Appendix B: FAA CORRESPONDENCE

La Grande / Union County Airport

Airport Master Plan Update

Exhibit A

SCOPE OF WORK

LA GRANDE / UNION COUNTY AIRPORT (LGD) Master Plan & Airport Layout Plan Update

Prepared by WHPACIFIC, Inc.

Prepared for UNION COUNTY, OR

July 2014

OVERVIEW

The intent of the project is to update the 1997 La Grande / Union County Airport Master Plan (AMP). This document is over 15 years old and needs to be updated to reflect new facilities, current projections of airport activity, new environmental and other regulatory constraints, and to plan for an appropriate mix of land uses to support projected aviation and non-aviation needs and the long-term financial health of the airport.

The updated Master Plan will help Union County (SPONSOR) determine needed airside and landside improvements and select appropriate patterns of land use on the airport and adjoining properties based on updated forecasts of demand for aviation services such as hangars, tiedowns, repair, flight instruction, etc. Obsolete elements of the existing airport layout plan (ALP) will be corrected. A new capital improvement plan (CIP) and financial plan will allow the County to make strategic investments in needed airfield projects.

This document establishes the scope of services for the project. The project will use the guidance of Federal Aviation Administration (FAA) Advisory Circulars 150/5070-6B, *Airport Master Plans*; 150/5300-13A *Airport Design* and other relevant FAA Advisory Circulars and Orders, Federal Aviation Regulations, Transportation Security Administration (TSA), and other aviation industry publications, using the versions current as of the date the SPONSOR authorizes WHPacific, Inc. (WHP) to proceed with the project.

TASK 0 – SCOPE OF WORK DEVELOPMENT

0.1 Objective:

The objective is to update a study design, or scope of work, that customizes master planning tasks for the La Grande / Union County Airport (Airport) and provides a work plan for the project.

0.2 Approach:

Work with SPONSOR and the FAA to define the scope, schedule and budget needed for successful completion of the project. Identify relevant issues, assumptions regarding level of effort, existing resources, decision-making milestones, number and timing of Planning Advisory Committee (PAC) and public meetings, and SPONSOR/WHP/FAA roles in the project. Minor changes to the work plan that do not alter the substance of the contract may be incorporated because of the initial PAC meeting.

0.3 Product:

A scope of work, schedule and budget for the project.

1. TASK 1 – INTRODUCTION, IDENTIFY ISSUES, AND ESTABLISH GOALS

1.1 Objective:

The objective of this task is introducing the Master Planning process, to identify issues specific to the Airport, and to establish goals of the master planning process. Additionally, an analysis of the alternative roles the Airport plays within the State of Oregon and the Eastern Oregon area system of airports will be conducted and a recommendation will be made as to what that role should be.

1.2 Approach:

A questionnaire will be distributed at the Airport and other local airports during the WHP's first visit and to Planning Advisory Committee members, aviators, and others who might help distribute the questionnaire. The detailed questionnaire will be used to gather information on types of aircraft, issues at the Airport, issues of facility requirements (i.e., runway length, aircraft storage, maintenance, services, etc.) and to help determine the role of the Airport. Issues of specific interest include:

- **Preservation of Existing C-IV Airport Reference Code (ARC)**. Previous studies have been able to justify an ARC of C-IV. It is important to gather detailed information to determine if this designation can be maintained to preserve existing design standards and AIP funding eligibility.
- Wise Growth Management. In an effort to become financially self-sufficient, the County must grow; however, there are questions of what type of growth and when
- **Cohesion with Area Economics and Industry.** The City of La Grande has designated a Heavy Industrial Zone adjacent to the Airport. The location of this zone is ideal for cohesive growth to stimulate the Airport through new/increased business and fuel flowage taxes. At the same time, development must be consistent with airport-compatible operations. Coordination with the City is critical.
- All Weather Accessibility. The Airport currently has NDB and GPS approach capability with high minimums. New technology had made approach development and implementation less costly than it once was and information will be gathered to determine user needs.
- **Partnership with the US Forest Service**. Union County has a key player at the Airport the US Forest Service. It is in the County's best interest to accommodate, and coordinate with, this anchor tenant to the extent reasonable.
- Maintain and Expand Existing Facilities. The County understands that existing facilities must be maintained and that new ones must be constructed. From our conversations and preliminary onsite visit, we understand these projects among others are critical to the County's roadmap: Runway 12/30 shoulder and drainage

improvements, installation of a new beacon and beacon tower, Runway 16/34 lighting, and Taxiway A extension.

- Environmental Considerations. There are many environmental considerations the County must include in decision-making at the Airport.
- Maintain and/or Gain Compliance with FAA Grant Assurances. The FAA has a rigorous set of compliance standards tied to their funding. At the La Grande/Union County Airport, there are potential compliance issues, such as through-the-fence access and sleeping quarters, that need to be identified.

State Aviation System Plan data will be used, where possible, for the AMP.

At the first PAC meeting input from the County, committee members and the public will be taken to help identify the goals of the Master Plan. This information will be reported in the introduction to the Master Plan.

1.3 Product:

All data will be presented in narrative, graphic and tabular form as appropriate at the completion of this task. This presentation will be in the form of a chapter for the Master Plan Update Report. PAC meeting #1 and Open House #1, as detailed in Task 10, will be conducted after SPONSOR review of Task 1.

1.4 WHP Assumptions:

The questionnaire is not intended to be a comprehensive survey of airport users or a statistically valid sampling of airport users. It is simply a way to encourage participation beyond those who attend the public or committee meetings. WHP will not conduct any follow-up to solicit a better response or to fill out the questionnaires by telephone.

1.5 SPONSOR Responsibilities:

SPONSOR will assist by requesting, if necessary, data from the businesses and aircraft owners.

2. TASK 2 - INVENTORY AND DATA COLLECTION

2.1 Objective:

The objective of the inventory task is to collect and map baseline data regarding airport facilities and aviation activity.

2.2 Approach:

An on-site inspection of airport facilities will be conducted to determine current conditions, capacity, use and ability to expand. Aviation activity data will be collected and synthesized for use in subsequent tasks. Airport facilities include those facilities within the airport boundary.

Specific categories in which data will be collected include the following:

- A. Background Data
 - Airport location and access
 - Area topography
 - Climate
 - Community and airport history
- B. Existing Facilities
 - Airport aerial mapping Subconsultants, Precision Approach Engineering and Anderson Perry, will provide data as requested. Specifically, Precision Approach Engineering will provide relevant data and coordination regarding the simultaneous AGIS efforts so that results from that study can be dovetailed into the Master Plan Update. The AGIS will provide an updated aerial map, along with building and ground elevations. Anderson Perry will provide existing mapping in AutoCAD format.
 - Airfield Facilities including the pavement conditions using the Pavement Condition Index (PCI) report. As-built information and pavement section/condition information will be provided from Precision Approach Engineering.
 - Runways, taxiways and taxilanes, aprons and aircraft parking, airfield lighting, airport navigational aids and instrument approach aids
 - Landside Facilities
 - Hangars, other buildings, aviation services, airport access and vehicle parking. Handheld distance-finder will be used to estimate building elevations.
 - Airport buildings will be visually inspected and a general condition determined as well as a future remaining life.
 - Agricultural spray operations area will be assessed per DEQ requirements.
 - Airport Support Facilities
 - Emergency services, airport maintenance, airport fencing, utilities and airport signage.
- C. Airspace

- Airways, airport traffic patterns, FAR Part 77 imaginary surfaces and obstructions, visual procedures and obstruction clearance approaches per AC 150/5300-13A, Airport Design
- D. Land Use Planning and Zoning
 - Existing on-airport zoning and land use, surrounding area land use and zoning, protection of airport airspace, ownership/control of runway protection zones.
 - Any pending developments near the airport will also be identified and addressed.
- E. Environmental Inventory
 - Identification of issues, which may affect the future operation or development of the Airport, such as potential or known wetland locations, special habitat considerations, flood plain levels, and storm water runoff, will be identified.
 - The status of any environmental permitting (i.e., NPDES storm water runoff permits, etc.) will be examined.
 - Environmental issues identified in this task will be factored into the alternatives analysis.
 - The FAA environmental checklist will serve as a guide to review potential environmental constraints on airport development.
 - Data to model base year noise contours.
- F. Aviation Activity Data

Existing information on historical aviation activity at the Airport will be collected and reviewed. Information of this type that is available in existing reports (previous Master Plan Updates, ODA System Plan and FAA 5010 Records) will be utilized to the maximum extent possible. Supplemental data collection will be undertaken as required to obtain information on:

- Volume and type of aircraft operations
- Number of based aircraft by type
- Total volume of traffic (annual and peak)
- Training activities, such as percent touch-and-goes
- Records of IFR arrivals and departures (from GCR)
- Records of fuel sales
- G. Airport Financial Data
 - Airport Operating Revenues and Expenses
 - Rates and Charges
 - Leases and Permits
 - Review any through-the-fence agreements; assess them to make sure they meet FAA compliance standards.

Recommendations for meeting FAA policies will be presented in subsequent chapters.

- Review any other leases and permits such as with the US Forest Service.
- Airport Economic Impact Study results from the Oregon Aviation Plan (OAP) 2007 will be presented to include the statewide totals for airports, Eastern Oregon region airports, and the La Grande / Union County Airport. (Note: Updated results will be presented as it becomes available since an Economic Impact Study update is under way).

2.3 Product:

All inventory data will be presented in narrative, graphic and tabular form as appropriate at the completion of this task. This presentation will be in the form of a chapter for the Master Plan Update Report.

2.4 WHP Assumptions:

Task 2 does not directly include destructive or nondestructive testing, mapping, surveying, measuring or other detailed fieldwork. Facility condition will be determined by visual observation and interviews with maintenance personnel. Buildings will be assessed from the exterior and building sizes will be estimated from aerial photos, interviews and available drawings. Elevations and other survey data will be taken from the concurrent AGIS study being conducted by Precision Approach Engineering. Off-airport land use will be determined from a windshield tour of the airport vicinity and documents obtained from local government. Baseline environmental conditions will be primarily determined by literature search and a site investigation; no wetlands delineation or extensive field observation of habitat is anticipated.

2.5 SPONSOR Responsibilities:

SPONSOR will escort or facilitate access to the airfield and will provide WHP copies or access to records and documents relevant to the task. SPONSOR personnel involved in the management, operation, maintenance and capital improvement of the airport will participate in interviews by WHP, as necessary, to provide an adequate inventory of existing conditions.

3. TASK 3 - AERONAUTICAL ACTIVITY FORECAST

3.1 Objective:

The Aeronautical Activity Forecast section is intended to provide an indication of the types and levels of activity expected at the Airport during the forecast period 2014 through 2034. The base year of historic operations/activity data will be 2013. The measures of activity will serve as input data for the facility requirements analysis that follows. This information will play a role in determining the need and timing of airport development and, subsequently, the impact of this development on the airport environs.

3.2 Approach:

The approved strategic role of the airport will provide the framework for the forecasts. Further, national and regional/local aviation trends will be discussed. Data pertaining to forecasts of population and employment activity will be analyzed. This work task will also include interviews with tenants and key users regarding their current use of the airport and their plans for future use in order to develop future growth scenarios. Forecasts will be made for 2019, 2024 and 2034 (5-, 10- and 20- years in the future). The base year will reflect the best estimate of current annual activity available, which will be coordinated with the FAA in advance of the forecasting effort. Forecasts by the FAA, State and others will be presented and more than one forecasting model may be examined to provide a range of forecasts. For each forecast component and milestone year, however, only one forecast will be recommended and used for Task 4 analysis.

Forecasts will be made for the following activity categories:

- A. Critical Aircraft: The existing and future critical aircraft will be defined along with an airport reference code. The critical aircraft(s) must conduct, or be projected to conduct, at least 500 annual itinerant operations.
- B. Based Aircraft: A forecast will be developed for the total number of based aircraft by classification consistent with the Federal Aviation Administration (FAA) categorizations./
- C. Operations Forecast: A forecast of operations will be made for the following classifications:
 - Total annual operations, subdivided by air carrier, air taxi, general aviation and military
 - Peak period (month, day, hour)
 - Operations by the critical aircraft
 - Percent local vs. itinerant operations for general aviation and military
 - Instrument operations

3.3 Product:

The forecast of aviation demand for the Airport will be documented in narrative, tabular and graphic form for use as a chapter in the Master Plan Update Report. The FAA's spreadsheet for comparing forecasts to the Terminal Area Forecast will be submitted. Because this data will become the basis of the airport demand/capacity and facility requirements analysis, it will be reviewed and accepted by the FAA prior to initiation of those tasks. PAC meeting #2 and Open House #2, as detailed in Task 10, will be conducted after SPONSOR review of Task 1.

3.4 WHP Assumptions:

Task 3 will include interviewing up to 20 people regarding future activity at the airport. Interviews with Chamber of Commerce representatives, local/regional economic development agencies, and similar organizations will be conducted to discuss economic development efforts and growth and its existing and potential influence on the La Grande/ Union County Airport aviation activity and trends. WHP will use population and economic forecasts prepared by governmental entities, such as US Census Bureau, Bureau of Labor and Statistics, Oregon Office of Economic Analysis, Portland State University Database and ODA System Plan, rather than prepare socioeconomic forecasts.

3.5 SPONSOR Responsibilities:

SPONSOR and the FAA's Airports District Office will approve the results of Task 3 prior to WHP starting Task 4.

4. TASK 4 - FACILITY REQUIREMENTS

4.1 Objective:

The objective of this task is to determine the ability of both the airside and landside facilities to accommodate forecast activity levels (based upon the Task 1 strategic role recommendation) and to outline what additional facilities will be required and when they should be anticipated.

4.2 Approach:

The capacity of the following components will be analyzed using quantitative techniques developed by the FAA as outlined in Advisory Circular 150/5060.5 or by other accepted methodologies:

- A. Airfield requirements, including runways (Runway Design Codes, RDCs, eligibility of crosswind runway based on 10-year wind data analysis), taxiways, apron areas, lighting and markings, navigational aids and support areas. Note: If a determination is made that current or forecast activity by one or more critical design airplanes will require a runway extension, additional research and documentation will be prepared to identify constrained or precluded operations for these aircraft using the existing length. This research and documentation will support or disprove the justification for an extension during the 20-year planning period.
- B. Approach area requirements, including runway protection zones, obstacle clearance approach surfaces per AC 150/5300-13A, FAR Part 77 approach slopes and airspace.

- C. General Aviation area requirements including hangars and tiedowns, fixed base operator (FBO) facilities, security features, automobile parking areas, and other facilities.
- D. Other building areas and land uses including commercial, industrial, industrial airpark, and fuel storage.
- E. Equipment requirements.
- F. Utility requirements including water, sewer, storm sewer, power and telecommunications.

Airport facility requirements will be developed to meet anticipated need for 5-, 10- and 20-year increments. In addition to capacity deficiencies, facility requirements that will result from security requirements; facilities that are in outdated condition, arrangement or functionality; deficiencies with FAA design standards; needs identified by the SPONSOR and airport users; and needs related to the strategic role of the airport will be developed.

4.3 Product:

The facility requirements analysis for the Airport will be documented and presented in graphic, tabular and narrative form, as a chapter for the Master Plan Update Report. PAC meeting #3 will be conducted after SPONSOR review of Task 4; Public Open House #3 will be held concurrently, as detailed in Task 10.

4.4 WHP Assumptions:

WHP will start Task 4 once the Forecast from Task 3 are approved by SPONSOR and FAA.

4.5 SPONSOR Responsibilities:

SPONSOR will provide comments on the draft chapter in a timely manner.

5. TASK 5 - AIRPORT ALTERNATIVES

5.1 Objective:

Based upon the facility requirements identified in Task 4, and the forecast critical aircraft/airport reference code, **three alternatives** to meet future demand will be developed, graphically depicted, and analyzed, and recommended alternatives selected for the various types of facilities analyzed. The No Action alternative will also be evaluated. The alternatives chapter will address the criteria outlined by FAA guidance and include special attention for the following:

- A. Airport reference code
- B. Runway length
- C. Pavement strength
- D. Instrument approach capabilities
- E. USFS operations area
- F. Terminal area layouts and development
- G. Airport lease areas for development of private/corporate/ County hangar facilities

5.2 Approach:

The alternatives will consider the development needs of the airport to meet projected facility requirements. Conceptual descriptions of the alternatives will be submitted to the SPONSOR prior to full development of the alternatives. WHP will meet with the SPONSOR, at the SPONSOR offices, to review the conceptual alternatives concurrent with the PAC Meeting #3 and Open House #3 trip.

