

**SCOPE OF WORK
AURORA STATE AIRPORT
2021-2041 AIRPORT MASTER PLAN UPDATE
FAA AIP Grant Number: 3-41-0004-022-2021**

Scope Revised 03-09-21

PROJECT INTENT

Century West Engineering Corporation (Consultant) has been retained to develop a 2021-2041 Airport Master Plan Update for the Aurora State Airport with direction and review provided by Oregon Department of Aviation – ODA (AGENCY). The Master Plan Update shall provide AGENCY with a plan to address the development needs at the airport for a 20 year planning horizon (2021-2041) and shall develop a program for implementation within known funding constraints. The 20 year Airport Master Plan planning horizon will consider needs for the next 20 years. It is acknowledged that significant changes due to construction of the preferred alternative will most likely necessitate a refresh in planning midway through the planning period. The Consultant shall work in closely with the AGENCY staff, a Planning Advisory Committee, local business and stakeholder groups, and the Federal Aviation Administration to ensure that the plan reflects the airport’s development needs.

The AGENCY has provided specific direction regarding the Tasks to be included in the master plan update to address the current and future needs at the airport. The following work program describes the effort required to successfully complete the Master Plan Update for Aurora State Airport within the FAA framework and may include additional scope items identified by AGENCY for the development and adoption of airport master planning documents.

This project shall provide AGENCY with an updated 2021-2041 Airport Master Plan and revised Airport Layout Plan (ALP) drawings. An updated Airport Capital Improvement Program (ACIP) shall provide the AGENCY with a method and proposed schedule for addressing future facility needs through use of FAA Airport Improvement Program (AIP) grants and other available funding sources.

The project shall address and/or update the basic tasks and work Tasks as outlined in FAA Advisory Circulars 150/5070-6B, Airport Master Plans and 150/5300-13 Airport Design (changes 1 through 14, or as amended). The most current FAA SOP 2.00 and 3.00 Checklists shall be prepared and submitted with the draft airport layout plan drawing set.

Acronyms and Definitions

AGENCY – Oregon Department of Aviation
ADO - FAA Seattle Airports District Office
AGIS - Airports Geographic Information Systems
AIP - Airport Improvement Program
ALP - Airport Layout Plan
APM – AGENCY’s Project Manager
ARC – Aircraft Reference Code
BOC – Breakdown of Costs
CIP - Capital Improvement Program
DBE – Disadvantaged Business Enterprise
FAA – Federal Aviation Administration
FBO - Fixed Based Operator
FMRA - FAA Modernization and Reform Act of 2012
MOS – Modification of Standards
MWESB – Minority, Women & Emerging Small Businesses
NTE – Not to Exceed
NTP – Notice to Proceed
ODA – Oregon Department of Aviation
ODOT – Oregon Department of Transportation
ORPIN – Oregon Procurement Information Network
ORS – Oregon Revised Statute
PA – Price Agreement
PM – Project Manager
RPZ – Runway Protection Zone
SOW – Statement of Work
WOC – Work Order Contract

AIRPORT MASTER PLAN TASKS

- The master plan update includes the following major work tasks:
- Task 1 – Study Initiation, Refine Scope of Work, and Project Management
 - Task 2 – Public Involvement Process
 - Task 3 – AGIS Survey
 - Task 4 – Existing Conditions Analysis
 - Task 5 – Aviation Activity Forecasts
 - Task 6 – Facility Goals and Requirements
 - Task 7 – Airport Development Alternatives
 - Task 8 – Implementation Plan (CIP/Financial/Strategies & Actions)
 - Task 9 – ALP Drawing Set
 - Task 10 – Recycling and Solid Waste Management Plan
 - Task 11 – Reports and Documentation

Note: Planning project delivery dates are based on days following notice to proceed based on an eighteen month planning period.

TASK 1 – STUDY INITIATION AND PROJECT MANAGEMENT

Consultant shall:

1. Finalize work scope through coordination with AGENCY in order to obtain FAA approval.
2. Prepare FAA required Independent Fee Estimate (IFE) worksheet and address FAA or AGENCY comments if required based on input from IFE process.
3. Schedule and lead bi-weekly project meetings (26 teleconferences averaging 30 minutes or less) with 2 Consultant staff, 1 subconsultant staff, AGENCY, and FAA.
4. Carry out project administration for a twenty-four month project duration including but not limited to monitoring project schedules and budgets; coordination of project with AGENCY and FAA; coordination with and monitoring subconsultant tasks; preparation of FAA quarterly reports and preparation of monthly consultant invoices for submittal to AGENCY.

Deliverables:

- Revised Scope of Work
- Fee Estimate
- IFE Worksheet
- Project Schedule
- FAA Quarterly Reports
- Monthly Invoices

Task 1 Due: Ongoing for the duration of the project.

TASK 2 – PUBLIC INVOLVEMENT PROCESS

Task 2.1 - Public Involvement Groundwork

Task 2.1.1 – Public Involvement and Communications Plan

Consultant shall create a public involvement and communications plan for the Project.

Consultant shall complete the following:

1. Create a comprehensive list of AGENCY and non-AGENCY stakeholders with their respective areas of interest/responsibility identified.
2. Outline key messages, communication and outreach tools, and a schedule, including a recommendation whether to conduct in-person outreach events (based on COVID conditions). Detail AGENCY and Consultant roles and responsibilities for each outreach tool and communication protocols in the plan.
3. Identify Planning Advisory Committee (PAC) members through coordination with AGENCY staff. PAC shall include up to 20 members unless increased at the direction of the AGENCY. Consultant shall coordinate with PAC to provide input and allow for public dissemination of data. Representatives from the FAA Seattle Airports District Office (ADO) shall serve as ex officio members of the PAC.

Consultant will coordinate with AGENCY staff in conjunction with project meetings and/or public hearings to brief staff on project progress to prepare State Aviation Board updates or reports to the

State Aviation Board.

Deliverables:

- AGENCY stakeholder list to be utilized for project coordination and document distribution.
- PAC contact list comprised of selected PAC members.
- Nine 2-hour coordination meetings with AGENCY Staff prior to PAC meetings.
- Draft and final Public Involvement and Communications Plan.

Task 2.1.1 Due: Ongoing for the duration of the project.

Task 2.1.2 - Stakeholder Database and Comment Log

Consultant shall develop and maintain a stakeholder database that must be used to inform and update impacted businesses, residents, neighborhoods, organizations and jurisdictions in the Project area. Consultant shall update the stakeholder database as needed. Consultant shall create and maintain a communications log to track communications with the public. Responses to correspondence from stakeholders (in the form of letters, email and phone calls) will be determined during Task 2.1.1.

Deliverables:

- Draft stakeholder database.
- Final stakeholder database at completion of project.
- A record of all correspondence in the project comment log with updates within 5 days of request.

Task 2.1.2 Due: Ongoing for the duration of the project.

Task 2.2 – Public Meetings

Task 2.2.1 – Planning Advisory Committee Meetings

Consultant shall conduct seven (7) Planning Advisory Committee (PAC) meetings and budget for two (2) additional meetings to be scheduled if deemed necessary by AGENCY during the course of the study. Consultant shall conduct the meetings, present the findings of planning relevant planning work, prepare written meeting summaries, and respond to technical and professional questions. Consultant shall clearly define the PAC and public comment period for each meeting including comment period duration and method of receiving comments in the public notice for each meeting. Consultant shall provide content for and coordinate Public Notice for all PAC meetings consistent with State and Local notice requirements.

- a. Conduct and facilitate AMP Introduction PAC Meeting #1.
- b. Conduct and facilitate existing conditions PAC Meeting #2.
- c. Conduct and facilitate facility goals and requirements PAC Meeting #3.
- d. Conduct and facilitate MOS/RPZ Analysis PAC Meeting #4.
- e. Conduct and facilitate preliminary development alternatives PAC Meeting #5.
- f. Conduct and facilitate preferred development alternatives PAC Meeting #6.
- g. Conduct and facilitate implementation plan and CIP PAC Meeting #7.
- h. Conduct and facilitate optional PAC Meeting #8.
- i. Conduct and facilitate optional PAC Meeting #9.

AGENCY shall be responsible for scheduling Planning Advisory Committee (PAC) and other public meetings, providing facilities for such meetings, and providing required notification to PAC members

and/or the general public.

Deliverables:

- Schedule PAC meetings in coordination with AGENCY
- Provide content for and coordinate Public Notice for all PAC meetings consistent with State and Local notice requirements
- Prepare PAC meeting presentations and materials
- Conduct PAC meetings (Facilitator, note taker, and 2 prime consultants shall attend each meeting)
- Draft meeting minutes (including Project Action Items and Decisions log) to be delivered to AGENCY within 5 days following the meeting.
- Final meeting minutes (including Project Action Items and Decisions log) due no later than 5 business days from receipt of compiled AGENCY comments.

Task 2.2.1 Due: PAC meeting dates shall be scheduled with AGENCY and coordinated with PAC members following NTP based on the following schedule:

- PAC Meeting #1 – 45 calendar days after NTP
- PAC Meeting #2 – 105 calendar days after PAC Meeting #1
- PAC Meeting #3 – 60 calendar days after PAC Meeting #2
- PAC Meeting #4 – 60 calendar days after PAC Meeting #3
- PAC Meeting #5 – 60 calendar days after PAC Meeting #4
- PAC Meeting #6 – 60 calendar days after PAC Meeting #5
- PAC Meeting #7 – 60 calendar days after PAC Meeting #6
- PAC Meeting #8 – TBD if required
- PAC Meeting #9 – TBD if required

Schedule may be modified at the discretion of AGENCY staff.

Task 2.2.2 Regional Stakeholder Meetings – Consultant shall schedule and conduct four (4) Regional Stakeholder Meetings with State and regional agency stakeholders including but not limited to ODOT, Clackamas County, Marion County, City of Wilsonville, City of Aurora, Port of Portland, and other agencies deemed necessary by AGENCY.

Deliverables:

- Schedule and conduct two Regional Stakeholder Meetings
- Prepare agenda and meeting materials
- Draft meeting minutes (including Project Action Items and Decisions log) to be delivered to AGENCY within 5 days following the meeting.
- Final meeting minutes (including Project Action Items and Decisions log) due no later than 5 business days from receipt of compiled AGENCY comments.

Task 2.2.2 Due: Regional Stakeholder Meetings will be schedule with AGENCY at milestones in the AMP process deemed appropriate to receive agency input in the planning process.

Task 2.2.3 - Small Group Briefings; One-on-One Briefing; and Stakeholder Interviews

Consultant shall identify up to 20 community groups, special interest groups, neighborhood associations or selected stakeholders that require a briefing of the project, based on the stakeholders identified in

the Public Involvement and Communications Plan, to be approved by AGENCY.

Consultant shall schedule and prepare for small group and one-on-one briefings, and stakeholder interviews, to provide Project updates and obtain input. Consultant shall coordinate with AGENCY on staff schedules for attending briefings and interviews. Consultant shall communicate with the stakeholders expected to attend the briefings and interviews, secure meeting spot for AGENCY staff on the agenda, and prepare for the meeting or presentation. Consultant shall use informational materials developed under other tasks for meetings and events. Up to two (2) public involvement Consultant staff shall attend each briefing with AGENCY representative; with each briefing estimated to be 2-hours in duration, excluding travel time. A one page meeting minute will be drafted and finalized for each briefing or interview, to be compiled into one larger document.

