

WSDOT-Managed Airports: System Evaluation and Strategic Plan

Recommendations for Best Management Practices
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STATE-MANAGED AIRPORTS: WORKING PAPER #3

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EXECUTIVE SUMMARY

Working Paper #3 represents the final submission to the Washington State Department of Transportation's (WSDOT) Aviation Division for the overall state-managed airport system analysis, conducted in association with the Washington State Long-Term Air Transportation Study (LATS). In terms of the overall study effort, Working Paper #1 established the value of the existing system, while the second working paper presented policies and performance objectives designed to maintain and enhance the value of that system. Working Paper #3 specifically assesses the existing operations of the 17 state-managed airport facilities, as well as provides recommendations for best management practices regarding their operation and maintenance. This paper concludes with the presentation of the final system recommendations, which represent the culmination of the analyses and efforts encompassed in the previous two working papers.

As suggested in the previous working paper, it is important for WSDOT Aviation to utilize state-level policies in helping guide decision-making with regard to the state-managed airports in order to ensure that any development contributes to the long-term goals of the State Aviation Policy. Appropriate and effective airport operational procedures act as the link between the airports and those state aviation policies in that they encompass the standards for how the airport is to be managed and operated. To date, no standardized airport operating procedures are in place specifically for the maintenance, operation and development of the WSDOT-managed airport system.

This working paper presents an inventory of the current operational practices for the 17 state-managed airports with specific focus paid to identifying the current leases and agreements in place at each respective facility. Ideally, airport operational procedures should be rooted in the aviation industry's current Best Management Practices (BMPs) and established to help ensure that system airports fulfill the goals of the system and state policies. As such, a high-level overview of BMPs for airport procedures and lease agreements has been provided in this paper to provide a basis for WSDOT Aviation to refine, establish and/or formalize the standard airport operational procedures at state-managed airports.

Finally, the culmination of any planning effort is the presentation of recommendations. This working paper details the principal recommendations that have been assembled throughout this planning effort. These recommendations are structured in a top-down format, starting at the system policy level, progressing on the system management level, and then culminating at the airport management level, which itself is broken up into operational procedures and facilities. The purpose for this structure is to

emphasize the system-approach to these recommendations in that they are interrelated and work to complement and support each other.

In terms of the overall process, Working Paper #3 concludes this planning study, but does not conclude WSDOT Aviation's efforts to manage and develop the state-managed airport system to meet the goals of the State Aviation Policy and to better serve Washington's pilots, residents, and government agencies. It is anticipated that WSDOT Aviation will consider the recommendations of this planning study and then formulate a program to prioritize and fund the pursuit of those recommendations.

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STATE-MANAGED AIRPORTS: WORKING PAPER #3

I. INTRODUCTION

The Washington State Department of Transportation's (WSDOT) Aviation Division has requested that Wilbur Smith Associates (WSA) conduct an analysis of its 17 state-managed airports. This planning study has been comprised of a total of three working papers as well as additional information that has been included in appendices. Working Paper #1 encompassed a system inventory overview and an independent system assessment that was designed to gauge how each of the state-managed airports was currently serving Washington's pilots, its residents, and government agencies. The paper evaluated how each state-managed airport operated in relation to the state's 1998 Aviation Policy, which itself has recently been augmented by a bill to clarify the goals and objectives of WSDOT. The five points of interest with regard to aviation for the State are identified as the following: Preservation, Safety, Mobility, Environmental Protection, and Stewardship. Working Paper 1 concluded by segmenting the state-managed airport system into four value categories based on their contribution to the state system.

Working Paper 2 built upon that initial effort by establishing WSDOT Aviation policy recommendations specifically for the operation and maintenance of the state-managed airport system. Additionally, this paper introduced airport and activity performance objectives to serve as the basis of long-term development goals for the existing system airports. These development goals are the primary product of this study effort and will provide the roadmap for each airport to fulfill their respective roles for the State of Washington.

Working Paper #3 is the final submission to WSDOT Aviation by WSA for the overall state-managed airport system analysis and includes a strategic overview of the airport operating and leasing procedures currently in place. This paper also includes the final development recommendations for the state-managed airports.

Working Paper #3 Purpose and Process

The purpose of Working Paper #3 is twofold. The first function of this paper is to provide WSDOT aviation with a high-level review of its current airport operating procedures and then provide general recommendations as to how to bring those procedures into conformance with standard industry practices, if so required. (Note that for the purposes of this planning effort, airport operating procedures include those activities required for the efficient management and safe operation of the airport itself, not aircraft operational procedures.) Because of the low levels of activity at most of the state-managed airports, operating procedures at these facilities have been primarily

tailored to the individual circumstances of each airport. It is the desire of WSDOT Aviation that these procedures be standardized across the state-managed system and that they utilize the best practices currently employed in the industry. This is not only for the purpose of enhancing the efficiency and effectiveness of airports, it is to directly support the system policies presented in the previous working paper, which, in turn, support the State Aviation Policy. As such, this paper will identify the current state-managed airports' operating procedures, then provide information on industry best management practices, and finally make general recommendations.

The second function of Working Paper #3 is to conclude the system planning process formulated in the previous working papers by providing the system plan development recommendations for each airport. As the basis of this system planning process, performance measures and objectives were developed from both an airport level (or stratification) perspective, and from an airport operations perspective that would directly support the State's Aviation Policy. The intent of this process was to combine the performance objectives established for a given airport's level with the performance objectives for the types of activities that the airport is intended to accommodate. The sum total of those performance objectives results in the ultimate airport development plan. The first two working papers have established the foundation for this final working paper, which will present the development recommendations and the general prioritization for each airport.

II. EXISTING AIRPORT OPERATING PROCEDURES

As suggested, it is important for WSDOT Aviation to utilize state-level policies in helping guide decision-making with regard to the state-managed airports in order to ensure that any development contributes to the long-term goals of the State Aviation Policy. Appropriate and effective airport operational procedures act as the link between the airports and state aviation policies in that they encompass the standards for how airports are to be managed and operated. Operational procedures typically include a wide variety of items. For this study, discussions will be limited to airport management concepts such as core airport support operations, minimum standards, and airport leasing arrangements. Specific aircraft operational considerations are more appropriately addressed in planning efforts whose scope is focused on a particular airport.

To date, no standardized airport operating procedures have been developed specifically for the maintenance, operation and development of the WSDOT-managed airport system. Because of their low levels of activity, most of the state-managed airports' operating procedures have been primarily tailored to the individual circumstances of each airport. As such, this working paper will introduce several

recommendations specific to the state-managed system that will serve as the foundation for future decision-making.