The physical configuration of each alternative will be presented in graphic form on the base drawings created for the airport layout plan. The drawings will depict existing and future facilities in sufficient detail to determine facility functional relationship, impacts on existing facilities, and potential service requirements (i.e., utility extensions, etc.). The preliminary alternatives will include order of magnitude cost data, which will be used in the screening of the alternatives. The alternatives evaluation will focus on seeking the best approach in meeting the airport's facility needs over the twenty-year planning period. The desirability and/or feasibility of each alternative will be judged on several factors including functionality, ease of implementation, potential environmental impacts, and development cost. The alternatives will be presented to the PAC and the public for their evaluation.

5.3 Product:

The alternatives analysis for the Airport will be documented and presented in graphic, tabular and narrative form, as a chapter for the Master Plan Update Report. An environmental review of the alternatives will be prepared, following the general requirements of the FAA Northwest Mountain Region Environmental Checklist.

5.4 WHP Assumptions:

The alternatives will address the major 20-year needs of the airport. The preferred alternative will likely be a composite of features from the analyzed alternatives and from comments made during evaluation by the SPONSOR, FAA, PAC and public.

5.5 SPONSOR Responsibilities:

SPONSOR will review the conceptual descriptions of the alternatives, so that the WHP does not develop options that the SPONSOR might consider fatally flawed or fail to analyze options important to the SPONSOR. SPONSOR will approve the preferred alternative before WHP completes Task 8.

6. TASK 6 - COMPLIANCE REVIEW

6.1 Objective:

Applying for and receiving Airport Improvement Program (AIP) grant funding contractually obligates the SPONSOR to comply with the Assurances contained in the application package. FAA makes continual efforts to educate sponsors in general about their grant obligations, but much of FAA's compliance efforts with individual sponsors is reactive, in that violations come to FAA's attention and require correction. The objective of this task is to take a proactive - even preemptive - approach to achieving compliance and avoiding noncompliance at a specific airport with its unique circumstances by examining existing and potential compliance issues as part of an airport planning project.

6.2 Approach:

The Consultant will conduct a thorough review of the most recent approved ALP (1997), Exhibit 'A' Property Map, Airport Ordinance (if any), Zoning Ordinance, Rules and Regulations, Minimum Standards, airport fund/budget, leases, easements, permits and any other pertinent governing documents to ascertain consistency with the Assurances. The Consultant will provide samples/templates for Rules & Regulations and Minimum Standards to the SPONSOR to guide updates for these documents, as needed. A common-sense "look-around" will also take place for the following:

- A. Incompatible land uses in the airport environs and/or an absence of appropriate airport-compatibility zoning
- B. Existing "through-the-fence" (TTF) access for businesses, aircraft based off airport property and/or possible future requests for same (including residential airparks)
- C. Review TTF agreements and SPONSOR's TTF application
- D. Review SPONSOR Conditions, Covenants and Restrictions (CC&Rs)
- E. Revenue diversion (including improper use of airport property)
- F. On-airport residential use (sometimes called "crew quarters")
- G. Non-aeronautical local events closing the airport or a runway
- H. Review avigation easements, existing and potential
- I. Unabated wildlife attractants
- J. Trees or structures (possibly unstudied/uncharted) obstructing the airport's airspace
- K. Anything else in conflict with the FAA Grant Assurances or sound operation of the airport

6.3 Product:

The Consultant will list and describe each existing and potential compliance issue, referenced to the specific Assurance or other obligation involved. For existing violations, remedies will be recommended, as well as time frames for achieving compliance. For potential violations, recommended strategies to avoid noncompliance (i.e., new ordinance, etc.) will be presented. The Consultant will develop a strategy/program to educate the SPONSOR's decision-makers and the general public on the components and importance of compliance. Educational materials for officials and citizenry on Federal and State requirements, and the development of tools for understanding Grant Assurances are a component of this Task. PAC meeting #4 will be conducted after SPONSOR review of Tasks 5 and 6; Public Open House #4 will be held concurrently, as detailed in Task 10.

6.4 WHP Assumptions:

Implementation of the proposed program is not included in this Task.

6.5 SPONSOR Responsibilities:

SPONSOR will provide documents listed in Section 6.2 to the Consultant in a timely manner.

7. TASK 7 – RECYCLING AND SOLID WASTE MANAGEMENT PLAN

7.1 Objective:

The FAA Modernization and Reform Act of 2012 (FMRA) extended the FAA Airport Improvement Program through 2015. Along with the reauthorization of the program, FMRA included a number of changes to the AIP program. One such change is the requirement of airport sponsors to develop a recycling and solid waste management plan. The specific guidance is included in Program Guidance Letter 12-08 (PGL 12-08) and is as follows:

"dd. Develop a plan for recycling and minimizing the generation of airport solid waste. The scope must be consistent with applicable State and local recycling laws and must include the following:

- *1. A waste audit;*
- 2. The feasibility of solid waste recycling at the airport;
- 3. *Minimizing the generation of solid waste at the airport;*
- 4. Operation and maintenance requirements;
- 5. The review of waste management contracts; and
- 6. The potential for cost savings or the generation of revenue."

The following scope of work is intended to meet this requirement.

7.2 Approach:

WHP will conduct the following tasks:

1. Waste Audit

WHP will perform a waste audit of all current sources of waste material currently generated on the airport. The audit will summarize material source, amount, current disposal protocol, and applicable State and Federal requirements for disposal, if any. This will include waste material generated from standard annual operations at the airfield and a basic summary of construction waste material generated through airfield improvement projects.

The waste audit will catalog waste sources including hangar tenants, maintenance activities, annual event wastes, deplaned waste, routine airport infield maintenance waste (yard debris), and construction waste generated through projects identified on the 5 year CIP. The waste audit will summarize waste over the busiest summer month and also include estimates for any annual events. The audit will also include estimates for construction projects and anticipated maintenance included in the 5 year CIP to determine anticipated C&D waste. Based on the nature of the project, types of anticipated C&D waste will be estimated with a summary of how these materials are typically handled for recycling and disposal. The "ownership" and responsibility for recycling or disposal of each waste source will be identified in the audit.

2. Recycling Feasibility

WHP will review the waste material identified in the waste audit and evaluate recycling feasibility for each constituent. The consultant will provide a table with a list of waste materials with recommendations for recycling options for each, if applicable.

This task will include contacting local waste management and recycling vendors to understand the availability of recycling for each waste stream and a review of logistical requirements, local ordinances, state requirements, hauler and landfill requirements, and associated costs. The findings of this review will be summarized to identify current practices, opportunities, and barriers to recycling at the airport.

3. Plan to Minimize Solid Waste Generation

WHP will work with the SPONSOR to develop a plan to minimize solid waste generation on the airport. WHP will utilize the list of solid waste constituents generated in the waste audit and provide recommendations for waste reduction opportunities for each, as applicable. The plan will include the following elements:

- Waste reduction policy and goals statement;
- Waste tracking protocols, recycling effectiveness, and reporting;
- Summary of lease requirements, local ordinances, development specifications related to waste reductions, and purchasing policies;
- Summary of physical constraints and requirements for recycling best practices;

4. Operational and Maintenance Requirements

WHP will review operational and maintenance activities that produce waste materials and evaluate opportunities to reduce, reuse, or recycle materials generated from these activities. A summary will be provided that includes each category of waste and who is responsible for the costs, maintenance of equipment, and overall implementation of the plan for each type of waste.

5. Review Waste Management Contracts

WHP will review existing waste management contracts for the airport and airport users and tenants to identify cost saving and recycling opportunities for waste materials generated at the airport. This will include a review of current contracts including janitorial contracts, tenant leases, and standard contract specifications for all maintenance and development projects. It will also include a review of current contracts for waste management including hauling contracts, and land fill contracts to identify opportunities for recycling through existing and other locally available providers.

6. Potential for Cost Savings or Revenue Generation

WHP will review all elements related to the generation, reuse, recycling, and disposal of all waste materials generated on the airport and evaluate and provide recommendations for costs savings or revenue generation.

7.3 Product:

The recycling and solid waste management plan for the Airport will be documented in narrative, tabular and graphic form for use as a chapter in the Master Plan Update Report.

7.4 WHP Assumptions:

Task 7 will prepare a draft plan and submit it to the SPONSOR for review prior to including in the final MPU.

7.5 SPONSOR Responsibilities:

The SPONSOR will provide WHP with recycling the solid waste information as requested and will review the draft plan in a timely manner.

8. TASK 8 - AIRPORT LAYOUT PLAN AND ASSOCIATED DRAWINGS

8.1 Objective:

The objective of this element is to update the existing airport layout plan to establish the proposed configuration of the runways, taxiways, aprons, structures, navigational aids and other airport facilities for the selected development plan at the airport.

8.2 Approach:

The Airport Layout Plan package will be prepared using the current FAA Airport Layout Plan (ALP) checklist and will consist of the following drawings:

A. <u>Cover sheet</u>

This drawing will include a location map, vicinity map and the sheet index

B. <u>Airport Layout Plan Drawing</u> - two sheets to include the Airport data sheet and the ALP

This drawing will depict the existing airport facilities and graphically show the recommended improvements in the following areas:

- Airfield facilities, including the runways, taxiways, aprons, buildings, navigational aids, surface vehicle roadways and automobile parking.
- Aviation and related development areas, which include general aviation, operations, maintenance and service areas.
- Runway object free areas, runway safety areas, runway protection zones, approach areas and building restriction lines.
- Property lines.
- Runway and airfield data tables.
- Wind data and source. The windrose will be updated as part of this project (data source: NOAA) using 10 years of the best available data.
- Electronic and visual navigational aids.
- Nonstandard Conditions Table. A table listing those areas where current facilities do not meet the applicable FAA design standards pertaining to the recommended Airport Reference Code (ARC) and the recommended disposition of those deviations will be prepared and listed on the Airport Layout Plan.
- A table that lists the existing and future declared distances available on the runways.

C. Airport Airspace Drawing

These drawings will illustrate the 14 CFR Part 77 Airspace for the Airport and will include a listing of obstructions and an obstruction removal plan as required.

D. Inner Portion of Approach Surface Drawing

These drawings will illustrate a plan view and profile view of the full length of existing and future Part 77 approaches, the obstacle clearance approaches per AC 150/5300-13A and the runway protection zones. Also included will be an obstruction table, which will identify obstructions to either of the approaches listed above. Also shown will be:

- Airport property lines, whether owned in fee simple or easement.
- Obstruction elevations and clearances for each approach.
- Elevations of roads within and/or bordering the RPZs and extended runway centerlines.
- An obstruction clearance plan will be provided with a brief analysis of the cost of removal of the obstructions identified.
- Contour elevations for the area under the existing and future approach surfaces with a minimum of 50-foot contour intervals for all sloping Part 77 imaginary surfaces will be depicted.
- Part 77 Approaches will be shown full length without cut lines or truncation in both plan and profile.

E. <u>Terminal Area Drawing</u>

This drawing will present a large-scale plan view or the areas where aprons, building, hangars and parking lots are or will be located.

F. Land Use and Noise Contour Drawing

Updated noise contours (55 - 75DNL) will be developed using current FAA approved computer modeling. Contour maps will be developed illustrating existing conditions and expected conditions 5 years into the future. Contours will not be created until after forecasts are approved by FAA and SPONSOR and after SPONSOR has selected the preferred alternative.

Noise contours will be overlaid on base maps showing land use and zoning. The base mapping selected will be USGS 7.5 or 15-minute topographical maps or a suitable alternative. The area of coverage (i.e., scale) will depend on the size of the largest noise contour depicted. County zoning boundaries will be incorporated into the drawing using electronic files, where available, or transferring from existing mapping.

G. <u>Runway Departure Surfaces Drawing</u>

Large-scale plan and profile view of departure surfaces for each runway end that is designated primarily for instrument departures.

H. <u>Airport Property Map-Exhibit "A"</u>

The ALP drawing set will include the Airport's current Exhibit A property map, which will be updated to reflect future property and/or avigation easement acquisition, if identified in the ALP.

I. <u>Utility Drawings</u>

Existing and future utility lines will be shown that include water, sewer, storm sewer, electrical and telecommunications.

8.3 Product:

A set of Airport Layout Plan drawings will be prepared in accordance with the requirements set forth in FAA AC 150/5070-6B and with design standards as set forth in the current FAA ALP checklist. A report chapter presenting the drawings and an explanation of them will be prepared as appropriate for use in the Master Plan Update Report.

8.4 WHP Assumptions:

WHP will begin the ALP set, defining existing conditions, during Task 2.

On-site surveys are not required for identification of Part 77 obstructions, for identifying top of building elevations, or providing other elevation information.

8.5 SPONSOR Responsibilities:

SPONSOR will provide comments on the draft chapter in a timely manner.

9. TASK 9 - CAPITAL IMPROVEMENT/FINANCIAL PLAN

9.1 Objective:

The objective of this phase is to evaluate the financial feasibility of proposed improvements both as individual projects and in the aggregate as planned phases of future development. The planned phases are in the 5-, 10- and 20-year periods, consistent with the forecasts.

9.2 Approach:

All development proposed in the Master Plan Update will be separated into specific itemized construction projects. The level of detail will be sufficient to make accurate preliminary cost estimates possible. Projects will generally be listed according to the sequence in which they are recommended for construction and in priority order for FAA Funding. Costs will be estimated for each project in 2014 dollars.

The Financial Plan expenses will be presented along with forecasted airport revenues (to include leases, fuel flowage, federal entitlements/grants, etc.) to help the SPONSOR identify funding for the proposed projects. Funding sources for capital improvements will consider the issuance of revenue bonds if costs appear to exceed AIP and excess cash flow, and if SPONSOR wants to consider bonds.

SPONSOR's rates and charges, including through-the-fence fees, will be analyzed in the CIP. Recommendations for changes will be provided based on SPONSOR and FAA input.

Opportunities for revenue enhancement regarding aviation and aviation-related development will be identified.

9.3 Product:

All projects, together with estimated costs, will be itemized. An accompanying narrative will describe supporting data. Unit cost data used in developing total costs will be documented. A staged 20-year development plan will show the airport improvements, by priority, on a first 5-year, second 5-year and final 10-year basis. The improvements recommended during the first five years will be listed by year in sufficient detail to serve as the airport's 5-year capital improvement program, and will identify potential environmental or land use clearances associated with each improvement.

A 20-year Capital Improvement/Financial Plan will be prepared for the Airport. This will be in tabular, graphic and narrative form as well as in an electronic form (computer spreadsheet). The staged development plan, which will illustrate the CIP for the planning periods, will suggest funding sources for each project. The final product will satisfy the FAA/ODA requirements to produce a 5-year capital improvement program and will be presented in the FAA/ODA CIP format. PAC meeting #5 will be conducted after SPONSOR review of Tasks 7, 8 and 9; Public Open House #5 will be held concurrently, as detailed in Task 10.

9.4 WHP Assumptions:

WHP will prepare project costs based on actual projects that have recently occurred in Oregon. Cost estimates will be adjusted to 2014 dollars.

9.5 SPONSOR Responsibilities:

SPONSOR will provide necessary financial data to WHP, as requested. Comments on the draft chapter will be given to WHP in a timely manner.

10. TASK 10 – CITIZEN, AIRPORT USER, AIRPORT TENANT AND AGENCY INVOLVEMENT

10.1 Objective:

The purpose of this task is to provide a mechanism for ongoing communication between SPONSOR and the airport tenants, users, local citizens and local agency officials. Through meetings of the PAC and project open houses, all groups will be informed of the study's progress.

10.2 Approach:

<u>**PAC**</u> <u>Meetings</u> – Five meetings are planned with this group, which will include a PowerPoint presentation on study progress and key findings. Electronic copies of the PowerPoint presentation will be provided to the SPONSOR for tailoring and use in presentations to other community leaders, stakeholders, and other interested parties. The topics at the six meetings will be:

- Meeting #1: Kick-Off Meeting: background of the Master Plan Update process and airport development needs; identification of Issues and Goals (Task 1)
- *Meeting #2:* Inventory (Task 2) and Aeronautical Forecast (Task 3)
- *Meeting #3:* Facility Requirements (Task 4) and Identification of Possible Alternatives (in preparation of Task 5)
- *Meeting #4:* Airport Alternatives Evaluation (Task 5) and Compliance Review (Task 6)
- Meeting #5: Recycling and Solid Waste Management Plan (Task 7), Airport Layout Plan drawings (Task 8), and Capital Improvement Plan (Task 9)

Final Report Briefing to County Commisison – Final Report presentation to the County Commission, with PAC member attendance, and an open house to follow. This briefing will be held once a Final Draft Master Plan has been submitted to and reviewed by the SPONSOR.