Deliverables:

- Schedule briefings and interviews in coordination with AGENCY; assume no more than five (5) will be in-person requiring two days of travel and the remaining 15 will be conducted by phone or virtual meeting.
- Conduct and facilitate briefings and interviews (Facilitator and note taker consultants shall attend each meeting).
- Draft meeting minutes (including Project Action Items and Decisions log) to be delivered to AGENCY within 5 days following the meeting.
- Final meeting minutes (including Project Action Items and Decisions log) due no later than 5 business days from receipt of compiled AGENCY comments.

Task 2.2.3 Due: Briefing and interview dates shall be scheduled with AGENCY. Schedule may be modified at the discretion of AGENCY staff.

Task 2.2.4 - Public Open House Meetings

Consultant shall schedule and organize four (4) 2-hour public open house meetings, two (2) of which will be conducted virtually. Meetings shall be organized as public workshops with information displayed to inform the public in general and to provide a forum for neighbors and stakeholder groups to discuss the project and provide input. A project questionnaire will be provided to attendees and posted to the website. The meetings shall be scheduled to coincide with PAC meetings (same day or consecutive day). Consultant will coordinate Public Notice for all open house meetings consistent with State and Local notice requirements. Consultant shall clearly define the public comment period for each meeting including comment period duration and method of receiving comments in the public notice for each meeting. Up to two consultant staff will attend each meeting.

Deliverables:

- Schedule Open House meetings
- Prepare open house materials
- Conduct open house meetings (2 prime consultants shall attend each meeting)
- Draft summary of events, questionnaire results, etc. related to each meeting to be delivered to AGENCY within 14 days following the meeting.
- Final summary due no later than 5 business days from receipt of compiled AGENCY comments.

Task 2.2.4 Due: Open house meeting dates shall be scheduled with AGENCY and shall coincide with a scheduled PAC meeting. Schedule may be modified at the discretion of AGENCY staff.

Task 2.2.5 - Project Questionnaires

Consultant shall develop up to two (2) project specific questionnaires to solicit input from the public at key points during the project at the Facility Requirements stage prior to the development of alternatives and at the Alternatives stage to define needs and solicit input towards the selection of the preferred alternative. Questionnaires shall be distributed and collected at public meetings, through survey monkey on-line surveys and the project webpage. The results of the questionnaires will be summarized in the open house summary where it was distributed.

Deliverables:

- Draft and final of two (2) questionnaires which will be distributed in hard copy at public meetings (50 copies each), survey monkey on-line version, and PDF version for webpage.

Task 2.2.5 Due: Completed 7 days in advance of Facility Requirements and Alternatives meetings per the due date in Task 2.2.

Task 2.2.6 - Online Open House

Consultant and subconsultant shall produce two (2) online open house for the Project using subconsultants platform. The online Open House must include the following materials (developed in Task 2.2.3):

- Welcome page/site index
- Interactive display boards
- Comment and contact form

Subconsultant shall produce 1 video to be uploaded to the online open house platform. Videos will be up to 2 minutes in length. Subconsultant shall draft and finalize the video script for AGENCY review and approval; with no more than 2 rounds of edits between the draft and final. AGENCY will coordinate with AGENCY staff schedules for filming with Subconsultant. Subconsultant shall schedule date, time, and location with AGENCY prior to filming the video.

Deliverables:

- Draft online open house materials for AGENCY review, within 10 business days of AGENCY request; with no more than 2 rounds of edits between the draft and final; final due no later than 5 business days from receipt of compiled AGENCY comments.
- Draft video scripts for AGENCY review, with no more than 2 rounds of edits between the draft and final; final due no later than 5 business days from receipt of compiled AGENCY comments.
- Filming, editing and post-processing of video in internet-based format with draft due date as determined by AGENCY; with no more than 1 round of edits between the draft and final; final due no later than 5 business days from receipt of compiled AGENCY comments.

Task 2.2.6 Due: Completed 7 days in advance of Facility Requirements and Alternatives meetings per the due date in Task 2.2.

Task 2.3 – Project Meetings

Task 2.3.1 Federal Agency Coordination Meetings – Consultant shall schedule and meet with FAA staff at the FAA Seattle ADO offices at the forecasts, alternatives, and ALP review stages of the project.

Deliverables:

- Schedule and attend three meetings at the FAA Seattle ADO (2 prime consultants shall attend each meeting. Each meeting shall be 3 hours in duration. Travel time shall be 6 hours per meeting)
- Prepare agenda and meeting materials
- Draft meeting minutes (including Project Action Items and Decisions log) to be delivered to AGENCY within 5 days following the meeting.
- Final meeting minutes (including Project Action Items and Decisions log) due no later than 5 business days from receipt of compiled AGENCY comments.

Task 2.3.1 Due: FAA review meetings shall be scheduled with AGENCY and FAA staff to follow forecast, alternatives, and draft final ALP submission dates.

Task 2.4 – Public Notice and Data Distribution

Task 2.4.1 - Public Meeting Notices and Press Releases – Consultant shall provide content for public meeting notices and press releases. AGENCY shall advertise the date and time meetings. AGENCY shall assume all costs of advertising and press release announcements in the local media and shall coordinate with local City/County staff to post notices and press releases to the appropriate websites.

Deliverables:

- Project web page with relevant project related materials updated as work products are available throughout the duration of the project

Task 2.4.1 Due: Ongoing for the duration of the project.

Task 2.4.2 - Project Webpage – Consultant shall develop a project webpage on existing Consultant website to be updated throughout the duration of the project. Webpage shall include project deliverables in PDF format including draft chapters, presentation materials, meeting agendas, meeting notices, press releases (7-9 for PAC meetings, 4 for open houses), questionnaires, and meeting summary notes. AGENCY shall determine what content is to be posted on the website and review and approve content prior to posting.

Deliverables:

- Project web page with relevant project related materials updated as work products are available throughout the duration of the project

Task 2.4.2 Due: Ongoing for the duration of the project.

Task 2.4.3 – Project Mailers and Fact Sheets

Consultant shall prepare text and provide the graphic layout for one (1) Project fact sheet to use for public events and to post online. Printing of the fact sheet must be paid and coordinated by AGENCY if it is not formatted and distributed as a mailer (see below). The fact sheet may be updated, if requested by AGENCY, up to two (2) times.

Consultant shall create up to two (2) Project mailers, the number of which will be determined by AGENCY. Consultant shall draft, design, and distribute the final mailers to arrive in mailboxes 2 weeks prior to public events (if scheduled). Consultant shall coordinate distribution of each mailer and AGENCY

shall pay printing and mailing fees.

Deliverables:

- Prepare draft and final text and graphic layout for one (1) Fact Sheet within 10 business days of AGENCY request; final due no later than 5 business days from receipt of compiled AGENCY comments.
- Provide up to two (2) update(s) to the first project Fact Sheets with draft updated Fact Sheet due within 10 business days of AGENCY request and final updated fact sheet due no later than 5 business days from receipt of compiled AGENCY comments.
- Prepare draft and final text and graphic layout for up to two (2) mailers with draft due within 10 business days of AGENCY request; with no more than 2 rounds of edits between the draft and final; revised mailers due no later than 5 business days from receipt of compiled AGENCY comments.

Task 2.4.3 Due: Ongoing for the duration of the project.

Task 2.4.4 Email Broadcasts

Consultant shall produce up to 10 email updates to be sent to interested stakeholders, at the direction of the AGENCY; in concurrence with newsletters as identified in Task 2.3.3 with additional information. AGENCY will provide Consultant access to existing email distribution software/platform for sending out email updates. Consultant shall prepare 1 draft and 1 final for AGENCY review for each email update. AGENCY comments must be compiled for review expediency and Consultant shall provide a final no later than 2 business days from receipt of compiled comments.

Deliverables:

- Draft email content (due as determined by the Public Involvement and Communications Plan) for no more than 10 emails
- Final content in AGENCY standard format no later than 2 business days from receipt of compiled AGENCY comments.

Task 2.4.4 Due: Ongoing for the duration of the project.

Task 2.5 Working Paper Delivery Schedule

Task 2.5.1 - Working Paper #1 – Consultant shall prepare Draft Working Paper #1 (Introduction, Existing Conditions Analysis, and Aviation Activity Forecast chapters) following PAC Meeting #1 and after discussion and comments have been incorporated in to the draft chapters. Consultant shall allow PAC members two weeks to review and comment. After the comment period has expired, consultant shall incorporate comments and coordinate with AGENCY to finalize Draft Working Paper #1 to submit the Aviation Forecasts for FAA Approval.

Deliverables:

- Draft Working Paper #1 with revisions as noted.

Task 2.5.1 Due: 15 calendar days after date of PAC meeting #1.

Task 2.5.2 - Working Paper #2 – Consultant shall prepare Draft Working Paper #2 (Facility Requirements, and Development Alternatives) to be submitted to the PAC for review and comment one

week before the PAC meeting #4. Consultant shall allow PAC members two weeks to review and comment following PAC meeting #4. After the comment period has expired, consultant shall incorporate comments and work with AGENCY to finalize the preferred development alternative to coordinate with FAA.

Deliverables:

- Draft Working Paper #2 with revisions as noted.

Task 2.5.2 Due: 7 calendar days prior to date of PAC meeting #4.

Task 2.5.3 - Working Paper #3 – Consultant shall prepare Draft Working Paper #3 (Strategies & Actions, Financial Plan, and ALP Drawing Set) to be submitted to the PAC and AGENCY for review and comment three weeks after PAC meeting #5. Consultant shall allow PAC members two weeks to review and comment. After the comment period has expired, consultant shall incorporate comments and work with AGENCY to finalize the implementation plan and develop the Final Draft Report for submittal to the FAA for subsequent review and approval.

Deliverables:

- Draft Working Paper #3 with revisions as noted.

Task 2.5.3 Due: 21 calendar days after the date of PAC meeting #5.

Task 2.5.4 - Draft Final Report/Final Report – Consultant shall prepare the Draft Final Report once final comments have been received from the PAC, AGENCY, and FAA on working paper #3. The Final Draft Report shall be submitted to AGENCY and FAA for final review. Consultant shall incorporate FAA and AGENCY comments and prepare the Final Airport Master Plan report.

Deliverables:

- Draft Final Report
- Final Report

Task 2.5.4 Due: Draft Final Report due 21 calendar days after PAC and AGENCY comments received. Final Report due 14 calendar days after AGENCY comments received.

TASK 3 - AGIS SURVEY

The Consultant shall conduct an aeronautical survey at Aurora State Airport. The project will be completed in compliance with AGIS Advisory Circulars and will include an Airport Airspace Analysis for Vertically Guided (VG) operations for existing Runway 17/35. The Advisory Circulars identified below detail the data collection requirements and accuracies for the project and the verification process by the Federal Aviation Administration (FAA) and the National Geodetic Survey (NGS).

