene F., husband and wife	2,230		2,230		09-20-2011		FEE SIMPLE
09RWNE214046	22-07-100-001-0000	22-07-100-001-0000	South Holland Trust and Savings Bank, as Trustee; Walker, Lucile; Schilling, Albert; Adams, Charles W.; Leitch, Sharon; Doane, Tamara	80,000		80,000		06-17-2003	R2003142007	FEE SIMPLE
09RWNE214047	22-08-100-004-0000	22-08-100-004-0000	Frost, David J.	13,200		13,200		08-04-2002	R2002144897	FEE SIMPLE
09RWNE214048	21-01-100-002-0000	21-01-100-002-0000	Mills, Paul Frank	53,330		53,330		06-17-2003	R2003139900	FEE SIMPLE
09RWNE214049	21-01-100-005-0000	21-01-100-005-0000	Sullivan, Eric Donald & Evelyn, as husband and wife	3,000		3,000		09-30-2003	R2003132821	FEE SIMPLE
09RWNE214050	21-01-300-001-0000	21-01-300-001-0000	Mills, Paul Frank	53,333		53,333		06-17-2003	R2003139899	FEE SIMPLE
09RWNE214051	21-01-300-009-0000	21-01-300-009-0000	Huligan, Helena D.	5,001		5,001		08-09-2009	08 ED 11	FEE SIMPLE
09RWNE214052	21-01-300-011-0000	21-01-300-011-0000	Lochbave, Douglas H. and Nancy L.	5,112		5,112		12-05-2002	R2002215993	FEE SIMPLE
09RWNE214053	21-01-300-012-0000	21-01-300-012-0000	Vanderveer, Jr., Robert and Donna	10,064		10,064		10-18-2002	R2002129445	FEE SIMPLE
09RWNE214054	21-01-300-014-0000	21-01-300-014-0000	Schavone, Jr., John; Schavone, Laura J.	10,058		10,058		08-10-2007	R2007126870	FEE SIMPLE
09RWNE214055	21-01-300-015-0000	21-01-300-015-0000	Byth, Andrew	10,058		10,058		12-17-2002	R2002233391	FEE SIMPLE
09RWNE214056	21-01-300-016-0000	21-01-300-016-0000	Black, Carl L., Trustee Eagle Acres Family Trust	10,045		10,045		04-18-2005	R2005063851	FEE SIMPLE
09RWNE214057	21-01-400-011-0000	21-01-400-011-0000	Suburban Bank & Trust Co., as Successor Trustee; Managhin, Evelyn	35,241		35,241		10-23-2002	R2002184455	FEE SIMPLE
09RWNE214058	21-01-400-019-0000	21-01-400-019-0000	Claus, Thomas L. and Bonnie J.	5,011		5,011		06-30-2002	R2002092822	FEE SIMPLE
09RWNE214059	21-01-400-025-0000	21-01-400-025-0000	Doop, John and Monique; Doop, Pamela	5,000		5,000		10-01-2003	R2003247012	FEE SIMPLE
09RWNE214060	21-01-400-026-0000	21-01-400-026-0000	Maier, Robert W. and Marilyn E.	15,045		15,045		01-08-2003	R2003057198	FEE SIMPLE
09RWNE214061	21-01-400-027-0000	21-01-400-027-0000	Ostrowski, Richard and Joan	5,011		5,011		03-13-2003	R2003058198	FEE SIMPLE
09RWNE214062	21-01-400-015-0000	21-01-400-015-0000	Smith, Richard A.	5,032		5,032		09-08-2002	R2002079950	FEE SIMPLE
09RWNE214063	21-01-400-014-0000	21-01-400-014-0000	South Holland Trust and Savings Bank; Wicks, Frank J.	5,032		5,032		04-19-2002	R2002068348	FEE SIMPLE
09RWNE214064	21-01-400-004-0000	21-01-400-004-0000	Boven, Darlene	10,064		10,064		04-24-2002	R2002070840	FEE SIMPLE
09RWNE214065	21-01-400-011-0000	21-01-400-011-0000	Shepp, Sr., Edmund and Irene	5,033		5,033		03-13-2002	R2002048067	FEE SIMPLE
09RWNE214066	21-01-400-010-0000	21-01-400-010-0000	Bonaga, Arinda	5,033		5,033		04-22-2002	R2002069282	FEE SIMPLE
09RWNE214067	21-01-400-009-0000	21-01-400-009-0000	Aguiar, Thomas, as Trustee; Aguiar, Agnes S., as Trustee	5,032		5,032		10-09-2002	R2002247012	FEE SIMPLE
09RWNE214068	21-01-400-008-0000	21-01-400-008-0000	Ross, Coville E.	1,398		1,398		10-17-2002	R2002174119	FEE SIMPLE
09RWNE214069	21-01-400-007-0000	21-01-400-007-0000	Walker, Sean D. and Laura	1,398		1,398		01-08-2003	R2003007399	FEE SIMPLE
09RWNE214070	21-01-400-006-0000	21-01-400-006-0000	Carlson, William	1,855		1,855		08-08-2003	R2003194789	FEE SIMPLE
09RWNE214071	21-02-400-006-0000	21-02-400-006-0000	Chicago Title & Trust Company, Trust 28320	10,025		10,025		12-14-2008	R2008213004	FEE SIMPLE
09RWNE214072	21-02-400-004-0000	21-02-400-004-0000	Bacon, Royce R., as Trustee under Trust 28320	10,017		10,017		09-11-2002	R2002148407	FEE SIMPLE
09RWNE214073	21-02-400-007-0000	21-02-400-007-0000	Maurer, Frank and Sheryl	10,028		10,028		03-13-2003	R2003058196	FEE SIMPLE
09RWNE214074	21-02-400-008-0000	21-02-400-008-0000	Municipal Trust and Savings Bank, as Trustee under; Giffney, Barbara J.	10,026		10,026		11-06-2008	R2008189754	FEE SIMPLE
09RWNE214075	21-02-400-009-0000	21-02-400-009-0000	Seneke, Joan U., Trustee of Seneke, Joan L.H.; Seneke, Lonita A., Trustee of Seneke, Lonita L.	20,052		20,052		05-27-2011	R2011039547	FEE SIMPLE
09RWNE214076	21-03-200-005-0000	21-03-200-005-0000	Standard Bank and Trust Co., formerly known as Her. Eric; Kathleen Rita Bataello; Kathleen (Kathleen); Emanuel; Georgan Rita Bataello; Georgan, nec; Bernart; Jeanne Rita Bataello; Jeanne (Jean), ne; Maris; Susan Rita Bataello; Susan, nec; Bataello, Jack, his nephew	10,079		10,079		04-16-2010	R2010043239	FEE SIMPLE
09RWNE214077	21-03-300-002-0000	21-03-300-002-0000	Link, Theodore S. Limited Partnership	161,427		161,427		03-18-2002	R2002048100	FEE SIMPLE
09RWNE214078	21-04-200-001-0000	21-04-200-001-0000	Harrington, Sr., Wayne E. North Star Trust Co., an Illinois Corp., successor; Sandberg, Philip M.	160,064		160,064		12-30-2009	R2010004523	FEE SIMPLE
09RWNE214079	21-04-300-002-0000	21-04-300-002-0000	First State Bank as successor trustee to The Cretz; Bank, Roberta (Robbie) L.	154,754		154,754		04-14-2010	R2010041840	FEE SIMPLE
09RWNE214080	21-04-300-003-0000	21-04-300-003-0000	Breazale, Burton and Earlene H.	5,014		5,014		11-01-2002	R2002186758	FEE SIMPLE
09RWNE214081	21-05-100-002-0000	21-05-100-002-0000	Great Lakes Bank, the First National Blue Island; Schulz, H. John; Schulz, Doris P.; Schulz, Alan J.	173,234		173,234		12-22-2003	R2004047376	FEE SIMPLE
09RWNE214082	21-05-100-004-0000	21-05-100-004-0000	MS Financial Bank N.A., Successor Trustee-Trust#454E; Stele, Gordon E.; Specter, Nancy A.; Adelman, James U.; Adelman, Gerald S.; Frank, Keith; Frank, Michael; Adelman, Kenneth L.; Adelman, Paul Robert; Herman-Nunes, Wendy J.	15,011		15,011		03-14-2006	R2006032630	FEE SIMPLE
09RWNE214083	21-05-200-012-0000	21-05-200-012-0000	Bale Limited Partnership	71,430		71,430		03-13-2003	R2003058197	FEE SIMPLE
09RWNE214084	21-05-200-005-0000	21-05-200-005-0000	Lucaids, William R. and Arlene M.	5,000		5,000		08-20-2002	R2002135784	FEE SIMPLE
09RWNE214085	21-05-200-007-0000	21-05-200-007-0000	Benge, Kenneth W. and Ann M.	5,000		5,000		05-03-2002	R2002076241	FEE SIMPLE
09RWNE214086	21-05-300-006-0000	21-05-300-006-0000	Roney, Christopher T.; Rooney, James M.	5,000		5,000		03-03-2012	R2010453112	FEE SIMPLE
09RWNE214087	21-05-400-002-0000	21-05-400-002-0000	Oelnering, Alfred	140,678		140,678		11-27-2002	R2002219038	FEE SIMPLE
09RWNE214088	21-05-100-013-0000	21-05-100-013-0000	Department of Public Works and Buildings of the St.	12,408		12,408		10-05-1970	W700 22738	FEE SIMPLE

SUMMARY OF EXISTING AIRPORT OWNED LAND (CONTINUED)										
Parcel Number	Tax ID Number (Original)	Tax ID Number (Revised)	Acquired From	Fee Simple Acquired	F.A.A. Participation	NO F.A.A. Participation	F.A.A. PROJECT NUMBER	DATE ACQUIRED	DOCUMENT NUMBER	REMARKS
09RWNE200001	21-06-200-002-0000		MS Financial Bank N.A., Successor Trustee-Trust#454E; Stele, Gordon E.; Specter, Nancy A.; Adelman, James U.; Adelman, Gerald S.; Frank, Keith; Frank, Michael; Adelman, Kenneth L.; Adelman, Paul Robert; Herman-Nunes, Wendy J.	151,947		151,947		02-14-2006	R2006032628	FEE SIMPLE
09RWNE200002	21-06-200-003-0000		MS Financial Bank N.A., Successor Trustee-Trust#1382; Bank, Carl R.	5,000						



AIRPORT DATA TABLE		
AIRPORT DATA	FUTURE	POTENTIAL
Airport Elevation (MSL)	775.0'	775.0'
Airport Reference Point (NAD 83)		
Latitude	41° 22' 29.38" N	41° 22' 29.38" N
Longitude	87° 41' 58.14" W	87° 41' 58.14" W
Mean Max. Temperature of Hottest Month	84.7° F	84.7° F
Airport Navigation Aids	ARRL, VOR, ABR, SSR, ASDE, RNAV(GPS/WAAS), LS, GS, LOC, IM, OM	ARRL, VOR, ABR, SSR, ASDE, RNAV(GPS/WAAS), LS, GS, LOC, IM, OM
Magnetic Variation	3° 29' W changing by 0° 5' W/year	3° 29' W changing by 0° 5' W/year
Date of Magnetic Variation	8/15/2011	8/15/2011
Tail Height	80'	80'
Critical Design Aircraft	A380-800	A380-800
Miscellaneous Facilities	LLWAS, AWOS, RVR, PRM, SMGC, HRL, ALSF-2, MTL, TOL, Touchdown Zone Lights, Wind cones	LLWAS, AWOS, RVR, PRM, SMGC, HRL, ALSF-2, MTL, TOL, Touchdown Zone Lights, Wind cones
Well	Well	Well
County	Will, Monroe, Washington	Will, Monroe, Washington
Ownership	Will, Monroe, Washington	Will, Monroe, Washington



ALL WEATHER WIND COVERAGE				
Runway	CROSSWIND COMPONENTS			
	10.5 Knot	13 Knot	16 Knot	20 Knot
9-27 (8-26)	86.13%	92.50%	97.91%	99.57%

VFR WIND COVERAGE				
Runway	CROSSWIND COMPONENTS			
	10.5 Knot	13 Knot	16 Knot	20 Knot
9-27 (8-26)	86.56%	92.67%	97.96%	99.59%

IFR WIND COVERAGE				
Runway	CROSSWIND COMPONENTS			
	10.5 Knot	13 Knot	16 Knot	20 Knot
9-27 (8-26)	82.87%	90.00%	96.96%	99.34%

DECLARED DISTANCES								
Stage	Runway End ID	TORA	TODA	ASDA	LDA	Approach End RSA Length	Stop and Go RSA Length	Date of Approval
Future	9L	7,500'	7,500'	7,500'	7,500'	1,000'	1,000'	9,500'
Future	28R	7,500'	7,500'	7,500'	7,500'	1,000'	1,000'	9,500'
Potential	8C	10,000'	10,000'	10,000'	10,000'	1,000'	1,000'	12,000'
Potential	28C	10,000'	10,000'	10,000'	10,000'	1,000'	1,000'	12,000'
Future	8R	12,000'	12,000'	12,000'	12,000'	1,000'	1,000'	14,000'
Future	26L	12,000'	12,000'	12,000'	12,000'	1,000'	1,000'	14,000'
Future	9L	12,000'	12,000'	12,000'	12,000'	1,000'	1,000'	14,000'
Future	27R	12,000'	12,000'	12,000'	12,000'	1,000'	1,000'	14,000'
Potential	9C	10,000'	10,000'	10,000'	10,000'	1,000'	1,000'	12,000'
Potential	27C	10,000'	10,000'	10,000'	10,000'	1,000'	1,000'	12,000'
Future	9R	10,000'	10,000'	10,000'	10,000'	1,000'	1,000'	12,000'
Future	27L	10,000'	10,000'	10,000'	10,000'	1,000'	1,000'	12,000'