<u>**Public Open Houses**</u> – Six public open houses are planned to receive citizen input on plan development and products. They will be held on the same day and address the same topics as the PAC meetings and Commission Briefing.

<u>**Project Website**</u> – A project website, linked from SPONSOR's website, will be developed and maintained by WHP to keep the public informed. Information on the website would include contact information, scope of work, project schedule, meeting materials and draft chapters (after they are reviewed by SPONSOR, FAA and PAC).

10.3 WHP Assumptions:

The PAC and public open houses will be held on the same day to minimize travel costs. WHP will prepare agendas, sign-in sheets, presentation boards, handouts and minutes for the meetings. (WHP will provide up to 50 copies of agendas, handouts, and minutes.) WHP will also prepare text for media advertisements that will be posted on the project website and printed in the local newspaper. 3-ring binders will be provided to each PAC member with pertinent project information and for their use to organize draft documents.

10.4 SPONSOR Responsibilities:

SPONSOR will formulate the PAC, arrange meeting places for PAC and public meetings and notify PAC committee members of meetings.

11. TASK 11 - REPORT PREPARATION

11.1 Objective:

Draft chapter reports will be distributed to the SPONSOR and the FAA at the following stages of the Master Plan Update process: after Task 1, after Tasks 2 and 3, after Task 4, after Task 5 and 6, after Tasks 7, 8 and 9, and after the chapters are compiled in the draft report. The final report shall also include an Executive Summary that highlights the Airport facilities, services, and future plans.

11.2 Approach:

The material developed for the tasks will be presented to the SPONSOR and FAA in draft form for comments and will form the basis of the chapters in the Master Plan Update report. The FAA checklist will be used in the development of the ALP.

11.3 Product:

Draft chapters will be provided to the SPONSOR and the FAA for review and comment. In addition to the report text, the appropriate section of the FAA ALP Update Checklist will be provided to the FAA for their review along with draft chapters. Upon completion of all tasks, a draft of the completed Master Plan Update Report will be assembled and distributed for final review by SPONSOR and the FAA Project Planner. In addition to the draft report, the FAA Project Planner will be provided with the Draft ALP Set for review. Once the FAA's Project Planner reviews and comments on the Final Draft report and drawing set, five full-sized copies of the Final Draft ALP Set will be sent to the FAA for Divisional Review. Based upon comments from all parties, the Final Report will be prepared and printed. The Executive Summary will not exceed four pages.

11.4 Deliverables:

Final copies of the report will be delivered in 3-ring binders. Electronic files will be delivered in Word and Other Microsoft Office software, along with PDF formatted documents. An unbound, camera-ready hard copy of the final report and Executive Summary will also be delivered.

Airport Layout Plan drawings (22-inch by 34-inch) will be delivered in both hard copy and electronic format files (AutoCAD and PDF).

The following products in the quantities specified below will be delivered:

	<u>SPONSOR</u>	FAA	<u>ODA</u>
Draft chapters/draft report	10	2	
Final report/Executive Summary	35	2	1
Draft ALP set	10	5	
Final ALP set (prints)	3	3	
Final ALP set (CADD & PDF files)	2	1	1 (PDF)

11.5 WHP Assumptions:

WHP will prepare written responses to comments received from the SPONSOR, FAA and others.

WHP will recommend resolution for conflicting comments, if requested by the SPONSOR. In the comment responses, any disagreement by WHP will be noted with an explanation provided for the disagreement; such comments will be resolved through discussion with the SPONSOR.

11.6 SPONSOR Responsibilities:

SPONSOR will be the clearinghouse for all review comments received from the PAC, public, SPONSOR personnel and the FAA. Review comments will be documented in writing or email. SPONSOR will provide comments in a timely manner and will adjudicate conflicting review comments.

Comparison of Airport Planning and FAA TAF Forecasts	ort Plan	ining and]	FAA TAI	F Forecasts	
AIRPORT NAME/LOCATION ID: Date:		La Grande / Union County, OR (LGD) 3/17/2015	nion County	y, OR (LGD)	
Passenger Enplanements	Year	Airport Forecast	FAA TAF	AF/TAF (% Difference)	
Base yr.	2014	0	0	#DIV/0!	
Base yr. + 5yrs. Base yr. + 10yrs.	2019 2024	0 0	0 0	#DIV/0! #DIV/0!	
Base yr. + 15yrs.	2029	0	0	#DIV/0!	
Commercial Operations					
Base yr.	2014	2,500	2,500	0.0%	Air Taxi / (
Base yr. + 5yrs.	2019	2,600	2,500	4.0%	
Base yr. + 10yrs.	2024	2,800	2,500	12.0%	
Base yr. + 15yrs.	2029	2,975	2,500	19.0%	
Total Operations					
Base yr.	2014	16,000	16,167	-1.0%	
Base yr. + 5yrs.	2019	17,040	16,998	0.2%	
Base yr. + 10yrs.	2024	18,150	17,831	1.8%	
Base yr. + 15yrs.	2029	19,368	18,680	3.7%	
					_

Commuter Operations

NOTE: TAF data is on a U.S. Government fiscal year basis

	Summa	ry of Docu	Summary of Documention for Airport Planning Forecast	or Airport	Planning	Forecast			
AIRPORT NAME/LOCATION ID: Date:	La Grande / Union County, OR (LGD) 3/17/2015	iion County, (OR (LGD)						
Base year:	A. 2014	. Forecast Levels	A. Forecast Levels and Growth Rates	tes					
	2014	2015	2019	2024	2029	<u>Averag</u> 2015	le Annual Com 2019	<u>Average Annual Compound Growth Rates</u> <u>15</u> 2019 2024 201	<u>1 Rates</u> 2029
Passenger Enplanements Air Carrier Commuter	0 0	0 0	0 0	0 0	0 0	#DIV/0! #DIV/0!	#DIV/0! #DIV/0!	#DIV/0	#DIV/0! #DIV/0!
TOTAL	0) 0	0	0	0	#DIV/0:	#DIV/0:	#DIV/0!	#DIV/0:
Operations									
Air carrier	0	0	0	0	0	#DIV/0!	#DIV/01	#DIV/0!	#DIV/0!
Commuter/air taxi	2,500	2,520	2,600	2,800	2,975	0.8%	0.8%	1.1%	1.2%
Total Commercial Operations	2,500	2,520	2,600	2,800	2,975	0.8%	0.8%	1.1%	1.2%
General aviation	9,000	9,150	9,750	10,500	11,213	1.7%	1.6%	1.6%	1.5%
Military	500	500	500	500	500	0.0%	0.0%	0.0%	0.0%
General aviation	4,000	4,038	4,190	4.350	4.680	1.0%	0.9%	0.8%	1.1%
Military	0	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
TOTAL OPERATIONS	16,000	16,208	17,040	18,150	19,368	1.3%	1.3%	1.3%	1.3%
Instrument Operations	4,950	4,998	5,191	5,528	5,859	1.0%	1.0%	1.1%	1.1%
Peak Hour Operations	15	15	16	18	19	0.0%	1.3%	1.8%	1.6%
Cargo/mail (enplaned+deplaned tons)	NA	NA	NA	NA	NA	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Based Aircraft									
Single Engine (Nonjet)	65 2	65 2	, 5	ع ع	69	0.0%	0.0%	0.3%	0.4%
Multi Engine (Nonjet) Let Engine (Turbofon & Turbonron)	n c	n c	0 -	0 -	+ -	%0.0	0.0% #DIV/01	%0.0	1.9% #DIX/01
Jet Lingine (10001011 & 10100109) Heliconter	> ~	0 6	10	11	12	12.5%	4.6%	3.2%	2.7%
Other	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%
TOTAL	76	77	42	82	86	1.3%	0.8%	0.8%	0.8%
	B.	Operati							
	2014	2015	2019	2024	2029				
Average aircrait size (seats) Air carrier	0.0	0.0	0.0	0.0	0.0				
Commuter	0.0	0.0	0.0	0.0	0.0	Note: Show bas	se plus one year i	0.0 Note: Show base plus one year if forecast was done.	ne.
Average enplaning load factor						If planning eff	fort did not inclu	If planning effort did not include all forecast years shown	urs shown
Air carrier	0.0%	0.0%	0.0%	0.0%	0.0%	nterpolate year.	s as needed, using	0.0% interpolate years as needed, using average annual compound	compound
Commuter	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		growul tates.			
GA operations per based aircraft	171	171	176	181	185				

Comments
Review
Plan
Master
Grande
g

						;
		Page	Section	FAA Comment		Note #
					PAC members received advance copies of all	
Master Plan Report	Introduction Page 1-1	Page 1-1	Second Paragraph	Priori citabrets do trot appear on wedsite. How was the public attolated a citatice to review and comment?	(with FAA comments incorporated) will be available for	1
					public review, prior to Commissioner Briefing.	
		Page 1-2	Issues	on of existing Airport Reference Code" - regardless of outcome on ARC's ter plan, it should be noted that this is typically based on actual use of	Text to be modified to clarify that point.	2
		Page 1-3	lssues	"Seasonal housing/RV parking - generally these are incompatible land uses on the airport.	Yes, this is discussed in more detail throughout the Plan. Mentioned here as an issue discussed by the PAC.	e
					Again, this is listed as it was mentioned in several user	
					surveys. Document later states that an instrument	
		Page 1-3	Surveys	ILS - currently being phased out, should look to satellite based approaches	approach feasibility study should be conducted to	4
					determine if other methods of instrumentation would be	
			-		appropriate at LGD.	
		Page 1-4	National System Kole		Yes.	ŋ
		Page 2-2	List of Development Projects	Specify Runway for 2004 , 2006 and 2008 projects (RWY 16/34 overlay)	Text will be updated accordingly.	9
			Eiret Daragraph	Taxiway A and C PCI ratings expressed as "good", "fair" and "poor". This is inconsistent with prior discussion on numerical values. Change or provide relative	Will clarify that numbers and description (good, etc)	-
		1 980 1		explanation of values.	correlate and correspond with PCI data and Exhibit 2C.	
		1 0 00 00		Discussion may be a little misleading. Only the Rwy 16 end is serviced with a	All runway ends are serviced by a circling approach, and text	C
		c-z ager	FIRST Paragraph	straight in approach. The others are a circling approach.	will be clarified so that is understood.	Q
					These small sheds have been used to store the County's	
					airport-related maintenanace equipment (mower, etc). No	
		Dana 7.6	T-h6 2B	Clarify use of numbers 17, 18 and 19 "County maintenance" sheds. Could clarify if	compliance issues are of concern. Will relabel to state	d
				there are any compliance issues.	"County Airport Maintenance Equipment Storage." They	ח
					have since been demolished to accommodate the new	
					Rappel Base.	
		Page 2-9	Ownership paragraph	Discuss compatible and incompatible land uses in the RPZ's.	Discussion on that issue will be added.	10
		Dage 2-10 Noise	Noice	16,000 annual operations should be broken down to jet and propeller ops since	An estimated breakout (per Forecast Chapter data) will be	1
		rage 2-10	NOISE	those guidelines are discussed in the paragraph.	added here.	11
		Page 2-10 Noise) Noise	Not a threshold of significance. Guidance on when to prepare a noise analysis.	Correct, the sentence will be revised to state it is a guidance marker for when study is needed.	12
				The findings of specific cultural resources surveys and consultations with the		
		Page 2-11	Page 2-11 Historic Properties, cuitural	Umauna tribe and SHPO conducted by the FAA in the last 5-10 years should be included here	Findings will be used to supplement this section.	13
		Page 2-13	Page 2-13 First Sentence	"An air quality analysis is required for general aviation airports if the airport serves 180,000 operations and/or 1.3 million enplanements annually." This threshold can Reference to old threshold will be removed.	Reference to old threshold will be removed.	14
				no longer be used and is being updated. Recommend deleting.		
			-	_	Absolutely, referenced past study for historical information	1
		Page 2-13	Page 2-13 Engangered Species	to ruture projects and	only. Will clarify tuture study/determination will be needed	CT
				consideration of ESA listed species will need to occur.	on a project-to-project basis.	
		Page 2-16	Page 2-16 Environmental Conclusion	"The potential impact will need to be measured by the Countyand FAA as specific projects are put forth and formal NEPA documentation is initiated."	Will update, per comment.	16
		Page 2-19	Table 2E	Provide detail on "Transfer to Public Works" to clarify possible compliance issues.	This is payment to supplement the Director's salary for his work at the airport - will add footnote to clarify.	17
		Page 3-20	Page 3-20 RWY 16-34 Critical Aircraft	Crosswind runway critical aircraft determined by wind coverage requirements	Section to be updated with information from the sunnlemental Wind Data Tech Memo.	18

Jemo 19	i that sonnel, 20	21	22	23	ed. educe a for 24 uage	eather lint said 5 hese 25 gards to	syond re use. ut along ALP are on, 26 on, 26 on, 26 an autical mented	ments. 27	ded. 28	tency. 29
t Will update section, per information from the Tech Memo on Group C aircraft.	 Section will be bolstered with additional information that solidifies this statement (utilities, infrastructure, personnel, proximity to NF, etc.) 	Will updated, as needed.	Section to be updated with information from the supplemental Wind Data Tech Memo.	Section to be updated with information from the supplemental Wind Data Tech Memo.	Correct, it is understood the standard can be exceeded. Relocating Txy A to the standard separation would reduce aircraft conflicts (parked vs. taxiing) and increase area for aircraft parking, as identified as a facility need. Language will be added to clarify this.	Doug spoke with Clint Howell (FAA) regarding the weather station. It has not been updated since 2005-2008. Clint said it is slated for an uupdate summer of 2017, including computer system updates and a new wind sensor. These updates likely address the concerns users have in regards to the weather station.	This future (ultimate) parallel taxiway is identified beyond the 20-year needs, but is shown to preserve for future use. The current apron and hangar areas are near built-out along the Rwy 16-34 flightline (once improvements on the ALP are completed). It would likely be a combination of apron, hangar, and aviation-related business (mechanic, avionics shop, etc). Those users that are compatible, but that do not need runway access would be developed farther away from the parallel taxiway. Area can be divided into "Aeronautical Use" and "Aviation Compatible". Text will be supplemented to demonstrate this.	Section will be revised to clarify any misleading statements.	Sections will be revised and more detail will be provided	Section will be updated to clarify and provide consistency
that meets the standard for 100. From the original results what the arread and arread that the arread and arread and arread and arread	"No other airports in the region are capable of replacing this facility" - While I agree that La Grande is a valuable asset in the region, this statement does not seem to address the 6,300 ft x 150 ft runway at Pendleton less than 50 miles away and the 5,000+ ft x 100 ft runway at Baker less than 30 miles away. More can be added to the justification here.	May need to update pending critical aircraft discussion.	Wind data seems to indicate Runway 16-34 is only eligible as a B-I runway. Additional width could be paid for locally.	Runway 16-34 appears to only be eligible to a B-l runway with a standard of 60 ft. Additional width could be paid for locally. Potentially similar issue with Runway 12- 30.	Parallel taxiway separation should not be affected by RDC discussion. AIP Handbook allows spacing greater than standard. This would allow an eligible B-II separation even if the RDC is B-I.	Benefit Cost analysis would be required for AWOS-III eligiblity. How old is the current equipment?	Development alternatives along new RWY 12-30 parallel taxiway are not identified. What are the potential needs for this area?	This table does not provide a basis for many of the statements. There may be an impression given that there will be no apparent issues when there may be based upon the environmental inventory chapter. As an example, for the cultural resources category, simply stating there will need to be acknowledgement from the tribes during excavation is not correct and doesn't provide information about the possible need for Section 106 consultation with both the SHPO and the Tribes. Suggest revising to show more accurately what may be required. This is misleading.	This is not helpful and as indicated in the comment on the table above, a more accurate depiction of what may be required is needed here.	Not consistent with the discussion of air quality in the environmental inventory section.
Page 3-22 Third paragraph	Page 3-22 Third paragraph	Table 4C	Table 4D	Table 4E	Page 4-13 Third paragraph	Page 4-15 Weather Reporting		Table 5A	5 sections starting with historical through wetlands	Air and Water Quality Standards
Page 3-22	Page 3-22	Page 4-10	Page 4-11	Page 4-12	Page 4-13	Page 4-15	Page 5-2	Page 5-7	Page 5-9	Page 6-4