- AC 150/5300-16B “General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey.”
- AC 150/5300-17C “Standards for Using Remote Sensing Technologies in Airport Surveys.”
- AC 150/5300-18B (Change 1) “General Guidance and Specifications for Submission of Aeronautical Surveys to NGS: Field Data Collection and Geographic Information System (GIS) Standards”

Task 3.1 – AGIS Project Plans and Coordination

The consultant shall complete project planning and coordination with the client and FAA are essential to a successful AGIS survey project. To clearly define project roles, responsibilities, and methods, the Consultant will complete the following:

- Develop and submit a Statement of Work (SOW) in coordination with the Client and FAA ADO
- Develop and submit a Survey and Quality Control Plan
- Develop and submit an Imagery Plan
- Coordinate with the Client, FAA, and NGS to ensure that the above documents are approved and followed through the entirety of the project

Product: AGIS Statement of Work, Survey and Quality Control Plan, and Imagery Plan submitted via FAA AGIS Project Portal

Task 3.2 – Ground Survey

Ground survey is the core of an AGIS survey. In accordance with the above mentioned ACs, the Statement of Work, and Survey and Quality Control Plan, the Consultant will complete the following:

- Conduct pre-survey interviews with Airport Manager and complete interview checklists
- Locate and validate PACS and SACS on the Airport. If PACS/SACS are not present or in usable condition, Temporary Survey Marks (TSM) will be established in accordance with AC 150/5300-16B, Paragraph 2.2.2
- Perform, Document, and Report the tie of PACS and SACS to the National Spatial Reference System (NSRS)
- Establish, record, and document aerial image control points/targets
- Establish, record, and document five (5) OPUS check points
- Survey and document all runway ends at the airport. Each runway end will be monumented if not already done.
- Determine or Validate the runway width and length
- Survey the runway centerline profile at 50' stations
- Survey or validate the positions of NAVAIDs on the Airport
- Provide completed field documentation, checklists and annotated photos detailing field methods
- Provide Survey Narrative describing field methods, data processing steps, and results.

Products:

1. Surveyed feature coordinates as a tabular file (CSV, XLSX, or similar) in PNEZD format. All feature coordinates will be in NAD 1983 Oregon State Plane North Zone International Feet (OR83-NIF).
2. All field forms, checklists, and annotated photographs. Paperwork will be submitted as PDF, photographs will be submitted as JPG.
3. Survey Narrative for final report in MS Word Format.

Task 3.3 – Aerial Survey

The primary purpose of this task is to acquire stereoscopic imagery to complete an FAA Airport Airspace Analysis (AAA) for all Vertically Guided (VG) Obstacle Identification Surfaces (OIS) as defined in FAA Advisory Circular 150/5300 - 18B: Section 2.7.1.1 Runways with Vertical Guidance. In addition to the

AAA, the Consultant will collect and provide airport planimetric data, and orthorectified aerial imagery. Individual tasks to be completed follow:

- Collect 0.6' Ground Sample Distance (GSD) orthorectified imagery to cover the extent of VG OIS
- Collect 0.15' GSD orthorectified imagery for the Airport property
- Complete AAA according to AC 150/5300-18B: 2.7.1.1, Runways with Vertical Guidance
- Collect planimetric features on the Airport property. (See attached data collection matrix).
- Generate 1' topographic contours for the Airport property
- Provide 1' pixel orthomosaic for extent of VG OISs
- Provide 0.20' pixel orthomosaic for the airport property
- Prepare and submit the final imagery deliverable package to AGIS in accordance with AC 150//5300-17C

Deliverables:

- VG OIS surfaces and Obstacle features in ESRI File Geodatabase (FGDB) format using 18B schema
- Planimetric Features in ESRI FGDB (18B Schema)
- Complete and submit the AGIS deliverable to AGIS Project Portal in accordance with AC 150/5300-17C
- 1' and 0.25' GSD orthomosaics as described above in MrSID format.
- 1' topographic contours in ESRI FGDB format (18B Schema). All contours will be continuous 3D polylines
- Eight (8) framed color aerial photographs 3 feet x 8 feet

Task 3.3 Due: 112 days after NTP, weather and seasonal conditions permitting. Aerial imagery data collection is contingent on sun angle and leaf on vegetation conditions per FAA requirements.

Task 3.4 – GIS Data Development

The Consultant will complete the following.

- Convert and load all data from ground and aerial surveys to ESRI FGDB format (18B Schema)
- Populate all required attributes for all FGDB features classes in accordance with 18B
- Upon completion of all data conversion and attribution of all features the FGDB feature classes will be converted to 18B-compliant ESRI Shapefiles for submission to the AGIS Project Portal

Deliverables:

- Complete and attributed 18B compliant ESRI FGDB
- Complete and attributed 18B compliant ESRI Shapefiles

Task 3.4 Due: 84 days after task 3.3 is completed.

Task 3.5 – Quality Control & Final Data Submission

The Consultant will complete the following.

- Ensure all survey forms, checklists, and sketches are included and complete
- Ensure all field photographs are included and annotated
- Ensure all surveyed features were collected according to ACs, SOW, and the Survey and Quality Control Plan
- Ensure all feature attributes are populated with valid values

- Ensure all feature positions are projected to OR83-NIF
- Test 18B shapefile package upload on AGIS Project Portal
- Complete AGIS Survey Deliverables Checklist
- Submit Final Survey Deliverables Package to AGIS Project Portal
- Monitor progress of submission through review process

Deliverables:

- Complete AGIS Survey Deliverables Package uploaded to AGIS Project Portal
- Status monitoring through NGS review process through validation

Task 3.5 Due: 28 days after task 3.4 is completed.

TASK 4 – EXISTING CONDITIONS ANALYSIS

Task 4.1 – Develop Report Introduction Chapter

Consultant shall develop a master plan introduction chapter to summarize and depict the following information related to the master plan:

- Study Purpose
- Project Need
- Project Funding
- Project Schedule
- Public Involvement Process
- Goals of the Master Plan
- Known Issues & Opportunities

Deliverables:

- Introduction Chapter to be included in Working Paper #1

Task 4.1 Due: Submitted on due date for Working Paper #1, 120 days after NTP

Task 4.2 – Data Collection and Inventory

Consultant shall collect, analyze and incorporate information from local, regional and state aeronautical or surface transportation studies, comprehensive planning documents, as related to the development of Aurora State Airport. Consultant shall collect historic and forecast socioeconomic data from secondary sources. Consultant shall review existing and future land use within the airport environs and existing zoning patterns, including, but not limited to, overlay zoning designations. Consultant shall identify and document noise sensitive uses/areas shall be identified and any natural characteristics, which could impact development and planning on and off airport property. Consultant shall summarize existing airport traffic patterns and noise abatement procedures.

Consultant shall identify, review, and document existing data and information including, but not limited to, documents, maps, studies and projects currently underway or in the planning stages (on and off airport property and in the vicinity) which may directly or indirectly influence this study effort.

Consultant shall review any existing regional and state system plans, airport layout plans, pavement maintenance plans, surface transportation plans, utility plans, and engineering reports.

The Consultant shall utilize inventory data contained in the Constrained Operations Runway Justification Study, previous Airport Layout Plan Report including, but not limited to, other airport specific, regional, or state aviation system planning studies, FAA Airport Record Form 5010, pavement management plan, construction drawings and other relevant documents, as provided by airport management. Consultant shall perform an on-site inspection of major components of the airport. Consultant shall collect or update the following:

- Based Aircraft (changes in fleet mix and size)
- Annual Operations
- Hangar Inventory (square footage or number of spaces)
- Annual Fuel Sales Volume (2004-current)
- Airport Tenants (number of active leases)
- Significant Facility Improvements
- Roadway and utility improvements
- Changes in Land Use and Land Use Planning (annexation, zoning, etc.).

Deliverables:

- Tabulated airport facilities inventory

Task 4.2 Due: Submitted on due date for Working Paper #1, 120 days after NTP

Task 4.3 - Evaluate the Regional Setting of the Airport

Consultant shall evaluate the regional setting and local context of the Airport and surrounding community for use in subsequent phases of the master plan. Consultant shall complete the following:

- a. Develop location and vicinity maps;
- b. Develop a summary and depiction of the Airport's history;
- c. Summarize and depict the Airport's role in the National and State aviation system and summarize the role of the Airport within the local community;
- d. Conduct an airport service area analysis by locating competing airports relative to Aurora State Airport and population centers, assessing their role, and evaluating their facilities and services. This information shall be utilized to assess the influence that surrounding airports have with respect to competing services, facilities and equipment, navigational aids, and accessibility.

Evaluate Historical and Existing Airport Operational Data

Consultant shall compile a summary of aviation activity and operational data for Aurora State Airport to indicate historical growth and present a basis for statistical analysis of based aircraft, annual aircraft operations, and related factors. Information from the Constrained Operations Runway Justification Study will be incorporated into the study.

Consultant shall perform a review of the airport's current based aircraft fleet. Consultant shall incorporate the evaluation of airport service area contextual analysis (Sub-task 4.3.2) into the forecast update to reflect the potential for increased market share. Consultant shall compare the previous Airport Layout Plan Report forecasts to actual data in order to gauge the accuracy of individual projections and identify specific trends. Consultant shall review for comparison with current and recent historic data and summarized in the forecast narrative the FAA Aerospace Forecasts (FY 2021-2041), the FAA Terminal Area Forecasts ("TAF") and current Oregon Aviation Plan forecasts.

The Consultant shall utilize other data sources including, but not limited to, FAA data (“TFMSC”), airport records, fuel sales data, on-site inventories, and an airport user survey to supplement airport management data, as appropriate.

Consultant shall determine the existing critical aircraft based on review of available data and previous airport planning documents. Consultant shall identify the existing critical aircraft (or family of aircraft), if necessary, by approach category, wingspan, and weight, for different airport components. By FAA standard, the critical aircraft/family of aircraft, must conduct at least 500 annual itinerant and local operations, excluding touch and gos. In the event that more than one aircraft meets the FAA criteria for defining critical aircraft for runway length or pavement strength evaluation purposes, Consultant shall identify those aircrafts. The existing critical aircraft will serve as the basis for developing updated forecasts.

Community Socio-economic Data

Consultant shall utilize available data (secondary sources) related to local and regional population, employment, and other relevant socioeconomic conditions (historic data, trends, and future Projections) to summarize and depict relevant local socio-economic data. This data may include, but is not limited to, state and regional economic data, tourism activity and trends, and area military or other state or federal government activity, as appropriate. Portland State University (“PSU”) annual estimates of population and U.S. Census data will be reviewed.

Relevant Studies

Consultant shall summarize and depict relevant content from State and local planning studies which may include, but are not limited to, the following:

- City of Aurora Comprehensive Plan
- City of Wilsonville Comprehensive Plan
- Clackamas County Comprehensive Plan
- Marion County Comprehensive Plan
- Local Transportation System Plans
- Local Utility Master Plans
- Aurora State Airport 2012 Airport Master Plan
- Current Signed Airport Layout Plan
- Oregon Aviation Plan (“OAP”) – 2018 Update
- 2019 UAO Constrained Operations Runway Justification Study

Environmental Data

NEPA Analysis – Building off of previous environmental work completed for the Airport, Consultant shall prepare an environmental overview of the Airport’s environmental setting and operating environment based on NEPA Environmental Impact Categories outlined in FAA Order 1050.1F Policies and Procedures for Considering Environmental Impacts, and FAA Order 5050.4B, FAA Environmental Handbook utilizing available data and information. No formal coordination with federal and state agencies will be conducted as part of this work task. Informal coordination may occur during the process of obtaining existing documents, etc. from various agencies.