In order to assess the state airport operational procedures, an inventory of the current situation at each of the 17 state-managed airports was conducted. Since these airports have particularly low activity levels, they are not by default subject to many of the standards that could be found at larger, more active facilities. Therefore, the goal of this inventory was to identify the current leases and agreements in place at each system facility. Specifically, the airport agreements examined the following types:

- Airport Property Lease: any agreement with another party for the leasing of property (not owned by WSDOT) to operate and maintain an airport.
- Airport / Airspace Zoning: any agreement (including zoning, laws, etc) that protects the airport and its airspace from incompatible development.
- Airport Easements: any agreement that grants an easement on airport property (including utilities, rights-of-ways, etc.).
- Tiedown Lease: any agreement to park an aircraft outdoors on airport property for a period longer than an itinerant basis.
- Hangar Lease: any agreement to park an aircraft within an airport facility for a period longer than an itinerant basis.
- FBO Services: any agreement with a business that will be located on airport property that will provide aircraft services and/or supplies.
- Land Lease: any agreement to lease property directly from the airport, usually for the purpose of developing aviation-related facilities, including hangars and FBOs.
- Airport Security: any agreement between the airport and another party to provide some level of airport security services.
- ARFF Services: any agreement between the airport and another party to provide Air Rescue and Fire Fighting (ARFF) services for the airport.
- Airport Inspection: any agreement to provide some level of airport inspection services (including conducting FAA 5010 inspections).
- Airfield Maintenance: any agreement to maintain the airfield environment (including mowing, pavement maintenance, marker repair, etc).
- Airspace Maintenance: any agreement to maintain the airspace environment in the immediate vicinity of the airport.
- Facilities Maintenance: any agreement to maintain airport facilities (including buildings, hangars, landside access, etc).
- Adopt-an-Airport: any agreement between the airport and another party or organization that will provide voluntary support to the airport (usually in the form of labor and materials).
- Rules and Regulations: an agreement or declaration that specifically identifies how the airport will be managed and operated.

- Minimum Standards: an agreement or declaration that establishes minimum facility and/or performance requirements for airport businesses and operations.
- ALP: an Airport Layout Plan (ALP) is the legal description of the airport that is usually on file with the Federal Aviation Administration (FAA) and/or WSDOT.

Table 1 below provides a summary of the current agreements that exist at each of the state-managed airports. (Note that additional information for each airport may be included in the individual airport assessments, located in the appendix.) A review of the table indicates that there are relatively few agreements currently established at the state-managed airports, and of those, many are informal ones. This again reflects the fact that these airports experience low levels of operations and therefore do not require a broad range of agreements or a high degree of formality. Of those formal contracts that do exist, they tend to be inconsistent with each other, which again indicate that they are a reflection of the individual circumstances at each airport.

It is also important to note that through examining Table 1, it is apparent that there are limited security and ARFF agreements, rules and regulations, minimum standards, and ALPs at most state-managed airports. The need for these agreements will be discussed in greater detail in the following sections. With respect to the standards for tenant leases and airport operations, a review of industry best management practices has been included to serve as a foundation for future development of such agreements.

**Table 2
STATE-MANAGED AIRPORT AGREEMENTS INVENTORY**

Agreement Classifications		Avey	Bandera	Copalis Beach	Easton	Lake Wenatchee	Lesler	Little Goose	Lower Granite	Lower Monumenta	Melhow Valley	Ranger Creek	Rogersburg	Skykomish	Stehekin	Sullivan Lake	Tieton	Woodland
Airport Property	Property Lease	F ⁸	-	F ⁵	-	-	-	F ¹³	F ¹³	F ¹³	-	F ¹⁰	F ¹²	-	F ¹¹	F ¹⁰	-	-
	Airport/Airspace Zoning	-	-	-	-	-	-	-	-	-	F	-	-	-	-	-	-	-
	Airport Easements	-	-	-	F	-	-	F	F	F	F	F	F	F ^{1,4}	-	-	-	-
Tenant Leases	Tiedown	-	-	-	-	-	-	-	-	-	F ²	-	-	-	-	-	-	F
	Hangar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	F
	FBO Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Land	-	-	-	-	F ³	-	-	-	-	F	-	-	-	-	-	-	-
	Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Safety	Airport Security	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I	I
	ARFF Services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Airport Inspection	F ⁶	F ⁶	F ⁶	F ⁶	F ⁶	F ⁶	F ⁶	F ⁶	F ⁶	F ⁶	F ⁶						
Airport Maintenance	Airfield	I ⁸	I ⁹	-	I ⁸	F ³	-	I ⁹	I ⁹	I ⁹	I ⁸	I ¹⁰	I ⁸	I ⁹	I ⁸	I ⁸	I ⁸	I ⁸
	Airspace	-	-	-	-	I ⁷	-	-	-	-	-	I ¹⁰	-	-	-	I ⁹	-	-
	Facilities	I ⁸	I ⁹	-	I ⁸	F ³	-	I ⁹	I ⁹	I ⁹	I ⁸	F ¹⁰	I ⁹	I ⁹	I ⁸	I ¹⁰	I ⁸	I ⁸
	Adopt-an-Airport	-	F	-	F	F	-	F	F	-	-	F	I	F	I	F	F	I
Airport Management	Rules and Regulations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Minimum Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ALP	-	-	-	-	-	-	-	-	-	F	-	-	-	-	-	-	F

F = Formal Agreement
 I = Informal Agreement
 - = No Existing Agreement
¹ Utility Easement
² Leases for five hangars
³ Maintenance services provided by snowmobile club in exchange for land to construct meeting hall
⁴ Agreement may exist for usage of adjacent land for septic/sewage system
⁵ Governmental Agency
⁶ Formal agreement with consultant to update 5010 every 3 years. WSDOT Aviation personnel also conduct ad hoc inspections.
⁷ Lake Wenatchee Rappellers
⁸ Private Individual
⁹ WSDOT
¹⁰ U.S. Forest Service
¹¹ National Park Service (NPS)
¹² Bureau of Land Management (BLM)
¹³ U.S. Army Corps of Engineers (ACE)

III. BEST MANAGEMENT PRACTICES

Ideally, airport operational procedures should be rooted in the industry's current Best Management Practices (BMPs) and established to help ensure that system airports fulfill the goals of the system and state policies. As a core business management concept, BMPs can be loosely defined as the most efficient and effective way of accomplishing a task, based on repeatable procedures that have proven themselves over time for large numbers of people. For airports, this concept is commonly applied through identifying techniques, methods, processes, and activities that have proven to be more effective at delivering a desirable outcome than any other technique, method, process, etc. The idea behind BMPs is that with proper processes, checks, and testing, a desired outcome can be delivered with fewer problems and unforeseen complications.

This section will provide a high-level overview of BMPs for airport procedures and lease agreements. Specifically, BMPs will be reviewed in the context of two documents/standards (the Airport Rules and Regulations document, and Minimum Standards) designed to establish and/or formalize the standard airport operational procedures that should be in place at any airport in the state-managed system. Additionally, a review of BMPs for standard airport leasing agreements that may be applicable for the airports within the state-managed system is included below. This review will not include a detailed review of WSDOT Aviation's standard leasing agreements since no standard currently exists.