					30
				As the change has not vet occurred the narrative text refers	
				the circuiting manual more yet occurred, the manuative textrements to the it as point of 2.4. Minimum the drawinger to lobel it	
Ċ	General		Magnetic Variation change will require RMV 16-34 to change to RMV 17-35	to it as twy 10-34. We call thange the unawings to label it Rwy 17-35 and provide a comment on the data sheet (Sheet	ά
			ואומפוררור אמוזמנוסון כוומוופר אוווין בלמורך ואאין דס כד נס בוומוופר נס ואאין די כס.	1) to charter the increming charge of these is consistents.	1
				z) to trainify the upcomming change so there is consistency between the narrative and the ALP sheets.	
	Sheet 2		PCN for Runway 16-34	A PCN for Rwy 16-34 has not been calculated and is not	37
,				available.	1
S	Sheet 2 \	Wind Data	Cite source and time period	Source and time period will be added.	33
S	Sheet 2		Declared Distance table	The declared distances information will be pulled from the Runwav Data Table and will be a stand alone table.	34
			If a parallel taxiway were built to the north of RWY 12-30 there would be a large	There is more buildable area behind the 35' BRL NE of Rwy	
s	sheet 3		area that is aviation use only. Current configuration does not appear to have much	12-30 than there is in the flightline that is currently being	35
╈				asea: ricase dariny comment. See supporting presentation that outlines contraints and	
S	Sheet 3		Roads and intersection in RPZ's of the 12 and 16 RWY ends. Any opportunities to relocate outside the RPZ?	why there are no viable options for relocating roads out of RPZs.	36
			Duraviou 16 and esfetu sees somesee to avierlan DWV 13.20 esfetu sees. Charild ha	FAA guidance does not state the RSA cannot overlap, rather it ethore than chould not overlap. EAA muidance provider a	
U)	Sheet 3		separated.	willingness to mitigate conflicts when full separation is not	37
				feasible. County requests that an overlap be allowed.	
S	Sheet 3		Address direct access from apron to runway along Taxiway A including proposed	Geometry will be addressed and direct access removed.	38
1	T		Tuture configuration	- - - - - - - - - - - - - - - - - - -	
5	Sheet 3		Show existing OFA for Taxiway A particularly on apron area (note comment is made) The existing OFA layer appears to have been turned off. off electronic version)	Phe existing OFA layer appears to have been turned off. Will correct.	39
S	Sheet 3		Identify TTF locations	The four locations will be marked.	40
S	Sheet 3		Label apron areas off Taxiway C	Labels to be added.	41
N	Sheet 3		At intersection of Runway 12-30 and Taxiway D, does there need to be 2 connector taxiways here? Taxiway D is not a standard high speed taxiway configuration and the nearby connector appears to have direct access to the runway which could contribute to a runway incursion risk.	Geometry will be corrected. Twy D will terminate at Txy C intersection. Nearby connector will be shifted to address the direct access issue.	42
S	Sheet 3		Road in RWY 34 end RPZ. What is the possible plan to clear?	No current plans to clear, per previous discussions with FAA. RSA/RPZ sketches discuss issues further.	43
S	Sheet 3		Taxiway B geometry at the intersection with RWY 12-30 is not perpendicular and creates large paved area which makes sign placement difficult and could add to hallor confusion. Develop plan to clean un diffure geometry.	Future layout will be identified, with consult of users (to determine best exit location based on aircraft capabilities).	44
S	Sheet 3		Show future 34 PAPI and REILs on ALP to match data sheet and add future PAPI to liesend	Features will be added.	45
				Correct, per FAA guidance RSAs are not technically required	
S	Sheet 3		No mod to standards for RSA on RWY 12-30	to be separated and therefore a mod to standard is not being requested. RSAs "should" be separated but there is	46
				no requirement for separation.	
S	Sheet 3		Show safety areas at runway ends (particularly 16/20 intersection)	RSAs will be fully depicted at all runway ends.	47
<u> </u>	Sheet 3		"High energy" crossings of RWY 16-34 at Taxiwavs C and D.	Access from apron to future Txy A will have a sidestep to reduce potential pilot confusion when approaching the runway. By separating Txy A from the apron area, another level of decision-making will be introduced to aid in pilot	48
				situational awareness. This is also part of the decision to meet the separation standard, rather than exceed it (per note #24).	
S	Sheet 14		What is "public institution" area shown SW of Rwy 34 end?	That would be the City's wastewater treatment facility. It is our understanding the County and FAA have discussed this issue extensively and come to the conclusion that no	49
-				corrective action is necessary.	

APPENDIX A. ALP REVIEW CHECKLIST

The following checklist shall be used in lieu of FAA AC 150/5070-6B, Appendix F, Airport Layout Plan Drawing set. This checklist is intended for use when submitting a new or updated ALP to the FAA for review and approval. Consultants and/or sponsors should indicate "Yes," "No" or "N/A" (not applicable) for every item on the checklist. The same checklist shall be provided to FAA for review and verification. For all reviewers: It is important that each item listed be shown on the respective plan.

Ai	rport Identification (to be completed by Spons	sor or Consultant)		
Airport	La Grande / Union County Airport			
City and State	La Grande, Oregon	Location Identifier	KLGD	
Airport Owner	Union County			
ALP S	ubmission Information (to be completed by S	oonsor or Consultan	t)	
ALP Prepared by	WHPacific, Inc.			
	Name of Consulting Firm			
	Mike Dane			
	Name of Individual		Date	
	503-372-3617			
	Telephone			
	mdane@whpacific.com			
	Email address			
Consulting QA/QC Review	Dave Nafie, Director of Aviation	n		
	Name and Title of Individual		Date	
Sponsor Review	Doug Wright, Public Works Direc	tor		
	Name and Title of Individual		Date	

	FAA Review (to be completed by FAA)	
_	Name and Title of Individual	Date

Make Model Annual Itinerant Operations Existing Lockheed C-130 Future Lockheed C-130

Critical Design Aircraft or Family of Aircraft:

Forecasted Year:

Click here to enter text.

	C-IV
Airport Reference Code (ARC):	

Runway Design Code (RDC) & Runway Reference (RRC):

Runway	RDC	RRC
12-30	C-IV	APRC – C/IV/5000 DPRC – D/IV
16-34	B-II	APRC – B/II/5000 DPRC – B/III

Approach Minimums:

Rwy End	Minimum	Rwy End	Minimum
16	1 1/4		

Runways (Existing and Future):

Runway	Exis	Existing Future			Departure Surface	
	Length (ft)	Width (ft)	Length (ft)	Width (ft)	(Y or N/A)	
12-30	6,260	100	6,260	100	Y	
16-34	3,876	60	3,876	75	Y	

For the balance of the checklist, enter a mark (\bigvee or X) to confirm inclusion.

A.1. Narrative Report

Narrative Report						
Item		Instructions	Spor	nsor/Consi	ultant	FAA
			Yes	No	N/A	-
A. (e	 Executive Summary – A concise 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. 1. Identify Projects along with description 2. Create a Timeline for each Project 3. Identify and List: a. Proposed Projects .g., Hangar development) 	 From AC 150/5070-6, Section 202: An accompanying ALP Narrative Report should explain and document those changes and contain at least the following elements: Basic aeronautical forecasts. Basis for the proposed items of development. Rationale for unusual design features and/or modifications to FAA Airport Design Standards. Summary of the various stages of airport development and layout sketches of the major items of development in each stage. An environmental overview to document environmental conditions that should be considered in the identification and analysis of airport development alternatives and proposed projects. 	× × × ×			
(e Th en 3.	b. Milestones/ Triggering Events .g., 1. All hangars are full, 2. here is a waiting list long hough to fill a new development, Hangars have reached their reful life, etc.)		×			
da 3. re in Im	c. Action items/Next Steps .g., 1. Maintain log and gather tta, 2. Discuss plan with ADO, Coordinate with ADO garding potential for inclusion FAA ACIP (Airports Capital aprovement Program), 4. entify funding sources.)		×			
	d. Funding Plan	Capital Improvement Plan for the forecast horizons. See AC 150/5070-6, Chapter 11. Only a rough, order-of-magnitude report is needed in the executive summary.	×			

			Narrative Report				
Item		Item	Instructions	Sponsor/Consultant			FAA
				Yes	No	N/A	
В.	(0-8 Bas	sic aeronautical forecasts 5, 6-10, 11-20 years): sic aeronautical forecasts 5, 6-10, 11-20 years):	Forecasts of future levels of aviation activity as approved by the FAA. These projections are used to determine the need for new or expanded facilities. See AC 150/5070-6, Chapter 7.	×			
	1.	Total annual operations	Total local and itinerant aircraft operations at the airport.	×			
	2.	Annual itinerant operations by all aircraft	Itinerant operations by aircraft that leaves the local airspace, generally 25 miles or more from the airport. See AC 150/5070-6, Chapter 7, Section 702.a. and Figure 7-2.	×			
	3.	Annual itinerant operations by current critical aircraft		×			
	4.	Annual itinerant operations by future critical aircraft		×			
	5.	Number of based aircraft	Aircraft that use the subject airport as a home base, i.e., have hangar or tie-down space agreements. See AC 150/5070- 6, Chapter 7, Section 702.a. and Figure 7-2.	×			
	6.	Annual instrument approaches	Number of instrument approaches expected to be executed during a 12-month period. See AC 150/5070-6, Chapter 7, Section 702.a. and Figure 7-2.	×			
	7.	Number of enplanements	See AC 150/5070-6, Chapter 7, Section 702.a. and Figure 7-2.			×	

Item	Instructions	Sponsor/Consultant			FAA
		Yes	No	N/A	-
Critical Aircraft (also referred as "design aircraft" or "critical design aircraft)	The critical aircraft is the most demanding aircraft identified in the forecast that will use the airport. Federally funded projects require that the critical aircraft will make substantial use of the airport in the planning period. Substantial use means either 500 or more annual itinerant operations or scheduled service. The critical aircraft may be a single aircraft or a composite of the most demanding characteristics of several aircraft. Provide the aircraft, AAC, and ADG. (e.g. Boeing 737-400, C-III) See AC 150/5300-13A, Paragraph 105(b) and FAA Order 5090.3C, 3-4.	×			·
Runway Design Code (RDC)	Describe the RDC for each runway. For the purpose of airport geometric design, each runway will contain a RDC which signifies the design standards to which the runway is to be built. The RDC consists of three parameters: Aircraft Approach Category (AAC), Airplane Design Group (ADG) and the approach visibility minimums. These parameters represent the aircraft that are intended to be accommodated by the airport, regardless of substantial use. See AC 150/5300-13A, Paragraph 105(c).	×			
. Runway Reference Code (RRC)	Describe the RRC for each runway. The RRC describes the current operational capabilities of a runway where no special operating procedures are necessary. The RRC consists of the same three components as the RDC, but is based on planned development and has no operational application. See AC 150/5300-13A, Paragraph 318.	×			
	Critical Aircraft (also referred as "design aircraft" or "critical design aircraft)	Critical Aircraft (also referred as "design aircraft" or "critical design aircraft)The critical aircraft is the most demanding aircraft identified in the forecast that will use the airport. Federally funded projects require that the critical aircraft will make substantial use of the airport in the planning period. Substantial use means either 500 or more annual itinerant operations or scheduled service. The critical aircraft may be a single aircraft or a composite of the most demanding characteristics of several aircraft. Provide the aircraft, AAC, and ADC. (e.g. Boeing 737-400, C-III) See AC 150/5300-13A, Paragraph 105(b) and FAA Order 5090.3C, 3-4.Runway Design Code (RDC)Describe the RDC for each runway. For the purpose of airport geometric design, each runway. For the purpose of airport geometric design, each runway. For the purpose of airport geometric design, each runway will contain a RDC which signifies the design standards to which the runway is to be built. The RDC consists of three parameters: Aircraft Approach Category (AAC), Airplane Design Group (ADG) and the approach visibility minimums. These parameters represent the aircraft that are intended to be accommodated by the airport, regardless of substantial use. See AC 150/5300-13A, Paragraph 105(c).Runway Reference Code (RPC)Describe the RRC for each runway. The RRC describes the current operational capabilities of a runway where no special operating procedures are necessary. The RRC consists of the same three components as the RDC, but is based on planned development and has no operational application. See AC	Critical Aircraft (also referred as "design aircraft" or "critical design aircraft" or "critical design aircraft" or "critical design aircraft is the critical aircraft is the most demanding aircraft identified in the forecast that will use the airport. Federally funded projects require that the critical aircraft will make substantial use of the airport in the planning period. Substantial use means either 500 or more annual itinerant operations or scheduled service. The critical aircraft may be a single aircraft or a composite of the most demanding characteristics of several aircraft. Provide the aircraft, AAC, and ADG. (e.g. Boeing 737-400, C-III) See AC 150/5300-13A, Paragraph 105(b) and FAA Order 5090.3C, 3-4.XRunway Design Code (RDC)Describe the RDC for each runway. For the purpose of airport geometric design, each runway will contain a RDC which signifies the design standards to which the runway is to be built. The RDC consists of three parameters: Aircraft Approach Category (AAC), Airplane Design Group (ADG) and the approach visibility minimums. These parameters represent the aircraft that are intended to be accommodated by the airport, regardless of substantial use. See AC 150/5300-13A, Paragraph 105(c).Runway Reference Code (RPC)Describe the RRC for each runway. The RRC consists of a runway where no special operating procedures are necessary. The RRC consists of a runway where no special operating procedures are necessary. The RRC consists of the same three components as the RDC, but is based on planned development and has no operational application. See AC	Critical Aircraft (also referred as "design aircraft" or "critical design aircraft" or "critical designThe critical aircraft is the most demanding aircraft identified in the forecast that will use the aircraft in the planning period. Substantial use of the aircraft aircraft make substantial use of the aircraft aircraft make substantial use means either 500 or more annual itinerant operations or scheduled service. The critical aircraft may be a single aircraft or a composite of the most demanding characteristics of several aircraft. Provide the aircraft. AAC, and ADG. (e.g. Boeing 737-400, C-III) See AC 150/5300-13A, Paragraph 105(b) and FAA Order 5090.3C, 3-4.XRunway Design Code (RDC)Describe the RDC for each runway. For the purpose of airport geometric design, each runway will contain a RDC which signifies the design standards to which the runway is to be built. The RDC consists of three parameters: Aircraft Approach Category (AAC), Airplane Design Group (ADG) and the approach visibility minimums. These parameters represent the aircraft that are intended to be accommodated by the airport, regardless of substantial use. See AC 150/5300-13A, Paragraph 105(c).XRunway Reference Code (RRC)Describe the RRC for each runway. The RRC describes the current operational capabilities of a runway where no special operational application. See AC	Critical Aircraft (also referred as "design aircraft" or "critical design aircraft or critical aircraft will make substantial use of the airport in the planning period. Substantial use means either 500 or more annual timerant operations or scheduled service. The critical aircraft may be a single aircraft or a composite of the most demanding characteristics of several aircraft. Provide the aircraft AC, and ADG. (e.g. Boeing 737-400, C-III) See AC 150/5300-13A, Paragraph 105(b) and FAA Order 5090.3C, 3-4.XFunway Design Code (RDC)Describe the RDC for each runway. For the purpose of airport geometric design standards to which the runway is to be built. The RDC consists of three parameters represent the aircraft that are intended to be accommodated by the aipord, creagraph 105(c).Funway Reference Code (RRC)Describe the RDC for each runway. The RDC describes the current operational capabilities of a runway where no special operating procedures are necessary. The RRC describes the current operational capabilities of a runway where no special operational application. See AC