Consultant shall gather and utilizing existing maps of the airport environs and environmental documents to document existing conditions. Consultant shall conduct an on-site field verification of site conditions,

and will include a reconnaissance level analysis of resources as identified in the bullet point list below. This summary is intended to reference any known or potential environmental conditions or issues that could be affected by proposed airport development that have been identified in recent environmental efforts conducted on the airfield. Consultant shall request information from the Oregon Biodiversity Information Center (“ORBIC”) and the US Fish and Wildlife Service (“USFWS”) of any rare, threatened, and endangered plant and animal species that have been documented within the vicinity of the Airport.

Consultant shall summarize and depict environmental data from a variety of sources including, but not limited to, previous environmental documents, Consultant inquiries, and publicly available data to address the following environmental impact categories:

- Air quality – Consultant shall briefly evaluate air quality considerations with respect to proposed master plan improvements. Air quality modeling or detailed analyses are outside of this scope of Services. Consultant shall also summarize and depict local climate data. Consultant shall request wind data from the onsite AWOS or National Climatic Data Center for the Airport, or both, if available. Consultant shall develop and update a wind rose using the FAA Airport Design program.
- Biological resources (including fish, wildlife, and plants) – Consultant shall provide an overview of habitat conditions and summary and of potential impacts to any biotic resources identified in the study area.

Federally-listed Endangered and Threatened (“T&E”) Species – Consultant shall summarize known or documented existing T&E species and designated critical habitat. Consultant shall conduct a site reconnaissance to determine if potential suitable habitat occurs within the study area. Consultant shall not perform species surveys as part of this scope of Services.

- Climate - Consultant shall briefly summarize climate considerations with respect to proposed master plan improvements.
- Coastal resources – Not Applicable
- Department of Transportation Act Section 4(f) – Consultant shall review the Project area to identify the presence of any Section 4(f) properties in the vicinity. If there are none, Consultant shall document it. A Section 4(f) evaluation to determine if the use of any 4(f) properties would be impacted is outside this scope of Services.
- Farmlands - Consultant will coordinate with Marion and Clackamas County and Oregon Department of Land Conservation and Development. If required a Farmland Conversion Impact Rating form (AD-1006) will be developed to assess potential impacts and requirements.
- Hazardous materials, solid waste, and pollution prevention - Consultant will complete a summary and assessment of any Hazardous Materials identified in the study area based on a review of previous studies and published data. The Consultant will develop recommendations for avoidance, minimization, and mitigation measures for the preferred development alternative.
- Historical, architectural, archeological, and cultural resources - Building off of previous environmental work completed for the Aurora State Airport, Consultant shall summarize previous cultural resources surveys and identify potential areas that may require further analysis based on proposed development.
- Land Use – Consultant shall review and summarize local land use compatibility and identify potential impacts of proposed improvements. Consultant shall review the City of Aurora, City of Wilsonville, Clackamas County and Marion County Comprehensive Plans and zoning maps. The

Cities and Counties will be contacted to confirm zoning and compatible land use.

- Natural resources and energy supply - Consultant shall review proposed improvements, construction techniques, and materials to assess opportunities and impacts.
- Noise and compatible land use - Noise contours will be developed for the 65 DNL noise contour identified for the current conditions as well as the twenty year contour. Noise contour modeling will use the forecasts and fleet mix identified in the forecast chapter for each run to analyze impacts of airport modifications as it relates to noise. Noise impacts of construction will also be evaluated.
- Socioeconomics, environmental justice, and children's environmental health and safety risks - Consultant will review and summarize socioeconomic impacts including shifts in patterns of population movement and growth; public service demands; changes in business and economic activities; and other factors identified by the public.
- Visual effects (including light emissions) - Consultant will prepare a summary of increased light emissions and visual effects created through the construction of the proposed improvements.
- Water resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

Wetlands and Waters of the US – Consultant shall review existing information to identify potential wetland resources in the Project area including historic aerial photos, National Wetlands Inventory, and Natural Resource Conservation Service County Soil Survey. Consultant shall perform a site reconnaissance to identify potential wetland areas. Consultant shall hand draw potential wetland areas on an aerial photo. A wetland delineation is outside this scope of services.

Floodplains – Consultant shall review FEMA maps to determine if any of the study area is within the 100- year floodplain.

Stormwater and Water Quality – Consultant shall review on site drainage patterns and site uses to determine the potential for water quality impacts.

Consultant will coordinate with US Army Corps of Engineers to confirm that no protected resources exist in the vicinity of the project.

NEPA Analysis will provide a background overview of impact categories that will be used in the assessment of development alternatives. The Preferred Alternative will be review to assess and document the likely impacts of the proposed improvements and serve as the basis for future Environmental Assessments. The Consultant shall recommend additional study for individual impact categories that may be required based on the Preferred Alternative selected.

Local Surface Transportation System Analysis

Consultant shall summarize and depict the existing and planned improvements for the local area surface transportation network immediately surrounding the Airport to facilitate a better understanding of the local transportation system and access to the airport vicinity during the facility requirements and development alternatives tasks of this plan. City, County, and ODOT TSPs will be reviewed to identify any improvements identified in the vicinity of the airport.

Land Use Analysis

Consultant shall summarize and depict the following:

- Base Zoning – Consultant shall summarize and depict existing and planned on-airport and off-airport zoning and land uses covering an area 1,500’ beyond the extents of the existing FAR Part 77 Surfaces.
- Overlay Zoning – Consultant shall summarize and depict existing adopted City and County Airport overlay zones.

Deliverables:

- Summary, tables, and figures describing the regional context of the airport.

Task 4.3 Due: Submitted on due date for Working Paper #1, 120 days after NTP

Task 4.4 - Evaluate Existing Landside Elements of the Airport

Consultant shall evaluate the landside facilities and services of the Airport for use in subsequent phases of the master plan. Consultant will evaluate the following:

Utilities

Consultant shall summarize and depict the existing utilities, to include water, gas, sanitary sewer, storm water, electric, telephone, communications, and any other utilities within the airport boundaries. Consultant shall depict and note existing utility easements and any specified development setbacks located within airport property. Consultant shall use existing local utility provider drawings to provide data for this task. Consultant shall consolidate existing mapping of natural site conditions into a common base map for use in the Project.

Local Emergency Medical/Fire Services (“EMS”)

Consultant shall summarize and depict local emergency response facilities and capabilities.

Airport Perimeter Fencing

Consultant shall summarize and depict airport perimeter fencing and access to the airport operations area. Consultant shall document the location and configuration of controlled and uncontrolled vehicle and pedestrian access gates.

Airport Surface Road Access, Vehicle Parking, and Pedestrian Access

Consultant shall summarize and depict the location and configuration of existing auto parking; vehicle parking conformance to local standards; internal airport access roads; and pedestrian access to aircraft. Consultant shall document the location and configuration of controlled and uncontrolled vehicle access points (gates, etc.) to the airport. Consultant shall note common vehicular access routes within the airport’s landside areas (hangars, aprons, etc.).

General Aviation (GA) Terminal Areas

Consultant shall summarize and depict the GA Terminal Area facilities including, but not limited to, corporate office and manufacturing facilities, FBOs, flight schools, public terminal buildings and Airport administration and maintenance/vehicle storage facilities, non-aeronautical activities, and other operations on the Airport.

Hangars and Aprons

Consultant shall summarize and depict the number of units, total square footage, and condition of aircraft storage units on the Airport. Consultant shall prepare a summary of current hangar occupancy based on data provided by AGENCY. Consultant shall also summarize and depict airfield apron areas as

well as the location, size, and number of based and itinerant aircraft parking spaces and tiedowns for the Airport's existing apron areas. Consultant shall depict the taxilane network identifying the connection to the runway and taxiway system.

Through-the-Fence Agreements and User Inventory

Consultant shall collect and summarize all Through-the-Fence (TTF) agreements at the airport. Consultant shall develop a figure depicting all TTF user properties and airport access improvements. Consultant shall document the type and number of aircraft associated with each TTF user to the extent feasible.

Support Facilities

Consultant shall summarize and depict the airside support facilities such as airfield lighting, signage, weather reporting equipment, NAVAIDS, fuel tanks, and fueling facilities.

Deliverables:

- Summary, tables, and figures describing the landside facilities on the airport.

Task 4.4 Due: Submitted on due date for Working Paper #1, 120 days after NTP

Task 4.5 - Evaluate Existing Airside Elements of the Airport

Consultant shall evaluate airside facilities, design standards, and airspace and approach procedures of the airport and airspace for use in subsequent phases of the master plan. Consultant will evaluate the following facilities:

Airside Facilities

Consultant shall summarize and depict existing airside facilities data gathered from a variety of sources to provide an inventory and understanding of the issues and opportunities surrounding the following airside elements:

- Runway – Consultant shall summarize and depict the existing runway on the airport.
- Taxiways – Consultant shall summarize and depict the existing taxiway network on the Airport.
- Airfield Pavements – Consultant shall summarize and depict pavement thickness, pavement markings, pavement strength, pavement condition, and construction history of airside facilities such as runway, taxiway/taxilane and apron pavements. The most recent Pavement Management Plan for the airport will be utilized in addition to a review of existing design drawings.
- Support Facilities – Consultant shall summarize and depict the airside support facilities such as airfield lighting, signage, weather reporting equipment, NAVAIDS, fuel tanks, and fueling facilities.

FAA Design Standards

Consultant shall summarize and depict known non-standard conditions identified in previous Airport Master Plan and any additional conformance issues based on the existing Airport Reference Code ("ARC") of B-I (small) and the approach type and category for each runway end.

Airspace and Approach Procedures

Consultant shall summarize and depict the latest available information for airspace, airport traffic patterns and procedures, TERPS/Part 77 Airspace, and approach procedures:

- Area Airspace Review - Consultant shall summarize and depict Airport airspace.
- Traffic Patterns – Consultant shall summarize and depict existing traffic patterns and aircraft operating procedures.
- TERPS – Consultant shall summarize and depict an analysis of existing TERPS surfaces and any obstructions. Consultant shall use AGIS data, if available, for the preliminary analysis, and incorporate the data into the final ALP drawing set.
- PART 77 Airspace – Consultant shall summarize and depict an analysis of existing FAR Part 77 surfaces and any existing obstructions. AGIS data will be used if available for the preliminary analysis, then incorporated into the final ALP drawing set.
- Approach Procedures – Consultant shall summarize and depict existing approach procedures and any known deficiencies.

Deliverables:

- Summary, tables, and figures describing the airside elements of the airport.

