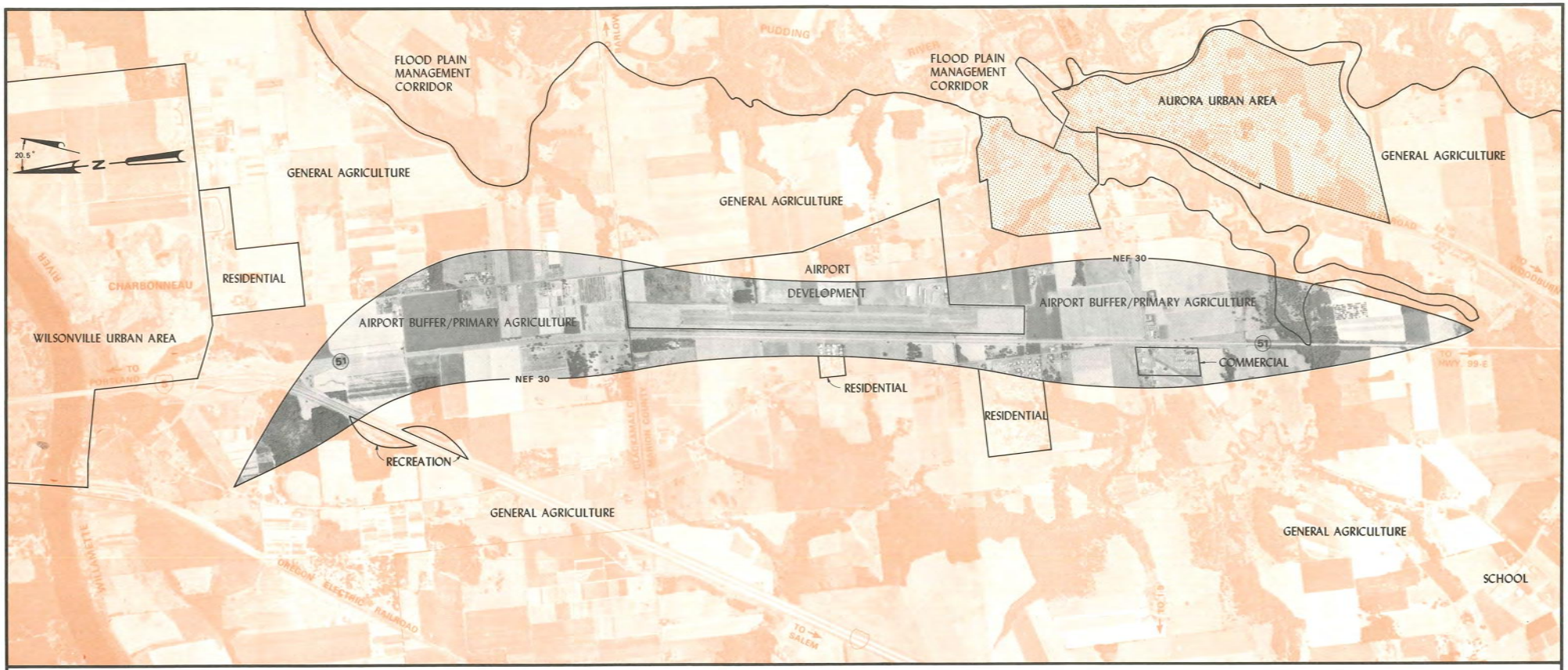

SUGGESTED LAND USE DESIGNATIONS

COMMERCIAL:

INCLUDES LIGHT INDUSTRIAL, DISTRIBUTION AND FARM AND BUSINESS SERVICE

RESIDENTIAL:

ENCOMPASSES MEDIUM TO HIGH DENSITY RESIDENTIAL AREAS, INCLUDING PROPER OPEN SPACE, RECREATION, UTILITY AND TRANSPORTATION FACILITIES.

URBAN AREAS:

INCLUDES THOSE USES NORMALLY ASSOCIATED WITH URBAN AREA DEVELOPMENT, SUCH AS RESIDENTIAL, COMMERCIAL, INDUSTRIAL AND PUBLIC USES. USUALLY LIMITED TO AREAS WHERE ADEQUATE MUNICIPAL FACILITIES ARE AVAILABLE.

RECREATION:

CONSISTS OF AREAS WITHIN THE FLOOD PLAIN MANAGEMENT CORRIDOR THAT PROVIDE SPORT AND LEISURE OPPORTUNITIES. THE REST AREA ALONG INTERSTATE FIVE IS ALSO INCLUDED.

FLOOD PLAN MANAGEMENT CORRIDOR:

INCLUDES AREA WITHIN 100 YEAR FLOOD PLAIN LIMITS. USES ARE PRIMARILY AGRICULTURAL, FORESTRY, PARK, RECREATION, OPEN SPACES, AND EXTRACTION OF SAND AND GRAVEL.