	Narrative Report						
Item		Instructions	Sponsor/Consultant		ultant	FAA	
			Yes	No	N/A		
	Explanation of proposed velopment items	Specific projects can be described as project listings on a master table, on individual project data sheets, or in projects booklets.	×				
Ap Re	Discuss near-term and future proach Procedure quirements or effects (e.g., V, Circling, etc.)	Based on existing or forecast usage. See FAA Order 7400.2, Figures 6-6-3 and 6-3-9.	×				
13.	Navigational Aids or Other Equipment Needs (e.g., Approach Lights, Wind Cones, AWOS, etc.)	The need for new or additional navigational aids is a function of the fleet mix, the percentage of time that poor weather conditions are present, and the cost to the users of not being able to use the airport while it is not accessible.	×				
	14. Wind coverage. Is it adequate for existing and future runway layouts? Has wind data been updated?	This analysis determines if additional runways are needed to provide the necessary wind coverage. Reference AC 150/5300-13A, Appendix 2 for guidance on wind coverage analysis techniques.	×				
D.	Modification to Standards.	Any approved nonconformance to FAA standards, other than dimensional standards for RSAs and OFZs, require FAA approval. A description of all approved modification to standards shall be provided. See AC 150/5300-13A, Paragraph 106(b) and FAA Order 5300.1.	×				
E.	Obstruction Surfaces (14 CFR Part 77 and Threshold Siting Surface)	Reference 14 CFR Part 77 and AC 150/5300-13A, Paragraph 303.	×				
F.	Runway Protection Zone	A description of any incompatible land uses inside the RPZ shall be provided. Prior to including new or modified land use in the RPZ, the Regional and ADO staff must consult with the National Airport Planning and Environmental Division, APP-400. This policy is exempt from existing land uses in the RPZ. See AC 150/5300-13A, Paragraph 310 and FAA memorandum dated September 27, 2012.	×				

		Narrative Report				
Item		Instructions	Spor	sor/Cons	ultant	FAA
			Yes	No	N/A	
G.	Development summary (including sketches, schedules, and cost estimates) for stages of construction for: Development summary (including sketches, schedules, and cost estimates) for stages of construction for:	Documentation provided should include any electronic spreadsheets and files to facilitate in modifying the financial plan on an as-needed basis.	×			
	15. Development Projects Completed Since Last ALP		×			
	16. 0-5 years		×			
	17. 6-10 years		×			
	18. 11-20 years		×			
H.	Shadow or line-of-sight study for towered airports (negative or positive statements are required).	Reference FAA Order 6480.4. This can be from the Airway Facilities Tower Integration Laboratory (AFTIL) or simpler GIS-generated studies.			×	
Ι.	Letters of coordination with all levels of government, as needed.	Affected private and/or governmental groups, agencies, commissions, etc., that may have input on the plans. See AC 150/5070-6, Chapter 3.	×			
J.	Wildlife Hazard Management Issues Review (in narrative).	Reference AC 150/5200-33.	×			
K.	Preliminary Identification of Environmental Features	Potential or known features only. Further environmental analysis will be necessary. Reference FAA Order 5050.4B. Begin framework for NEPA analysis.				
	19. Major airport drainage ditches		×			
	20. Wetlands		×			
	21. Flood Zones		×			
	22. Historic or Cultural features		×			
	23. Section 4(f) features		×			
	24. Flora/Fauna		×			

	Instructions Sponsor/Consulta	Instructions	Sponsor/Consultant		FAA
		Yes	No	N/A	
25. Natural Resources 26. Etc. (other features identified in Order 5050.4B)					
Note Action Items from Runway Safety Program Office	List and note status of items from Runway Safety Program Office or Runway Safety Action Plan.			×	
I. Declared Distance (DD)	The narrative on declared distances is used to aid in understanding the maximum distances available and suitable for meeting takeoff, rejected takeoff, and landing distances performance requirements for turbine powered aircraft. The narrative shall also provide clarification on why declared distances have been implemented. Declared distances data must be listed for all runway ends. The TORA, TODA, ASDA, and LDA will be equal to the runway length in cases where a runway does not have displaced thresholds, stopways, or clearway, and have standard RSAs, ROFAs, RPZs, and TSS. Reference AC 150/5300-13A, Paragraph 323.	×			
Remarks					

A.2. Title Sheet

- The scale of the Title Sheet should be developed to include the items listed below.
- The minimum size for the final drawing set is 22" X 34" (ANSI D) and 24" X 36" (ARCH D). Coordinate use of 34" x 44" (ANSI E) and 26" X 48" (ARCH E) with FAA. Color drawings may be acceptable if they are still usable if reproduced in grey scale.

	Item	Instructions	Spor	nsor/Cons	ultant	FAA
			Yes	No	N/A	1
Α.	Title and revision blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	×			
B.	Airport sponsor approval block	Provide an approval block for the sponsoring authority's representative to sign. Include space for name, title, and date.		×		
C.	Date of ALP (date the airport sponsor signs the ALP)	The month and year of signature prominently shown near the title.		×		
D.	Index of sheets (including revision date column)	Airport Layout Drawing, Airport Airspace Drawing, Inner Portion of the Approach Surface Drawing, Terminal Area Drawing, Land Use Drawing, Airport Property Map, Airport Departure Surface, etc.	×			
E.	State Aeronautics Agency Approval Block (as needed)	Provide an approval block for the sponsoring authority's representative to sign. Include space for name, title, and date.			×	
F.	State outline with county boundaries. County in which airport is located should be highlighted.	Provide as needed.	×			
G.	Location map (general area)		×			
H.	Vicinity map (specific airport area)		×			
Re	emarks					
Fo	r sponsor approval see ALP Shee	et				

A.3. Airport Data Sheet

• For smaller airports, some of the ALP sheets may be combined if practical and approved FAA.

		li e une	Airport Data Sheet		10		
		Item	Instructions	Spor Yes	nsor/Cons	N/A	FAA
A.	Title	and Revision Blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	×			
В.	IFR) refer orier cross com wind perio runw	Rose (all weather and with appropriate airport ence code and runway tation depicted, swind coverage, and bined coverage, source of information and time od covered (for IFR ays applicable minimums Id be included):	Assembly and analysis of wind data to determine ultimate runway orientation and also provides the operational impact of winds on existing runways. If instrument procedures are present or will be requested then both all-weather and instrument meteorological condition wind roses are required. See AC 150/5300-13A, Appendix 2.				
	2.	10.5, 13, 16, 20 knots wind rose (based on appropriate airport reference code) Percentage of wind coverage/crosswind	When a runway orientation provides less than 95 percent wind coverage for any aircraft forecasted to use the airport on a regular basis, a crosswind runway is recommended. The 95 percent wind coverage is computed on the basis of the crosswind not exceeding 10.5 knots for Airport Reference Codes A-I and B-I, 13 knots for Airport Reference Codes A-II and B-II, 16 knots for Airport Reference Codes A-III, B-III, and C-I through D-III, and 20 knots for Airport Reference Codes A-IV through D-VI. See also AC 150/5300-13A, Paragraph 302(c)(3) and AC 150/5300-13A, Appendix 2.	×			
	3. 5	Source of data	Wind data may be obtained from NOAA at <u>http://www.ncdc.noaa.gov/</u> Reference AC 150/5300-13A, Appendix 2, Paragraph A2-5 and A2-6.	×			

	Item	Instructions	Spor	sor/Cons	ultant	FAA
			Yes	No	N/A	1
4.	Age of data (last 10 consecutive years of data with most current data no older than 10 years)	Data must be from the latest 10- year period from the reporting station closest to the airport. Reference AC 150/5300-13A, Appendix 2, Paragraph A2-5.	×			
C. Airp	oort Data Table					
1.	ARC for Airport	List the Airport Reference Code (ARC) for airport. 5300-13AARC is an airport designation that signifies the airport's highest Runway Design Code (RDC), minus the third (visibility) component of the RDC. Reference AC 150/5300-13A.	×			
2.	Mean maximum temperature of hottest month	List the mean maximum temperature and the hottest month for the airport location as listed in "Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree- Days" (Climatography of the United States No. 81). See AC 150/5325-4, 506.b.	×			
3.	Airport elevation (highest point of the landing areas, nearest 0.1 foot) – using North American Vertical Datum of 1988 (NAVD88)	List the Airport Elevation, the highest point on an airport's usable runway expressed in feet above mean sea level (MSL). Use NAVD88. Reference AC 150/5300-13A, Paragraph 102(g)	×			
		All elevations shall be in NAVD88. A note shall be put on the Airport Layout Drawing that denotes that the NAVD88 vertical control datum was used.				
4.	Airport Navigational Aids, including ownership (NDB, TVOR, ASR, Beacon, etc.)	List the electronic aids available at the airport.	×			

		Airport Data Sheet				
	Item	Instructions	Spor	sor/Cons	ultant	FAA
			Yes	No	N/A	
5.	Airport reference point coordinates, nearest second (existing, future if appropriate, and ultimate) - NAD83	List the Airport Reference Point, the latitude and longitude of the approximate center of the airport. Use the North American Datum of 1983 (NAD83) coordinate system. See AC 150/5300-13A, Paragraph 207.	×			
		All latitude/longitude coordinates shall be in NAD83. A note shall be put on the Airport Layout Drawing that denotes that the NAD83 coordinate system was used.				
6.	Miscellaneous facilities (taxiway lighting, lighted wind cone(s), AWOS, etc.) [Including type/model and any facility critical areas]	List any other facilities available at the airport.	×			
7.	Airport Reference Code and Critical Aircraft (existing & future)	List the existing and ultimate Airport Reference Code and Critical Aircraft, the most demanding aircraft identified in the forecast that will use the airport. Federally funded projects require that critical design airplanes have at least 500 or more annual itinerant operations at the airport (landings and takeoffs are considered as separate operations) for an individual airplane or a family grouping of airplanes. See AC 150/5325-4, 102.a.(8) and AC 150/5070-6, 702.a. Indicated dimensions for wingspan and undercarriage, along with approach speed.	×			
8.	Airport magnetic variation, date and source	Magnetic declination may be calculated at http://www.ngdc.noaa.gov/geomag -web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	×			
9.	NPIAS service level (GA, RL, P, CS, etc.)	See FAA Order 5090.3C.	×			

		Airport Data Sheet				
	Item	Instructions	Spor	sor/Cons	ultant	FAA
			Yes	No	N/A	
	10. State equivalent service role	As applicable pursuant to State Aviation Department System Plan.	×			
D.	Runway Data Table	The Runway Data Table should show information for both existing and ultimate runways.				
	 Runway identification (Include identifying runways that are "utility") 	A column for each runway end should be present. List the runway end number and if pavement strength is less than 12,500 pounds (single-wheel), then note as utility.	×			
	2. Runway Design Code (RDC)	5300-13AThe first component, depicted by a letter, is the AAC and relates to aircraft approach speed (operational characteristics). The second component, depicted by a Roman numeral, is the ADG and relates to either the aircraft wingspan or tail height (physical characteristics); whichever is more restrictive. The third component relates to the visibility minimums expressed by RVR values in feet of 1200, 1600, 2400, and 4000. List the RDC for each runway. See AC 150/5300- 13A, Paragraph 105(c).	×			
	3. Runway Reference Code (RRC)	The RRC describes the current operational capabilities of a runway where no special operating procedures are necessary. Like the RDC, it is composed of three components: AAC, ADG, and visibility minimums. List the RRC for each Runway. See AC 150/5300-13A, Paragraph 318.	×			
	4. Pavement Strength & Material Type	Indicate the runway surface material type, e.g., turf, asphalt, concrete, water, etc.	×			
	a. Strength by wheel loading	List the existing and ultimate design strength of the landing surface. See AC 150/5320-6, Chapter 3.	×			
	b. Strength by PCN	See AC 150/5335-5.	×			

	ltem	Airport Data Sheet	Spor	nsor/Cons	ultant	FAA
			Yes	No	N/A	
	c. Surface treatment	Note any surface treatment: grooved, PFC, etc.	×	1		•
5.	Effective Runway Gradient (%) Author to note maximum grade within runway length. Note to included statement that the runway meets line of sight requirements	List the maximum longitudinal grade of each runway centerline. See AC 150/5300-13A, Paragraph 313.	×			
6.	Percent (%) Wind Coverage (each runway)	List the percent wind coverage for each runway for each Aircraft Approach Category. See AC 150/5300-13A, Appendix 2.	×			
7.	Runway dimensions (length and width)	Dimensions determined for the Critical Design Aircraft by using graphical information in AC 150/5325-4.	×			
8.	Displaced Threshold	Provide the pavement elevation of the runway pavement at any displaced threshold. See AC 150/5300-13A, Paragraph 303(2).	×			
9.	Runway safety area dimensions (actual existing and design standard)	List the existing and ultimate dimensions of the Runway Safety Area (RSA). See AC 150/5300- 13A, Paragraph 307.	×			
10.	Runway end coordinates (NAD83) (include displaced threshold coordinates, if applicable) to the nearest 0.01 second and 0.1 foot of elevation.	Show the latitude and longitude of the threshold center and end of pavement (if different) to the nearest .01 of a second and 0.1 foot of elevation.	×			
11.	Runway lighting type (LIRL, MIRL, HIRL)	List the existing and ultimate type of runway lighting system for each runway, e.g., Reflectors, Low Intensity Runway Lighting (LIRL), Medium Intensity Runway Lighting (MIRL), or High Intensity Runway Lighting (HIRL). LIRLs will typically not be shown for new systems. See AC 150/5340- 30, Ch. 2.	×			

	Item	Instructions	Spor	nsor/Cons	ultant	FAA
			Yes	No	N/A	1
12.	Runway Protection Zone (RPZ) Dimensions	List the existing and ultimate Runway Protection Zone (RPZ) dimensions. See AC 150/5300- 13A, Paragraph 310. Prior to including new or modified land use in the RPZ, the Regional and ADO staff must consult with the National Airport Planning and Environmental Division, APP- 400. This policy is exempt from existing land uses in the RPZ. See AC 150/5300-13A, Paragraph 310 and FAA memorandum dated September 27, 2012.	×			
13.	Runway marking type (visual or basic, non- precision, precision)	Indicate the existing and ultimate pavement markings for each runway. See AC 150/5340-1, Section 2.	×			
14.	14 CFR Part 77 approach category (50:1; 34:1; 20:1) Existing and Future	List the existing and ultimate approach surface slope. See FAA Order 7400.2, Figures 6-6-3 and 6-3-9.	×			
15.	Approach Type (precision, non-precision, visual)	List the existing and ultimate Part 77 Approach Use Types. See FAA Order 7400.2, Figures 6-6-3 and 6-3-9.	×			
16.	Visibility minimums (existing and future)	List the existing and ultimate visibility minimums for each runway. See AC 150/5300-13A, Table 1-3.	×			
17.	Type of Aeronautical Survey Required for Approach (Vertically Guided, not Vert. Guided)	List the type of aeronautical survey required for the visibility minimums given. See AC 150/5300-18, Section 2.7 and AC 150/5300-13A, Table 3-4 and Table 3-5.	×			
18.	Runway Departure Surface (Yes or N/A)"	Determine applicability of 40:1 Departure Obstacle Clearance Surface (OCS) as defined in Paragraph 303(c) of AC 150/5300-13A.	×			

Item	Airport Data Sheet	Spor	nsor/Cons	ultant	FAA
		Yes	No	N/A	-
19. Runway Object Free Area	List the existing and ultimate dimensions of the Runway Object Free Area (OFA). See AC 150/5300-13A, Paragraph 309. Objects non-essential for air navigation or aircraft ground maneuvering purposes must not be placed in the ROFA, unless a modification to standard has been approved.	×	I		
20. Obstacle Free Zone	The OFZ clearing standard precludes aircraft and other object penetrations, except for frangible NAVAIDs that need to be located in the OFZ because of their function. Modification to standards does not apply to the OFZ.	×			
	List the Runway OFZ, Inner- approach OFZ, Inner-transitional OFZ, and Precision OFZ if applicable.				
21. Threshold siting surface (TSS)	E List the existing and ultimate threshold siting surface (i.e. approach and departure surfaces). Identify any objects penetrating the surface. If none, state "No TSS Penetrations". Reference AC 150/5300-13A, Paragraph 303.	×			
22. Visual and instrument NAVAIDs (Localizer, G PAPI, etc.)	List the existing and ultimate S, visual navigational aids serving each runway.	×			
23. Touchdown Zone Elevation	List the highest runway centerline elevation in the existing and ultimate first 3000 feet from landing threshold. See FAA Order 8260.3, Appendix 1.	×			
23. Taxiway and Taxilane width	List the existing and ultimate width of the taxiways and taxilane. Reference AC 150/5300-13A, Paragraph 403 and Table 4-2.	×			
24. Taxiway and Taxilane Safety Area dimensions	List the existing and ultimate taxiway and taxilane safety area dimensions. Reference AC 150/5300-13A, Paragraph 404(c) and Table 4-1.	×			

Item	Instructions	Spor	nsor/Cons	Sponsor/Consultant	
		Yes	No	N/A	
25. Taxiway and Taxilane Object Free Area	List the existing and ultimate taxiway and taxilane object free area dimensions. Reference AC 150/5300-13A, Paragraph 404(b) and Table 4-1.	×			
26. Taxiway and Taxilane Separation	List any objects located inside the Taxiway/Taxilane Safety Area and Taxiway/Taxilane Object Free Area. Also provide the distance from the taxiway/taxilane centerline to the fixed or movable object. Reference Paragraph 404(a) and Table 4-1.	×			
27. Taxiway/Taxilane lighting	List the existing and ultimate type of taxiway lighting system, e.g., Reflectors, Low Intensity Taxiway Lighting (LITL), Medium Intensity Taxiway Lighting (MITL), or High Intensity Taxiway Lighting (HITL). LITLs will typically not be shown for new systems. See AC 150/5340-30, Chapter 4.	×			
28. Identify the vertical and horizontal datum	All latitude/longitude coordinates shall be in North American Datum of 1983 (NAD 83). A note shall be put on the Airport Layout Drawing that denotes that the NAD 83 coordinate system was used.	×			
	All elevations shall be NAVD88. A note shall be put on the Airport Layout Drawing that denotes that the NAVD88 vertical control datum was used.				
E. Modification to Standards Approval Table (if applicable, a separate written request, including justification, should accompany the modification to standards). Show: Approva	Provide a table to list all FAA approved Modifications to Standards. See AC 150/5300- 13A, Paragraph 106(b), and FAA Order 5300.1.	×			
Date/ Airspace Case No. / Standard to be Modified / Description	List "None Required" on the table if no Modifications have yet been proposed or approved.				