Airport Procedural and Operational Documents

An Airport Rules and Regulations document and a Minimum Standards document not only provide an additional level of control for the airport, but also help to maintain convenience and safety for airport customers. A Rules and Regulations document is typically established to "facilitate the safe, orderly, and efficient use of the airport." Minimum Standards are generally defined as qualifications or criteria established by an airport owner as the minimum requirements that must be met by businesses engaged in on-airport aeronautical activities for the right to conduct those activities. The combination of these two documents provides clarification to avoid confusion and misunderstanding about operating on the airport and conducting business activities. These guidelines are fundamental to operating today's general aviation airport in a professional and business-like manner, and new leases should support the items contained in these documents. In fact, these documents could be attached as a separate exhibit to all airport leases.

Properly establishing and consistently updating these two documents is essential to effective airport management since they provide additional levels of control for the airport and help strengthen airport leases. These documents typically include and

detail those items that an airport sponsor considers important and others that are commonly overlooked by tenants. As such, if these documents are properly established and maintained to reflect those items, it will not be necessary to include every detail in each lease. Since Airport Rules and Regulations, and Minimum Standards documents are lengthy and should be consistently updated, it is recommended that they be included as a separate attachment to leasing agreements.

Airport Rules and Regulations

An Airport Rules and Regulations document is generally established to facilitate the safe, orderly, and efficient use of the airport for the benefit of its users and investors. Its primary purpose is to ensure that airport tenants and customers operate in a safe and orderly fashion, as well as to restrict (or prevent) any activity which would interfere with the safe and orderly use of the airport.

As an individual document, the Airport Rules and Regulations document should establish the necessary administrative, operational and safety rules and regulations for the management of the state-managed airports. The document itself should be geared to the everyday airport user, such as an aircraft owner, and should be easy to read and reference. Additionally, since this document should be readily available, many airports have provided links to their documents on their website and/or have printed this particular document in a booklet form with a hard cover for easy storage in a pilot's flight bag.

While a Rules and Regulations document should be developed to meet the unique circumstances of an individual airport, there are several areas of focus that generally should be included in the document. These areas of focus include, but are not limited to, the following:

- Airport Management and associated roles (including authority, responsibilities and accountability);
- Description of standard airport operations (including primary contact information and periods of operation; standards of tenant and operator behavior; insurance and liability requirements and waivers; and security and access standards and responsibilities);
- Description of aircraft operational areas and standard procedures (including traffic patterns, details of the surrounding terrain, weight limitations, noise abatement, etc.);
- Description of ground vehicular operational areas and standard procedures (including vehicular requirements);
- Description of other specific standard airport operations (including fueling, forest fire fighting operations, emergency medical operations, vertical operations, through-the-fence operations, and recreational use);

- Description of airport maintenance programs (including mowing, snow removal, pavement maintenance, etc.).

At a minimum, the Rules and Regulations should give a clear description of airport areas to which the general public is not allowed free access for reasons of safety and interference with airport operations, and distinguish those areas to which the public has unrestricted rights and access (i.e. airport roads, public-parking areas, public terminals, etc.).

Airport Minimum Standards

By definition, Minimum Standards are the "qualifications that may be established by an airport owner/operator as the minimum requirements to be met as a condition for the right to conduct an aeronautical activity on the airport." The purpose of minimum standards is "to provide a fair and reasonable opportunity, without unlawful discrimination, to all applicants to qualify, or otherwise compete, to occupy available airport land and/or improvements and engage in authorized aeronautical activities at an airport." In essence, by establishing minimum entry-level requirements (or thresholds), Minimum Standards level the playing field. If consistently applied and enforced, this permits the airport sponsor to maintain a high level of service to the public while also offering consistent, predictable decision-making criteria to potential tenants.

Minimum Standards are established for commercial operators on the airport, not for private and corporate tenants. Their primary purpose is to set threshold requirements for aeronautical service providers who want to operate on a particular airport. Ideally, they should consider the individual circumstances of an airport, including its existing and future development, as well as its current and future roles in the aviation system. Once established, Minimum Standards require that aviation businesses seeking to operate on the airport agree to offer a minimum level of service for their type of business as detailed in the Standards to be allowed to do business on the airport. In doing so, Minimum Standards will help the sponsor to ensure that undercapitalized or doubtful operators are not awarded the use of a public facility to operate their businesses.

Where consistently applied, Minimum Standards will help the airport sponsor evaluate businesses wishing to locate on the airport and provide a mechanism to achieve the following:

- Ensure safe, efficient, and quality service at the airport,
- Establish a template for safe airport operations,
- Minimize exposure to claims of discrimination or unfair treatment by providers of aeronautical services and their users,

- Address environmental liability, and
- Assure that prospective tenants are treated equally and without unjust discrimination.

Specifically, the Minimum Standards document is the appropriate location for an airport to address a wide variety of operations. For example, as described in detail below, a Specialized Aeronautical Service Operator (SASO) is any individual aviation-related activity that can generate revenue for the business and the airport operator, and as such, is a critical contributor to a general aviation airport. This type of operator should be specifically addressed within a Minimum Standards document to protect both the airport and the operator from noncompliance with the standards. A Minimum Standards document should also include a formal application process as a way to negotiate with an interested party. Additionally, the Minimum Standards document is the appropriate place to include requirements for a general airport business permit or independent flight instructor permit. These items can serve as a deterrent to illegal business and help the airport to keep track of individual providers. Some airports also charge a minimal annual fee to help update the airport's provider information annually. If the airport decides to implement any type of permit, a blank form should be included and attached as part of the Minimum Standards.

An airport's Minimum Standards document should be reviewed regularly and, if necessary, revised in order to maintain standards that are meaningful and apply to current airport operational circumstances. Note that any changes to these documents should be conducted with full participation of the airport's tenants and users. Revisions should also include at least one public hearing, a thorough review process, and a review by airport legal council.

Airport Leasing Agreements

For airport operators, one of the most important and challenging jobs can be the management of leases and leased property. This activity is critical in that typically over 75 percent of an airport's income is ordinarily generated from those leases. As such, it is important to have leases or rental agreements that will help maintain existing revenue streams, and provide opportunities for expanding those streams, while insulating the airport from exposure to liability.

This section includes many Best Management Practices in relation to the structuring and development of leasing arrangements at airports. Note that the information detailed below includes only some of the areas that should be covered in the development of lease agreements. However, since the particular requirements of states, local governments and airport sponsors can vary dramatically, the finalization of any leasing agreements must be coordinated with the sponsor's attorney or an attorney who specializes in the area of landlord-tenant law.

It is also important to acknowledge that many of the leasing practices detailed below are largely based on FAA standards and requirements related to grant assurances for the securing of Airport Improvement Program (AIP) funding. WSDOT managed airports currently do not participate in AIP. In fact, only one of the state-managed airports (Methow State) is included in the NPIAS and therefore eligible for such funding. Therefore, WSDOT Aviation is not obligated to adhere to these grant assurances, and therefore some of these practices may not be wholly applicable. However, since most airports do participate in AIP, standard industry practices are necessarily intertwined with these assurances. The information included below reflects this.