AIRPORT DEVELOPMENT:

INCLUDES THE ACTUAL FACILITIES OF THE AIRPORT SUCH AS, THE RUNWAY, TAXIWAYS, PARKING APRONS, HANGARS, ADMINISTRATION AND OPERATION BUILDINGS, CLEAR ZONES, ETC. AVIATION RELATED INDUSTRIAL AND COMMERCIAL BUSINESSES ALSO ALLOWED IN APPROPRIATE AREAS.

AIRPORT BUFFER OVERLAY:

ENCOMPASSES AN AREA AROUND THE AIRPORT, BOUNDED BY THE FUTURE NEF 30 CONTOUR, WITHIN WHICH LAND USES ARE DESIGNATED THAT WILL BE MINIMALLY AFFECTED BY AIRCRAFT OPERATIONS AT THE AIRPORT. PREFERRED LAND USES WOULD BE PRIMARY AGRICULTURE AND COMMERCIAL USE LIMITED TO LOW DENSITY CONCENTRATION OF PEOPLE.

PRIMARY AGRICULTURE:

PRIMARILY FOR AGRICULTURAL USES, INCLUDING FARMSTEADS. ADDITIONAL USES PERMITTED ARE RURAL COMMUNITY FACILITIES SUCH AS SCHOOLS, CHURCHES, PARKS, ETC. THESE SHOULD NOT BE ALLOWED UNDER THE AIRPORT BUFFER OVERLAY. EXISTING NONCONFORMING RESIDENTIAL AND COMMERCIAL USES MAY BE CONTINUED BUT SHOULD NOT BE ALLOWED TO EXPAND BEYOND PRESENT LIMITS SHOWN.

GENERAL AGRICULTURE:

GENERALLY FOR AGRICULTURAL USES INCLUDING LARGE FARMS, LOW DENSITY ACREAGE RESIDENTIAL AREAS AND SMALL HOBBY FARMS. ADDITIONAL USES PERMITTED INCLUDE RESIDENTIAL SUBDIVISIONS, PRIVATE COMMERCIAL RECREATION FACILITIES, FARM PRODUCTS PROCESSING OPERATIONS AND SAND AND GRAVEL EXTRACTION.

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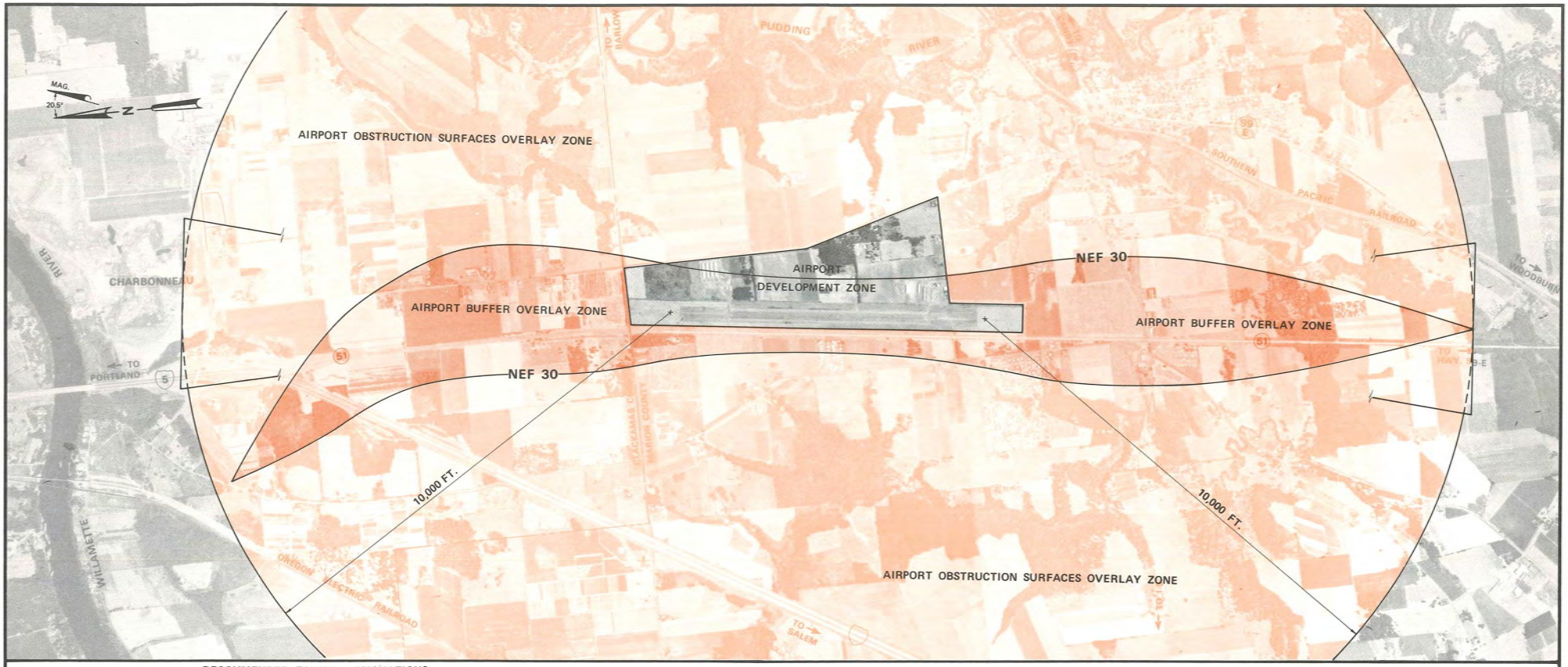
SCALE IN FEET