A-19

	Airport Data Sheet				
Item	Instructions	Spon	sor/Cons	ultant	FAA
		Yes	No	N/A	
F. Declared Distances Table	Required even if Declared Distances are not in effect. Declared distances are only to be used for runways with turbine- powered aircraft. The TORA, TODA, ASDA, and LDA will be equal to the runway length in cases where a runway does not have displaced thresholds, stopways, or clearways, and have standard RSAs, ROFAs, RPZs, and TSS. Reference AC 150/5300-13A, Paragraph 323.	×			
1. Take Off Run Available (TORA)	List the runway length declared available and suitable for the ground run of an airplane taking off, i.e., Take Off Run Available (TORA). The TORA may be reduced such that it ends prior to the runway to resolve incompatible land uses in the departure RPZ, and/or to mitigate environmental effects. Reference AC 150/5300-13A, Paragraph 323(d)(1).	×			
2. Take Off Distance Available (TODA)	List the length of remaining runway or clearway (CWY) beyond the far end of the TORA ADDED TO the TORA. The resulting sum is the Take Off Distance Available (TODA) for the runway. The TODA may be reduced to mitigate penetrations to the 40:1 instrument departure surface, if applicable. The TODA may also extend beyond the runway end through the use of a clearway Reference AC 150/5300-13A, Paragraph 323(d)(2).	×			
3. Accelerate Stop Distance Available (ASDA)	5300-13A List the length the length of runway plus stopway (if any) declared available and suitable for satisfying accelerate- stop distance requirements for a rejected takeoff. Additional RSA and ROFA can be obtained by reducing the ASDA. Reference AC 150/5300-13A, Paragraph 323(d)(3).	×			

Item	Airport Data Sheet Instructions	Spon	FAA		
		Yes	No	N/A	
4. Landing Distance Available (LDA)	5300-13A List the length of runway declared available and suitable for satisfying landing distance requirements. The LDA may be reduced to satisfy the approach RPZ, RSA, and ROFA requirements. Reference AC 150/5300-13A, Paragraph 323(e).	×			
G. Legend	Provide a Legend that identifies all symbols and line types used on the drawing. Lines must be clear and readable with sufficient scale and quality to discern details.			×	
Remarks					
For declared distances see runway	data table				
For declared distances see runway	data table				

A.4. Airport Layout Plan Drawing

- For smaller airports, some of the ALP sheets may be combined if practical and approved by FAA.
- 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')

		Airport Layout Plan Drawing				
	Item	Instructions	Spor	sor/Consi	ultant	FAA
			Yes	No	N/A	
Α.	Title and Revision Blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	×			
B.	Space for the FAA approval stamp	Leave a blank four-inch by four- inch area for the FAA approval stamp.	×			
C.	Layout of existing and proposed facilities and features:	To assure full consideration of future airport development in 14 CFR Part 77 studies, airport owners must have their plans on file with the FAA. The necessary plan data includes, as a minimum, planned runway end coordinates, elevation, and type of approach for any new runway or runway extension. See AC 150/5300-13A, Paragraph 106.	×			
	 True and magnetic North arrow with year of magnetic declination 	Magnetic declination may be calculated at <u>http://www.ngdc.noaa.gov/geomag-</u> web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	×			
	 Airport reference point – locate by symbol a Lat./Long. To nearest second (existing, future, and ultimate) NAD 83 	List the Airport Reference Point, the latitude and longitude of the approximate center of the airport. Use the NAD 83 coordinate system. See AC 150/5300-13A, Paragraph 207.	×			
	 Wind cones, segmented circle, beacon, AWOS, etc. 	Show as applicable pursuant to AC 150/5300-13A, Chapter 6.	×			

		Item	Instructions	Spor	sor/Cons	ultant	FAA
				Yes	No	N/A	1
4.	Contours (showing only significant terrain differences)		Topography, budget, and future uses of the base mapping, will dictate what intervals of topographical contours to use on the maps. Topographic issues may be important in the alternatives analysis, which may require that reduced contour intervals be used. See AC 150/5070-6, 1005.	×			
5.	Ele	vations: All NAVD88	All latitude/longitude coordinates shall be in NAD83/NAVD88.				
	a.	Runway – existing, future, and ultimate ends (nearest 0.1 ft.)	Show the latitude and longitude of the threshold center and end of pavement.	×			
	b.	Touchdown Zone Elevation (highest point in first 3,000 ft. of runway)	List the highest runway centerline elevation in the existing and ultimate first 3000 feet from landing threshold. See FAA Order 8260.3, Appendix 1.	×			
	C.	Runway high/low points (existing and future)	For all runways identify high and low points (centerline) and provide elevation information.	×			
	d.	Label runway/runway intersection elevations	Label the pavement elevation of runway intersections where the centerlines cross.			×	
	e.	Displaced Thresholds (if any)	Label the pavement elevation and coordinates of the runway pavement at any displaced threshold. See AC 150/5300- 13A, Paragraph 303(a)(2).	×			
	f.	Roadways & Railroads (where they intersect Approach surfaces, the extended runway centerline, and at the most critical points)	Provide elevation information for the traverse ways' centerline elevation where they intersect the Part 77 Approach surfaces (existing and ultimate). Note whether this elevation is the actual elevation or the traverseway elevation plus the traverseway adjustment (23' for railways, 17' for interstate highways, 15' for other public roads, or 10' for private roads). See also 14 CFR Part 77.	×			

			Airport Layout Plan Drawing				
		Item	Instructions	Spor	nsor/Cons	ultant	FAA
				Yes	No	N/A	
	g.	Structures, Buildings, and Facilities	All buildings on the Airport Layout Drawing should be identified by an alphanumeric character. List these identifiers in a table and give a description of the building. If no Terminal Area drawing is done, also include the top of structure elevation in MSL. If any of the structures violate any airport or approach surfaces give an ultimate disposition to remedy the violation. Don't forget navigation aid shelters, AWOS/ASOS, RVRs, PAPIs, Fueling systems, REILs, etc. Also identify the structure use (hangar, FBO, crew quarters, etc.), as needed. Some lesser objects may be identified by symbols in the legend.		×		
	h.	Define features to include: trees streams, water bodies, etc.	Provide information and delineate trees, streams, water bodies, etc., on or near airport property and approach surfaces.	×			
6.	Ru	nway Details					
	a.	Runway Design – runway length, runway width, shoulder width, blast pad width, blast pad length, and cross wind component. (existing, future, and ultimate)	AC 150/5325-4 describes procedures for establishing the appropriate runway length. AC 150/5300-13A, Table 3-4 and Table 3-5 provides the minimum runway length. AC 150/5300-13A, Table 3-8 provides the standard dimensions of the runway width, shoulder width, blast pad width, blast pad length, and crosswind component	×			
	b.	Orientation – true bearing to nearest 0.01 second (and runway numbers)	based on RDC. Clearly denote the runway numbers at the thresholds. Show location of existing and future threshold lights. Show the true bearing to the nearest .01 of a degree of the runway centerline.	×			

		Airport Layout Plan Drawing				_
	Item	Instructions	Spor	nsor/Cons	ultant	FAA
			Yes	No	N/A	
c.	End Coordinates – existing, future, and ultimate degrees, minutes, seconds (to the nearest 0.01 second)	Show the latitude and longitude of the threshold center and end of pavement (if different) to the nearest .01 of a second.	×			
d.	Runway Safety Areas (RSA) – actual, existing, future, and ultimate (including dimensions)	Show the extents of the existing and ultimate RSA 5300-13A. Reference AC 150/5300-13A, Paragraph 307.	×			
e.	Runway Object Free Areas (ROFA)	Show the extents of the existing and ultimate ROFA. Reference AC 150/5300-13A, Paragraph 309.	×			
f.	Precision Obstacle Free Zone (POFZ)	Show the extents of the existing and ultimate POFZ. Reference AC 150/5300-13A, Paragraph 308(d).			×	
g.	Obstacle Free Zone (OFZ)	Show the extents of the existing and ultimate OFZ. Reference AC 150/5300-13A, Paragraph 308.	×			
h.	Clearways and Stopways	Show any/all clearways and stopways/overruns and the markings used to denote these areas. See AC 150/5300-13A, Paragraph 311 and 312; and AC 150/5340-1, Section 2, Paragraph 14.	×			
i.	Runway Protection Zone (RPZ) - Dimensions (existing, future, and ultimate)	Show existing and ultimate RPZ. See AC 150/5300-13A, Paragraph 310. Show the existing and ultimate protective area/zone type of ownership. Identify any incompatible objects and activities inside the RPZ. Prior to including new or modified land use in the RPZ, the Regional and ADO staff must consult with the National Airport Planning and Environmental Division, APP- 400. This policy is exempt from existing land uses in the RPZ. See AC 150/5300-13A, Paragraph 310 and FAA memorandum dated September 27, 2012.	×			

	Item	Instructions	Spor	nsor/Cons	ultant	FAA
			Yes	No	N/A	-
j.	14 CFR Part 77 Approach Surfaces	Show the portion of the existing and ultimate approach surfaces that are over airport and adjacent property and identify the approach surface dimensions and slope. See FAA Order 7400.2, Figure 6-3-9.	×			
k	Threshold Siting Criteria: Approach/Departure Surface (existing, future, and ultimate) 5300-13A	Determine and identify pursuant to AC 150/5300-13A, Paragraph 303(b) and 303(c).	×			
I.	Terminal Instrument Procedures (TERPS)surface and TERPS GQS, if applicable.	Determine and identify pursuant to AC 150/5300-13A, Paragraph 303(a)(4)(a), Table 3-4, and Table 3-5. Reference FAA Order 8260.3.		×		
rr	n. Navigation Aids (NAVAIDS) – PAPI, ILS, GS, LOC, ALS, MALSR, REIL, etc., (plus facility critical area's)	Show all NAVAIDS and provide clearance distances from runways, taxiways, etc. Reference AC 150/5300-13A, Chapter 6.	×			
n	. Marking – thresholds, hold lines, etc.	Show on the runway the type and location of markings, existing and ultimate. See AC 150/5340-1, Section 2.	×			
0	Displaced threshold coordinates and elevation	Show the latitude, longitude, and the pavement elevation of the runway pavement at any displaced threshold. See AC 150/5300-13A, Paragraph 303(a)(2).5300-13A.	×			
p	. Runway centerline separation distances	Show the runway centerline separation distances to parallel runway centerline, holding position, parallel taxiway/taxilane centerline, aircraft parking area, and helicopter touchdown pad, if applicable. Reference AC 150/5300-13A, Paragraph 321 and Table 3-8.	×			
7. T	axiway Details	Show the taxiway centerline separation distances to parallel taxiway/taxilane centerlines, fixed or movable objects.	×			

	Item	Airport Layout Plan Drawing	Snor	nsor/Cons	ultant	FAA
	hom	mondotiono	Yes	No	N/A	
a	 Dimensions – width (existing & ultimate) 	Taxiway width based on Taxiway Design Group (TDG). See AC 150/5300-13A, Table 4-2.	×			
b	b. Taxiway Edge Safety Margin (TESM)	TESM dimension based on TDG. See AC 150/5300-13A, Table 4- 2.		×		
с	. Taxiway Shoulder Width	Taxiway shoulder width based on TDG. See AC 150/5300-13A, Table 4-2.	×			
b	o. Taxiway/Taxilane Object Free Area (TOFA)	TOFA width based on Taxiway Design Group (TDG). TOFA extend the entire length of taxiway. See AC 150/5300-13A, Table 4-1.	×			
С	:. Taxiway/Taxilane Safety Area (TSA)	TSA width based on TDG. TSA extend the entire length of taxiway. See AC 150/5300-13A, Table 4-1.	×			
d	I. Taxiway/Taxilane Centerline Separation from:					
	i. Runway centerline	Show the distance from centerline of runway to centerline of taxiway. See AC 150/5300- 13A, Table 4-1.	×			
	ii. Parallel taxiway	Show the distance from centerline of taxiway to centerline of parallel taxiway. See AC 150/5300-13A, Table 4-1.	×			
	iii. Aircraft parking	Show the distance from centerline of taxiway to marked aircraft parking/tie downs. See AC 150/5300-13A, Table 4-1.	×			
	iv. Fixed or Movable Objects	Show the distance from centerline of taxiway to airport objects such as buildings, facilities, poles, etc. See AC 150/5300-13A, Table 4-1.	×			
8. F	ences (identify height)	Show the location of existing and ultimate fences and identify height.	×			

		Item	Instructions	Spor	nsor/Cons	ultant	FAA
				Yes	No	N/A	-
9.	Ар	rons					
	a.	Dimensions (square footage, dimension, or length and width)	Include dimensions of apron and distance from runway and taxiway centerlines. Apron should be sized using activity forecast and the apron design spreadsheet. See AC 150/5300- 13A, Chapter 5 and FAA Engineering Brief No. 75.	×			
	b.	Identify aircraft tie- down layout	Show proposed tie-down layout on the apron area. See AC 150/5300-13A, Figure A5-1, AC 20-35, and AC 150/5340-1.	×			
	c.	Identify Special Use Areas (e.g., deicing or aerial application areas on or near apron)	Show as applicable and pursuant to representative ACs.	×			
10.	Ro	ads	Label all roads.	×			
11.	Leç	gend	Provide a Legend that identifies all symbols and line types used on the drawing. Lines must be clear and readable with sufficient scale and quality to discern details.	×			
12.		ns to be identified with tinct line types	Use distinct line types to identify different items and differentiate between existing and ultimate.				
	a.	NAVAID Critical Areas (Glide Slope, Localizer, AWOS, ASOS, VOR, RVR, etc.)	Show the critical area outline for all Instrument Landing System and other electronic Navigational Aids located on the airport. See AC 150/5300-13A, Chapter 6 for general guidance and FAA Order 5750.16 for critical area dimensions.	×			
	b.	Building Restriction Lines 5300- 13A(BRL)	The BRL is the line indicating where airport buildings must not be located, limiting building proximity to aircraft movement areas. See AC 150/5300-13A, Paragraph 213(a).	×			
	C.	Runway Visibility Zone (RVZ)	Show the RVZ for the existing and ultimate airport configurations. See AC 150/5300-13A, 305(c).			×	

		Item	Instructions	Spor	sor/Cons	ultant	FAA
				Yes	No	N/A	
	d.	Airport Property Lines and Easements (existing, future, and ultimate)	Show the airport property boundaries, including easements, for the existing and ultimate airport configurations.	×			
13.	Su	rvey Documentation					
	a.	Survey Monuments (PACS/SACS, see AC 150/5300-16)	Show the location of all established survey monuments located on or near the airport property. Identify Primary and Secondary Airport Control Stations (PACS/SACS) if they exist. See AC 150/5300-16.		×		
			Show the location of all section corners on or near the airport property.				
	b.	Offsets, stations, etc.	Show as applicable.		×		
14.	Tov sig (us	y Air Traffic Control wer (ATCT) line of ht/shadow study areas e separate sheet if cessary)	Reference FAA Order 6480.4.			×	
15.	dev fue har det	neral Aviation velopment area (e.g., I facilities, FBO, ngars, etc.) – greater ail can be shown on terminal area drawing	Show as applicable.	×			
16.	are pha	cilities and movement eas that are to be ased out, if any, are scribed	Show as applicable.			×	
lemar	ks						
ee T/	AP fo	or building facilties numb	ers and Exhibit A for PACS/SACS/Mo	numents			

A.5. Airport Airspace Drawing

- A required drawing.
- Scale 1" = 2000' plan view, 1" = 1000' approach profiles, 1"=100' (vertical) for approach profiles.
- 14 CFR Part 77, Objects Affecting Navigable Airspace, defines this as a drawing depicting obstacle identification surfaces for the full extent of all airport development. It should also depict airspace obstructions for the portions of the surfaces excluded from the Inner Portion of the Approach Surface Drawing.