Task 4.5 Due: Submitted on due date for Working Paper #1, 120 days after NTP

Task 4.6 – Evaluate Existing Airport Administration

Consultant shall evaluate airport administration elements for use in subsequent phases of the master plan. Consultant will evaluate the following airport administration elements:

Airport Ownership & Management

Consultant shall summarize and depict pertinent information as it relates to the ownership and management of the Aurora State Airport, which may include, but is not limited to, the following:

- AGENCY Ownership of Airport
- Airport Maintenance
- Airport Property Leasing

Relevant State and Federal Regulations

Consultant shall summarize and depict pertinent information as it relates to relevant State and Federal regulations governing the Aurora State Airport, which may include, but is not limited to, the following:

- Oregon Revised Statutes (“ORS”)
- Oregon Administrative Rules (“OAR”)
- Federal Regulatory Standards
- Grant Assurances/Compliance

Airport Financials

Consultant shall summarize and depict a five year financial history for the Airport (AGENCY data may be utilized) to include, but is not limited to:

- Operating Revenue and Expense Analysis
- Rates and Charges Fee Schedule
- Profit and Loss Analysis

Deliverables:

- Summary, tables, and figures describing the airport administration of the airport.

Task 4.6 Due: Submitted on due date for Working Paper #1, 120 days after NTP

Task 4.7 – Prepare Existing Conditions Analysis Working Paper

Consultant shall develop a working paper summarizing the tasks, sub-tasks, and pertinent information outlined above. The draft working paper must provide information for subsequent decisions. Consultant shall submit working paper to AGENCY and FAA for review and comment, as described in Task 2 Public Involvement.

Deliverables:

- A narrative and graphical summary report of the tasks completed within Task 4.

Task 4.7 Due: Submitted on due date for Working Paper #1, 120 days after NTP

TASK 5 – AVIATION ACTIVITY FORECASTS

Per FAA guidelines, the airport master plan must include updated activity forecasts including, but not limited to, based aircraft, annual aircraft operations, activity peaking, fleet mix, instrument approaches and operations, and distribution between local and itinerant operations to assess the future demand at Aurora State Airport. Consultant will evaluate the existing and forecasts data and identify the current and future critical aircraft through the forecast update. The base year for data will be CY 2021. Forecasts will focus on the 20-year window, with reporting in the 5-, 10-, 20- and 50- year increments. To the extent feasible, the Consultant will utilize information gathered for the 2019 UAO Constrained Operations Runway Justification Study as a source document for the study.

Task 5.1 - Prepare Aviation Activity Forecasts

Based on the established baseline of the airport activity data identified in task 4.3, Consultant shall develop forecasts of future aviation demand levels using trend analysis, market share analysis or similar methodologies. Consultant shall analyze socioeconomic and airport activity data collected during the existing conditions analysis for input into the forecasting analyses. Updated forecasts will be developed for the following elements:

Based Aircraft

Consultant shall summarize and depict pertinent information as it relates to the forecast number of based aircraft (single engine, multi-engine piston, single/multi-engine turboprop, business jets, helicopters, and other aircraft (light sport aircraft, gliders, ultralights). Consultant shall further organize forecast based aircraft fleet by aircraft reference code (“ARC”) and operating weight.

Aircraft Operations

Consultant shall summarize and depict pertinent information as it relates to the forecast number of annual aircraft operations including, but not limited to, mix of general aviation itinerant and local operations; commercial operations; and military operations. Consultant shall include the distribution of fixed wing and helicopter operations for each forecast year.

Activity Peaking

Consultant shall summarize and depict pertinent information as it relates to the forecast aviation activity peaking (peak month, design hour, peak hour operations).

Fleet Mix

Consultant shall summarize and depict pertinent information as it relates to the forecast of the fleet mix for preferred aircraft operations forecast by ARC and weight.

Critical Aircraft

Consultant shall summarize and depict pertinent information as it relates to the forecast critical aircraft for each forecast year. Based on aircraft operations forecasts, the Consultant shall determine the forecasted existing and future critical (500 annual operations) aircraft. The critical aircraft must determine the existing and future airport reference code, upon which FAA design standards are predicated.

Deliverables:

- General aviation forecasts in 5-year intervals for the 20- year planning period.

Task 5.1 Due: Submitted three weeks prior to due date for Working Paper #1, 100 days after NTP

Task 5.2 – Preferred Forecasts

Based on a review of the updated master plan forecasts and TAF Projections, the Consultant shall recommend a “preferred forecast” for the master plan update. AGENCY, with input (as desired) from stakeholders and the Consultant, will identify the preferred forecasts to be carried forward to develop scenarios for future facilities.

Deliverables:

- Technical memorandum identifying the preferred forecast scenario.

Task 5.2 Due: Submitted one week prior to due date for Working Paper #1, 100 days after NTP

Task 5.3 - Develop Forecast Working Paper

Consultant shall develop a working paper summarizing the tasks, sub-tasks, and pertinent information outlined above and within Task 5. The draft working paper must provide information for subsequent decisions. Consultant shall submit this working paper to the AGENCY and FAA for review and comment as described in Task 2 Public Involvement (See Task 11 for document distribution details).

Deliverables:

- *A narrative and graphical summary of the forecasting analysis and preferred aviation activity forecasts*

Task 5.3 Due: Submitted on due date for Working Paper #1, 120 days after NTP

Task 5.4 - Forecast Approval

The FAA Seattle Airports District Office (“ADO”) will review forecasts of aviation demand. Based on its review, the ADO will approve the forecasts and existing and critical aircraft as submitted, or provide comments and request revisions to be made by the Consultant (for subsequent review by the FAA Seattle ADO). The FAA spreadsheets, “Comparison to TAF” and “Forecast Summary” will be included in the forecast chapter appendix. Consultant will coordinate with FAA to facilitate forecast review and amend forecasts to incorporate FAA comments, if necessary.

Deliverables:

- *Revised final forecasts chapter for FAA approval.*

Task 5.4 Due: Two weeks after FAA forecasts comments received

Note: This task will serve as a baseline for consideration, analysis, and recommendation conducted as part of other Study tasks. As this task serves as a basis for subsequent Study tasks, the Consultant shall perform no effort and incur no expense for other tasks relying on the Aviation Activity Forecasts until AGENCY has received approval and acceptance of this Aviation Activity Forecasts task.

TASK 6 – FACILITY GOALS AND REQUIREMENTS

The facility goals and requirements task must identify the Airport’s facility improvements required to satisfy existing and future airside and landside demand based on updated aviation activity forecasts and the identification of the current and future design aircraft identified in Task 5. The facility goals and requirements identified must focus on the facility improvements needed to safely and efficiently accommodate projected demand for the twenty year planning period (2019-2039).

Task 6.1 – Define Updated Airfield Design Standards and Analyze Airfield Conformance

The Consultant shall conduct an evaluation of the forecast critical aircraft and appurtenant FAA airport design standards and FAR Part 77 airspace standards based and the existing approach type and category for each runway end. Consultant shall document any non-conforming items. Consultant will address non-standard items in the airport development alternatives evaluation.

Deliverables:

- Summary and graphics depicting non-conforming facility configurations based on existing and future ARC to be included in the Facility Requirements chapter.

Task 6.1 Due: Included in draft chapter due 240 days after NTP

Task 6.2 – Perform Airport Demand/Capacity Analysis

The Consultant shall compare existing and future operations levels at the Aurora State Airport with runway capacity guidance contained in FAA AC 150/5060-5, Airport Capacity and Delay, to determine if runway capacity constraints will occur within the 20-year planning period. The analysis must assess arrival and departure activity per runway end and must address prevailing winds and instrument procedure availability. The Consultant shall not perform simulation modeling as part of this task. Consultant shall generate estimates of annual capacity (Annual Service Volume) and hourly capacity to coincide with activity forecast years (current, 5, 10, 15, and 20 years). Consultant shall consider any current or potential capacity constraints identified through the analysis in other facility requirements tasks and when preparing airport development alternatives.

Deliverables:

- Summary and graphics depicting comparison of hourly and annual capacity and existing/forecast demand to be included in the Facility Requirements chapter.

Task 6.2 Due: Included in draft chapter due 240 days after NTP

Task 6.3 – Define Regional Setting Goals and Requirements

Consultant shall summarize and depict a series of facility goals and requirements based on the existing conditions analysis, forecasts of aviation activity, demand considerations, and input from AGENCY and the Planning Advisory Committee (“PAC”), necessary to satisfy future demand and address any issues or opportunities identified in the Regional Setting (Task 4.3) analysis, which may include, but is not limited to the following:

- Airport Role and Area Airports Goals and Requirements
- Airport Operational Data Goals and Requirements
- Environmental Goals and Requirements
- Local Surface Transportation System Goals and Requirements
- Land Use Goals and Requirements

Deliverables:

- Summary of “regional setting” facility goals and requirements to serve as a guide for the preparation of the development alternatives to be included in the Facility Requirements chapter.

Task 6.3 Due: Included in draft chapter due 240 days after NTP

Task 6.4 – Define Landside Goals and Requirements

Consultant shall summarize and depict facility goals and requirements necessary to satisfy future demand based on the existing conditions analysis, forecasts of aviation activity, demand considerations, and input from AGENCY and PAC, and address any issues or opportunities identified in the Landside (Task 4.4) analysis, which may include but is not limited to the following:

- Utilities Goals and Requirements
- Local Emergency Medical/Fire Services (“EMS”) Goals and Requirements
- Airport Perimeter Fencing Goals and Requirements
- Airport Surface Road Access, Vehicle Parking, and Pedestrian Access Goals
- General Aviation (“GA”) Terminal Areas Goals and Requirements
- Hangar, Apron, and Taxiway Goals and Requirements
- Other Support Facility Goals and Requirements.

Deliverables:

- Summary of “landside” facility goals and requirements to serve as a guide for the preparation of the development alternatives to be included in the Facility Requirements chapter.

Task 6.4 Due: Included in draft chapter due 240 days after NTP

Task 6.5 – Define Airside Elements Goals and Requirements

Consultant shall summarize and depict a series of facility goals and requirements necessary to satisfy future demand based on the existing conditions analysis, forecasts of aviation activity, demand considerations, and input from AGENCY and the PAC, and address any issues or opportunities identified in the Airside Elements (Task 4.5) analysis, which may include, but is not limited to the following:

- Airside Facilities Goals and Requirements - Based on analysis in Sub-task 4.5.1
- FAA Design Standards Goals and Requirements - Based on analysis in Sub-task 4.5.2 and Task 6.1
- Airspace and Approach Procedures Goals and Requirements

Deliverables:

- Summary of “airside” facility goals and requirements to serve as a guide for the preparation of the development alternatives to be included in the Facility Requirements chapter.

Task 6.5 Due: Included in draft chapter due 240 days after NTP

Task 6.6 – Define Airport Administration Goals and Requirements

Consultant shall summarize and depict a series of facility goals and requirements necessary to satisfy future demand based on the existing conditions analysis, forecasts of aviation activity, demand considerations, and input from AGENCY and the PAC, and address any issues or opportunities identified in the Airport Administration (Task 4.6) analysis, which may include but is not limited to the following:

- Airport Ownership & Management Goals and Requirements
- Relevant State and Federal Regulations Goals and Requirements
- Airport Financials Goals and Requirements

Deliverables:

- Summary of “airport administration” facility goals and requirements to serve as a guide for the preparation of the development alternatives to be included in the Facility Requirements chapter.