Generally, the FAA requires that airports establish fair and reasonable fees without unjustly discriminating against a specific aeronautical user. This same policy states that airports should maintain a fee and rental structure that makes the airport as financially self-sustaining as possible. Airports are expected to establish rents and airport user fees that generate enough revenue to meet airport funding requirements without discriminating against airport users, subsidizing tenants or diverting revenue off-airport.

Lease Types

Currently, WSDOT Aviation has very few lease agreements in place at the state-managed airports. However, in order to manage airports efficiently, WSDOT should anticipate the possibility of future leasing requirements that may necessitate several lease versions or templates that would have to be more specific than a standard land lease. These leases would assist WSDOT Aviation in managing a specific tenant group, and should include, but not be limited to the following:

- Land Lease
- Facility Lease
- Tie-Down Parking Lease
- Fixed Base Operator (FBO)/Specialized Aeronautical Service Operators (SASO) Lease

A general description of these lease versions are provided in the following.

Land Lease

The most common lease at smaller airports is that of the land or ground lease. For this lease, the airport sponsor makes undeveloped sites available for the development of aviation businesses and private hangars on airport property. As such, this lease is often utilized by an airport sponsor as a means to generate development of facilities on the airport that the sponsor may not otherwise have the ability to fund or complete. Typically, airport sponsors faces many competing demands on their funding and

bonding capabilities, and in some states, including Washington, there is a constitutional or other prohibition against using the credit of the public sector to aid the private sector. Without leveraging public/private partnerships, most airports would be comprised of just the basic airfield infrastructure. Note that development on any airport properties (such as facilities and infrastructure) through a ground lease are typically subject to reversion to the airport after a specific period (often 25 to 50 years).

As is the current practice, land leases need to be negotiated individually; however, they still should follow the basic format of the facility lease (described below) and include all of the same references to the Airport Minimum Standards and Airport Rules and Regulations documents. The land lease price per square foot should vary by location and possibly by the length of the term. The land lease may also be tied to a business permit or a Fixed Base Operator (FBO) lease. Some conditions that are typical of land leases include the following:

- Requires significant tenant capital investment - tenant must develop a proposed improvement on site within specified timeframe;
- Lease specifies type of improvement (i.e. T-hangars or hangar for aeronautical services);
- Generally is a long-term lease (25 to 50 years to allow tenants to amortize their investments and make a reasonable profit);
- Often includes provisions for lease extension options up to a specified number of years;
- Often includes provision for improvement to revert to the airport at the end of the lease plus all extensions;
- Generally requires tenant to maintain safe building, minimum level of aesthetics and cleanliness; and
- Subleasing allowed only under certain, limited conditions.

Facility Lease

A facility lease is required for any facility or structure being leased on the airport, such as private hangars, T-hangars, and other structures. Facility leases should include all of the same references to the Airport Minimum Standards and Airport Rules and Regulations documents. Factors that affect facility lease rates include amenities, location, condition, type of use, and length of lease. Additionally, this type of lease should also be flexible enough to accommodate both aviation and non-aviation operations. For example, a standard hangar facility lease agreement should be able to accommodate a full range of hangars (i.e. small to large T-hangars and conventional hangars). The only part of that lease that should normally vary between each type of hangar would be the rental price, which itself can fluctuate based on size, amenities, location, access, condition or type of door operating mechanism for each type of

hangar. It is important to note that it is not uncommon for an airport to have different leasing rates for similar sized hangars due to amenities, terms of lease, etc. Additionally, this type of lease needs to specify that hangars are for aircraft storage purposes only and should prevent a tenant from using the property for conducting a non-aviation related business or storing other non-aviation related items. Hangars that are leased for any type of business purposes should be covered under an FBO or SASO lease, described below.

Some conditions that are typical of private facility leases include the following:

- Requires no or minimal capital investment;
- Year-to-year lease (or shorter timeframe) with automatic renewal unless notice is given;
- Subleasing prohibited; and
- Generally requires tenant to carry out basic maintenance and up-keep.

It is often possible to combine both hangar and tiedown agreements into one agreement, simplifying the leasing process. While there may be some areas of the lease that will not apply to a tiedown tenant that does apply to a hangar tenant, the lessor could strike through these areas or clauses or simply write over them “Not Applicable to this Agreement.”

Tiedown Parking Lease

A tiedown lease at an airport should be able to accommodate parking for both small and large aircraft. The only part of this lease that will fluctuate is the rental price of the tiedown space, and that price may vary based on location or proximity to other services on the airport. This type of lease needs to be for the sole purpose of aircraft storage and should be designed to prevent a tenant from using a tiedown for an unauthorized business. It should also require compliance with the aforementioned Airport Minimum Standards and Airport Rules and Regulations documents. The state-managed airport system currently has tiedown leases only at Methow State and Woodland State. In order to protect WSDOT Aviation, it is important that any tenant who leases space should be obligated under a formal lease.

Some conditions that are typical of private tie-down leases include the following:

- Requires little or no capital investment;
- Month-to-month lease with automatic renewal unless notice is given;
- Subleasing prohibited; and
- Generally requires tenant to carry out basic maintenance and up-keep.

FBO/SASO Lease

Fixed Base Operator (FBO) and Specialized Aeronautical Service Operator (SASO) leases encompass commercial aeronautical applications and businesses located at an airport. FBO leases are typically unique to the local conditions and therefore must be negotiated individually. However, these lease types should still follow the basic format of the facility lease and include all of the same references to the Airport Minimum Standards and Airport Rules and Regulations documents. From a practical standpoint, the term “FBO” is defined within the context of the market place, but generally, it is defined as an airport-based service provider that operates under a lease, use, or operating agreement with the airport with the specific purpose of providing aircraft fueling services and engages in one or more aviation-related service areas. Some examples of service areas might include but are not limited to aircraft storage, ground handling, maintenance and repair, flight instruction, aircraft rental, and aircraft sales.

While an FBO normally provides fueling services and engages in one or more aviation-related services, a SASO provides specialized products and services in only one of the aviation-related service areas such as flight training or maintenance, exclusive of selling fuel. SASOs may operate under a lease of their own or as sub-tenants of an FBO.

The majority of general aviation airports require an FBO to provide a variety of services that are typically identified in advance by the airport. In return for providing this full package of services, the FBO receives the ability to sell fuel, which is often an FBO’s primary source of income. As stated above, SASOs are generally not permitted to sell only fuel.

Some conditions that are typical of commercial FBO/SASO leases include the following:

- May require minimal-to-moderate capital investment;
- Generally lease period 3-5 years, with options for renewal;
- Renewal options may be limited;
- Generally requires tenant to maintain safe building (minimum level of aesthetics and cleanliness); and
- Subleasing allowed under certain conditions.

Lease Agreement Considerations

Currently, the state-managed airport system has very few leasing agreements established, and those contracts that do exist are inconsistent. It is important for WSDOT Aviation that any future agreements established incorporate those elements that are considered the current level of best management practices with regard to leasing. The following considerations are based on common practices and lease documents typical of other general aviation airports. These are by no means all-inclusive, but should assist WSDOT Aviation in developing a lease template and general format to be utilized in all of the state-managed airport system's lease agreements. As stated previously, the finalization of any leasing agreements must be coordinated with the sponsor's attorney or an attorney who specializes in the area of landlord-tenant law.