			Airport Airspace Drawing				
		Item	Instructions	Spon	sor/Cons	ultant	FAA
				Yes	No	N/A	
Α.	Title	e and Revision Block	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as- builts, the revision block should show the current revision number and date of revision.	×			
В.		n view (based on ultimate ru er or sewage facilities if insic	nway lengths) Include location of le horizontal surface.				
	1.	U.S. Geological Survey (USGS) Quad Sheet for base map	Use the most current USGS Quadrangle(s) as a base map for the airspace drawing.	×			
	2.	Runway end numbers	Show the ultimate runways and runway numbers. Contact the FAA before renumbering existing runways.	×			
	3.	Part 77 Surfaces (Horizontal, Conical, Transition, based on ultimate). Including elevations at the point where surfaces change.	Show the extents of the Part 77 imaginary surfaces. For airports that have precision approach runways show balance of the 40,000' approach on a second sheet, if necessary. See 14 CFR Part 77.19.	×			
	4.	50' elevation contours on sloping surfaces (NAVD88)	Show contour lines on all sloping Part 77 imaginary surfaces. See 14 CFR Part 77.19.	×			
	5.	Top elevations of penetrating objects for the inner portion of the approach surface drawing	Identify by unique alphanumeric symbol all objects beyond the Runway Protection Zones that penetrate any of the Part 77 surfaces. See 14 CFR Part 77.	×			
	6.	Note specifying height restriction (ordinances/statutes)	List any local zoning restrictions that are in place to protect the airport and surrounding airspace. See AC 150/5190-4.		×		

	Item	Airport Airspace Drawing Instructions	Spor	nsor/Cons	ultant	FAA
	nem	listidetions	Yes	No	N/A	
7.	North Arrow with magnetic declination and year	Magnetic declination may be calculated at http://www.ngdc.noaa.gov/geomag -web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	×			
C. Pro	file view					
1.	Airport Elevation	List the Airport Elevation, the highest point on an airport's usable runway expressed in feet above mean sea level (MSL). Use NAVD88 datum. See AC 150/5300-13A, Chapter 1, Paragraph 102(g).	×			
2.	Composite Ground Profile along extended Runway Centerline (Representing the composite profile, based on the highest terrain across the width and along the length of the approach surface)	Depict the ground profile along the extended runway centerline representing the composite profile, based on the highest terrain across the width and along the length of the approach surface.	×			
3.	Significant objects (bluffs, rivers, roads, schools, towers, etc.) and elevations	Identify all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions. Use the objects' same alphanumeric identifier that was used on the plan view.	×			
		Identify the top elevations of all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions.				
4.	Existing, future, and ultimate runway ends and approach slopes	Show existing and ultimate runway ends and FAR Part 77 approach surface slopes. See 14 CFR Part 77.19.	×			

	Item	Instructions	Spor	nsor/Cons	ultant	FAA
			Yes	No	N/A	
	struction Data Tables (iden Portion of the Approach Su	tify obstacles not depicted on the rface Drawing)				
1.	Object identification number	Identify all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions. Use the objects alphanumeric identifier that was used on the plan view.	×			
		Identify the top elevations of all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions.				
2.	Description	Provide a brief description of the object, e.g., Power Pole, Cell Tower, Natural Gas Flare, etc.	×			
3.	Date of Obstruction Survey	Provide the date of latest obstruction survey.	×			
4.	Ground Surface Elevation	n Provide the ground surface elevation (MSL) at the base of each object.	×			
5.	Object Elevation	List the above ground level (AGL) height and the top of object elevation (above mean sea level / AMSL / MSL) for each object.	×			
6.	Amount of surface penetration	List the surface that is penetrated and the amount the object protrudes above the surface. See 14 CFR Part 77.	×			
7.	Proposed or existing disposition of the obstruction	Provide a proposed or existing disposition of the object to remedy the penetration. See AC 70/7460-1.	×			
	a. Proposed Disposition (existing)	n	×			
	b. Proposed Disposition (future)	n	×			

See Appendix G of Master Plan Report for expanded disposition plan. See Land Use Plan (Sheet 14) for zoning height ordinance.

A.6. Inner Portion of the Approach Surface Drawing

- A required drawing.
- Scale 1"=200' Horizontal, 1"=20' Vertical, 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 feet above the runway threshold elevation, at a minimum, or the limits of the RPZ, whichever is further.
- Drawings containing the plan and profile view of the inner portion of the approach surface to the runway and a tabular listing of all surface penetrations. The drawing will depict the obstacle identification approach surfaces contained in 14 CFR Part 77, Objects Affecting Navigable Airspace. The drawing may also depict other surfaces, including the threshold-siting surface, Glideslope Qualification Surface (GQS), those surfaces associated with United States Standards for Instrument Procedures (TERPS), or those required by the local FAA office or state agency. The extent of the approach surface and the number of airspace obstructions shown may restrict each sheet to only one runway end or approach.

		Inn	er Portion of the Approach Surface	Drawing			
		Item	Instructions	Spor	sor/Cons	ultant	FAA
				Yes	No	N/A	
A.	Titl	e and Revision Block	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as- builts, the revision block should show the current revision number and date of revision.	×			
В.	Pla	n View (existing, future, and	ultimate)				
	1.	Inner portion of approach surface	Show the area from the runway threshold out to where the ultimate approach surface slope is 100 feet above the threshold elevation.	×			
	2.	Aerial photo for base map	Use an aerial photograph for the base map.	×			
	3.	Objects (identified by numbers)	Identify all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions using an alphanumeric character.	×			
	4.	Property line within approaches	Show the property lines that are within the area/portion of airport shown.	×			

		Inner Portion of the Approach Surface	Drawing			_
	Item	Instructions	Spor	sor/Cons	ultant	FAA
			Yes	No	N/A	
5.	Road & railroad elevations, plus movable object heights	Provide elevation information for the traverse ways' centerline elevation where they intersect the Part 77 Approach surfaces (existing and ultimate). Note whether this elevation is the actual elevation or the traverse way elevation plus the traverse way adjustment (23' for railways, 17' for interstate highways, 15' for other public roads, or 10' for private roads). See also 14 CFR Part 77.	×			
6.	Part 77 Approach Surface clearance over Roads and Railroads at the most critical points, the Centerline and Edge of the surface.	centerline of the Part 77	×			
7.	Physical end of runway, end number, elevation (NAVD88) Nearest 0.1 foot	Show the existing and ultimate runway end, runway number, and the elevation of the threshold center.	×			
8.	Airport Design Surfaces					
	a. Runway Safety Are	a Show the extents of the existing and ultimate Runway Safety Area (RSA). See AC 150/5300-13A, Paragraph 307 and Table 3-8.	×			
	b. Runway Object Fre Area	e Show the extents of the existing and ultimate Object Free Area (OFA). See AC 150/5300-13A, Paragraph 309 and Table 3-8.	×			
	c. Runway Obstacle Free Zone (OFZ)	Show the extents of the existing and ultimate OFZ which includes the inner-approach OFZ, inner- transitional OFZ, and the Precision OFZ (POFZ), if applicable. See AC 150/5300- 13A, Paragraph 308.	×			

		Inn	er Portion of the Approach Surface	Drawing			
		Item	Instructions	Spor	sor/Consu	ultant	FAA
				Yes	No	N/A	
		d. Runway Protection Zone (RPZ)	Show the extents of the existing and ultimate RPZ. Prior to including new or modified land use in the RPZ, the Regional and ADO staff must consult with the National Airport Planning and Environmental Division, APP- 400. This policy is exempt from existing land uses in the RPZ. See AC 150/5300-13A, Paragraph 310, Table 3-5 and FAA memorandum dated September 27, 2012.	×			
		e. NAVAID critical area	Show the critical area outline for all Instrument Landing System and other electronic Navigational Aids located on the airport. See AC 150/5300-13A, Chapter 6 for general guidance and FAA Order 5750.16 for critical area dimensions.	×			
	9.	Ground contours	Show ground contour lines in 2', 5', or 10' intervals. Topographic issues may be important in the alternatives analysis, which may require that reduced contour intervals be used. See AC 150/5070-6, Paragraph 1005.	×			
	10.	North arrow with magnetic declination and year	Magnetic declination may be calculated at http://www.ngdc.noaa.gov/geomag -web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, Chapter 2, Section 5, for further information.	×			
C.	Pro	file view					
	1.	Existing and proposed runway centerline ground profile (list elevations at runway ends & at all points of grade changes) (representing the composite profile based on the highest terrain across the width and along the length of the approach surface)	Depict the ground profile along the extended runway centerline representing the composite profile, based on the highest terrain across the width and along the length of the approach surface to where the ultimate approach surface slope is 100 feet above the threshold elevation. A more effective presentation may be a rendering of a composite critical profile.	×			

		Inn	er Portion of the Approach Surface	Drawing			
		Item	Instructions	Spor	sor/Cons	ultant	FAA
				Yes	No	N/A	
	2.	Future development from plan view	Identify future development using same alphanumeric identifier that was used on the plan view.	×			
	3.	Part 77 Approach/transition surface; existing and future VASI/PAPI siting surface	Show the boundaries of the existing and ultimate Part 77 Approach Surface. See FAA Order 7400.2, Figure 6-3-9, See also 14 CFR Part 77.	×			
	4.	Threshold Siting Surface	Depict any applicable siting requirements pursuant to Table 3-2 of FAA AC 150/5300-13A.	×			
	5.	Terrain in approach area (fences, streams, etc.)	Show all significant terrain(fences, streams, mountains, etc.) within the approach surfaces, regardless of whether or not they are obstructions	×			
	6.	Objects – identify the controlling object (same numbers as plan view)	Show all significant objects (roads, rivers, railroads, towers, sign and power poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions.	×			
			Identify the objects using same alphanumeric identifier that was used on the plan view.				
	7.	Cross section of road & railroad	Show the cross-section of any roads and/or railroads that cross the area shown. Indicate cross section elevations of roads and railroads at edges and extended centerlines that cross the area shown.	×			
	8.	Existing and proposed property and easement lines	Show the airport property boundaries, including easements, for the existing and ultimate airport configurations. AC 5300- 13A Note easements for pipelines and residential through the fence gateways.	×			
D.	app	struction tables for each proach surface (surface puld be identified)	A separate table for each runway end must be used to enhance information clarity.				
	1.	Object identification number	List each object by the same alphanumeric symbol used in the plan view.	×			

	Inne	er Portion of the Approach Surface	Drawing			
	Item	Instructions	Spon	sor/Cons	ultant	FAA
			Yes	No	N/A	
2.	Description	Provide a brief description of the object, e.g., Power Pole, Cell Tower, Natural Gas Flare, etc.	×			
3.	Date of Obstruction Survey and Survey Accuracy	Provide the date of latest obstruction survey.	×			
4.	Surface Penetrations	5300-13A For any object that penetrates the Part 77 surface, the approach surface, or the obstacle free zone, describe the vertical length the object protrudes.	×			
5.	Proposed disposition of surface penetrations	Provide a proposed disposition of the object to remedy the penetration as described in item 4 above. See AC 70/7460-1 for Part 77 violations. "Removal" and/or "Lower" should be listed for any Airports safety area/zone violations. See AC 150/5300- 13A, Paragraph 303 and 308.	×			
6.	Object elevation	List the Above Ground Level (AGL) height and the top of object elevation in MSL for each object.	×			
7.	Triggering Event (e.g., a runway extension) – Timeframe/expected date for removal	List the surface that is penetrated and the amount the object protrudes above the surface. See 14 CFR Part 77 and AC 150/5300-13A, Paragraphs 303 and 308.	×			
8.	Allowable approach surface elevation (if applicable)		×			
9.	Amount of approach surface penetration (if applicable)					
10.	Proposed disposition of approach surface obstruction (if applicable)	Provide a proposed disposition of the object to remedy the penetration. See AC 70/7460-1 for Part 77 violations. "Removal" and/or "Lower" should be listed for any Airports safety area/zone violations. See AC 150/5300- 13A, Paragraph 303.	×			

Item	Instructions	Spor	nsor/Cons	ultant	FAA
		Yes	No	N/A	
11. Obstacle Free Zone (OFZ)	Determine and depict the applicable OFZ surfaces, see AC 150/5300-13A, Paragraph 308. Provide a proposed disposition of the object to remedy the penetration. Note: Modification to the OFZ standard is not permitted.		×		
E. Runway Centerline Profile	This may be shown on the Inner Portion of the Approach Surface drawing if there is space to show the runway and Runway Safety Area in sufficient detail otherwise a separate sheet may be necessary. At a minimum this drawing is to show the full length of the runway and Runway Safety Area including: runway elevations, runway and Runway Safety Area gradients, all vertical curves, and a line representing the 5' line-of-sight. See AC 150/5300-13A, Paragraph 305.	×			
1. Scale	The vertical scale of this drawing must be able to show the separation of the runway surface and the 5' Line-of-Sight line. See AC 150/5300-13A, Paragraph 305.	×			
2. Elevation	Show runway elevations, runway and Runway Safety Area gradients, and all vertical curve data. See AC 150/5300-13A, Paragraph 318.	×			
3. Line of Sight	The vertical scale of this drawing must be able to show the separation of the runway surface and the 5' Line-of-Sight line. See AC 150/5300-13A, Section 305.			×	
Remarks					
See Appendix G of Master Plar	Report for expanded disposition plan.				

A.7. Runway Departure Surface Drawing

- Required where applicable. For each runway that is designated for instrument departures.
- This drawing depicts the applicable departure surfaces as defined in Paragraph 303 of FAA AC 150/5300-13A. The surfaces are shown for runway end(s) designated for instrument departures.
- 40:1 for Instrument Procedure Runways (Scale, 1" = 1000' Horizontal, 1" = 100' Vertical, Out to 10,200' beyond Runway threshold) 62.5:1 for Commercial Service Runways (Scale, 1" = 2000' Horizontal, 1" = 100' Vertical, Out to 50,000' beyond Runway threshold).
- Contact the FAA if the scale does not allow the entire area to fit on a single sheet. The depiction of the One Engine Inoperative (OEI) surface is optional; it is not currently required.