ITEM	Future Runway 8L-28R		Potential Runway 9C-28C		Future Runway 8R-26L		Inaugural Runway 9R-27L Future Runway 9L-27R		Potential Runway 9C-27C		Future Runway 9R-27L			
	Future 8L	Future 28R	Potential 9C	Potential 28C	Future 8R	Future 26L	Inaugural 9R	Inaugural 27L	Future 9L	Future 27R	Potential 9C	Potential 27C	Future 9L	Future 27R
Approach Category and Design Group	C-II		C-I		D-VI		C-II		C-I		C-I		C-I	
Approach Slope	4%		5%		5%		4%		5%		5%		5%	
Runway Length	7,500'		10,000'		12,000'		9,500'		12,000'		10,000'		10,000'	
Runway Width	150'		150'		200'		150'		200'		150'		150'	
Pavement Surface Type	Concrete		Concrete											
Maximum Pavement Strength (psi)	500,000		500,000		1,260,000		500,000		1,260,000		500,000		500,000	
Runway Line Bearing (NAD83)	N 90° 0' 0.00" E		N 90° 0' 0.00" E											
Runway End Coordinates (NAD83)	Latitude: 41° 23' 58.02" N Longitude: 87° 42' 32.07" W	Latitude: 41° 23' 58.47" N Longitude: 87° 40' 53.89" W	Latitude: 41° 23' 34.50" N Longitude: 87° 42' 03.11" W	Latitude: 41° 23' 33.77" N Longitude: 87° 40' 53.91" W	Latitude: 41° 23' 09.87" N Longitude: 87° 42' 18.40" W	Latitude: 41° 23' 09.00" N Longitude: 87° 42' 18.40" W	Latitude: 41° 21' 56.98" N Longitude: 87° 42' 46.38" W	Latitude: 41° 21' 55.89" N Longitude: 87° 40' 41.77" W	Latitude: 41° 21' 56.79" N Longitude: 87° 42' 18.14" W	Latitude: 41° 21' 31.99" N Longitude: 87° 42' 17.71" W	Latitude: 41° 21' 31.27" N Longitude: 87° 42' 18.13" W	Latitude: 41° 21' 07.29" N Longitude: 87° 42' 06.49" W	Latitude: 41° 21' 06.57" N Longitude: 87° 42' 06.38" W	
Runway End Elevation (MSL)	775.0'		734.4'		763.5'		761.0'		761.0'		761.0'		734.0'	
Displaced Threshold From Runway End	None		None											
Displaced Threshold Coordinates (NAD83)	Latitude: N/A Longitude: N/A													
Displaced Threshold Elevation (MSL)	N/A		N/A											
Effective Gradient (%)	0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%	
Wind Coverage (%)	99.57%		99.57%		99.57%		99.57%		99.57%		99.57%		99.57%	
Approach Visibility Minimum (RVR)	2,400'		2,400'		5,000'		2,400'		2,400'		5,000'		2,400'	
Runway Lighting Type	HRL, RCL		HRL, RCL		HRL, REL		HRL, RCL, REL, MALSR		HRL, RCL		HRL, REL		HRL, RCL	
Runway Marking Type	Precision		Non-Precision		Non-Precision		Precision		Precision		Non-Precision		Precision	
Approach Type	Precision (CAT II)		Non-Precision (CAT II)		Non-Precision (CAT II)		Precision (CAT I)		Precision (CAT II)		Non-Precision (CAT II)		Precision (CAT II)	
TACRER Part 77 Approach Category	90:1		90:1		90:1		90:1		90:1		90:1		90:1	
Type of Aeronautical Survey Required for Approach	Vertically Guided		Vertically Guided											
Runway Departure Surface	Yes		Yes											
Visual Aids	PAPI(4), MALSR		PAPI(4), LPV		PAPI(4), LPV		PAPI(4)		PAPI(4)		PAPI(4), LPV		PAPI(4), LPV	
Instrument NAVAIDS	LS, GS, LOC, IM, OM, RVR		LS, GS, LOC, IM, OM, RVR		N/A		LS, GS, LOC, IM, OM, RVR, PRM, SMGC		LS, GS, LOC, IM, OM, RNAV(GPS/WAAS)		LS, GS, LOC, IM, OM, RVR, PRM, SMGC		LS, GS, LOC, IM, OM, RVR, PRM, SMGC	
Runway Safety Area (RSA)	1,000'		1,000'		1,000'		1,000'		1,000'		1,000'		1,000'	
Runway Protection Zone (RPZ)	2,500'		2,500'		1,700'		2,500'		2,500'		1,700'		2,500'	
Runway Object Free Area (OCA)	1,000'		1,000'		1,000'		1,000'		1,000'		1,000'		1,000'	
Runway Obstacle Free Area (OFA)	200'		200'		200'		200'		200'		200'		200'	
Precision Obstacle Free Area (POFA)	200'		200'		N/A		200'		200'		N/A		200'	
Taxiway Object Free Area Width	262'		262'		262'		262'		262'		262'		262'	
Taxiway Safety Area (TSA) Width	262'		262'		262'		262'		262'		262'		262'	
Taxiway Lighting	MTL		MTL		MTL, TOL									

GENERAL NOTES:  
 1. SEE SHEET #4 FOR GENERAL NOTES AND DATA SOURCES.  
 2. INAUGURAL RUNWAY 9L-27R WILL BE DECOMMISSIONED.  
 3. TAXIWAYS ARE DESIGNED FOR GROUP IV IN THE FUTURE AIRPORT LAYOUT PLAN. SEPARATIONS BETWEEN RUNWAYS AND TAXIWAYS ARE 600'.  
 4. NO OFZ OR TSS PENETRATIONS EXIST.

TRANSPORTATION  
**AECOM**  
 AECOM TECHNICAL SERVICES, INC.  
 303 EAST WACKER DRIVE, SUITE 800  
 CHICAGO, ILLINOIS 60601  
 TEL: 312.373.7700 F: 312.338.1109  
 www.aecom.com

**SSA**  
 South Suburban Airport  
 Illinois Department of Transportation  
 Division of Aeronautics

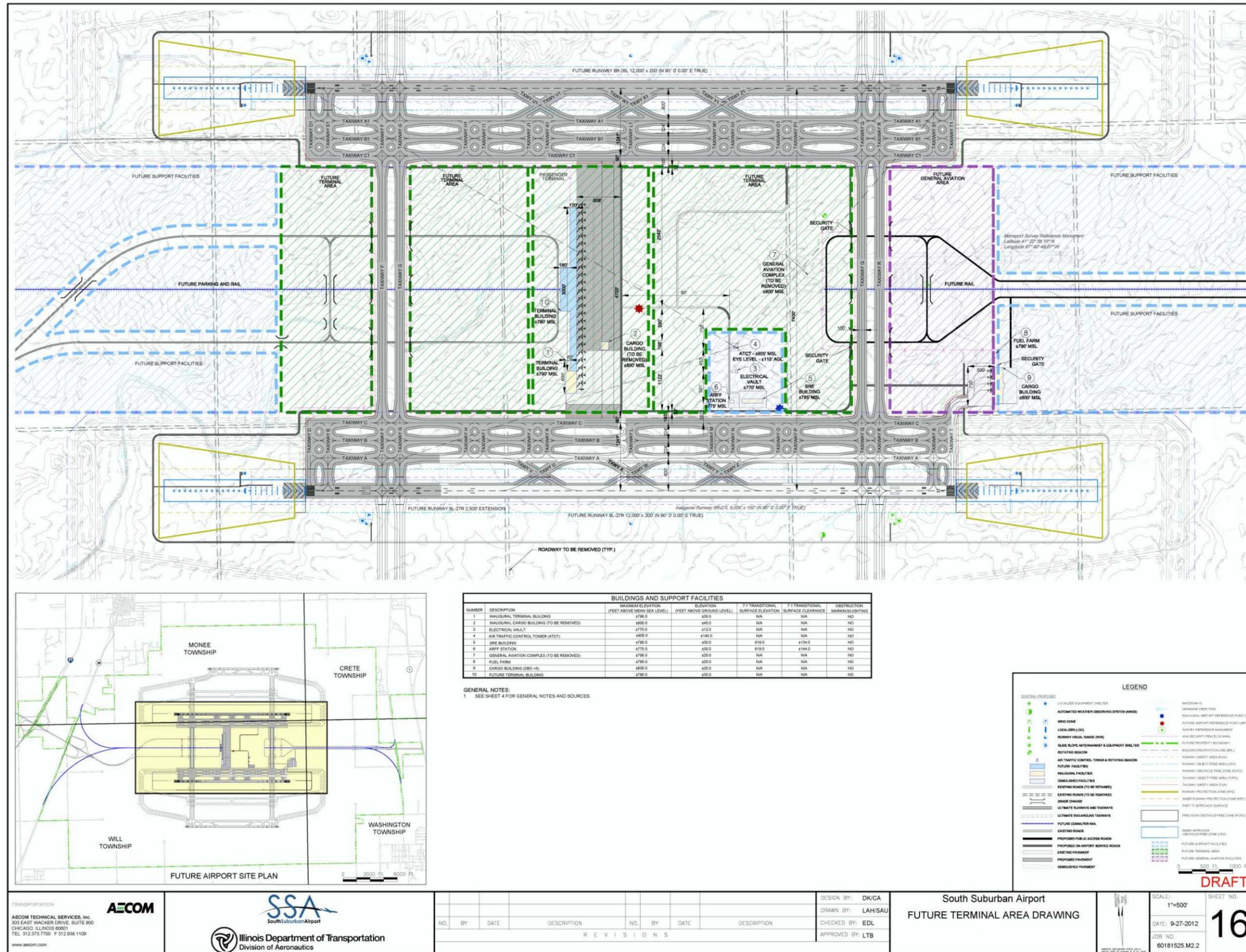
NO.	BY	DATE	DESCRIPTION	NO.	BY	DATE	DESCRIPTION
REVISIONS							

DESIGN BY: DKCA  
 DRAWN BY: LAH/SAU  
 CHECKED BY: EDL  
 APPROVED BY: LTB

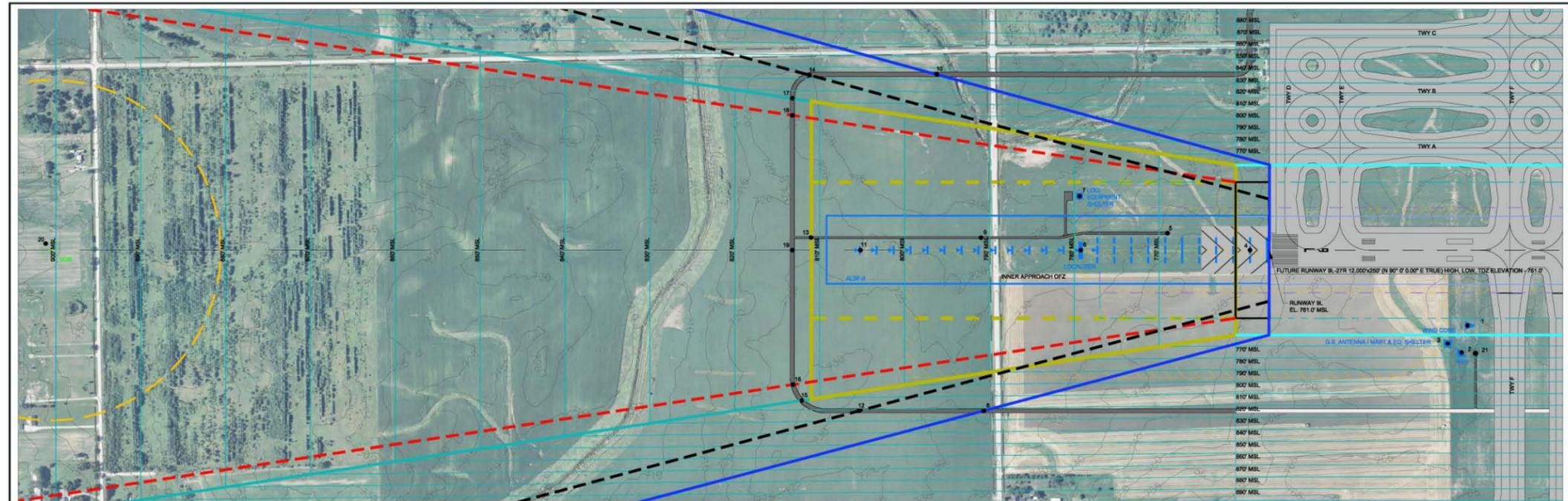
South Suburban Airport  
 FUTURE AIRPORT DATA SHEET

SCALE: NOT TO SCALE  
 DATE: 9-27-2012  
 JOB NO.: 60181525.M2.2

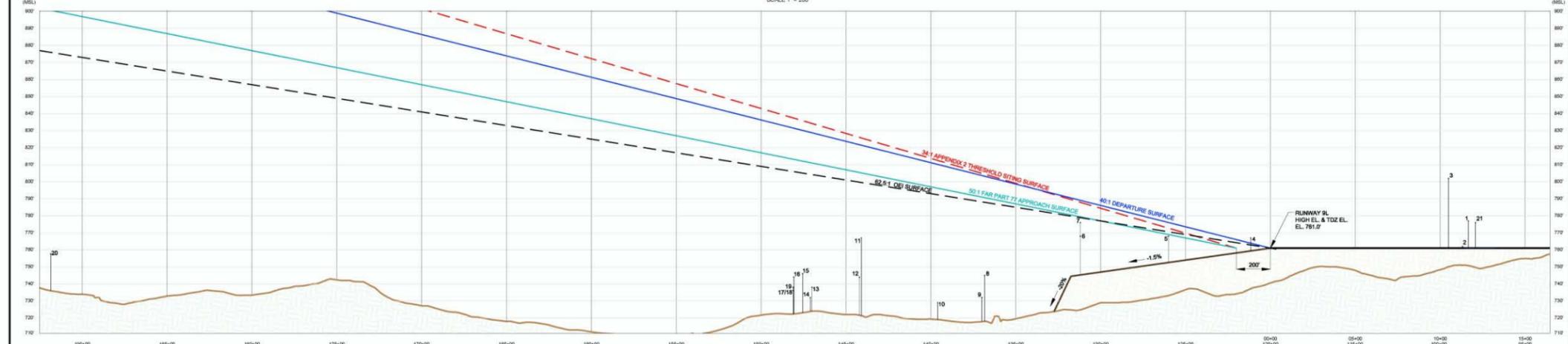
**DRAFT**  
 SHEET NO. **15**







RUNWAY 9L PLAN VIEW  
SCALE 1" = 200'