Lease Term

Generally, in negotiating the lease terms, careful consideration should be given to the useful life of the improvements and size of the tenant's investment, since the lease term will directly affect how long an amortization period the tenant would receive in terms of his financing. While there are no hard and fast rules, it is possible that an overly long lease term may prevent land from being developed to its highest-and-best use, while an overly short term will make the prospective tenants investment not cost effective, unprofitable and therefore, undesirable.

Critical to airport lease agreements is the inclusion of a reversion clause, which generally means that at the termination of a lease, or potentially at a specified point during the term of a lease agreement, that the ownership of any improvements (i.e. facilities) reverts to the airport. The presence of a reversionary clause is standard within the aviation industry for a number of reasons, including the provision for future revenue streams, maintaining a certain level of control over the development and maintenance of facilities on the airport, and the ultimate control/management over airport development as it may affect future airport expansion. However, it should be noted that there are numerous other examples of leases at airports throughout the United States that include provisions for the airport to purchase the improvements at lease termination. Seldom is there a provision for automatic or perpetual renewals of the lease at the prevailing ground rent only.

An additional consideration with respect to reversion includes the lessee's right of first refusal, which should be clearly defined in the agreement to be that of fair market value within a specific set time before the expiration of the existing lease. Additionally, if possible, it is desirable to avoid lease options and stick with a fixed year length on time since options are more difficult to manage than a specific termination date.

Specific to the state-managed airports, WSDOT Aviation should consider month-to-month agreements that automatically renew each month (or other agreed-upon period) unless WSDOT or the tenant gives the other the proper amount of written notice (typically 30 to 45 days). This is standard industry practice and supported by the Aircraft Owners and Pilots Association (AOPA). Note that a month-to-month rental agreement would provide the State with more flexibility than a one-year lease, including the ability to increase rents or change other terms with relatively short notice. With proper notice, the sponsor could also end the rental agreement at any time. On the other hand, if WSDOT Aviation were to determine that it is difficult to fill any vacant hangar space or, as a means of attracting development, it may be preferable to have tenants to commit to a longer period of time, such as six months or a year.

Occasionally a tenant will not give adequate notice of intent to move as outlined in the lease or agreement, and while it is also not uncommon for a tenant to leave with no notice at all, it is important that tenants be required to pay rent through the notice period. Considerations to offset this potential include the requirement of a deposit (normally equal to one month's rent) or a performance bond/letter of credit (more suitable to business operations). If a deposit were to be required, the airport may want to develop a tenant checklist, which would have to be completed prior to a new tenant taking occupancy. This would require a mutual inspection of the rental unit and identify any problems that existed at the time of the lease execution. This could help avoid any disputes when the tenant vacates the unit.

Lease Rate

The rental amount for the state-managed airports may be determined by conducting a brief survey of similar GA airports in the area. An amount per square foot should be equal to the average amount paid for like-property at similar size airports in the state. Note that this amount is only representative of the value of the land at a specific date and time. In a competitive environment, the forces of supply and demand should yield a determination of what is known as market value. While a comparison of similar facilities is an acceptable method of determining market value, other market factors affecting the value of the land can be quite different.

Leases usually require rent to be payable on or before the first day of each month without invoicing. They should also specify what forms of payment (i.e. personal check, cashier's check, credit card, or money order) are acceptable. It is also reasonable to consider a discount for tenants who make rent payments in advance.

WSDOT Aviation may want to consider language to cover annual or semi-annual rent increases that coincide with the first of the year or the first date of the fiscal year. If formalized increases are to be considered, the frequency of the increases will need to be determined, as well as the basis for the increase. Options for the latter include

using the Consumer Price Index (CPI), a flat dollar amount, or a straight percentage to determine the rent increase. This will help keep the rentals comparable to other facilities and account for the cost of inflation. In the case of a percentage-based or CPI-based increase, it is advisable to specify a “not to exceed” amount, so the increase does not end up too excessive.

The mistake most airports have made with rent increases is that they wait until other airports are charging higher rent before they raise their rent. This type of rent increase is often not well received by the tenants. To avoid hasty rental increases for the tenants, a small annual or biannual increase is recommended to help offset the increases in the cost of doing business.

Late fees associated with lease payments should be a fixed dollar amount. However, the problem with late fees is they are only effective when they are enforced and collected, and a significant amount of time and effort can go into collecting what could amount to little income. Depending on the overall number and frequency of delinquent accounts, it may be prudent to eliminate all late fees and just raise the rental rates to compensate.

It is also important to recognize that any violation of the agreement by the tenant should be grounds for terminating the tenancy. As such, the lease could identify some specific reasons for lease termination, such as requiring that the stored aircraft be owned by the tenant and the aircraft is airworthy or requiring a tenant to provide a current airworthiness certificate and registration. This will also help to minimize the number of derelict aircraft at the facility.

Additionally, the lease could contain wording that in the event that the lessee fails to remove property prior to the expiration of lease terms, the lessor should retain the right to store, utilize, sell, or otherwise dispose of any of lessee’s personal property remaining on the premises after the termination of the agreement. In this situation, the lessee needs to know that any such property would be considered the property of the lessor and title would vest with them.

Identification of Rental Premises

Based on industry practice, conventional hangars and T-hangars should have a fixed monthly rate not normally referenced as a square foot amount. These fixed rates may vary based on the conditions described previously. The words “for aircraft storage purpose only” should be used in the lease to prevent a tenant from using the property for operating a business or storing other items. The lease should also state that the tenant is not permitted let anyone else permanently utilize the hangar or tie-down space without the airport sponsor’s written consent. Some additions to this may include a requirement that the aircraft is FAA-registered and that tenants provide a

copy of the aircraft registration as proof. As another consideration, some airports also require the aircraft to be airworthy.

Many airports choose to let their tenants operate businesses from their hangars. As such, the facility lease can be written to allow, with approval, tenants to sublease or operate a business concession on the airport. If WSDOT Aviation chooses to allow this type of activity, it should be addressed in a lease that is different from the standard hangar lease or in a separate business license or use permit. Additionally, all business must comply with existing Airport Rules, Regulations, and Minimum Standards. WSDOT Aviation would also need to consider the amount of vehicular traffic that the business would generate, as well as the number of outside signs, and the number of employees. (Note that most hangars do not have water, sewage, or phone service, which would make operating a business out of them difficult.) The sponsor would also want to determine and require an appropriate level of insurance for a hangar-based business to protect the potential liability of employees or guests. A tenant may be required to maintain a certain type of liability insurance, depending on the type of business. In order to run a business out of the hangar, it may also be necessary to meet the accessibility requirements of the federal Americans with Disabilities Act.