			Runway Departure Surface Draw	ing			
		Item	Instructions	Spon	sor/Consu	ultant	FAA
				Yes	No	N/A	
Α.	Titl	e and Revision Blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	×			
В.	Pla	n view (existing & future)	See AC 150/5300-13A, Paragraph 303(c).				
	1.	Aerial Photo for base map	Use an aerial photograph for the base map. A USGS 7.5 minute series map is also acceptable.	×			
	2.	Runway end numbers and elevations (nearest 1/10 of a foot)	Show the existing and ultimate runway end, runway number, and the elevation of the threshold center. For runways that have a clearway, depict this surface and the relocated departure surface. Reference AC 150/5300-13A, Paragraph 303(c)(1).	×			
	3.	50' elevation contours on sloping surfaces (NAVD88)	Show contour lines on the Part 77 imaginary surfaces. See 14 CFR Part 77.19.			×	
	4.	Depict property line, including easements	Show the property line(s) that are within the area/portion of airport shown.	×			
	5.	Identify, by numbers, all traverse ways with elevations and computed vertical clearance in the departure surface	Identify all significant objects (roads, rivers, railroads, towers, poles, etc.) within the departure surfaces, regardless of whether or not they are obstructions using unique alphanumeric characters.	×			

			Runway Departure Surface Draw				
		ltem	Instructions		nsor/Cons	1	FAA
				Yes	No	N/A	
	6.	Ground contours	Show ground contour lines in 2', 5', or 10' intervals. Topographic issues may be important in the alternatives analysis, which may require that reduced contour intervals be used.	×			
C.	Pro	file view (existing & future)					
	1.	Ground profile	Depict the ground profile along the extended runway centerline representing the composite profile, based on the highest terrain across the width and along the length of the departure surface to extents of the surface dimensions.	×			
	2.	Significant objects (bluffs, rivers, roads, buildings, fences, structures, etc.)	Show all significant objects (roads, rivers, railroads, towers, poles, etc.) within the approach surfaces, regardless of whether or not they are obstructions using an alphanumeric character.	×			
	3.	Identify obstructions with numbers on the plan view	Identify the objects using same alphanumeric identifier that was used on the plan view.	×			
	4.	Show roads and railroads with dashed lines at edge of the departure surface	Show the cross-section of any roads and/or railroads that cross the area shown.	×			
D.	Ob	struction Data Tables					
	1.	Object identification number	Identify all significant objects (roads, rivers, railroads, towers, poles, etc.) within the departure surfaces, regardless of whether or not they are obstructions using unique alphanumeric characters. List each object by the same alphanumeric symbol used in the plan view.	×			
	2.	Description	Provide a brief description of the object, e.g., Power Pole, Cell Tower, Tree, Natural Gas Flare, etc.	×			
	3.	Object Elevation	List the Above Ground Level (AGL) height and the top of object elevation in MSL for each object.	×			

	Item	Instructions	Sponsor/Consultant			FAA
			Yes	No	N/A	
4.	Amount of surface penetration	List the object protrudes above the departure surface. See AC 150/5300-13A, Paragraph 303(c).	×			
5.	Proposed or existing disposition of the obstruction	Provide a proposed disposition of the object to remedy the penetration. See AC 150/5300- 13A, Paragraph 303(c).	×			
6.	Separate table for each departure surface	A separate table for each runway end must be used to enhance information clarity.	×			
Rema	rks					
See Ap	opendix G of Master Plan Re	port for expanded disposition plan.				

A.8. Terminal Area Drawing

- Scale 1"=50' or 1"=100'. Plan view of aprons, buildings, hangars, parking lots, roads.
- This plan consists of one or more drawings that present a large-scale depiction of areas with significant terminal facility development. Such a drawing is typically an enlargement of a portion of the ALP. At a commercial service airport, the drawing would include the passenger terminal area, but might also include general aviation facilities and cargo facilities. See AC 150/5300-13A, Appendix 5.
- Use scale that allows the extent of the terminal/FBO apron area to best fit the chosen sheet size, e.g., typical GA airports may be able to use 1"=50' scale on a 22" X 34" sheet, but a complex hub airport with multiple terminal areas may require a 1"=100' scale on a 36" X 48" sheet. Contact FAA if an airport layout requires scaling or sheet sizing other than what is listed.

			Terminal Area Drawing				
		Item	Instructions	Spor	sor/Cons	ultant	FAA
				Yes	No	N/A	
Α.	Title :	and Revision Blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	×			
В.	Build 1	ing data table Structure identification	All buildings on the Airport Layout Drawing should be identified by an alphanumeric character. List				
	1.	number	these identifiers in a table and give a description of the building.	×			
	2.	Top elevation of structures (AMSL)	If no Terminal Area drawing is done, also include the top of structure elevation in MSL.	×			
	3.	Obstruction marking/lighting (existing/future)	Show the location of existing and ultimate hangars. Include dimensions of apron and distance from runway and taxiway centerlines. See AC 150/5300- 13A, Appendix 5. Show the elevation of the highest point of each structure.	×			
C.		ldings to be removed or ocated noted	If any of the structures violate any airport or approach surfaces give an ultimate disposition to remedy the violation.	×			
D.	Fue futu	eling facilities, existing and ire	Show the location of existing and ultimate fueling facilities. Include dimensions of apron and distance from runway and taxiway centerlines.	×			

• This drawing is not needed at every airport type and is therefore optional.

		Terminal Area Drawing				
	Item	Instructions	Spor	sor/Consi	ultant	FAA
			Yes	No	N/A	
E.	Air carrier gates positions shown (existing/future)	Show the existing and ultimate air carrier gate positions. See AC 150/5300-13A, Chapter 5.			×	
F.	Existing and future security fencing with gates	Show the existing and ultimate security fencing and gates. See AC 150/5300-13A, Paragraph 606.	×			
G.	Building restriction line (BRL)	Show the Building Restriction Line (BRL) that is within the area/portion of airport shown. The BRL identifies suitable building area locations on airports. This should be located where the Part 77 surfaces are at 35' above the airport elevation unless a different height is coordinated with the FAA. See AC 150/5300-13A, Paragraph 213(a).	×			
H.	Taxiway or Taxilane centerlines designated	Show centerlines of all taxiway and taxilanes within the area/portion of airport shown.	×			
I. D	limensions					
	 Clearance Dimensions between runway, taxiway, and taxilane centerlines and hangars, buildings, aircraft parking, and other objects. 	Show the location of existing and ultimate apron. Include dimensions of apron and distance from runway and taxiway centerlines. Apron should be sized using activity forecast and the apron design spreadsheet.	×			
	2. Dimensions of aprons, taxiways, etc.	See AC 150/5300-13A, Chapter 5 and FAA Engineering Brief No. 75.				
me crit and the dep Inc	ron/Hangar areas that do not et dimensional standards of the ical aircraft should be identified d the wingspan/design group of aircraft that can use that area picted. Iude tie down location with arances	Show the dimensions between existing and ultimate runway, taxiway, and taxilane centerlines and existing and ultimate hangars, buildings, aircraft parking, and other fixed or movable objects. See AC 150/5300-13A, Chapter 3 and Chapter 4.	×			
		Show proposed tie-down layout on the apron area as well as taxilane marking plan. See AC 150/5300-13A, Appendix 5, AC 20-35, and AC 150/5340-1.				
J.	Property Line	Show the property line(s) that are within the area/portion of airport shown.	×			

	Item	Terminal Area Drawing Instructions	Spor	sor/Cons	ultant	FAA
			Yes	No	N/A	1
K.	Auto parking (existing & ultimate)	Show the existing and ultimate auto parking areas. See AC 150/5300-13A, Appendix 5.	×			
L.	Major airport drainage ditches or storm sewers	Show any significant airport drainage ditches or storm sewers within the area/portion of airport shown.	×			
M.	Special Use Area (e.g., Agricultural spraying support, Deicing, or Containment)	Show any special use areas within the area/portion of airport shown.	×			
N.	North Arrow with magnetic declination and year	Magnetic declination may be calculated at <u>http://www.ngdc.noaa.gov/geomag</u> <u>-web/#declination</u> . This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	×			
О.	Fence	Show the existing and ultimate perimeter fencing or general area fencing.	×			
P.	Entrance Road	Show the existing and ultimate entrance road. See 5300- 13AFAA Order 5100.38, Chapter 6, Section 2.	×			
R	emarks					

A.9. Land Use Drawing

- Scale 1"=200' to 1"=600'.
- A drawing depicting on- and off-airport land uses and zoning in the area around the airport. At a minimum, the drawing must contain land within the 65 DNL noise contour. For medium or high activity commercial service airports, on-airport land use and off-airport land use may be on separate drawings. The Airport Layout Drawing should be used as a base map.
- Drawing optional. Need based on scope of work.

	Land Use Drawing						
Item		Instructions	Sponsor/Consu	oonsor/Consultant		FAA	
			Yes	No	N/A	-	
Α.	Title and Revision Blocks	Each drawing in the Airport Layout Plan drawing set shall have a Title and Revision Block. For drawings that have been updated, e.g., as-builts, the revision block should show the current revision number and date of revision.	×				
В.	Airport boundaries/property, existing & future (fee and easement)	Show the existing and ultimate property lines. If known, show property lines for parcels surrounding the airport.	×				
C.	Plan view of land uses by categ Commercial, Residential, etc.).		×				
	 On-Airport (existing & future) 	Label existing and ultimate on- airport property by usage, e.g., Terminal Area, Air Cargo, Public Ramp, Airfield - Movement, Airfield - Non-movement, etc. Include existing and future airport features (e.g., runways, taxiways, aprons, safety areas/zones, terminal buildings and navigational aids).		×			
	2. Off-Airport (existing & future) [to the 65 DNL Contour at a minimum, if contour known]	Label existing and ultimate off- airport property by usage and zoning, e.g., Agricultural, Industrial, Residential, Commercial, etc.	×				
D.	Boundaries of local government	List any local zoning restrictions that are in place to protect the airport and surrounding airspace. See AC 150/5190-4.	×				
E.	Land use legend	Provide a legend that identifies all symbols and line types used on the drawing. Lines must be clear and readable with sufficient scale and quality to discern details.	×				

Item Instructions			Sponsor/Consultant			FAA
			Yes	No	N/A	
F.	Public facilities (schools, hospitals, parks, churches etc.)	Identify public facilities, e.g., schools, parks, etc.	×			
G.	Runway visibility zone for intersecting runways	Show the Runway Visibility Zone(s) for the existing and ultimate airport configurations. See AC 150/5300-13A, Section 305.			×	
H.	Show off-airport property out to 65 DNL if available	Label existing and ultimate off- airport property by usage and zoning, e.g., Agricultural, Industrial, Residential, Commercial, etc.		×		
I.	Airport Overlay Zoning or Zoning Restrictions	List any local zoning restrictions that are in place to protect the airport and surrounding airspace. See AC 150/5190-4.	×			
J.	North arrow with magnetic declination and year	Magnetic declination may be calculated at				
		http://www.ngdc.noaa.gov/geomag -web/#declination. This model is using the latest World Magnetic Model which has an Epoch Year of 2010. See FAA Order 8260.19, "Flight Procedures and Airspace." Chapter 2, Section 5, for further information.	×			
K.	Drawing details to include runways, taxiways, aprons, RPZ, terminal buildings and NAVAIDS	Show existing and future airport features (e.g., runways, taxiways, aprons, safety areas/zones, terminal buildings and navigational aids, etc.). See AC 150/5300-13A.	×			
L.	Crop Restrictions	Show the Crop Restriction Line (CRL). See AC 150/5300-13A, Paragraph 322 and AC 150/5200-33.			×	
R	emarks					
R	emarks					

A.10. Airport Property Map / Exhibit A

• Scale 1"=200' to 1"=600'.

	Airport Property Map / Exhibit A					
ltem		Instructions	Sponsor/Consultant		ultant	FAA
			Yes	No	N/A	
Α.	 Will Property Map serve as Exhibit A? If YES, follow the directions to the right. If NO, go to item B below. 	If prepared in accordance with AC 150/5100-17, Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects, use ARP SOP no. 3.00 Exhibit A guidance instead of below checklist.			×	
	Property Map <i>will not</i> serve as hibit A:				×	
В.	Title and Revision Blocks					
C.	Plan view showing parcels of land (existing, future, and ultimate)				×	
	1. Fee land interests (existing and future)				×	
	2. Easement interests (existing and future)				×	
	a. Part 77 protection				×	
	b. Compatible Land Use				×	
	c. RPZ protection				×	
	3. Airport Property Line				×	
D.	Legend – shading/cross hatching, survey monuments, etc.				×	
E.	Data Table				×	
	 Depiction of various tracts of land acquired to develop airport 	If any obligations were incurred as a result of obtaining property, or an interest therein, they should be noted. Obligations that stem from Federal grant or an FAA- administered land transfer program, such as surplus property programs, should also be noted. The drawing should also depict easements beyond the airport boundary.			×	

Item		Item	Instructions	Spon	Sponsor/Consultant		
				Yes	No	N/A	
	2.	Method of acquisition or property status (fee simple, easement, etc.)				×	
	3.	Type of Acquisition Indicated	(e.g., AIP-noise, AIP-entitlement, PFC, surplus property, local purchase, local donation, condemnation, other)			×	
	4.	Acreage				×	
F.	the	cess point(s) for through- -fence arrangements luding residential				×	
Re	emar	ks					
Pr	oper	ty Map/Exhibit A Completed	by Anderson Perry in 2013.				



U.S. Department of Transportation Federal Aviation Administration

February 23, 2018

Northwest Mountain Region Seattle Airports District Office 1601 Lind Avenue S.W., Suite 250 Renton, Washington 98057-3356

Mr. Doug Wright Union County Public Works Director 10513 N. McAlister Road P.O. Box 1103 La Grande, OR 97850

Dear Mr. Wright:

The final review of the La Grande Municipal Airport Layout Plan (ALP) updated October 2017 has been completed.

Two aeronautical studies (2017-ANM-1911-NRA and 2016-ANM-1542-NRA) were conducted on the proposed airfield changes to determine their effect on the safe and efficient use of the navigable airspace by aircraft. The following comments were generated based upon that study:

<u>Seattle Flight Procedures Office</u> The 487 feet shift south of Runway 16-34 will require an amendment of flight procedures. A vertically guided obstruction survey from the new runway ends must be approved and entered into the FAA's AirNav database approximately 2 years before the publication of amendments. A request for the amendment of the procedures must be made by the proponent via https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/ifp_initiation/

The 2020 Magnetic Variation is -14 degrees. At some point in the future, Runway 16-34 needs to be renumbered to 17-35 which will affect instrument procedures. Coordinate with the Flight Procedures Team 2 years or more in advance of repainting, so that the publication date of procedure revisions and repainting can occur at same time.

Technical Operations: During any periods of runway closure, it is standard FAA policy to secure (shut down) all associated visual landing aids (visaids). The purpose of this policy is to minimize pilot risk of landing to a closed or altered runway by inadvertent use of inaccurate landing aids. This is advisable for non-FED facilities as well. The associated Federally owned (FED) facilities include the Runway 16 PAPI. To schedule any necessary temporary outages for the FED facilities, please coordinate at least 30 days in advance with Timothy Strangeway, Manager, Columbia Basin System Support Center (SSC) at 509-943-7431, timothy.strangeway@faa.gov. The associated non-FED facilities include the Runway 12 PAPI, Runway 30 PAPI and Runway 30 REIL. This Airport Layout Plan includes the installation of a PAPI and REIL facility on Runway 34 as well as REIL facilities on Runway 12 and Runway 16. Ensure that these facilities adhere to the 6850.2B siting location criteria and pass flight inspection. Flight Inspection requirements for non-FED Visual Glide Slope Indicator (VGSI) facilities (e.g. PAPI) are specified within Advisory Circular FAA AC 150/5340-30H; Chapter 7; Paragraph 7.7(f), and the flight Inspection requirements for non-FED Runway End Identifier Light (REIL) facilities are specified within Advisory Circular FAA AC 150/5340-30H; Chapter 7; Paragraph 7.7(e). Flight Inspection requirements for FAA VGSI facilities are specified within FAA Order 8200.1D, Chapter 7, Paragraphs 3 through 6, and the flight Inspection requirements for FAA REIL facilities are specified within FAA Order 8200.1D, Chapter 7, Paragraphs 9 through 12. To arrange for FAA Flight Inspection services, contact Georgia Hines, FAA Flight Inspection; Planning & Acquisition Team at 405-954-8545 to generate a cost estimate and a funding mechanism as a prerequisite to flight inspection of the new PAPI and REIL systems. To record the new PAPI and REIL installations (location, glide angle, threshold crossing height, etc.) as part of the National Airspace System facility database, an Airport Datasheet update will be required for each new facility. This process may be initiated online by first establishing a User ID by logging into https://nfdc.faa.gov. Choose: Submit Aeronautical Data/Airport Data Change (Public Use) then choose the Public Airport Data Change Form link in the new window.

This process must be completed, submitted, & entered as a PENDING change in the National Flight Data Center database before a Flight Inspection may be scheduled so that the new PAPI and REIL facility data may be utilized during the inspection. In addition, NOTAMs to report current airfield and associated visaids facility status must be issued and kept up to date. Any work that causes or results in the blockage of an in-service visaid on an open runway is not permitted. Prior to commencement of any excavation, the proponent shall coordinate all project work in the vicinity of underground power utility and communication cables in advance, preferably a minimum of two weeks, with the SSC Manager and the Airport Manager.

Sincerely, Jason Ritchie 6

Assistant Manager, Seattle ADO

cc: Ms. Sara Lucas, WHPacific, Inc.