RUNWAY 9L PROFILE VIEW  
VERTICAL SCALE 1" = 20'  
HORIZONTAL SCALE 1" = 200'

**RUNWAY 9L OBSTRUCTION DISPOSITION CHART**

NO.	DESCRIPTION	TOP ELEVATION (MSL)	DISTANCE TO RWY	PRIMARY SURFACE		T1 TRANSITIONAL SURFACE		82.5:1 OBI SURFACE		50:1 FAR PART T1 APPROACH SURFACE		40:1 DEPARTURE SURFACE		DISPOSITION
				SURFACE ELEVATION	PENETRATION	SURFACE ELEVATION	PENETRATION	SURFACE ELEVATION	PENETRATION	SURFACE ELEVATION	PENETRATION	SURFACE ELEVATION	PENETRATION	
1	WIND COME	377	188	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
2	WIND	382	188	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
3	G.S. AIRMAN MARY A EQ. SHELTER	812	188	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
4	ALFA J. PILOT LIGHT	787	197	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
5	WHITEHALL ACCESS ROAD	788	197	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
6	LOOK OUT	789	197	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
7	LOCALIZER EQUIPMENT SHELTER	779	197	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
8	PERIMETER ROAD	747	198	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
9	MAINTENANCE ACCESS ROAD	747	198	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
10	PERIMETER ROAD	729	198	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
11	ALFA J. PILOT LIGHT	787	200	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
12	PERIMETER ROAD	748	202	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
13	PERIMETER ROAD	748	202	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
14	WHITEHALL ACCESS ROAD	759	217	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
15	PERIMETER ROAD	729	219	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
16	PERIMETER ROAD	749	219	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
17	PERIMETER ROAD	749	219	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
18	PERIMETER ROAD	729	221	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
19	PERIMETER ROAD	729	221	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
20	WIND	792	228	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION
21	MAINTENANCE ACCESS ROAD	752	228	NA	0'	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION

TOP ELEVATION OF EXISTING STRUCTURES ARE NOT AVAILABLE. IT IS RECOMMENDED TO REMOVE THESE EXISTING STRUCTURES. THESE STRUCTURES ARE NOT DEPICED IN RUNWAY 9L PROFILE VIEW.

**LEGEND**

- RUNWAY SAFETY AREAS (SMA)
- RUNWAY OBSTACLE FREE ZONE (OFZ)
- RUNWAY PROTECTION ZONE (RPZ)
- PRIMARY SURFACE
- RW PART T1 APPROACH SURFACE
- TRANSITIONAL SURFACE
- DEPARTURE SURFACE
- APPENDIX 2 THRESHOLD STRIP SURFACE
- EXISTING GROUND
- PROPOSED GROUND - GRADED
- EXISTING GROUND - UNGRADED
- PROPOSED GROUND - FILL
- LOCALIZER CRITICAL AREA (CA)
- SLOPE CRITICAL AREA (CA)

- NOTES**
- GROUND CONTOUR INTERVALS ARE SHOWN (KNOWN) BASED ON 10' VERTICAL INTERVALS (UNKNOWN) BASED ON 20' VERTICAL INTERVALS.
  - AERIAL PHOTOGRAPHY, HILL COUNTY, ILLINOIS, 2008, WAS USED TO DETERMINE THE EXISTING GROUND FOR THIS DRAWING.
  - SEE SHEET 17 FOR THE APPROACH SURFACE PLAN.
  - EXISTING GROUND IS BASED ON THE PROFILE SURFACE BASED ON THE OBSTACLE DATA SET AND FROM THE AERIAL PHOTOGRAPHY DATED JULY 18, 2011.
  - IT IS RECOMMENDED THAT AN OBSTRUCTION SURVEY BE PERFORMED.
  - PROVIDED: THE GENERAL BACKGROUND OF THE RWY 9L FROM RUNWAY 9L TO LOCALIZER CRITICAL AREA.
- REFERENCE:**
- LATITUDE AND LONGITUDE ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
  - VERTICAL CURVES, IF APPLICABLE TO THE RWY 9L, ARE SHOWN ON THE PLAN VIEW OF THIS DRAWING.

TRANSPORTATION  
AECOM TECHNICAL SERVICES, INC.  
303 EAST WACKER DRIVE, SUITE 800  
CHICAGO, ILLINOIS 60601  
TEL: 312.375.7700 F: 312.358.1109  
www.aecom.com

**AECOM**  
**SSA**  
South Suburban Airport  
Illinois Department of Transportation  
Division of Aeronautics

NO.	BY	DATE	DESCRIPTION

R E V I S I O N S

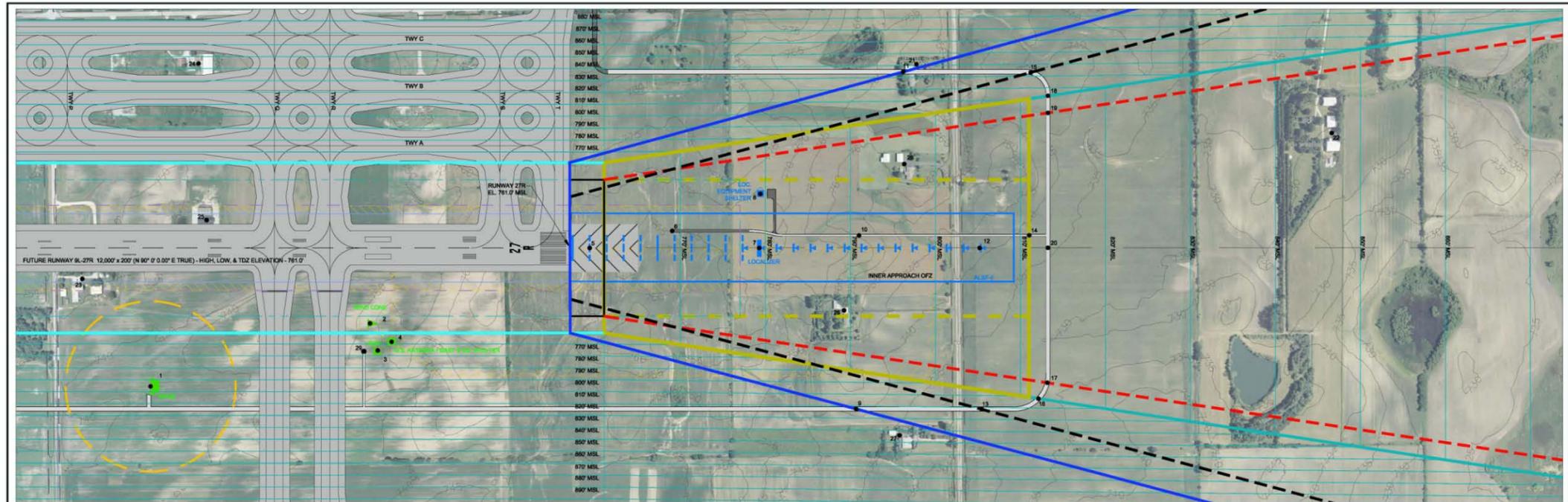
DESIGN BY: DKICA  
DRAWN BY: LAH/SAU  
CHECKED BY: EDL  
APPROVED BY: LTB

South Suburban Airport  
**FUTURE RUNWAY 9L INNER PORTION  
OF THE APPROACH SURFACE DRAWING**

SCALE: AS NOTED  
DATE: 9-27-2012  
JOB NO.: 60181525 M2.2

SHEET NO.: **18**

**DRAFT**



NO.	DESCRIPTION	TYPE/ELEVATION (MSL)	DISTANCE TO END	APPROX. SURFACE ELEVATION	PENETRATION	APP. 1 TRANSITIONAL SURFACE	APP. 2 FAR PART OF APPROACH SURFACE	APP. 3 APPROPCH 2 THRESHOLD STRIP SURFACE	APP. 4 DEPARTURE SURFACE	APP. 5 40:1 DEPARTURE SURFACE	APP. 6 50:1 FAR PART OF APPROACH SURFACE	APP. 7 50:1 APPENDIX 2 THRESHOLD STRIP SURFACE	DISPOSITION
1	ARC	760	100	760	0	760	760	760	760	760	760	760	NO ACTION
2	ARC	770	100	770	0	770	770	770	770	770	770	770	NO ACTION
3	ARC	780	100	780	0	780	780	780	780	780	780	780	NO ACTION
4	ARC	790	100	790	0	790	790	790	790	790	790	790	NO ACTION
5	ARC	800	100	800	0	800	800	800	800	800	800	800	NO ACTION
6	ARC	810	100	810	0	810	810	810	810	810	810	810	NO ACTION
7	ARC	820	100	820	0	820	820	820	820	820	820	820	NO ACTION
8	ARC	830	100	830	0	830	830	830	830	830	830	830	NO ACTION
9	ARC	840	100	840	0	840	840	840	840	840	840	840	NO ACTION
10	ARC	850	100	850	0	850	850	850	850	850	850	850	NO ACTION
11	ARC	860	100	860	0	860	860	860	860	860	860	860	NO ACTION
12	ARC	870	100	870	0	870	870	870	870	870	870	870	NO ACTION
13	ARC	880	100	880	0	880	880	880	880	880	880	880	NO ACTION
14	ARC	890	100	890	0	890	890	890	890	890	890	890	NO ACTION

NOTES:  
 1. POSITIVE VALUES SHOW ABOVE OBSTRUCTION PENETRATION RELATIVE TO THE SURFACE ELEVATION.  
 2. NEGATIVE VALUES SHOW BELOW OBSTRUCTION PENETRATION RELATIVE TO THE SURFACE ELEVATION.  
 3. DIMENSIONS ARE GIVEN IN FEET UNLESS OTHERWISE SPECIFIED.  
 4. ALL DIMENSIONS ARE TO THE CENTERLINE OF THE SURFACE UNLESS OTHERWISE SPECIFIED.  
 5. THE SURFACE ELEVATION IS THE ELEVATION OF THE SURFACE AT THE POINT OF OBSTRUCTION.  
 6. THE SURFACE ELEVATION IS THE ELEVATION OF THE SURFACE AT THE POINT OF OBSTRUCTION.  
 7. THE SURFACE ELEVATION IS THE ELEVATION OF THE SURFACE AT THE POINT OF OBSTRUCTION.  
 8. THE SURFACE ELEVATION IS THE ELEVATION OF THE SURFACE AT THE POINT OF OBSTRUCTION.  
 9. THE SURFACE ELEVATION IS THE ELEVATION OF THE SURFACE AT THE POINT OF OBSTRUCTION.  
 10. THE SURFACE ELEVATION IS THE ELEVATION OF THE SURFACE AT THE POINT OF OBSTRUCTION.

TRANSPORTATION

**AECOM**

AECOM TECHNICAL SERVICES, INC.  
 303 EAST WACKER DRIVE, SUITE 800  
 CHICAGO, ILLINOIS 60601  
 TEL: 312.375.7700 F: 312.358.1109  
 www.aecom.com

**SSA**  
 South Suburban Airport

Illinois Department of Transportation  
 Division of Aeronautics

NO.	BY	DATE	DESCRIPTION

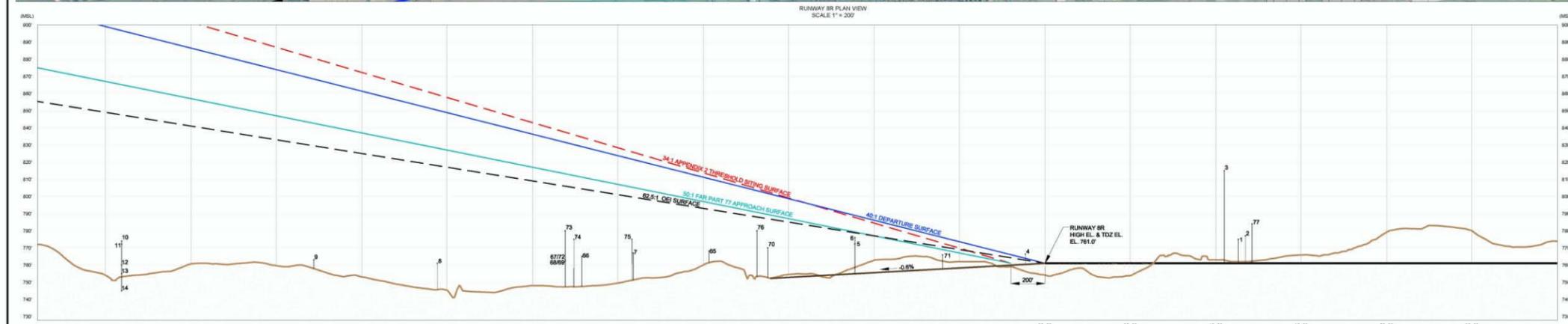
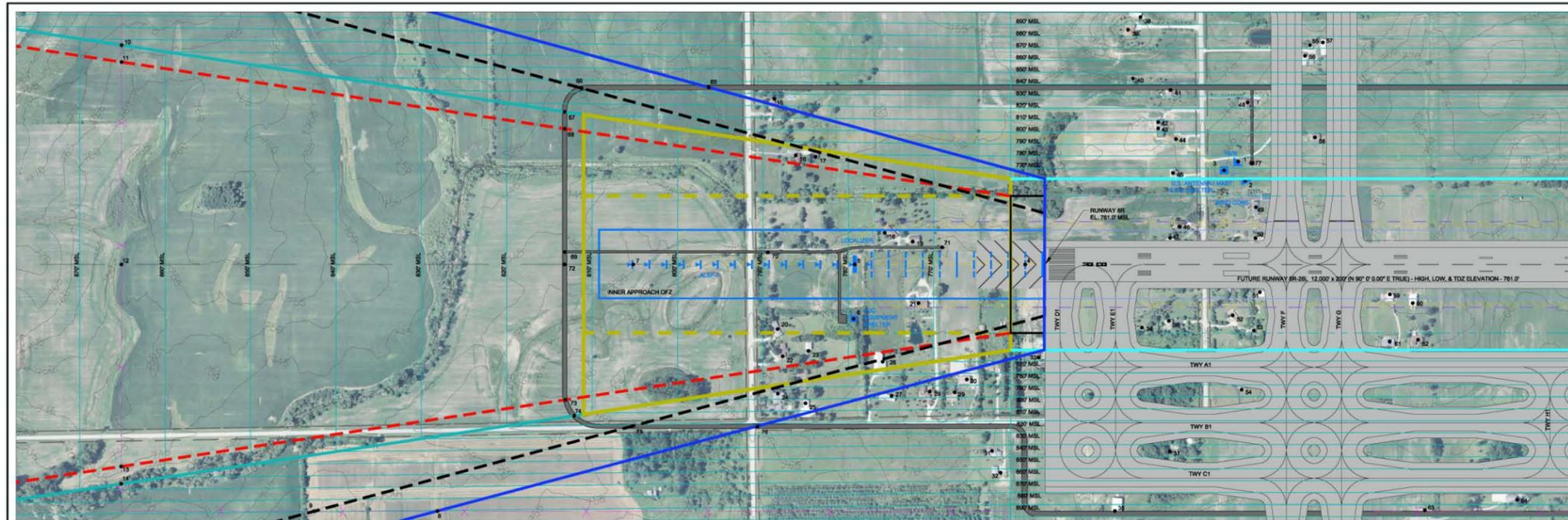
REVISIONS