Task 6.6 Due: Included in draft chapter due 240 days after NTP

Task 6.7 – Develop Facility Goals and Requirements Working Paper

Consultant shall develop a working paper describing the tasks outlined above. The draft working paper must provide information for subsequent decisions. Consultant shall submit this working paper to AGENCY and FAA for review and comment as described in Task 2 Public Involvement (See Task 11 for document distribution details).

Deliverables:

- A narrative and graphical summary of the facility goals and requirements; the working paper must be revised as necessary based on review comments and will become a chapter of the Airport Master Plan report.

Task 6.7 Due: Included in draft chapter due 240 days after NTP

TASK 7 – AIRPORT DEVELOPMENT ALTERNATIVES

In coordination with the public involvement process identified in Task 2, the purpose of this task is to evaluate the effects of the proposed development solutions identified in the facility goals and requirements (Task 6) in the form of airport development alternatives, thus providing the technical basis necessary for selecting a “preferred” development plan for the airport.

Task 7.1 – Identify and Prepare Development Alternatives

Consultant shall, based on the facility goals and requirements established in Task 6, prepare and depict potential airport development alternatives for community and regulatory AGENCY discussion. Consultant shall prepare a maximum of three (3) airside development options and three (3) landside

development options, in addition to a no-action option for evaluation. Consultant shall prepare the airport development alternatives using an aerial photo base and AGIS data, when available, combined with the electronic file for the Airport Layout Plan that depicts existing conditions.

Consultant shall present the preliminary alternatives graphically and in narrative (working paper) form, including large-scale drawings (and online) for presentation to the PAC, AGENCY, FAA, and the general public for review and consideration.

Deliverables:

- Summary and graphical depiction of airside and landside development alternatives for the future development of the airport.

Task 7.1 Due: Included in draft chapter due 226 days after NTP

Task 7.2 – Modifications of Standards Analysis for Roadway in the Object Free Area

Consultant shall review the relevant information from the FAA Airport Design Advisory Circular (AC) 150/5300-13, 14 CFR Part 77, and FAA Order 5300.1G FAA Modification of Standards (MOS) to produce a summary analysis and narrative that summarizes the issues necessitating the MOS process, identifies the relevant FAA standards, presents an alternatives analysis, and includes recommendations for the preferred alternative for a path to compliance with FAA standards.

Consultant shall summarize the existing deviations from airport design standards and the elements identified in the alternatives analysis impacted by the existing OFA condition. This will include the standards identified in FAA Airport Design Advisory Circular (AC) 150/5300-13, 14 CFR Part 77, and outline the requirements of FAA Order 5300.1G FAA Modification of Standards. Consultant shall conduct a clearance review of the existing condition by placing the centerline of the critical aircraft on the edge of the RSA to identify wingtip clearance provided.

Product: A narrative and graphical summary of non-standard conditions for input to future work elements.

OFA Alternatives Analysis

Consultant shall prepare two preliminary development alternatives to address the current OFA condition that consider shifting the runway to the east towards existing airside and landside facilities on the airport and relocating Hubbard Highway and the existing fence to the west. Consultant shall also include two alternatives that would reduce the non-standard condition including evaluating an alternative to move the fence west to the extent feasible.

The OFA alternatives analysis will include:

- A narrative and exhibits depicting each alternative.
- Cost estimates for each alternative.
- A practicability assessment of the feasibility of the alternative in terms of cost, constructability, and other factors.
- Identification of federal, state, and local agencies that have jurisdiction over land impacted by the improvements identified in each alternative.
- Land acquisition requirements including a summary of land ownership for impacted properties.
- Other relevant factors that may impact the selection of a preferred option.

Product: Narrative and graphical summary of alternatives analysis.

Select Preferred OFA Alternative/Summarize Path to Compliance

Consultant shall coordinate with ODA and FAA to review alternatives and select a preferred alternative to address nonstandard conditions. Once the preferred alternative is selected, Consultant shall develop an action plan that outlines the steps necessary to implement the preferred alternative including airport planning tasks, environmental requirements, property acquisition, interagency coordination (ODOT, Marion County), public involvement, property acquisition, cost estimates, and design. The action plan will be the basis of a narrative identifying the path to compliance for the airport.

Product: A memorandum and graphical summary of the action plan and proposed path to compliance.

Assumption: Includes two review periods with ODA and two review periods with FAA Seattle ADO.

Prepare MOS Memorandum

Consultant shall develop a memorandum requesting a Modification of Standards utilizing information developed as outlined above. The memo will be submitted to ODA and FAA for review and comment.

Product: A Modifications of Standards request memorandum with supporting documentation for ODA and FAA Review.

Assumption: Includes one review period with ODA and one review period with FAA Seattle ADO.

Submit MOS in ADIP

Consultant shall submit the MOS materials to the Airport Data and Information Portal (ADIP) at: <https://adip.faa.gov/agis/public/#/public>. Consultant will coordinate submission materials and response to comments with the ADO to complete the process as efficiently as possible.

Product: Submit MOS application through the ADIP Portal.

Assumption: The materials generated in Task 7.2 will be developed with the active participation of the Seattle ADO. It is assumed that the application materials will be in final approvable form at the time of submittal. Once approved, the elements of the approved alternative will be incorporated into subsequent alternatives studies subsequent to this task.

Deliverables:

- Summary and graphical depiction of the recommended preferred development alternative submitted to FAA for approval.

Task 7.2 Due: Included in draft chapter due 120 days after NTP

Task 7.3 – Runway Protection Zone Analysis

Consultant shall identify and summarize the relevant information from the FAA's Interim Guidance on Land Uses Within a Runway Protection Zone, FAA Airport Design Advisory Circular (AC) 150/5300-13, 14 CFR Part 77.

Identify and Evaluate Existing and Future RPZ Deficiencies at UAO

Consultant shall prepare a summary and depiction of relevant existing and future RPZ deficiencies to be

addressed in the RPZ Alternatives Analysis. Analysis will include a risk analysis based on the critical aircraft centered on the Runway Safety Area and Runway Object Free Area boundaries and consider applicability to the conformance of the RPZ.

RPZ deficiencies to be considered include:

- Buildings and structures
- Recreational land use
- Transportation facilities
- Fuel storage facilities
- Hazardous material storage
- Wastewater treatment facilities
- Above-ground utility infrastructure, including any type of solar panel installations
- Wildlife hazard attractants such as retention ponds or municipal landfills

Prepare RPZ Assessment Memo

Consultant shall develop a working paper summarizing RPZ requirements and deficiencies as outlined above for ODA and FAA review and comment. The draft working paper will provide information for subsequent analysis and decisions.

Product: A narrative and graphical summary of RPZ requirements and the existing and future RPZ deficiencies.

Assumption: Includes limit of two review periods with ODA and two review periods with FAA ADO.

RPZ Alternatives Analysis

Consultant shall prepare preliminary development alternatives to address RPZ deficiencies based on previous work product and input from ODA and FAA. Consultant shall review the preferred alternative included in the 2012 Airport Master Plan and provide up to three additional alternatives to address RPZ deficiencies including modifying the runway layout, considering alternatives to provide required runway length, and taxiway configuration options to accommodate the runway length identified in the Facility Requirements. Alternatives will include the no action alternative; the 2012 AMP preferred alternative; an alternative to achieve full compliance with FAA standards and guidance; and an alternative to minimize impacts within practical limits.

Areas of emphasis for analysis of alternatives shall include:

- A description of each alternative including a narrative discussion and exhibits or figures depicting the alternative.
- Full cost estimates associated with each alternative regardless of potential funding sources.
- A practicability assessment of the feasibility of the alternative in terms of cost, constructability, and other factors.
- Identification of all Federal, State, and local transportation agencies involved or interested in the issue.
- Analysis of the specific portion and percentages of the RPZ affected, drawing a clear distinction between the Central Portion of the RPZ versus the Controlled Activity Area, and clearly delineating the distance from the runway end and runway landing threshold.
- Analysis and identification of issues affecting sponsor control of the land within the RPZ.
- Other relevant factors for FAA HQ consideration.

Product: Graphical depictions of airside alternatives and summary of analysis.

Select Preferred RPZ Development Alternative

Consultant shall provide a recommendation for the preferred development alternative based on FAA and ODA review and comment of the preliminary development alternatives. A preferred alternative will be recommended with a description of the basis for the preference over the other alternatives. The recommendations will be presented to ODA for final review and approval. The preferred alternative will be consistent with all applicable FAA technical standards and regulations unless FAA agrees to a modification of standards in their approval of the preferred alternative.

Product: Consultant shall provide a graphic depiction and narrative description of the preferred alternative.

Assumption: Assumes limit of two review periods with ODA.

Coordinate FAA Approval of Preferred Alternative

Consultant shall coordinate final review and approval of the preferred alternative with ODA and FAA. Consultant shall modify and update figures and narrative based on comments received through the coordination process to arrive at the ODA preferred development alternative with FAA.

Product: ODA's selected preferred development alternative will be reflected in graphic depiction and narrative description and presented to FAA for final review and acceptance.

Assumption: Assumes two review periods with ODA and FAA Seattle ADO and two review periods with FAA HQ. Based on the configuration of the preferred alternative, an update to the ALP plan set may be required and is not included in this scope of work.

Coordinate FAA ADO and FAA HQ Review and Approval

Consultant shall coordinate with ODA, FAA ADO, and FAA HQ personnel to obtain final approval of the draft final report. Consultant shall coordinate with FAA staff to obtain final acceptance letters to be included in final report and develop a final report document.

Product: A final approval letter from FAA personnel indicating acceptance of the preferred alternative.

Assumption: Assumes up to four individual meetings/conference calls with ODA and FAA ADO/HQ staff.

Deliverables:

- *FAA ADO and FAA HQ approved RPZ alternative to be included in subsequent development alternatives and supporting memos, documentation, and approval letters from FAA HQ.*

Task 7.3 Due: 270 days after NTP

Task 7.4 – Evaluation of Development Alternatives

Consultant shall develop a detailed evaluation to summarize and depict a comparison of the merits and deficiencies of the development alternatives under consideration. Consultant shall prepare an evaluation matrix to compare the composite rankings of each alternative. Consultant shall consider factors in the evaluation that include but are not limited to:

- **Ability to Serve Forecast Demand:** Consultant shall evaluate each alternative to determine its ability to meet forecast demand levels within accepted performance standards such as aircraft delay and airport user convenience. Consultant shall perform these evaluations for each type of facility and shall aggregate them to permit comparison. Consultant shall quantify the results of this evaluation process to the extent possible for use in the evaluation matrix.
- **Airport Design Standards:** Consultant shall evaluate each alternative toward FAA airport design standards. Consultant shall identify [potential approach obstructions and required mitigation, if any. Consultant shall address potential impacts on existing airport or tenant facilities.
- **Airspace Compatibility:** Using the airspace requirements developed earlier and the forecasts of aviation activity, Consultant shall evaluate potential impacts to airspace and related operations for each alternative. This will include, but is not limited to, VFR airport traffic patterns, existing instrument approach and departure (“TERPS”) surfaces.
- **Land Use, Transportation, and Environmental Compatibility:** Consultant shall evaluate the proposed development alternatives to determine the impact on local land use, local transportation systems, and the environment (the environmental analysis must generally be a high level overview of the relevant NEPA impact categories).
- **Development Costs:** Consultant shall prepare a preliminary (planning level) cost estimates associated with proposed improvements. The cost estimates must provide an indication of the cost of developing the airport and also must provide a basis for comparing cost-effectiveness among the various airport alternatives. Consultant shall also estimate the cost of maintaining the airport and developing or relocating any required off-site roadways under various alternative scenarios.