One other circumstance to consider is if a tenant wants to allow another aircraft, other than the one to which the hangar is assigned, to utilize the hangar or tie-down space for a short period of time. If WSDOT Aviation wishes to allow this practice, they would need to include some language in the lease to limit guest stays. While some airports do not strictly enforce restrictions on guests, it should be recognized that the practice of accommodating “guests” could occasionally be used by a tenant to disguise a sublease arrangement. This is a common problem at airports with long waiting lists. Appropriate leasing language would provide the lessor with the standing needed to ask the guests to leave or, if necessary, to evict a tenant for violating this lease provision.

Use of Premises

Facility leases should include a provision to prevent the lessee from storing non-aviation related items in the facility. This provision can be used to prevent subletting and the use of the hangar to store other items such as boats and cars. Some airports do permit such items as desks, couches, and storage cabinets, while others limit the hangar to the aircraft and aircraft support items only. In this manner, if the tenant wishes to have a workbench or cabinet to use in conjunction with the operation of the aircraft, it is permissible. However, it is important to prevent hangars from becoming auxiliary storage units to the tenant’s home.

There are several other issues that the lease could address, including the potentially sensitive topics for airport tenants of aircraft maintenance and the storage of flammable or hazardous material. Aircraft owner self-maintenance can be addressed in several ways depending on local building and fire codes, and on the privileges

WSDOT Aviation may wish to extend to its tenants. The main issue associated with maintenance in a hangar is the need to avoid undue exposure to liability. Because of the importance of this issue, some airports provide a designated outside area to conduct maintenance, while others provide a specific hangar or inside space that is available for conducting self-maintenance activities.

Another potential aircraft maintenance issue originates in FAA airport grant assurance #22 (f) which states that tenants should be able to use their own employees or agents. In terms of aircraft maintenance, the definition of “employee” depends on the lease arrangement, insurance, and what the lessor defines to be an “employee.” An employee should be a person who is on the payroll of the aircraft owner, with the owner complying with all applicable labor laws, including Worker’s Compensation, Social Security, etc. He should not be a mechanic that operates out of the back of a van. Note that if the lessor owns the hangar and pays for its insurance, it has the right to regulate the activity that takes place inside it. The best alternative is to provide a designated space to conduct maintenance activities.

Over-spray from aircraft painting and fabric doping operations and the use of a compressor for this type of activity can be potentially very damaging to surrounding facilities and aircraft. Hangars are not airtight and over-spray can damage aircraft windows and paint. The cost in damage from these activities justifies their prevention. Additionally, some lessees bring their projects from home and work on them at the airport in their hangar; this is as much a liability issue as it is a non-compatible use issue.

Another major concern is the storage of flammables. Using the National Fire Prevention Association (NFPA) code gives the airport some support for enforcement. Most airports do not permit the storage of flammables, and of those that do, the majority have strict requirements, such as no more than 2 gallons or tenants are required to have an NFPA-approved cabinet for the storage of flammable materials.

Within hangars, auxiliary heaters are commonplace, although they can be extremely hazardous. A lessor that permits this type of equipment will not only increase the chance of a fire, but it may also void its insurance policy. The airport should check with the local fire marshal regarding specific state laws, and with local authorities for a list of approved heaters that meet local building and fire codes and are permissible. Any permanently installed heaters must be approved by the airport and local building officials.

Finally, when the tenant’s lease terminates, it is important that the tenant leave the hangar or tie-down space the same way he or she found it. It can be costly to have to make repairs or correct unwanted electrical modifications that might not meet code or been completed with out permits.

Note that many of these issues are commonly addressed in the Airport Minimum Standards and Airport Rules and Regulations documents, which should be attached as an exhibit to the lease.

Construction, Maintenance, Repairs, Utilities

Leases should guarantee that leased properties are used for the defined purpose of the lease, and that development of that property should be conducted in accordance with a specific site plan. Furthermore, the lessee should be required to complete the construction of any new facilities within a specific allotment of time or the lease should revert to the airport. This practice eliminates the potential for future land banking and future lease assignments to another party. The lessee should also be required to maintain and repair the facilities and surrounding grounds. These items are good examples of requirements that could be referenced in the Airport Minimum Standards and Airport Rules and Regulations documents in that they typically can be changed more easily than the individual land leases.

Most important for this section is that the lessee be prohibited from making any changes, modifications, or improvements to the property and/or facility. The only reasonable exception to this prohibition would be if the lease specifically provides a means for the lessee to acquire written approval from the lessor prior to any repairs, renovations, improvements and alterations or maintenance being performed.

In terms of maintenance, the lease should state that the airport sponsor has no obligation whatsoever with respect to maintenance, replacement or repair of the leased premises and that the tenant is responsible for keeping the rental premises in a neat and orderly condition, including arranging for the disposal of refuse. Additional provisions could include requiring tiedown lessees to be responsible for providing and maintaining their own chocks and ropes to secure their aircraft. Leases could include requirements for each tenant to provide an approved dry chemical fire extinguisher suitable for use on type A, B, and C fires that would coincide with the minimum size extinguisher recommendations of the local fire department. Lessees should also assume sole and exclusive responsibility for prompt and efficient removal of snow, ice, and debris from leased premises, and should coordinate a snow removal plan and method of removal with the airport. It must also be made clear that the tenant shall not make any alterations during maintenance without the airport's consent.

To protect its investments, WSDOT Aviation should schedule an annual safety and maintenance inspection. This annual inspection would be a good opportunity to inspect the overall integrity of the airport facilities, including hangars and mechanical door operations, and would permit the observation of other conditions, such as the storage of illegal items flammable liquids or possible subletting. WSDOT Aviation could also choose to have another official, such as the local fire marshal, accompany

the inspector during the inspection to be sure local fire codes and regulations are enforced.

In terms of providing utility services to lessees, most airports do not include a clause for hangar rentals unless the hangars are individually metered, or are used for conducting business, since most airports include the cost of limited electrical use in the rent. When building new hangars, WSDOT Aviation should consider requiring a separate service for each individual hangar unit so each tenant would then be responsible for specific utility charges. This also will depend on the type of activities the airport will allow to be conducted in the hangars.

Rights, Reservations and Obligations of Lessor

Leases should provide the lessor with the ability to enter, ingress and egress leased premises. Leases should also reference the lessor's rights for the purpose of enforcing or ensuring compliance with the Airport Minimum Standards and Airport Rules and Regulations documents. Since the lessor oftentimes does not own the facility, the lease should specify a reasonable notification period and outline a formal process such as in writing or by phone for a notice of inspection.

As such, WSDOT Aviation may want to consider requiring a key from each tenant. Although this is a sensitive issue for some renters, the majority of states recognize the lessor's legal right for access. One way to avoid this would be to provide locks to the tenants and require that they only use airport-supplied locks. This will reduce the amount of passkeys needed to access the property. The return on the investment and the extra measure of safety strongly outweigh the small cost in purchasing and supplying the locks. If employed, language should be added to the lease to specify that upon termination of the lease, all locks will be removed by the lessor.