DESIGN BY: DKCA  
 DRAWN BY: LAH/SAU  
 CHECKED BY: EDL  
 APPROVED BY: LTB

South Suburban Airport  
**FUTURE RUNWAY 27R INNER PORTION  
 OF THE APPROACH SURFACE DRAWING**

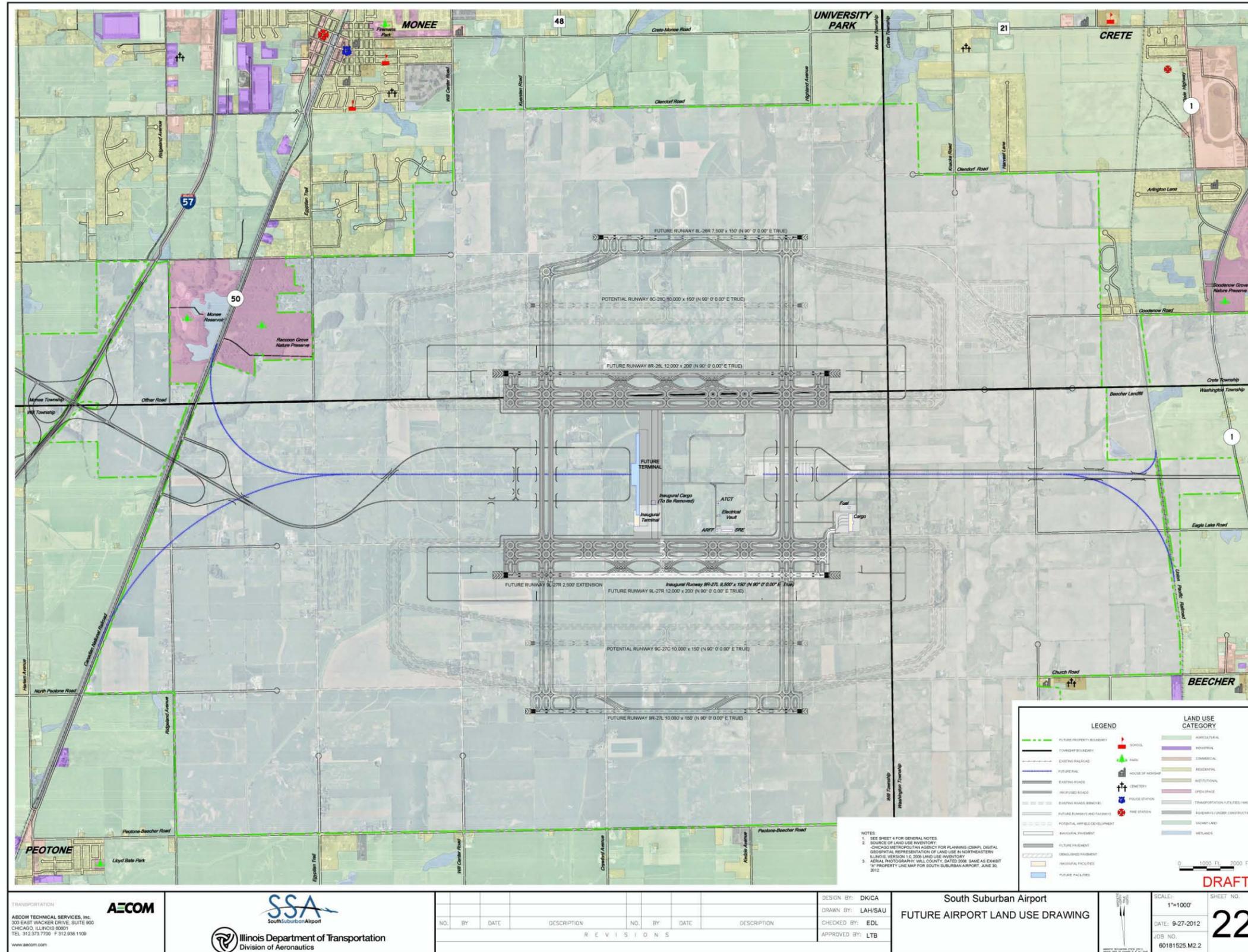
SCALE: AS NOTED  
 DATE: 9-27-2012  
 JOB NO: 60181525 M2.2

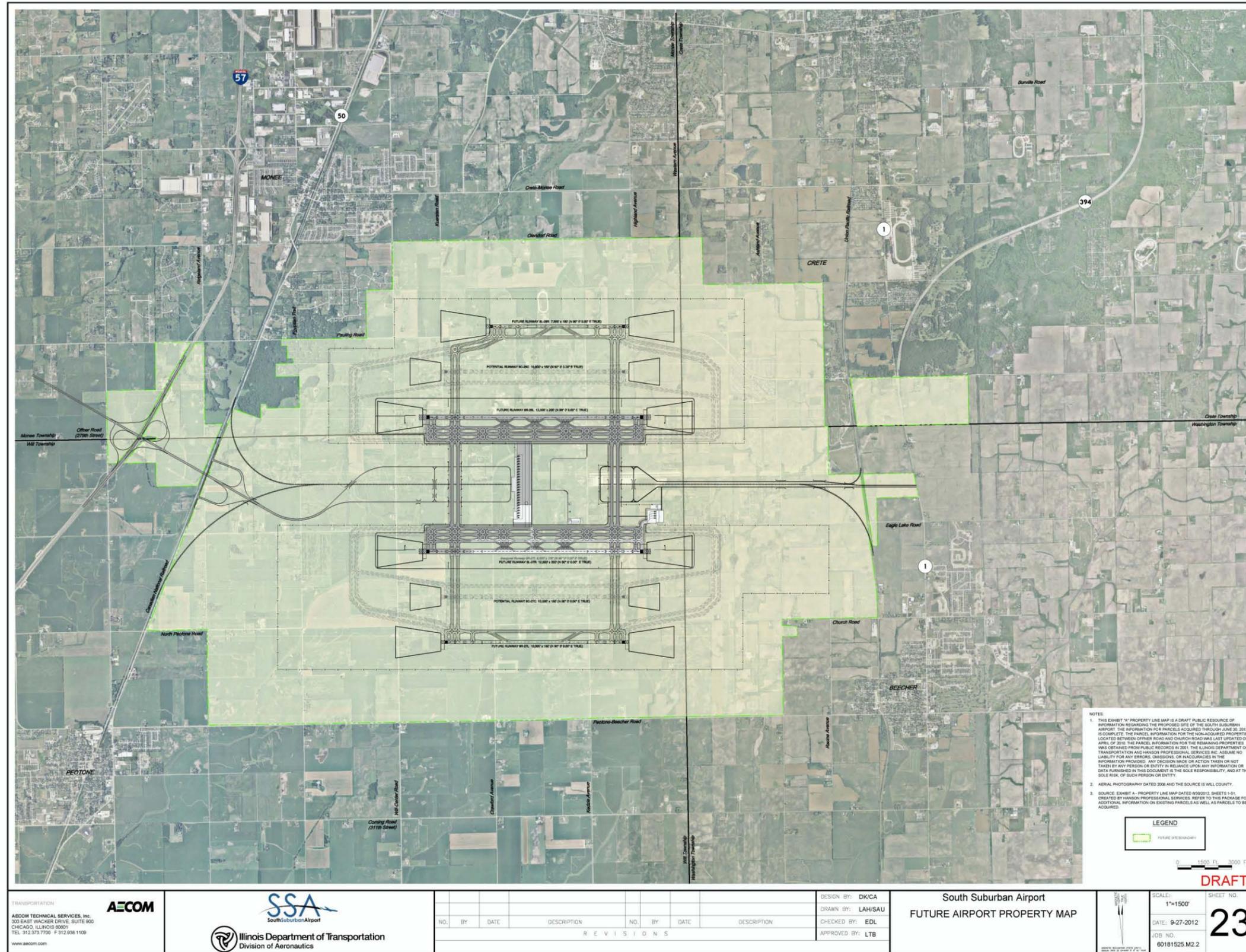
SHEET NO:  
19



RUNWAY 8R OBSTRUCTION DISPOSITION CHART																
NO.	DESCRIPTION	TOP ELEVATION (MSL)	DISTANCE TO END	TRANSITIONAL SURFACE			FAR PART OF APPROACH SURFACE			APPROPRIATE THRESHOLD SITING SURFACE			DEPARTURE SURFACE			DISPOSITION
				SURFACE ELEVATION	PENETRATION	REVISION	SURFACE ELEVATION	PENETRATION	REVISION	SURFACE ELEVATION	PENETRATION	REVISION	SURFACE ELEVATION	PENETRATION	REVISION	
1	PILE	770	884	NA	NA	770	0	NA	NA	NA	NA	NA	NA	NA	NO ACTION	
2	WOOD CONC	777	NA	777	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	OBSTRUCTION REMOVED	
3	GLASS SIGN	870	NA	NA	NA	780	0	NA	NA	NA	NA	NA	NA	NA	NO ACTION	
4	ALUMINUM PAVEMENT	787	133	787	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO ACTION	
5	LOCAL DEER	762	130	NA	NA	NA	NA	770	-17	767	-20	759	-27	759	-27	NO ACTION
6	COCKLETON EQUIPMENT STORAGE	780	130	NA	NA	NA	NA	770	-17	767	-20	759	-27	759	-27	NO ACTION
7	ROCKY HILLS LIGHT	780	130	NA	NA	NA	NA	770	-17	767	-20	759	-27	759	-27	NO ACTION
8	ADJ SECURITY FENCE	761	1317	NA	NA	761	0	NA	NA	NA	NA	761	0	NA	NO ACTION	
9	ADJ SECURITY FENCE	760	1318	NA	NA	760	0	NA	NA	NA	NA	760	0	NA	NO ACTION	
10	ADJ SECURITY FENCE	759	1319	NA	NA	759	0	NA	NA	NA	NA	759	0	NA	NO ACTION	
11	ADJ SECURITY FENCE	758	1320	NA	NA	758	0	NA	NA	NA	NA	758	0	NA	NO ACTION	
12	ADJ SECURITY FENCE	757	1321	NA	NA	757	0	NA	NA	NA	NA	757	0	NA	NO ACTION	
13	ADJ SECURITY FENCE	756	1322	NA	NA	756	0	NA	NA	NA	NA	756	0	NA	NO ACTION	
14	ADJ SECURITY FENCE	755	1323	NA	NA	755	0	NA	NA	NA	NA	755	0	NA	NO ACTION	
15	ADJ SECURITY FENCE	754	1324	NA	NA	754	0	NA	NA	NA	NA	754	0	NA	NO ACTION	
16	ADJ SECURITY FENCE	753	1325	NA	NA	753	0	NA	NA	NA	NA	753	0	NA	NO ACTION	
17	ADJ SECURITY FENCE	752	1326	NA	NA	752	0	NA	NA	NA	NA	752	0	NA	NO ACTION	
18	ADJ SECURITY FENCE	751	1327	NA	NA	751	0	NA	NA	NA	NA	751	0	NA	NO ACTION	
19	ADJ SECURITY FENCE	750	1328	NA	NA	750	0	NA	NA	NA	NA	750	0	NA	NO ACTION	
20	ADJ SECURITY FENCE	749	1329	NA	NA	749	0	NA	NA	NA	NA	749	0	NA	NO ACTION	
21	ADJ SECURITY FENCE	748	1330	NA	NA	748	0	NA	NA	NA	NA	748	0	NA	NO ACTION	
22	ADJ SECURITY FENCE	747	1331	NA	NA	747	0	NA	NA	NA	NA	747	0	NA	NO ACTION	
23	ADJ SECURITY FENCE	746	1332	NA	NA	746	0	NA	NA	NA	NA	746	0	NA	NO ACTION	
24	ADJ SECURITY FENCE	745	1333	NA	NA	745	0	NA	NA	NA	NA	745	0	NA	NO ACTION	
25	ADJ SECURITY FENCE	744	1334	NA	NA	744	0	NA	NA	NA	NA	744	0	NA	NO ACTION	
26	ADJ SECURITY FENCE	743	1335	NA	NA	743	0	NA	NA	NA	NA	743	0	NA	NO ACTION	
27	ADJ SECURITY FENCE	742	1336	NA	NA	742	0	NA	NA	NA	NA	742	0	NA	NO ACTION	
28	ADJ SECURITY FENCE	741	1337	NA	NA	741	0	NA	NA	NA	NA	741	0	NA	NO ACTION	
29	ADJ SECURITY FENCE	740	1338	NA	NA	740	0	NA	NA	NA	NA	740	0	NA	NO ACTION	
30	ADJ SECURITY FENCE	739	1339	NA	NA	739	0	NA	NA	NA	NA	739	0	NA	NO ACTION	
31	ADJ SECURITY FENCE	738	1340	NA	NA	738	0	NA	NA	NA	NA	738	0	NA	NO ACTION	
32	ADJ SECURITY FENCE	737	1341	NA	NA	737	0	NA	NA	NA	NA	737	0	NA	NO ACTION	
33	ADJ SECURITY FENCE	736	1342	NA	NA	736	0	NA	NA	NA	NA	736	0	NA	NO ACTION	
34	ADJ SECURITY FENCE	735	1343	NA	NA	735	0	NA	NA	NA	NA	735	0	NA	NO ACTION	
35	ADJ SECURITY FENCE	734	1344	NA	NA	734	0	NA	NA	NA	NA	734	0	NA	NO ACTION	
36	ADJ SECURITY FENCE	733	1345	NA	NA	733	0	NA	NA	NA	NA	733	0	NA	NO ACTION	
37	ADJ SECURITY FENCE	732	1346	NA	NA	732	0	NA	NA	NA	NA	732	0	NA	NO ACTION	
38	ADJ SECURITY FENCE	731	1347	NA	NA	731	0	NA	NA	NA	NA	731	0	NA	NO ACTION	
39	ADJ SECURITY FENCE	730	1348	NA	NA	730	0	NA	NA	NA	NA	730	0	NA	NO ACTION	
40	ADJ SECURITY FENCE	729	1349	NA	NA	729	0	NA	NA	NA	NA	729	0	NA	NO ACTION	
41	ADJ SECURITY FENCE	728	1350	NA	NA	728	0	NA	NA	NA	NA	728	0	NA	NO ACTION	
42	ADJ SECURITY FENCE	727	1351	NA	NA	727	0	NA	NA	NA	NA	727	0	NA	NO ACTION	
43	ADJ SECURITY FENCE	726	1352	NA	NA	726	0	NA	NA	NA	NA	726	0	NA	NO ACTION	
44	ADJ SECURITY FENCE	725	1353	NA	NA	725	0	NA	NA	NA	NA	725	0	NA	NO ACTION	
45	ADJ SECURITY FENCE	724	1354	NA	NA	724	0	NA	NA	NA	NA	724	0	NA	NO ACTION	
46	ADJ SECURITY FENCE	723	1355	NA	NA	723	0	NA	NA	NA	NA	723	0	NA	NO ACTION	
47	ADJ SECURITY FENCE	722	1356	NA	NA	722	0	NA	NA	NA	NA	722	0	NA	NO ACTION	
48	ADJ SECURITY FENCE	721	1357	NA	NA	721	0	NA	NA	NA	NA	721	0	NA	NO ACTION	
49	ADJ SECURITY FENCE	720	1358	NA	NA	720	0	NA	NA	NA	NA	720	0	NA	NO ACTION	
50	ADJ SECURITY FENCE	719	1359	NA	NA	719	0	NA	NA	NA	NA	719	0	NA	NO ACTION	
51	ADJ SECURITY FENCE	718	1360	NA	NA	718	0	NA	NA	NA	NA	718	0	NA	NO ACTION	
52	ADJ SECURITY FENCE	717	1361	NA	NA	717	0	NA	NA	NA	NA	717	0	NA	NO ACTION	
53	ADJ SECURITY FENCE	716	1362	NA	NA	716	0	NA	NA	NA	NA	716	0	NA	NO ACTION	
54	ADJ SECURITY FENCE	715	1363	NA	NA	715	0	NA	NA	NA	NA	715	0	NA	NO ACTION	
55	ADJ SECURITY FENCE	714	1364	NA	NA	714	0	NA	NA	NA	NA	714	0	NA	NO ACTION	
56	ADJ SECURITY FENCE	713	1365	NA	NA	713	0	NA	NA	NA	NA	713	0	NA	NO ACTION	
57	ADJ SECURITY FENCE	712	1366	NA	NA	712	0	NA	NA	NA	NA	712	0	NA	NO ACTION	
58	ADJ SECURITY FENCE	711	1367	NA	NA	711	0	NA	NA	NA	NA	711	0	NA	NO ACTION	
59	ADJ SECURITY FENCE	710	1368	NA	NA	710	0	NA	NA	NA	NA	710	0	NA	NO ACTION	
60	ADJ SECURITY FENCE	709	1369	NA	NA	709	0	NA	NA	NA	NA	709	0	NA	NO ACTION	
61	ADJ SECURITY FENCE	708	1370	NA	NA	708	0	NA	NA	NA	NA	708	0	NA	NO ACTION	
62	ADJ SECURITY FENCE	707	1371	NA	NA	707	0	NA	NA	NA	NA	707	0	NA	NO ACTION	
63	ADJ SECURITY FENCE	706	1372	NA	NA	706	0	NA	NA	NA	NA	706	0	NA	NO ACTION	
64	ADJ SECURITY FENCE	705	1373	NA	NA	705	0	NA	NA	NA	NA	705	0	NA	NO ACTION	
65	ADJ SECURITY FENCE	704	1374	NA	NA	704	0	NA	NA	NA	NA	704	0	NA	NO ACTION	
66	ADJ SECURITY FENCE	703	1375	NA	NA	703	0	NA	NA	NA	NA	703	0	NA	NO ACTION	
67	ADJ SECURITY FENCE	7														