Deliverables:

- Summary and graphical depiction of airside and landside development alternatives for the future development of the airport.

Task 7.4 Due: Included in draft chapter due 345 days after NTP

Task 7.5 – Recommended Preferred Development Alternative

Consultant shall facilitate a discussion amongst key stakeholders and PAC members per the public involvement process in Task 2 to identify a recommended preferred development alternative for the Aurora State Airport.

Deliverables:

- Summary and graphical depiction of the recommended preferred development alternative

Task 7.5 Due: Included in draft chapter due 345 days after NTP

Task 7.6 – Environmental Analysis of Preferred Alternative

The Consultant shall review and identify potential key environmental impacts of the preferred development alternative per FAA Order 1050.1F Policies and Procedures for Considering Environmental Impacts, and FAA Order 5050.4B, FAA Environmental Handbook and pertinent Oregon State guidance. This analysis will not provide the detail typically required in an FAA NEPA Environmental Assessment or other study, but provides a foundation that can be used by AGENCY for any future environmental analysis required for implementation based on the NEPA categories analyzed and depicted in the Inventory Chapter.

Deliverables:

- Summary and graphical depiction of potential environmental impacts of the preferred development alternative

Task 7.6 Due: Included in draft chapter due 345 days after NTP

Task 7.7 – Prepare Development Alternatives Working Paper

The Consultant shall develop a working paper describing the tasks outlined above. Consultant shall submit working paper to AGENCY and FAA for review and comment as described in Task 2 Public Involvement (See Task 11 for document distribution details).

Deliverables:

- Narrative and graphical summary of the alternatives analysis; Consultant shall revise and amend the working paper as necessary based on review comments and must become a chapter of the Airport Master Plan report.

Task 7.7 Due: Included in draft chapter due 345 days after NTP

Task 7.8 – Confirm Preferred Development Alternative

Based on review and comment of the preliminary development alternatives presented in the working paper, AGENCY will select a preferred development alternative for the Consultant to proceed on with in the implementation phase of the master plan. The preferred alternative may include elements from one or more of the preliminary development alternatives, or may include refinements that were created during the evaluation of the preliminary alternatives. Consultant shall summarize and document comments provided by the master plan PAC, FAA, City/County, AGENCY, airport users and tenants, and the general public in memo form by the Consultant. Consultant shall recommend a preferred alternative with a description of the basis for the preference of the alternative over the others. Consultant shall present the recommendations to AGENCY for final review and approval of the preferred alternative. As noted earlier, the preferred alternative must be consistent with all applicable FAA technical standards and regulations.

Deliverables:

- Summary and graphical depiction of AGENCY’s selected preferred development alternative

Task 7.8 Due: Included in draft chapter due 360 days after NTP

TASK 8 – IMPLEMENTATION PLAN

Consultant shall prepare a capital program and financial plan for implementing the preferred airport development alternative representing recommendations that are: fiscally and operationally efficient; and environmentally and socially sustainable, implementable and defensible. The master plan’s 20-year Capital Improvement Plan (“CIP”) must summarize all development and major maintenance Projects anticipated during the planning period.

Consultant shall work closely with AGENCY to identify key development priorities to be reflected in the updated CIP. The cost of each Project must be listed with the amount of anticipated FAA and AGENCY funding defined based on current funding eligibility. The CIP must provide an annual breakdown of Projects for the short-term period (years 1-5); then overall groupings of Projects provided for the

intermediate (years 6-10) and long-term (years 11-20) periods.

Once the list of capital Projects and cost estimates has been developed, the Consultant shall work with AGENCY staff to develop a cursory review of strategies and actions AGENCY, City of Aurora, Marion County, Clackamas County, and other regulatory agencies could pursue to ensure the proposed improvements identified in the preferred alternative are implemented.

Task 8.1 - Capital Improvement Program

The Consultant shall prepare a 20-year Airport CIP, which must include, but is not limited to, recommended phases of development, estimates of cost for each improvement, possible funding sources, including an evaluation of the airport's predicted available FAA grant funding based on current funding legislation. The CIP must also estimate local expenses associated with Project implementation that are not typically eligible for FAA funding.

Consultant shall organize the short-term period of the CIP (years 1-5) with prioritized annual Project listings; Projects included in the intermediate and long term periods will be prioritized within the overall timeframe. Consultant shall prepare a phasing diagram will identify each development and major pavement maintenance Project programmed in the 20-year planning period.

Deliverables:

- A 20-year CIP in spreadsheet format and project phasing diagram, with associated text

Task 8.1 Due: Included in draft chapter due 510 days after NTP

Task 8.2 – Financial Plan

Consultant shall prepare projections of the airport operating revenue and expenses to coincide with the 20-year CIP. AGENCY will provide a summary of the most recent complete year of financial data to be used as the baseline for the revenue and expense projections. Specific assumptions regarding potential changes in expenses or revenues will be coordinated between the AGENCY and Consultant and will reflect the general timeframe for major revenue-generating projects or increased maintenance or operational costs. Consultant will prepare a projection to identify levels of airport-generated funding available to support the capital improvement program during the current planning period.

Deliverables:

- A 20-year airport revenue and expense projection in tabular format

Task 8.2 Due: Included in draft chapter due 510 days after NTP

Task 8.3 – Strategies & Actions

Consultant shall identify land use, transportation, and environmental strategies and actions to complete the identified project for each project in the first 5 years of the CIP. Consultant with coordination with AGENCY will develop a plan to ensure that:

- Airport improvements identified throughout the planning process are linked to other activities within the community's capital improvement program.
- Land-use regulations that need to be adjusted to reflect the plan's goals are accomplished within reasonable timeline.
- Clear direction is provided on project responsibilities, schedule, and funding.
- Key agencies responsible for implementing each element of the plan are identified.

Consultant shall work with AGENCY staff to identify and recommend strategies and actions specific to each project based on information developed within this task and previous tasks that may be required to implement the preferred airport development alternative.

Deliverables:

- A summary and depiction of recommended strategies and actions that correspond with major development projects identified within the first 5 years of the CIP

Task 8.3 Due: Included in draft chapter due 420 days after NTP

Task 8.4 - Prepare Implementation Plan Working Paper

Consultant shall develop a working paper describing the tasks outlined above. Consultant shall submit this working paper to AGENCY and FAA for review and comment as described in Task 2 Public Involvement (See Task 11 for document distribution details).

Deliverables:

- A narrative and tabular summary of the implementation plan. Consultant shall revise and amend the working paper as necessary based on review comments and shall make it a chapter of the Airport Master Plan report

Task 8.3 Due: Included in draft chapter due 510 days after NTP

TASK 9 - AIRPORT LAYOUT PLAN DRAWINGS

Consultant shall replace (redraw) the previous Airport Layout Plan (ALP) drawing set to reflect current conditions, updated master plan development recommendations, and all applicable FAA requirements. Consultant shall show the major projects proposed in the Capital Improvement Program (“CIP”) on the ALP in schematic form. Consultant shall create all drawings in AutoCAD Version 2018 and formatted with color imaging and use of color aerial photography and AGIS data, developed according to FAA SOP 2.00 and 3.00.

Note: ALP drawings will be submitted as a set. Deliverables and due dates for all ALP drawing sets are included at the end of Task 9. ALP Cover Sheet will be developed with space allocated for two letter sized pages to incorporate the ALP approval letter into the final drawing.

Task 9.1 - Airport Layout Plan

Consultant shall prepare an Airport Layout Plan (“ALP”) in accordance with the findings, recommendations and approvals resulting from the study. Consultant shall develop the ALP utilizing the data collected and exported into AutoCAD, Version 2018.

The Airport Layout Plan must contain the information as required in FAA Advisory Circular 150/5300-13A, and the most current FAA SOP 2.00 and SOP 3.00. The Airport Layout Plan must contain sufficient data to obtain approvals from the FAA. The Airport Layout Plan must be depicted as a black and white line drawing with color, as needed, to help differentiate the line work and hatching.

Task 9.2 – On-Airport Individual Area Plans

Consultant shall prepare individual Area Plans to depict the existing and proposed facilities for various areas within airport property. The plans must generally be comprised of, but not limited to existing

general aviation facilities located on the east side of the runway and any new general aviation areas (locations to be determined through master plan evaluation). Consultant shall show facilities on the drawings include, but are not limited to:

- a. Apron Configuration and Aircraft Parking Positions (based and itinerant aircraft, including helicopter parking positions);
- b. Aircraft Taxiways and Taxilanes;
- c. FBO and Aircraft Fueling Facilities;
- d. Access Roadways and public vehicle parking; and
- e. Security Fencing and Gates.

Task 9.3 - Airport Airspace Drawing (FAR Part 77)

Consultant shall prepare FAR Part 77 drawing depicting the plan view of the ultimate FAR Part 77 imaginary surfaces for the airport. The existing and future full-length approach plan and profile views to each runway end. Any obstructions will be listed, the amount of penetration determined (using AGIS data) and their proposed disposition will be identified. Fifty-foot contour intervals will be shown for all FAR Part 77 imaginary surfaces for full length of all approach surfaces. NOS Obstruction Chart and AGIS obstruction data will be incorporated into the drawing, as appropriate. USGS quadrangle maps or AGIS data will be utilized for the base layer on the Part 77 plan view.

Task 9.4 - Runway Protection Zone (RPZ)/Inner Approach Plan and Profile Drawings

Consultant shall prepare drawings that show the plan view of the Runway Protection Zones (“RPZ”) and plan and profile views of the inner portion of the runway approach surface for each runway end. In addition, Consultant shall depict obstacle clearance surfaces (“OCS”) or TERPS instrument runway departure surfaces, as applicable. Consultant shall identify any obstructions within the RPZ or the other noted surfaces and provide a recommended. Aerial photography and AGIS data may be used to develop these drawings. This drawing may be combined with other drawings.

Task 9.5 - Approach Plan and Profile for Each Runway End

Consultant shall prepare drawings that show the existing and future full approach plan and profile for the approaches to each runway. In addition, Consultant shall depict obstacle clearance surfaces (“OCS”) or TERPS instrument runway departure surfaces, as applicable. Consultant shall identify any obstructions within the approaches and provide a recommended disposition. This drawing may be combined with other drawings. Consultant shall utilize USGS maps and AGIS data.