Another item to consider would be the right of WSDOT Aviation to temporarily close the airport facility, including, but not limited to, the runway, taxiway, apron, terminal building, and automobile parking area, when reasonably necessary for purpose of maintenance, repair, further development or construction, or for the safety of the general public. This will help alleviate the need for prorating a tenant's rent in the event of having to close the airport for a significant amount of time for construction or due to inclement weather such as snow removal operations. Some tenants may seek restitution for airport closure and their inability to use the airport or access their aircraft.

Obligations of Lessee

Given the current environmental regulatory requirements, it is important that the lessee's obligations with respect to the disposal of trash, oils, fluids or any hazardous waste be specifically detailed. Current federal and some local regulations dictate the amount of hazardous materials that are permitted to be stored at any one time, which is

the case with aircraft refinishing facilities and the storage of certain waste oils and fluids.

WSDOT Aviation should also prevent tenants from subleasing or renting out additional space to another aircraft. Rules established to prevent subletting are also designed to prevent assignments or the transfers of the tenancy to someone else. A common problem at airports with waiting lists for hangar space is that tenants may leave in the middle of a month or lease term. By not allowing subletting to occur, this problem can be avoided. Additionally, it would protect the airport from any allegations of favoritism, since those on the waiting list for a hangar will have sequential rights for hangars when they become available.

Insurance

Lease requirements in terms of insurance can vary dramatically by use and by airport. Oftentimes, insurance requirements (such as Comprehensive, Automobile, and Aircraft Liability insurance, or Workman's Compensation Insurance on any structure and hangar) might not be appropriate for hangar rentals, but are appropriate for land leases. WSDOT Aviation should revisit the insurance requirements for each type of lease to insure that the combined single limit amount is reasonable, obtainable, and in line with the current tie-down permit requirements.

On some occasions, an airport might require that a tenant carry liability insurance on the hangar or tiedown. This is usually not a problem since the tenant's aircraft insurance provider should be able to extend the aircraft insurance policy's liability coverage at little or no cost to the tenant. The lessor could also require that their name be added as an additional insured party with respect to the tenant's insurance policy. Adding the lessor as an additional insured potentially reduces property owner liability for claims against both the property owner and the tenant. Additionally, insurance companies will typically provide only 10-days notice of cancellation for nonpayment of premium, and therefore, it may be best for the lessor to specify only a 10-day notice on the certificate of insurance. A lessor may also want to specify a particular dollar amount of minimum insurance or valid liability and property damage insurance. Some airports ask for a copy of the insurance certificate or require the tenants to provide the name of the company that underwrites their insurance policy, as well as to require that the company be licensed to do business in the state.

IV. RECOMMENDATIONS

The culmination of any planning effort is the presentation of recommendations. For the State-Managed Airports System Study, this section will serve as a summarization of the principal recommendations that have been assembled throughout this planning effort. Specifically, these recommendations will be structured in a top-down format, starting at the system policy level, progressing on to the system management level, and then culminating at the airport management level, which itself will be broken up into operational procedures and facilities. The purpose for this is to emphasize the system-approach to these recommendations in that they are interrelated and work to support each other.

System Policy Level Recommendations

The State of Washington has a long history of partnering with the aviation industry to enhance and maximize the mutual benefits that can be gleaned from such a relationship. One of the State's most recent efforts is the long-term air transportation planning study for all general aviation and commercial airports located within the State of Washington. The purpose of this study, known as the Washington State Long-Term Air Transportation Study (LATS), is to evaluate the current capacity of the state's aviation system to determine what facilities will be needed to meet the future demand for air transportation. As noted previously, the State-Managed Airports System Study is actually a subset of LATS designed to answer the question as to why WSDOT Aviation operates the state-managed airports, and what role that these airports play today as well as their adequacy for serving the state in the future.

Charged with shepherding LATS to a successful conclusion, WSDOT Aviation is the principle agent of the State responsible for protecting and preserving Washington State's 139 public-use airports. Overall policy guidance and direction is provided to WSDOT Aviation from the State via the State Aviation Policy, established in 1998 and augmented in 2007. Briefly, this policy notes that the State of Washington has the following five points of interest with regard to aviation:

- **Preservation** - *To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services;*
- **Safety** - *To provide for and improve the safety and security of transportation customers and the transportation system;*
- **Mobility** - *To improve the predictable movement of goods and people throughout Washington State;*
- **Environment** - *To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment; and*

- **Stewardship** - *To continuously improve the quality, effectiveness and efficiency of the transportation system.*

As evidenced by its long history of activity in respect to aviation as well as its continued participation in the formulation and refinement of aviation-related policy, the State of Washington continues to display involvement and leadership with regard to its aviation system. As such, and in relation to this State-Managed Airports System Study, there can be no recommendation for the State other than to continue to maintain its State Aviation Policy as an effective and relevant standard towards which WSDOT Aviation can align its goals.

System Management Level Recommendations

WSDOT Aviation provides vital financial assistance to the 139 public-use airports across the State of Washington in the form of airport development and maintenance grants. This assistance also extends to sponsoring planning efforts such as master plans and system plans, such as LATS and this State-Managed Airport System Plan. The agency is also responsible for the management of air search and rescue operations, as well as for providing education and training in relation to the value and protection of general aviation airports. Specifically, WSDOT Aviation's role within the state is detailed in the following.

The department has general supervision over aeronautics within this state. It is empowered and directed to encourage, foster, and assist in the development of aeronautics in this state and to encourage the establishment of airports and air navigation facilities. It shall cooperate with and assist the federal government, the municipalities of this state, and other persons in the development of aeronautics, and shall seek to coordinate the aeronautical activities of these bodies and persons. (RCW 47.68.070, General Powers)

WSDOT Aviation also funds and operates the 17 state-managed airports that are the subject of this system plan. However, while WSDOT Aviation has been provided guidance for how to operate the system through the State Aviation Policy, it has not established its specific policies for the maintenance, operation and development of the state-managed airport system. This is particularly important since, ideally, WSDOT Aviation would utilize its own policies to help guide decision-making with regard to the state-managed airports to ensure that any development contributes to the long-term goals of the State Aviation Policies. Therefore, the following four policies are recommended for establishment by WSDOT Aviation to serve as a bridge between the strategic-level State Aviation Policy and the tactical-level operational and development requirements of the state-managed airport system. (Note that a detailed description and explanation of these policies are included in Working Paper 2.)

- **Policy 1** - The primary function of the WSDOT Aviation-Managed Airport System is to fulfill the stated purposes of the State Aviation Policy.
- **Policy 2** - WSDOT Aviation *will operate and maintain* the airports within the state-managed system only to the level to sustain the fundamental benefits for the State of Washington as prescribed by the State Aviation Policy.
- **Policy 3** - WSDOT Aviation will consider the *acquisition or disposal* of airports only within the context of fulfilling the stated purposes of the State Aviation Policy.
- **Policy 4** - WSDOT Aviation will not endorse the establishment of independent operators conducting aeronautical activities on land adjacent to, but not a part of, any properties associated with the state-managed airport system.