NOTES:  
 1. THIS EXHIBIT "A" PROPERTY LINE MAP IS A DRAFT PUBLIC RESOURCE OF INFORMATION REGARDING THE PROPOSED SITE OF THE SOUTH SUBURBAN AIRPORT. THE INFORMATION FOR PARCELS ACQUIRED THROUGH JUNE 30, 2012 IS COMPLETE. THE PARCEL INFORMATION FOR THE NON-ACQUIRED PROPERTIES LOCATED BETWEEN OFNER ROAD AND CHURCH ROAD WAS LAST UPDATED ON APRIL 2012. THE PARCEL INFORMATION FOR THE REMAINING PROPERTIES WAS OBTAINED FROM PUBLIC RECORDS IN 2011. THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND HANSON PROFESSIONAL SERVICES, INC. ASSUME NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INACCURACIES IN THE INFORMATION PROVIDED. ANY DECISION MADE OR ACTION TAKEN OR NOT TAKEN BY ANY PERSON OR ENTITY IN RELIANCE UPON ANY INFORMATION OR DATA FURNISHED IN THIS DOCUMENT IS THE SOLE RESPONSIBILITY, AND AT THE SOLE RISK, OF SUCH PERSON OR ENTITY.  
 2. AERIAL PHOTOGRAPHY DATED 2008 AND THE SOURCE IS WILL COUNTY.  
 3. SOURCE: EXHIBIT A - PROPERTY LINE MAP DATED 09/20/12, SHEETS 1-65, CREATED BY HANSON PROFESSIONAL SERVICES. REFER TO THIS PARAGRAPH FOR ADDITIONAL INFORMATION ON EXISTING PARCELS AS WELL AS PARCELS TO BE ACQUIRED.

LEGEND  
 FUTURE SITE BOUNDARY

0 1500 3000 FT.

**DRAFT**

TRANSPORTATION  
**AECOM**  
 AECOM TECHNICAL SERVICES, INC.  
 303 EAST WACKER DRIVE, SUITE 800  
 CHICAGO, ILLINOIS 60601  
 TEL: 312.373.7700 F: 312.338.1109  
 www.aecom.com

**SSA**  
 South Suburban Airport  
 Illinois Department of Transportation  
 Division of Aeronautics

NO.	BY	DATE	DESCRIPTION	NO.	BY	DATE	DESCRIPTION
REVISIONS							

DESIGN BY: DKCA  
 DRAWN BY: LAH/SAU  
 CHECKED BY: EDL  
 APPROVED BY: LTB

South Suburban Airport  
**FUTURE AIRPORT PROPERTY MAP**

SCALE: 1"=1500'  
 DATE: 9-27-2012  
 JOB NO: 60181525 M2.2  
 SHEET NO:  
**23**

## **Appendix C – Runway Safety Area Determination**

Exhibit 5-1 – Draft Runway Safety Area Determination for Runway 9L-27R



# Federal Aviation Administration

# DRAFT

## Memorandum

Date: September 7, 2012

From: Manager, Chicago Airports District Office, CHI-ADO-600

To: RSA Determination File

Prepared by: Amy Hanson, Program Manager, CHI-ADO-603

Subject: South Suburban Airport, Chicago/Peotone, Illinois  
Runway Safety Area (RSA) Determination  
Runway 9-27 (Inaugural 9L-27R)

### **RSA IS PRACTABLE TO MEET CURRENT STANDARDS**

This RSA determination cancels all previous determinations for this runway.

#### REFERENCE DOCUMENTS

Advisory Circular (AC) 150/5300-13, Change 18, "Airport Design Manual"  
New Airport Layout Plan Airspace Determination Study  
Runway Safety Area Data Sheet dated **Month Day, 2012**  
Airport/Facility Directory dated December 15, 2012 – February 9, 2012  
Airport Master Record dated December 15, 2011

BACKGROUND INFORMATION – Runway 9-27 (Inaugural 9L-27R) is Approach Category B and Design Group I. The existing paved Runway 9-27 (Inaugural 9L-27R) is 5,001 ft long by 75 ft wide and has Low Intensity Runway Lights (LIRL). A complete parallel taxiway is 150 ft south of the Runway 9-27 (Inaugural 9L-27R) centerline. According to AC 150/5300-13, Table 3-1, "*Runway design standards for aircraft approach category A & B visual runways and runways with not lower than 3/4-statute mile (1,200 m) approach visibility minimums*" the standard runway safety area for this runway has a required width of 150 feet and a length of 300 feet beyond each end of the runway.

The Runway Safety Area beyond both thresholds of Runway 9-27 (Inaugural 9L-27R) are penetrated by two local roadways. Specifically, the Runway 9 (Inaugural Runway 9L) RSA is penetrated 132 ft by Kedzie Avenue and Runway 27 (Inaugural Runway 27R) RSA is penetrated 120 ft by Western Avenue.

ALTERNATIVES AVAILABLE – Three (3) alternatives exist in addressing the Runway 9-27 (Inaugural 9L-27R) RSA penetrations: Closure of both roadways, relocation of both roadways and No Action.

DISCUSSION – No Action will not resolve the penetrations to the Runway Safety Area, will not provide an acceptable level of safety and is dismissed from further consideration. Closure of both roadways is not an acceptable option due to disruptions of existing transportation patterns. However, closure of Western Avenue and relocation of Kedzie will provide compliant RSAs and will not adversely impact existing transportation patterns. It is practicable to close/relocate the roadways and increase the safety of the runway environment.

DETERMINATION – Based solely on a review of the above referenced documents, it has been determined that, at this time, the Runway 9-27 (Inaugural 9L-27R) safety area does not meet the current standards contained in AC 150/5300-13, Change 18.

However, based on the actions contained in the above discussion, it is Practical to Meet Current Standards. This determination may be revised if additional information becomes available.

Prepared by:

\_\_\_\_\_  
 Amy Hanson  
 Program Manager, CHI-ADO-603

\_\_\_\_\_  
 Date

Recommended by:

\_\_\_\_\_  
 Jack Delaney  
 Assistant Manager, CHI-ADO-601

\_\_\_\_\_  
 Date

Approved by:

\_\_\_\_\_  
 James G. Keefer  
 Manager, CHI-ADO-600

\_\_\_\_\_  
 Date

Attachments:

- Runway Safety Area Data Sheet
- Airport Master Record

**DRAFT**

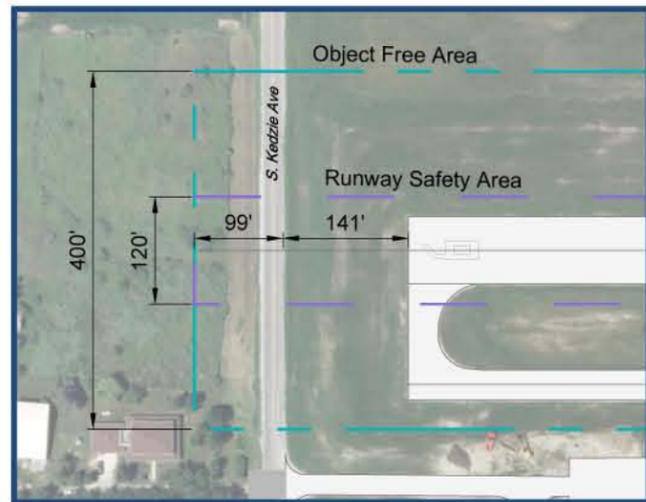
## **Appendix D – Modification to Standards**

Exhibit 6-1 – Inaugural Runway 9L-27R Object Free Area Penetrations Map

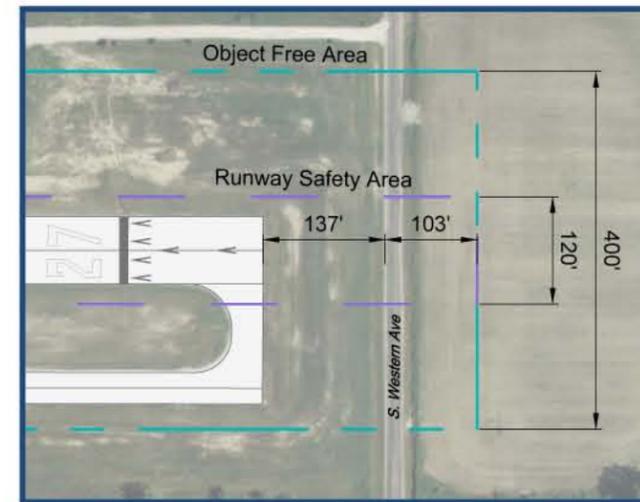
Exhibit 6-2 – Draft Modification to Standards for Runway 9L-27R



PLAN VIEW  
1" = 800'



S. KEDZIE AVE./RUNWAY END 9L OFA PENETRATION  
1" = 200'



S. WESTERN AVE./RUNWAY END 27R OFA PENETRATION  
1" = 200'



Inaugural Runway 9L-27R Object Free Area Penetrations Map  
Exhibit 6-1

# South Suburban Airport Chicago/Peotone, Illinois

## Airport Layout Plan – Proposal for Modification to Design Standards

DRAFT

### Background

The South Suburban Airport (SSA) is a commercial and general aviation/corporate aviation airport that is located in the southern Chicago metropolitan area. Presently a general aviation/corporate runway is located on the site. Inaugural Runway 9L-27R is presently 5,001 ft long and 75 ft wide.