Task 9.6 – Threshold Siting Surface Drawing for Each Runway End

Consultant shall prepare a Threshold Siting Surface Drawing based on the findings and recommendations reflected in the preferred alternative. Consultant shall develop a plan showing the existing and ultimate threshold siting surface for each runway end. Consultant shall develop Plan and profile views of each area identifying all physical obstructions. Consultant shall note obstruction heights and locations based on AGIS data. Consultant shall note any obstruction requiring removal or relocation to meet FAA standards and shall identify an action plan. This drawing may be combined with other drawings, if appropriate.

Task 9.7 – On-Airport Land Use Plan

Consultant shall prepare a Land Use Plan drawing depicting existing and recommended uses of all land within the ultimate airport property. Consultant shall also depict current zoning designations for the Airport. Consultant shall illustrate the Land Use Plan on a drawing (same sheet size and scale as the ALP) and describe it within the body of the Master Plan document. The Consultant shall work with the

respective City/County planning departments during the development of the On-Airport Land Use Plan to ensure accurate depiction of existing and proposed land uses.

Task 9.8 – Off-Airport Land Use Plan

Consultant shall prepare an Off-Airport Land Use Plan drawing depicting existing and recommended uses of all land in the vicinity of the airport, generally identified as that area surrounding the airport, generally within ½-mile of the facility. Consultant shall depict land uses by comprehensive plan land use categories, including such as agriculture, residential, industrial, commercial, open space, aviation-related, public, etc. Current zoning designations may also be depicted.

Consultant shall illustrate off-airport land use on a drawing (same sheet size as the ALP) and described within the body of the Master Plan document. Any findings from this study effort will be incorporated into the land use recommendations, which will be provided to any affected governmental near the Airport. Consultant shall work with the respective City/County planning departments during the development of the Off-Airport Land Use Plan drawing to ensure that recommendations needed to implement any changes in land use designations or zoning have been shared with local planning agencies.

Task 9.9 – Exhibit “A”

Consultant shall prepare an Exhibit “A” drawing depicting property ownership, aviation and surface easements. The current airport boundary along with detailed parcel information grantor, grantee, type of interest, acreage, book & page, date of recording, and appropriate FAA Project application numbers, if applicable, is to be provided to the Consultant by AGENCY or secondary sources. Consultant shall prepare the Exhibit “A” in accordance with FAA Exhibit A SOP 3.0 and include the following tasks:

1. Research Property Information. Consultant shall research and obtain available existing airport property/land use information from the AGENCY, FAA, and previous airport plans and drawings.

Property research shall be conducted in the following manner:

- Consultant is responsible for obtaining recorded property Ownership & Encumbrance (O&E) information. Property research shall date back to Land Patent.
- Research existing airport property interests (e.g. fee, easement).
- Research recorded encumbrances upon existing airport property.
- Research FAA land acquisition grant history.

No property ownership and encumbrance research shall be conducted on future airport property areas identified in planning study.

2. Prepare Exhibit “A” Electronic Base Map. Consultant shall utilize available section corner information and researched legal descriptions to prepare the electronic mapped record drawing of airport property interests and encumbrances. No site survey shall be completed. Encumbrances will only be mapped to the extent possible from recorded documents.

3. Prepare Exhibit “A” Printed Drawings & Tables. Consultant shall prepare the Exhibit “A” / Airport Property Map in accordance with FAA ARP SOP 3, Standard Operating Procedure (SOP) for FAA Review of Exhibit “A” Airport Property Inventory Maps (October 1, 2013). Detailed information on airport property interests and encumbrances on existing airport property shall be presented in a tabular format.

4. Prepare Exhibit “A” Recordation and Encumbrance Booklet. Consultant shall compile all property

research documents and drawings to prepare an Exhibit "A" Recordation and Encumbrance Booklet to meet FAA SOP standards. Any property discrepancies will be documented. Resolution of property discrepancies is not included within the scope of work.

5. Documentation & Review Process. The Engineer shall assemble all property documentation into a submittal package. Consultant shall submit Exhibit "A" / Airport Property Map plan sheet, checklist, and backup documentation to Owner and FAA for review and acceptance.

Deliverables:

- Preliminary Draft ALP Drawing Set (1 copy to AGENCY, and 1 copy to FAA Seattle ADO for informal coordination with FAA ALP Checklist)
- Draft ALP Drawing Set (1 printed copy to AGENCY; 3 printed copies and 1 electronic copy to FAA Seattle ADO).
- Draft Final ALP Drawing Set (electronic submittal of final ALP set with comments incorporated for final FAA planner and ADO manager review prior to printing of final documents for signature). Consultant shall provide FAA planner one final check set of ALP drawings electronically to confirm that comments have been addressed. Consultant shall be responsible for submitting a signed copy of the FAA ALP checklist with copies of the draft ALP submittal to the FAA. Following completion of FAA and local review, the Consultant shall make all necessary revisions; and shall address comments provided by AGENCY staff, the master plan PAC, and others during the same revision period.
- Upon written confirmation from FAA planner and ADO manager that comments have been addressed and the ALP is ready for signature, the Consultant shall submit three (3) final drawing sets for AGENCY signature and final submittal to FAA for signature. The FAA will return one signed ALP set to the Sponsor and keep two sets on file at the FAA Airport District Office ("ADO"). Final ALP Drawing Set (3 copies to AGENCY for signature; to be forwarded to FAA Seattle ADO for approval and signature; 1 electronic copy to FAA; 1 signed set returned to AGENCY; and 1 printed copy and 1 electronic copy to AGENCY).

Task 9 Due: Draft ALP Drawing set 390 days after NTP; Draft Final ALP Drawing set 420 days after NTP; Final ALP Drawing set 510 days after NTP

TASK 10 - RECYCLING AND SOLID WASTE MANAGEMENT PLAN

Consultant shall assist AGENCY in developing a recycling and solid waste management plan in accordance with the FAA requirements and consistent with applicable State and local recycling laws and must include, but is not limited to, the following:

- waste audit;
- feasibility of solid waste recycling at the airport;
- recommendations to minimize the generation of solid waste at the airport;
- operation and maintenance requirements;
- review of waste management contracts; and
- potential for cost savings or the generation of revenue.

Task 10.1 – Waste Audit

The Consultant shall perform a waste audit of all current sources of waste material currently generated on the airport. The audit must summarize material source, amount, current disposal protocol, and

applicable State and Federal requirements for disposal, if any. This must include, but is not limited to, 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 must catalog waste sources including, but not limited to, hangar tenants, FBO and maintenance hangar wastes, 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 must also summarize waste over the busiest summer month and also include estimates for any annual events. Consultant shall identify the “ownership” and responsibility for recycling or disposal of each waste source in the audit.

Deliverables:

- Waste audit summary

Task 10.1 Due: Included in draft chapter due 330 days after NTP

Task 10.2 – Recycling Feasibility

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

This task must include, but is not limited to, 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. Consultant shall summarize the findings of this review to identify current practices, opportunities, and barriers to recycling at the airport.

Deliverables:

- Recycling feasibility summary

Task 10.2 Due: Included in draft chapter due 330 days after NTP

Task 10.3 – Plan to Minimize Solid Waste Generation

The Consultant shall work with the AGENCY to develop a plan to minimize solid waste generation on the airport. The Consultant shall utilize the list of solid waste constituents generated in the waste audit and shall provide recommendations for waste reduction opportunities for each, as applicable. Consultant shall develop and write the plan. The plan must include, but is not limited to, the following elements:

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

Deliverables:

- Plan to minimize solid waste

Task 10.3 Due: Included in draft chapter due 330 days after NTP

Task 10.4 – Operational and Maintenance Requirements

The Consultant shall review operational and maintenance activities that produce waste materials and evaluate opportunities to reduce, reuse, or recycle materials generated from these activities. Consultant shall provide a summary includes, but is not limited to, 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.

Deliverables:

- Operational and maintenance recycling summary

Task 10.4 Due: Included in draft chapter due 330 days after NTP

Task 10.5 – Review Waste Management Contracts

The Consultant shall 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 must include, but is not limited to, 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 the hauling contract, and landfilling contract and must identify opportunities for recycling through existing and other locally available providers.

Deliverables:

- Summary of waste management contracts

Task 10.5 Due: Included in draft chapter due 330 days after NTP

Task 10.6 – Potential for Cost Savings or Revenue Generation

The Consultant shall 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.

This section must include, but is not limited to, the following tasks:

- Plan for future development Projects including hangar construction, tenant improvements, landside and airside facility development and rehabilitation Projects.
- Opportunities for periodic review to identify if market dynamics have changed (i.e., glass recycling pick up becomes available for the airport area.);
- Recommendations for implementation including immediate actions, short term implementation, and ongoing actions triggered by events or Projects. This must also include recommendations for modifications to Project specifications and airport contracting procedures to require recycling, as appropriate, for future Projects and agreements.
- Summary of cost savings or revenue generation at the airport through the implementation of the plan.

Deliverables:

- Summary of potential costs savings and revenue generation

Task 10.6 Due: Included in draft chapter due 345 days after NTP

Task 10.7 - Prepare Recycling and Solid Waste Management Plan Working Paper

The Consultant shall develop a working paper describing the tasks outlined above. Consultant shall

submit this working paper to AGENCY and FAA for review and comment as described in Task 2 Public Involvement (See Task 11 for document distribution details).

Deliverables:

- Airport Recycling and Solid Waste Management Plan

Task 10.7 Due: Included in draft chapter due 345 days after NTP

TASK 11 - REPORTS AND DOCUMENTATION

Task 11.1 – “Preliminary” Draft ALP Set

Consultant shall prepare a draft ALP set for FAA and Sponsor preliminary review and comment.

Deliverables:

- Preliminary Draft ALP Drawing Set (1 copy to AGENCY, and 1 copy to FAA Seattle ADO for informal coordination with FAA ALP Checklist)

Task 11.1 Due: Preliminary Draft ALP Drawings Set 480 days after NTP

Task 11.2 - Draft Airport Master Plan Report and Draft ALP Drawing Set

Consultant shall submit a Draft Airport Master Plan Report and Draft ALP drawing set for formal review. The draft report must contain all preliminary working papers (revised based on comments provided on original drafts), ALP drawings and the financial evaluation. Consultant shall submit the draft documents and plans to the FAA for review and coordination with the appropriate FAA divisions (Air Traffic, etc.).

Consultant shall provide FAA planner one final check set of ALP drawings electronically to confirm that comments have been addressed. Upon written confirmation from FAA planner and ADO manager that comments have been addressed and the ALP is ready for signature, the Consultant shall submit final drawing sets for City signature and final submittal to FAA for signature.

Deliverables:

- Draft Final ALP Drawing Set
- Draft Final Airport Master Plan report

Task 11.2 Due: 510 days after NTP

Task 11.3 - Final Report and ALP Drawing Set

Consultant shall prepare and distribute the final Airport Master Plan Report and ALP drawings set based on comments received from the FAA and final coordination and review comments received from the AGENCY. Consultant will prepare the final publication of the report and plans set.

Deliverables:

- Final ALP Drawing Set (3 full sized sets, 1 electronic copy)
- Final Airport Master Plan report (9 hard copies, 1 electronic copy in PDF format)

Task 11.3 Due: 540 days after NTP