Beyond these policies and related to the analysis provided above, it is recommended that WSDOT Aviation work to standardize its management, operation, and maintenance of the state-managed airport system. These airports are situated in a very diverse range of locales and operated in unique circumstances. While they are currently being managed very capably by WSDOT Aviation staff, this management system appears to be successful more as a result of the individuals who operate them rather than as the result of a formal structure. The benefit of this current system is that it affords those individuals the efficiency and flexibility to make decisions that are appropriate for these airports without having to ascribe to the requirements of an onerous management process. However, the drawback of this system is that any turnover in key personnel could leave significant deficiencies in the knowledge base required to maintain continuity in airport operations. Appropriate structure could compensate for that drawback. Therefore, the following items are recommended:

- Establish uniform standards for the state-managed airport system in terms documentation requirements, airport layout plans, leasing agreements, policies and procedures, minimum standards, security standards and any other element that could reasonably be applied to all of the airports. These standards should be consistent with current aviation industry best management practices. (Note that the standards established should be commensurate to the level of activity at these airports, meaning less rigorous standards would likely be adequate.)
- Establish a system-wide airport operations manual that would detail those elements and best practices noted above as the standard for operational procedures for the state-managed system airports. This manual will serve as the basis for individual airport operations manuals.
- Establish airport operations manuals for each airport that would include airport safety plans, maintenance standards and guidelines, construction guidelines, operating procedures, etc.

- Establish an annual airport inspection of all airports to inspect the overall integrity of the airport facilities and compliance with Airport Rules and Regulations.
- Continue to monitor the status of existing airports and assess the need for new facilities throughout the system. WSDOT Aviation must remain diligent in its efforts to ensure that its state-managed airports have appropriate facilities to meet the needs of the airport users.

Airport Management Level Recommendations – Operational Procedures

Appropriate airport operational procedures are the critical link between the recommended state aviation policies and the state-managed airports in that they encompass the standards for how the airport is to be managed and operated. Operational procedures typically include a wide variety of items that can range from airport management to aircraft operations, but for the purposes of this study, the focus of this effort is on core airport management concepts. This is because other than general standards, specific aircraft operational requirements can vary greatly depending on the conditions at the individual airport.

For this planning study, recommendations with respect to airport operational procedures originate in the previous section. Prior to instituting any of the specific recommendations listed below, WSDOT Aviation should commit to the establishment of a uniform, system-wide standard to ensure consistency of application at the state-managed airports. Not following through with this could result in standards that are inconsistent across the system and/or are haphazardly applied. As suggested above, these uniform standards should be formally established and documented in airport operations manuals for each airport.

Additionally, the following are also recommended to WSDOT Aviation for establishment as standard airport operational procedures:

- Ensure that all airport property leases and agreements, including easements, are current and appropriate.
- Establish appropriate protection (including zoning, laws, etc) for the airport and its airspace from incompatible uses and development.
- Ensure that all tenant leases (including tiedowns, hangars, FBO services, land, etc) are consistent with current industry best practices. Establish schedule to update existing leases that are not currently consistent with industry best practices with those that are consistent
- Pursue potential public/private partnerships to facilitate the appropriate development and growth of the airports.

- Pursue potential public/public partnerships with other governmental agencies for the development of the airports and their facilities for mutual benefit.
- Pursue agreements with local law enforcement agencies to provide a level of airport security through regular visits/inspections. Note that oftentimes partnering opportunities exist at airports with law enforcement agencies that are looking for remote substation locations.
- Pursue agreements with local fire fighting agencies to provide air rescue and fire fighting services at airport at times of emergency. Note that firefighters providing such services may require additional training to respond to aircraft incidents or accidents.
- Pursue formal agreements with volunteer organizations to expand the “Adopt-an-Airport” program.
- Establish Rules and Regulations documents for all airports.
- Establish Minimum Standards documents for all airports.
- Establish Airport Layout Plans for all airports

Airport Management Level Recommendations - Facilities

The system planning process for the state-managed airports was initiated in Working Paper #1 where it was established that the State Aviation Policy was to be utilized as the basis of the analysis. Since the primary function of any state-managed airport should reasonably be expected to fulfill some elements of the state policy, an independent assessment was conducted by which the merits or “value” of each airport were weighed against the policy. Specific goals were identified and quantifiable factors were derived from the inventory effort. Simply put, if those quantifiable factors were to help a particular airport meet one of those goals of the state policy, that airport would be recognized as helping the state aviation system fulfill the state policy, and therefore would also be considered to be bringing “value” to the state. This independent assessment resulted in a stratification of the state-managed airport system into four categories.

Working Paper #2 provided the direct link between the State Aviation Policy and the airports themselves through the creation of specific facility performance objectives. These objectives, established from both a system stratification perspective and from an airport activity perspective, provide a listing of the recommended facilities for each of the state managed airports to fulfill the goals of the state policy. The intent of this approach was to establish performance objectives that looked both at the needs of the overall system, as well as at the needs of each airport to enhance their ability to accommodate activities and ultimately benefit the state.

Specifically, 12 facility objectives were identified for each of the four airport stratification levels described in Working Paper #1. Similar to LATS, airports within

higher stratification levels tended to have a higher number or degree of objectives. These objectives encompassed all of an airport's primary facility components, including performance measures for the runway, taxiways, landing criteria (or approach categories), navigational aids (NAVAIDS), and appropriate goals for meeting specific airport design criteria.

Additionally, performance objectives were identified based on the type of activities that a given airport accommodated. As shown in Working Paper #1, the state-managed airports contribute to the fulfillment of the State Aviation Policy goals by providing benefits to the state that might not otherwise be afforded if not for these state-managed airports. Within that working paper, the benefits or value to the state were identified, as were the unique performance objectives for each of the following five activities:

- Support of forest fire fighting activity
- Transportation access to remote communities
- Support of emergency medical operations
- Transportation access to recreational areas
- Flight safety enhancement

Working Paper #3 concludes the system planning effort for the state-managed airports by presenting a recommended development plan for each airport. These plans have been created by marrying the 12 facility objectives identified by a given airport's system stratification level, with the performance objectives that reflect the types of activities that the airport accommodates. Additionally, each plan has been refined through coordination with WSDOT Aviation personnel to ensure that they are reasonable and practicable. For purposes of clarity, the individual facility development recommendations have been included in each airport's assessment, located in the appendix.

V. CONCLUSION

This working paper is the final submission to WSDOT Aviation by WSA for the State-Managed Airport System Study. This paper presented a strategic overview of the airport operating and leasing procedures currently in place in addition to the final development recommendations for the state-managed airport system. Those recommendations (detailed above) were stratified into three primary levels: System Policy Level, System Management Level, and Airport Management Level, the latter of which was divided into operational procedures and facility recommendations. They represent the culmination of the analyses and efforts encompassed in the previous two working papers.

In terms of the overall process, Working Paper #3 concludes this planning study, but does not conclude WSDOT Aviation's efforts to manage and develop the state-managed airport system to meet the goals of the State Aviation Policy and to better serve Washington's pilots, residents, and government agencies. It is anticipated that WSDOT Aviation will consider the recommendations of this planning study and then formulate a program to prioritize and fund the pursuit of those recommendations.