On September 7, 2012 an Airport Layout Plan (ALP) was submitted to the Federal Aviation Administration (FAA) for review under **Airspace Case Number 2012-AGL-xxxx-NRA**. The Inaugural Airport Layout Plan Drawing of that ALP set noted that the Runway Object Free Area (ROFA) beyond both thresholds of Inaugural 9L-27R are penetrated by two local roadways. Specifically, the Inaugural Runway 9L ROFA is penetrated 132 ft by Kedzie Avenue and Inaugural Runway 27R ROFA is penetrated 120 ft by Western Avenue.

Based on the findings of the SSA Airport Master Plan and the submitted ALP, the Illinois Department of Transportation-Division of Aeronautics (IDOT) is requesting a Modification to Standards for existing airfield conditions. IDOT proposes to correct all conditions through on-site development (road closure and relocation). These actions are depicted on the Inaugural Airport Layout Plan Drawing. The following is a listing and analysis of the conditions.

### Conditions for Analysis

1. Inaugural Runway 9L Runway Object Free Area – Kedzie Avenue
2. Inaugural Runway 27R Runway Object Free Area – Western Avenue

The following analysis is directed by guidance in the Federal Aviation Administration’s Great Lakes Region Policy and Procedures Memorandum (PPM) 5320.1G, *General Processing of Modifications to Agency Airports Design and Construction Standards*. The PPM states that the Proposal Package for Modifications to Standards include the following documentation.

1. **A list of standards requiring modification and a discussion of why the standards cannot be met.**

The following conditions cannot be met:

**Condition 1: Inaugural Runway 9L ROFA** – A portion of the full length of the Inaugural Runway 9L ROFA is currently constrained by Kedzie Avenue. Kedzie Avenue is approximately 132 ft west of the runway threshold and is depicted in **Exhibit 1**.

**Condition 2: Inaugural Runway 27R ROFA** – A portion of the full length of the Inaugural Runway 27R ROFA is currently constrained by Western Avenue. Western Avenue is approximately 120 ft east of the runway threshold and is depicted in **Exhibit 1**.

<b>Table 1 – Design Standard Modification For Inaugural Airport Layout Plan Sheet</b>		
<i>Airport Design Criteria</i>	<i>Existing Design Criteria Condition</i>	<i>FAA Design Criteria Standard</i>
Inaugural Runway 9L ROFA Beyond Runway End	400 ft wide x 132 ft long	400 ft wide x 240 ft long
Inaugural Runway 27R ROFA Beyond Runway End	400 ft wide x 120 ft long	400 ft wide x 240 ft long

2. **A description of the proposed modification.**

### Design Standard Requiring Modification for the Existing Airport Layout Plan Sheet

The following standards in **Table 1** are provided in AC 150/5300-13, Change 18:

### 3. A discussion of viable alternatives for accommodating the unique conditions.

A goal of the South Suburban Airport Master Plan is to be compliant with FAA Airport Design criteria, to the fullest extent possible. During the drafting the ALP three alternatives for resolving design issues for Inaugural Runway 9L-27R were considered: No Action Alternative, Closure of Kedzie and Western Avenues and Relocation of Kedzie and Western Avenues. A combination of closure and relocation was also considered. Retention of the existing general aviation/corporate aviation runway along with the development of the commercial runway was determined to be the most desirable airfield configuration.

The following alternatives were considered when analyzing the **Inaugural Runway 9L ROFA Beyond Runway End:**

- A. *No Action – Inaugural Runway 9L – Kedzie Avenue would penetrate the ROFA:*
- i. This alternative would take 0 years to complete.
  - ii. Estimated cost – \$0
  - iii. The pro of this option is that it has no cost. The con is that it does not allow for a clear ROFA.
  - iv. This alternative is considered to be economically feasible.
  - v. This alternative would not meet an acceptable level of safety because vehicles traveling on Kedzie Avenue would penetrate the ROFA.
- B. *Clear ROFA – Closure of Kedzie Avenue:*
- i. It is estimated that this alternative would take less than 1 year to complete due to the small amount of road removal and grading/seeding that is required.
  - ii. Estimated cost – \$5,000.00.
  - iii. The pro of this option is that it would create a clear ROFA. The con is that existing users of Kedzie Avenue could be adversely impacted due to the road closure.
  - iv. This alternative is considered to be economically feasible.
  - v. This alternative would meet an acceptable level of safety because there would be a clear ROFA.
- C. *Clear ROFA – Relocate Kedzie Avenue outside of the ROFA:*
- i. It is estimated that this alternative would take 1 year to complete due to the road removal, grading/seeding and construction of the new road that is required.
  - ii. Estimated cost – \$1,900,000.00
  - iii. The pro of this option is that it would create a compliant ROFA. The con is more expensive than the two previous alternatives.
  - iv. This alternative is considered to be economically feasible.
  - v. This alternative would meet an acceptable level of safety because there would be a clear ROFA.

The preferred alternative is Alternative C, depicted in **Exhibit 1**, would allow for the relocation of Kedzie Avenue outside the ROFA. The Inaugural Runway 9L ROFA penetration is ultimately resolved on the Inaugural ALP.

The following alternatives were considered when analyzing the **Inaugural Runway 27R ROFA Beyond Runway End:**

- A. *No Action – Inaugural Runway 27R Western Avenue would penetrate ROFA:*
- i. This alternative would take 0 years to complete.
  - ii. Estimated cost – \$0
  - iii. The pro of this option is that it has no cost. The con is that it does not allow for a clear ROFA.
  - iv. This alternative is considered to be economically feasible.

**DRAFT**

- v. This alternative would not meet an acceptable level of safety because vehicles traveling on Western Avenue would penetrate the ROFA.
- B. Clear ROFA – Closure of Western Avenue:**
- i. It is estimated that this alternative would take less than 1 year to complete due to the road removal and grading/seeding.
  - ii. Estimated cost – \$5,000.00.
  - iii. The pro of this option is that it would create a clear ROFA. The con is that existing users of Western Avenue would be affected due to the road closure.
  - iv. This alternative is considered to be economically feasible.
  - v. This alternative would meet an acceptable level of safety because there would be a clear ROFA.
- C. Clear ROFA – Relocate Western Avenue outside of the ROFA:**
- i. It is estimated that this alternative would take 1 year to complete due to the road removal, grading/seeding and construction of the new road that is required.
  - ii. Estimated cost – \$1,400,000.00.
  - iii. The pro of this option is that it would create a compliant ROFA. The con is it is the most expensive alternative.
  - iv. This alternative is considered to be economically feasible.
  - v. This alternative would meet an acceptable level of safety because there would be a clear ROFA.

The preferred alternative is Alternative B, depicted in **Exhibit 2**, would provide for the closure of Western Avenue within the ROFA. The Inaugural Runway 27R ROFA penetration is ultimately resolved on the Inaugural ALP Drawing.

#### 4. Assurances that the proposed modification conforms to the requirements of paragraphs 2.d (2) and 3.b.

*2.d (2) – Approval of the modification of a design standard is contingent on the assurance that the modification will provide an acceptable level of safety, and provide an economical and feasible alternative.*

The subject Airport Layout Plan (**Airspace Case Number 2012-AGL-xxxx-NRA**) has been reviewed by all lines of business at the FAA and none have identified any potential unacceptable levels of safety. Based upon the above analyses, it is believed that the proposed alternative (as depicted on the Inaugural ALP) provides an acceptable level of safety in a manner that represents the most economical, prudent, and feasible resolution to the existing and Inaugural conditions.

*3.b – The ADO/block grant state may approve all construction methods and material specification modifications to construction standards that have not been reserved for approval by AAS-1. These approvals are contingent on the assurance that the modification to construction standards will provide an economical and feasible alternative, will provide a product that conforms to FAA acceptance criteria, and will perform for its intended design life, based on historical data. This approval authority includes but is not necessarily limited to:*

- (1) Those addressed in engineering briefs,
- (2) Those local construction methods, practices or material specifications that are routinely and successfully utilized in that area and have been previously found acceptable by the AAS-1.
- (3) Those FAA non-standard construction methods and material specifications covered by ASTM and AASHTO specifications that have been successfully used during previous airport construction in similar applications (in the sole judgment of the ADO/block grant state).
- (4) Any other construction method or material specification modification, which in the judgment of the ADO/block grant state, is to primarily "...accommodate unique local conditions...", except for those items reserved for approval by AAS-1.

**DRAFT**

- (5) *Any material specification when locally available materials cannot meet the requirements of that standard, except those standards reserved for AAS-1 approval.*
- (6) *All modifications to the FAA standard specifications, except those reserved for approval by AAS-1. Examples include, but are not limited to:*
  - (a) *Approving modification to aggregate gradation and bandwidths, aggregate material test (soundness, abrasion, fracture faces, etc.).*
  - (b) *Approving construction equipment and methods, which are not first time, experimental or controversial.*
  - (c) *Weather limitations.*
- (7) *The General Provisions of AC 150/5370-10 may be approved, if necessary to make them compliant with local laws and regulations.*

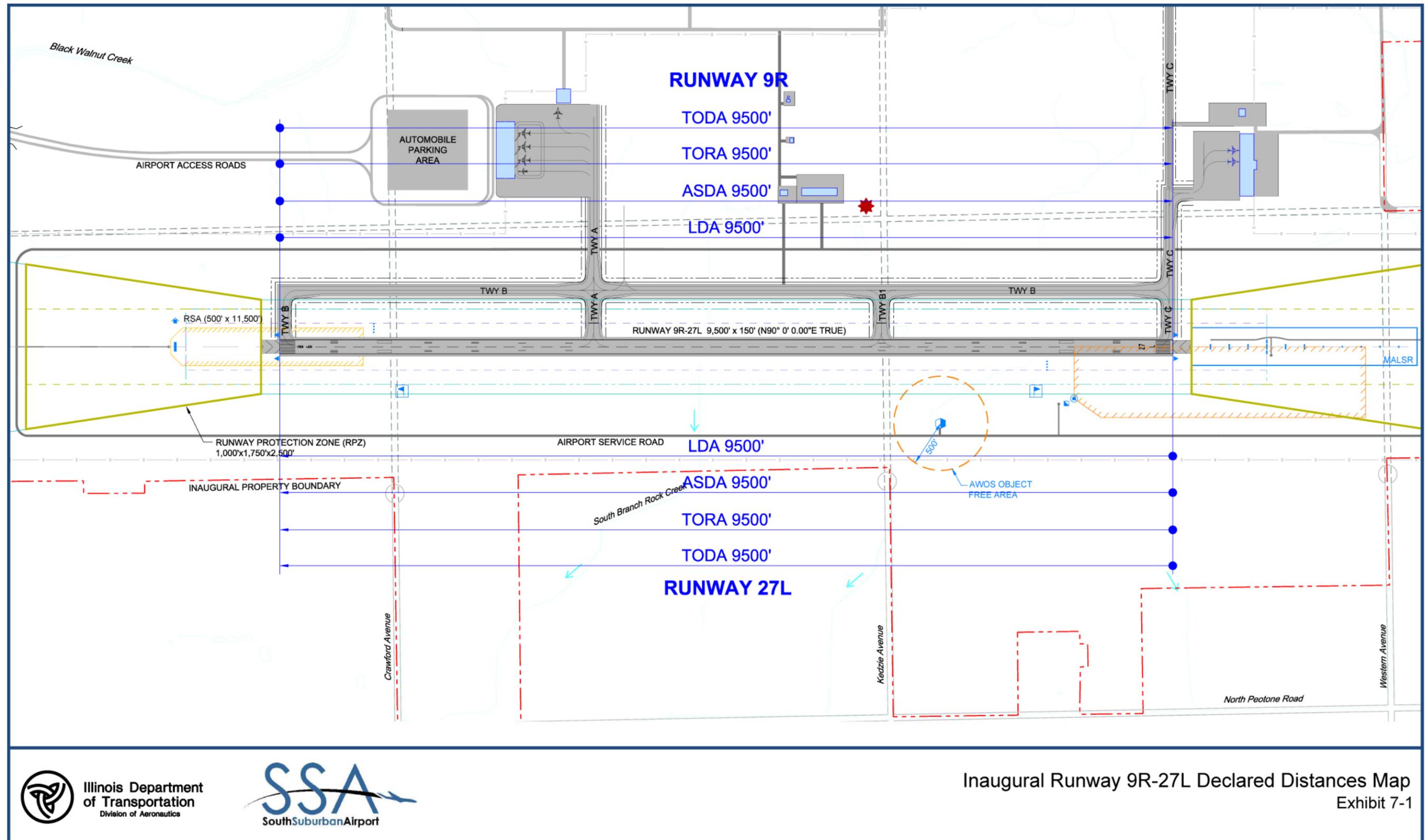
The proposed ALP Modification to Standards only concerns airport design standards, and not modifications to construction standards. As such, this section is not applicable to this proposal.

**DRAFT**

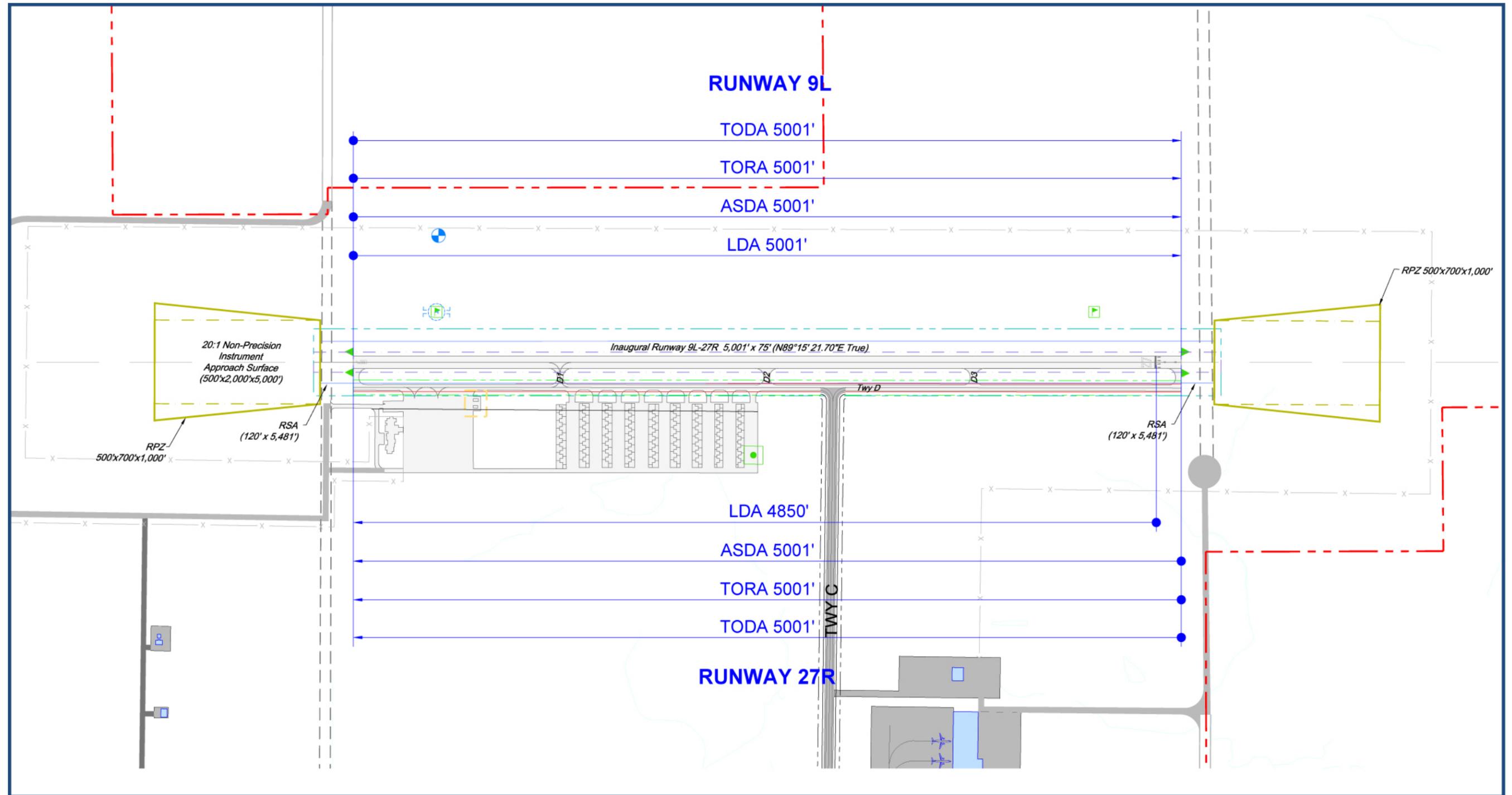
## **Appendix E – Declared Distances**

Exhibit 7-1 – Inaugural Runway 9R-27L Declared Distances Map

Exhibit 7-2 – Inaugural Runway 9L-27R Declared Distances Map



Inaugural Runway 9R-27L Declared Distances Map  
Exhibit 7-1



Inaugural Runway 9L-27R Declared Distances Map  
Exhibit 7-2

## **Appendix F – Airport Layout Plan Checklist**

Exhibit 8-1 – South Suburban Airport Layout Plan Checklist

## **ATTACHMENT B. ALP REVIEW CHECKLIST**

The following checklist is a supplement to the FAA AC 150/5070-6B, Appendix F, Airport Layout Plan Drawing Set and is to be used when completing and submitting an ALP in the Great Lakes Region for review and approval. All references are to AC 150/5070-6B, Change 1, unless otherwise stated. Consultants and/or sponsors should indicate “Yes,” “No” or “Not applicable (N/A)” for every item on the checklist. The FAA/IDOT will then use the same checklist for review and verification.

The ALP Title Sheet must contain the following signed “ALP Review Statement”:

**On behalf of AECOM, this Airport Layout Plan (ALP) was prepared for the South Suburban Airport according to the applicable Advisory Circulars, the current version of the Great Lakes Region ALP Checklist, and accurately depicts the proposed use of airspace at the time of submittal. The ALP conforms with FAA design standards, except as noted.**

<b>Airport Identification</b> (to be completed by Sponsor or Consultant)		
Airport	South Suburban Airport	
City and State	Peotone, Illinois	Three-Letter Code: Temp ID 2043
Airport Owner	Illinois Department of Transportation, Division of Aeronautics	

<b>ALP Submission Information</b> (to be completed by Sponsor or Consultant)		
ALP Prepared by	AECOM Name of Consulting Firm	
	Elliott Lindgren / Linell Homentosky Name of Individual	09/04/2012 Date
	(215) 399-4339 / (215) 399-4346 Telephone	
	elliott.lindgren@aecom.com / Linell.Homentosky@aecom.com Email address	
Internal QA/QC Review	David Karlquist / Joann Bingham (HPS) Name of Individual	09/04/2012 Date
Airport Sponsor Review	Peter R. Quattrocchi Name of Individual	09/06/2012 Date
	Project Manager Title	

<b>IDOT State Block Grant Review</b> (to be completed by IDOT)		
Reviewer	Not Applicable Name of Submitter	N/A Date
	Not Applicable Title	

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
<b>I. Narrative Report</b>				
<b>A. Executive Summary – A short summary of the findings/recommendations of the master planning effort or changes to the ALP. This should include a description of planned projects, an implementation plan/timeline, and identification of benchmarks or actions that will be conducted to either verify the original planning assumptions or proceed with project implementation.</b>				
1. Identify Projects along with description	✓ <sup>1</sup>			
2. Create a Timeline for each Project	✓ <sup>1</sup>			
<b>3. Identify and List:</b>				
a. Proposed Projects (e.g. Hangar development)	✓ <sup>1</sup>			
b. Milestones/Triggering Events (e.g. 1. All hangars are full. 2. There is a waiting list long enough to fill a new development, 3. Hangars have reached their useful life, etc.)	✓ <sup>1</sup>			
c. Action Items/Next Steps (e.g. 1. Maintain log and gather data. 2. Discuss plan with IDOT SBG. 3. Put on ACIP. 4. Identify funding sources. 5. Agreement from IDOT SBG that project should move forward to Environmental review.)	✓ <sup>1</sup>			
d. Funding Plan	✓ <sup>1</sup>			
<b>B. Basic aeronautical forecasts (0-5, 6-10, 11-20 years):</b>				
1. Total annual operations	✓ <sup>2</sup>			
2. Annual itinerant operations all aircraft	✓ <sup>2</sup>			
3. Annual itinerant operations by current critical aircraft	✓ <sup>2</sup>			
4. Annual itinerant operations by future critical aircraft	✓ <sup>2</sup>			
5. Number of based aircraft	✓ <sup>2</sup>			
6. Annual instrument approaches	✓ <sup>2</sup>			
7. Number of enplanements	✓ <sup>2</sup>			
8. State System Plan Forecasts/Critical Aircraft	✓ <sup>2</sup>			
<b>C. Alternatives/Proposed Development</b>				
1. Explanation of proposed development items	✓ <sup>3</sup>			
2. Discuss near-term and future Approach Procedure Requirements or affects (i.e. LPV, Circling, etc.)	✓ <sup>4</sup>			
3. Navigational Aids or Other Equipment Needs (ie Approach Lights, Wind Cone, AWOS etc)	✓ <sup>4</sup>			

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
4. Is wind coverage adequate for existing and future runway layouts? Has wind data been updated?	✓ <sup>4</sup>			
D. Rationale for unusual design features and/or Modification to FAA Airport Design Standards requested and/or approved. This item must be either in the Narrative Report or clearly explained on the ALP.	✓ <sup>4</sup>			
E. Obstruction Surfaces (14 CFR Part 77, Threshold Siting, Airports GIS surfaces)	✓ <sup>4</sup>			
F. Development summary (including sketches and cost estimates) for stages of construction for:				
1. 0-5 Years	✓ <sup>1</sup>			
2. 6-10 Years	✓ <sup>1</sup>			
3. 11-20 Years	✓ <sup>1</sup>			
G. Shadow Study for towered airport (negative or positive statements are required)	✓ <sup>1</sup>			
H. Letters of coordination with all levels of government, as needed	✓ <sup>5</sup>			
I. Are there any Wildlife Hazard Management Issues?	✓ <sup>5</sup>			
J. Preliminary Identification of Environmental Features				
1. Major airport drainage ditches	✓ <sup>6</sup>			
2. Wetlands	✓ <sup>6</sup>			
3. Flood Zones	✓ <sup>6</sup>			
4. Historic or Cultural features	✓ <sup>6</sup>			
5. Section 4(f) features	✓ <sup>6</sup>			
6. Flora/Fauna	✓ <sup>6</sup>			
7. Natural Resources	✓ <sup>6</sup>			
8. Etc. (other features identified in Order 5050.4B)	✓ <sup>6</sup>			
Remarks.				
<sup>1</sup> See Implementation/Financial Report. <sup>2</sup> See Approved SSA Forecasts 2009: Verification Of 2004 Forecasts Report. <sup>3</sup> See Alternatives Development and Evaluation Report. <sup>4</sup> See Airport Plans Report. <sup>5</sup> Ongoing. <sup>6</sup> See Environmental Considerations Report.				

**South Suburban Airport  
Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B**

**Sponsor / Consultant**  
Yes No N/A **FAA/  
IDOT**

**Airport Layout Plan Drawing(s)**

**Critical Design Aircraft or Family of Aircraft**

Inaugural: 09R-27L	Make: Boeing	Model: B737-800/A320	Annual Operations: See Forecast Report
Inaugural: 09L-27R	Make: Cessna	Model: Bravo	Annual Operations: See Forecast Report
Future: 09L-27R	Make: Various	Models: Various	Annual Operations: See Forecast Report
Future: 08R-26L	Make: Various	Models: Various	Annual Operations: See Forecast Report

Forecasted Year: See Forecast Report

Airport Reference Code (ARC): Inaugural Runway 09R-27L	C-III
Airport Reference Code (ARC): Inaugural Runway 09L-27R	B-1
Airport Reference Code (ARC): Future Runway 09L-27R	C/D-III/VI
Airport Reference Code (ARC): Future Runway 08R-26L	C/D-III/VI

**Approach Minimums**

Inaugural: 09R	Minimums: Precision	Inaugural : 27L	Minimums: Precision
Inaugural: 09L	Minimums: Non-Precision	Inaugural: 27R	Minimums: Non-Precision
Future: 09L	Minimums: Precision	Future: 27R	Minimums: Precision
Future: 08R	Minimums: Precision	Future: 26L	Minimums: Precision

**Runways (Inaugural and Future)**

Runway Numerals	Inaugural Runways			Future Runways		
	Length (ft)	Width (ft)	Departure (Y/NA)	Length (ft)	Width (ft)	Departure (Y/NA)
09R-27L	9500	150	Y	NA	NA	NA
09L-27R	5000	100	NA	NA	NA	NA
09L-27R	NA	NA	NA	12,000*	150/200	Y
08R-26L	NA	NA	NA	12,000*	150/200	Y

Remarks. NA – Not Applicable. \*Provided for planning purposes.

**II. Title Sheet**

The scale of the Title Sheet should be developed to include the following:

A. Title and revision blocks	✓			
B. Airport owner (sponsor) approval block	✓			

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
C. Date of ALP (date the airport sponsor/consultant signs the ALP)	✓			
D. Index of sheets	✓			
E. State Aeronautics Agency Approval Block	✓			
F. State outline with county boundaries. County in which airport is located should be highlighted	✓			
G. Location map (general area)	✓			
H. Vicinity map (general area showing specific airport location)	✓			
I. Space for the FAA approval letter or stamp	✓			
J. ALP Review Statement	✓			
Remarks.				
<b>III. Airport Data Sheet</b>				
A. Title and Revision Blocks	✓			
B. Wind Rose (all weather and IFR) with appropriate airport reference code, crosswind coverage, source of wind information and time period covered (for IFR runways applicable minimums should be included.				
1. 10.5, 13, 16 & 20 knots wind rose (based on appropriate airport reference code)	✓			
2. Percentage of wind coverage/crosswind	✓			
3. Source of data	✓			
4. Age of data (last 10 consecutive years of data with most current data no older than 10 years)	✓			
C. Airport Data Table				
1. Mean maximum temperature of hottest month	✓			
2. Airport elevation (highest point of the landing areas, nearest 0.1 ft)	✓			
3. Airport Navigational Aids (NDB, TVOR, ASR, Beacon, etc.)	✓			
4. Airport reference point coordinates, nearest second (existing, future if appropriate and ultimate)	✓			
5. Miscellaneous facilities (taxiway lighting, lighted wind cone(s), AWOS, etc.){Including type/model and any facility critical areas}	✓			
6. Identify the following for each runway and stage of development:				

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
a. approach category	✓			
b. design group	✓			
c. tail height	✓			
7. Critical Design Aircraft (existing & future)	✓			
<b>D. Runway Data Table</b>				
1. Runway identification	✓			
2. Approach Category and Design Group	✓			
3. Visibility minimums (existing and future) [All changes to approach minimums must be confirmed through separate submission of AGL “Request for Approach Procedure” Form prior to a request for a new, amendment to an approach procedure]	✓			
4. Pavement Strength & Material Type	✓			
5. Effective Runway Gradient (%)	✓			
6. Percent (%) Wind Coverage (each runway)	✓			
7. Runway dimensions (length and width)	✓			
8. Displaced Threshold	✓			
9. Runway safety area dimensions (actual existing and design standard)	✓			
10. Runway end coordinates (NAD83) (include displaced threshold coordinates, if applicable)	✓			
11. Runway lighting type (LIRL, MIRL, HIRL)	✓			
12. Runway Protection Zone (RPZ) Dimensions	✓			
13. Runway marking type (visual, non-precision, precision)	✓			
14. 14 CFR Part 77 approach category (50:1; 34:1; 20:1)	✓			
15. Approach Type (precision, non-precision, visual)	✓			
16. Type of Aeronautical Survey Required for Approach (Vertically Guided, Not Vertically Guided)	✓			
17. Runway Departure Surface (Yes or N/A)	✓			
18. Object Free Area and Precision Obstacle Free Zone Dimensions	✓			
19. Visual and instrument NAVAIDs (Localizer, GS, PAPI, etc.)	✓			
20. Taxiway safety area dimensions	✓			

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
21. Taxiway lighting	✓			
22. Identify the vertical/horizontal datum	✓			
E. Modification to Airport Design Standards Approval Table (if applicable , a separate written request, including justification, should accompany the Modification to Design Standards				
1. Approval Date/Airspace Case Number/Standard to be Modified Description	✓			
F. Object Penetration Table				
1. Obstacle Free Zone (OFZ) Object Penetration (if none, state “No OFZ Penetrations”)	✓			
2. Threshold Siting Surface (TSS) Object Penetrations (if none, state “No TSS Penetrations”)	✓			
G. Declared Distances Table (Required even if Declared Distances are not in effect)				
1. Takeoff Run Available (TORA)	✓			
2. Takeoff Distance Available (TODA)	✓			
3. Landing Distance Available (LDA)	✓			
4. Accelerate-Stop Distance Available (ASDA)	✓			
Remarks.				
<b>IV. Airport Layout Drawing</b>				
Two or more sheets may be necessary for clarity, existing and proposed. The reviewer should be able to differentiate between existing, future, and ultimate development. If clarity is an issue, some features of this drawing may be placed in tabular format. North should be pointed towards the top of the page or to the left. (scale 1”=200’ to 1”=600’) (Pg. 129-132)				
A. Title and Revision Blocks	✓			
B. Layout of existing and proposed facilities and features:				
1. True and magnetic North with year of magnetic declination, include Epoch year.	✓			
2. Airport reference point – locate by symbol and elevation to the nearest 0.1 ft, Lat./Long. To the nearest second (existing, future, and ultimate).	✓			
3. Wind cones, segmented circle, beacon, AWOS, etc.	✓			
4. Contours (showing only significant terrain differences).	✓			
5. Elevations.				
a. Runway – existing, future and ultimate ends (nearest 0.1 ft)	✓			
b. Touchdown Zone Elevation (highest point in first 3,000 ft. of runway)	✓			

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
c. Runway high/low points (existing & future)	✓			
d. Label runway/runway intersection elevations			✓	
e. Displaced Thresholds (if any)	✓			
f. Roadways & Railroads (where they intersect approach surfaces, the extended runway centerline and at the most critical points)	✓			
g. Structures	✓			
<b>6. Runway Details.</b>				
a. Dimensions – length and width (existing, future and ultimate)	✓			
b. Orientation – true bearing to nearest 0.01 second (and runway numbers)	✓			
c. End Coordinates – existing, future and ultimate degrees, minutes, seconds (to the nearest 0.01 second)	✓			
d. Runway Safety Areas – actual, existing, future and ultimate (including dimensions)	✓			
e. Runway Object Free Areas (OFA)	✓			
f. Precision Obstacle Free Zone (POFZ)	✓			
g. Obstacle Free Zone (OFZ)	✓			
h. Clearways and stopways			✓	
i. Runway Protection Zone (RPZ)				
1) Dimensions (existing, future and ultimate)	✓			
j. 14 CFR Part 77 Approach Surfaces	✓			
k. FAA AC 150/5300-13, Appendix 2 Runway End Siting Requirements, if applicable (see Attachment A guidelines)				
1) Approach Surface Slope and Type (existing & future)	✓			
l. NAVAIDS – PAPI, ILS, ALS, MALSR, REIL, etc. (plus NAVAID critical area’s)	✓			
m. Marking – thresholds, hold lines offsets, etc.	✓			
n. Displaced threshold coordinates and elevation.	✓			
o. Runway separation distances.	✓			
<b>7. Taxiway Details (Taxiway Safety Area and Object Free Area extend the entire length of the taxiway):</b>				
a. Dimensions –width (existing and ultimate)	✓			

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
b. Taxiway Object Free Area	✓			
c. Hold Position signage/markings	✓			
d. Taxiway Centerline Separation from:				
1). Runway centerline	✓			
2). Parallel Taxiway	✓			
3). Aircraft Parking	✓			
4). Objects	✓			
8. Fences (identify height)	✓			
9. Aprons				
a. Dimensions	✓			
b. Identify aircraft tie-down layout	✓			
c. Identify Special Use Area’s (i.e. Deicing, or Aerial Applications on or near an apron)	✓			
10. Roads (labels)	✓			
11. Legend	✓			
12. Building Table (including building elevations)	✓			
13. Items to be identified with distinct line types				
a. ILS Critical Area (GS & Localizer)	✓			
b. Building Restriction Lines (Reference FAA AC 150/5300-13, Paragraph 210) Identify Assumptions	✓			
c. Runway Visibility Zone			✓	
d. Airport Property Line and Easements (existing, future and ultimate)	✓			
14. Survey Documentation				
a. Survey Monuments (PACS/SACS, see AC 510/5300-16)	✓			
b. Offsets, stations, etc.	✓			
15. Any ATCT line of sight shadow areas (use separate sheet if necessary)	✓			
16. General Aviation development area (i.e., fuel facilities, FBO, hangars, etc) – greater detail can be shown on the terminal area drawing	✓			
17. Facilities and movement areas that are to be phased out, if any, are described	✓			
Remarks.				

<b>South Suburban Airport                  Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B</b>	<b>Sponsor / Consultant</b>			<b>FAA/                  IDOT</b>
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	

<b>V. Airport Airspace Drawing</b>				
(Part 77) Scale 1" = 2000' plan view, 1" = 1000' approach profiles, 1"=100' (vertical) for approach profiles (Pg. 132)				
<b>A. Title and Revision Blocks</b>	✓			
<b>B. Plan view (based on ultimate runway lengths)</b>				
1. USGS Quad Sheet for base map	✓			
2. Runway end numbers	✓			
3. Part 77 Surfaces (Horizontal, Conical, Transitional, etc.) Including elevations at the point where surfaces change	✓			
4. 50' elevation contours on sloping surfaces (NAVD88)	✓			
5. Top elevations of penetrating objects (refer to the inner portion of the approach surface drawing, pg. 133-134)	✓			
6. Note specifying height restriction (ordinances/statutes, pg. 133)	✓			
<b>C. Profile view (optional)</b>				
1. Airport Elevation	✓			
2. Composite Ground Profile along extended Runway Centerline	✓			
3. Significant objects (bluffs, rivers, roads, schools, towers, etc.) and elevations	✓			
4. Existing, future and ultimate runway ends and approach slopes	✓			
<b>D. Obstruction Data Tables (identify obstacles not depicted on the Inner Portion of the Approach Surface Drawing)</b>				
1. Object identification number	✓			
2. Description	✓			
3. Date of Obstruction Survey	✓			
4. Ground Surface Elevation	✓			
5. Object Elevation	✓			
6. Amount of surface penetration	✓			
7. Proposed or existing disposition of the obstruction	✓			
<b>Remarks.</b>				

**South Suburban Airport  
Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B**

Sponsor / Consultant			FAA/ IDOT
Yes	No	N/A	

**VI. Inner Portion of the Approach Surface Drawing**

Scale 1"=200' Horizontal, 1"=20' Vertical (Pg.133) Two sheets may be necessary for clarity. Typically, the plan view is on the top half of the drawing and the profile view is on the bottom half. (Views should be drawn from the runway threshold to a point on the approach slope 100 ft above the runway threshold elevation, at a minimum, or the limits of the RPZ whichever is further)

<b>A. Title and Revision Blocks</b>	✓			
<b>B. Plan view (existing and ultimate)</b>				
1. Inner portion of approach surface	✓			
2. Aerial photo for base map when available			✓	
3. Objects (identified by numbers)	✓			
4. Property line within approaches	✓			
5. Road & railroad elevations, plus movable object heights	✓			
6. Approach Surface clearance over Roads and Railroads at the most critical points, the Centerline and Edge of the surface	✓			
7. Physical end of runway, end number, elevation (NAVD88)	✓			
<b>8. Airport Design Surfaces</b>				
a. Runway Safety Area	✓			
b. Runway Object Free Area	✓			
c. Runway Obstacle Free Area	✓			
d. Runway Protection Zone	✓			
e. Precision Obstacle Free Zone	✓			
9. Ground Contours.	✓			
<b>C. Profile view</b>				
1. Existing and proposed runway centerline ground profile (list elevations at runway ends & all points of grade changes)	✓			
2. Future development from plan view	✓			
3. Part 77 Approach/transition surface	✓			
4. AC 150/5300-13, Appendix 2 Runway End Siting Requirements, if applicable	✓			
5. Terrain in approach area (fences, streams, etc.)	✓			
6. Objects – identify the controlling object (same numbers as plan view)	✓			

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
7. Touchdown zone elevation (highest point in first 3,000 ft. of runway)	✓			
8. Cross section of road & railroad	✓			
9. Existing and proposed property and easement lines	✓			
<b>D. Obstruction tables for each approach surface (surface should be identified)</b>				
1. Object identification number	✓			
2. Description	✓			
3. Date of Obstruction Survey and Survey Accuracy	✓			
4. Allowable Part 77 elevation	✓			
5. Amount of surface penetration.	✓			
6. Proposed disposition of Part 77 obstruction	✓			
7. Triggering Event (i.e., Runway extension) – Timeframe/expected date for removal	✓			
8. Allowable Appendix 2 surface elevation (if applicable)	✓			
9. Amount of Appendix 2 surface penetration (if applicable)	✓			
10. Proposed disposition of Appendix 2 surface obstruction (if applicable)	✓			
11. 150/5300-13, Appendix 2 Surfaces (15:1, 20:1, 34:1, 40:1, 62.5:1)	✓			
Remarks.				
<b>VII. Terminal Area Drawing (pg. 134)</b>				
Scale 1"=50' or 1"=100'. Plan view of aprons, buildings, hangars, parking lots, roads				
A. Title and Revision Blocks	✓			
<b>B. Building data table</b>				
1. Structure identification number	✓			
2. Top elevation of structures (AMSL)	✓			
3. Obstruction marking/lighting (existing/future)	✓			
C. Buildings to be removed or relocated noted	✓			
D. Fueling facilities, existing and future	✓			
E. Air carrier gates positions shown, indicated by circles (existing/future)	✓			
F. Existing and future security fencing with gates	✓			
G. Building restriction line (BRL)	✓			

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
H. Taxiway or taxilane centerlines designated	✓			
I. Dimensions				
1. Clearance Dimensions between Runway, Taxiway, and Taxilane centerlines and hangars, buildings, aircraft parking, and other objects	✓			
2. Dimensions of Aprons, taxiways, etc. [Apron/Hangar areas that do not meet dimensional standards of the critical aircraft should be identified and the wingspan/design group of the aircraft that can use that area depicted.]	✓			
J. Property Line	✓			
K. Auto parking (existing/future)	✓			
L. Major airport drainage ditches or storm sewers	✓			
M. Special Use Area (i.e., Agricultural spraying, Deicing/Containment)	✓			
Remarks.				
<b>VIII. Land Use Drawing (p. 134)</b>				
Scale 1"=200' to 1"=600'.				
A. Title and Revision Blocks	✓			
B. Airport boundaries/property, existing and future (fee and easement)	✓			
C. Plan view of land uses by category (Agricultural, Aeronautical, Commercial, Residential, etc.)				
1. On-Airport (existing & future)	✓			
2. Off-Airport (existing & future) {to the 65 DNL contour at a minimum, if contour known}	✓			
D. Boundaries of local government	✓			
E. Land use legend	✓			
F. Public facilities (schools, hospitals, parks, churches etc.)	✓			
G. Runway visibility zone for intersecting runways	✓			
H. Show off-airport property out to 65 LDN, if available			✓ <sup>10</sup>	
I. Zoning Restrictions	✓			
Remarks.				

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
<b>IX. Runway Departure Surface Drawing (for each runway that is designated primarily for instrument departures, p. 135) Advisory Circular 150/5300-13, Appendix 2 (40:1 for Instrument Procedure Runways [Scale 1"=1,000' Horizontal, 1" = 100' Vertical, Out to 10,200' beyond the Runway threshold])(62.5:1 for Commercial Service Runways (Scale 1" = 2,000' Horizontal, 1" = 100' Vertical, Out to 50,000' beyond the Runway threshold.</b>				
A. Title and Revision Blocks	✓			
B. Plan view (existing and future)				
1. Aerial Photo for base map	✓			
2. Runway end numbers and elevation	✓			
3. 50' elevation contours on sloping surfaces (NAVD88)	✓			
4. Depict Property line, including easements	✓			
5. Identify, by numbers, all traverse ways with elevations and computed vertical clearance in the departure surface	✓			
C. Profile View (existing & future)				
1. Ground profile	✓			
2. Significant objects (bluffs, rivers, roads, buildings, fences, structures, etc.)	✓			
3. Identify obstructions with numbers on the plan view	✓			
4. Show roads and railroads with dashed lines at edge of the departure surface	✓			
D. Obstruction Data Table				
1. Object Identification number	✓			
2. Description	✓			
3. Object Elevation	✓			
4. Amount of surface penetration	✓			
5. Proposed or existing disposition of the obstruction	✓			
6. Separate table for each departure surface	✓			
Remarks.				
<b>X. Airport Property Map/Exhibit A (p. 136) Scale 1"=200' to 1"=600'</b>				
A. Title and Revision Blocks	✓			

South Suburban Airport Airport Layout Plan Checklist –Regional Guidance Letter 5070.1 – Attachment B	Sponsor / Consultant			FAA/ IDOT
	Yes	No	N/A	
<b>B. Plan view showing parcels of land (existing, future and ultimate)</b>				
1. Fee land interests (existing and future)	✓			
2. Easement interests (existing and future)				
a. Part 77 protection	✓			
b. Compatible Land Use	✓			
c. RPZ Protection	✓			
C. Legend - shading/cross hatching, survey monuments, etc.	✓			
D. County/Township/Range and vicinity map.	✓			
E. Data Table				
1. Number or letter and area of each parcel or easement	✓			
2. Date property was acquired or property status	✓			
3. Federal Aid project number under which the property acquisition was reimbursed			✓	
4. Type of funds used to acquire land (i.e., AIP-noise, AIP-entitlement, PFC, surplus property, local purchase, local donation, condemnation, other)	✓			
5. Grantor of property	✓			
6. Acreage	✓			
Remarks.				