AURORA STATE AIRPORT

LAND USE PLAN

FIGURE **28**

CH2M HILL



RECOMMENDED ZONING DESIGNATIONS

AIRPORT DEVELOPMENT ZONE:

PERMITTED USES TO INCLUDE OPERATION OF AN AIRPORT. CONDITIONAL USES TO BE LIMITED TO AVIATION RELATED COMMERCIAL AND/OR INDUSTRIAL BUSINESSES IN APPROPRIATE AREAS WITH RESPECT TO AERONAUTICAL FACILITIES. THERE MUST BE A DEMONSTRATED AVIATION LINK TO COMMERCIAL AND/OR INDUSTRIAL USE IN THIS ZONE.

AIRPORT BUFFER OVERLAY ZONE:

AN OVERLAY SURROUNDING AN EXISTING OR POTENTIAL AIRPORT IMPACT AREA. TO BE SUPERIMPOSED OVER AND USED IN CONJUCTION WITH EXISTING ZONING. IT IS DEFINED BY THE EXISTING OR FORECAST NEF 30 NOISE CONTOUR, WHICHEVER ENCOMPASSES THE LARGEST AREA. THE PURPOSE IS TO PROVIDE FOR USES THAT PRECLUDE CONCENTRATIONS OF PEOPLE. FOR THE AURORA STATE AIRPORT BUFFER ZONE EXCLUSIVE FARM USE (EFU), WITH LIMITED COMMERCIAL AREA, IS RECOMMENDED. THE PERMITTED USES IN THE OVERLAY ZONE OVERRIDE CONFLICTING USES IN THE ZONES BENEATH THE OVERLAY.

AIRPORT OBSTRUCTION SURFACES OVERLAY ZONE

AN ADDITIONAL OVERLAY SUPERIMPOSED OVER AND SURROUNDING THE PLANNED AIRPORT DEVELOPMENT AND DIMENSIONED ACCORDING TO FEDERAL AVIATION REGULATION PART 77, OBJECTS AFFECTING NAVIGABLE AIRSPACE. THE OBSTRUCTION SURFACES ARE SHOWN ON FIGURE 24, ULTIMATE AIRPORT IMAGINARY SURFACES. THE CONICAL SURFACE HAS BEEN EXCLUDED FROM THE OVERLAY SO THAT NO AREA FARTHER THAN 10,000 FEET FROM THE PRIMARY AIRPORT SURFACE IS AFFECTED.

AURORA STATE AIRPORT

RECOMMENDED ZONING PLAN

FIGURE 29

CH2M HILL

IMPLEMENTATION PLAN

IMPLEMENTATION PLAN

DEVELOPMENT SCHEDULE AND STAGING 43
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FINANCING PLAN 45
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IMPLEMENTATION PLAN

DEVELOPMENT SCHEDULE AND STAGING

Table 10, Development Schedule, shows the stage development proposed through the short-range (1975-1980), the mid-range (1980-1985), and the long-range (1985-1995), periods.

This follows the requirements developed in AIRPORT REQUIREMENTS and shown on Table 7, page 26. The developments are according to the Airport Layout Plan and are illustrated on Figure 30. It has been assumed that all new pavements will last the duration of this Master Plan period (20 years).

The quantity of work required to match capacity improvements to demand requirements is shown for each item. The quantities are slightly more than demands require at the time specified. Otherwise the owner could construct smaller facilities earlier or more frequently, particularly as regards apron space.

The major development items in Stage I are land acquisition and a parallel taxiway. All land must be acquired initially to insure that the airport remains a complete unit and that the owner has control to carry out the rest of the Master Plan program.

Other major developments are: parking aprons for more than 100 aircraft, based and transient, runway rehabilitation, major airfield lighting, and site development of the terminal area.

During the Stage II development period the runway will be extended 900 feet with MALSF lighting and NDB. This anticipates a demand for more complex aircraft and longer trip distances with resultant greater takeoff requirements. Most of the other improvements are for developing the terminal area.

The timing for Stage III long-range development needs is less definite. The Master Plan calls for a 6000 feet runway at 60,000 pounds S.G. strength and other pavement strengthening. An MLS or equivalent landing system should be added by that time to maintain adequate airport utilization.

Significant additions to the terminal area will include more parking, a control tower, a terminal/administration building, a heliport and a crash/fire/rescue station.

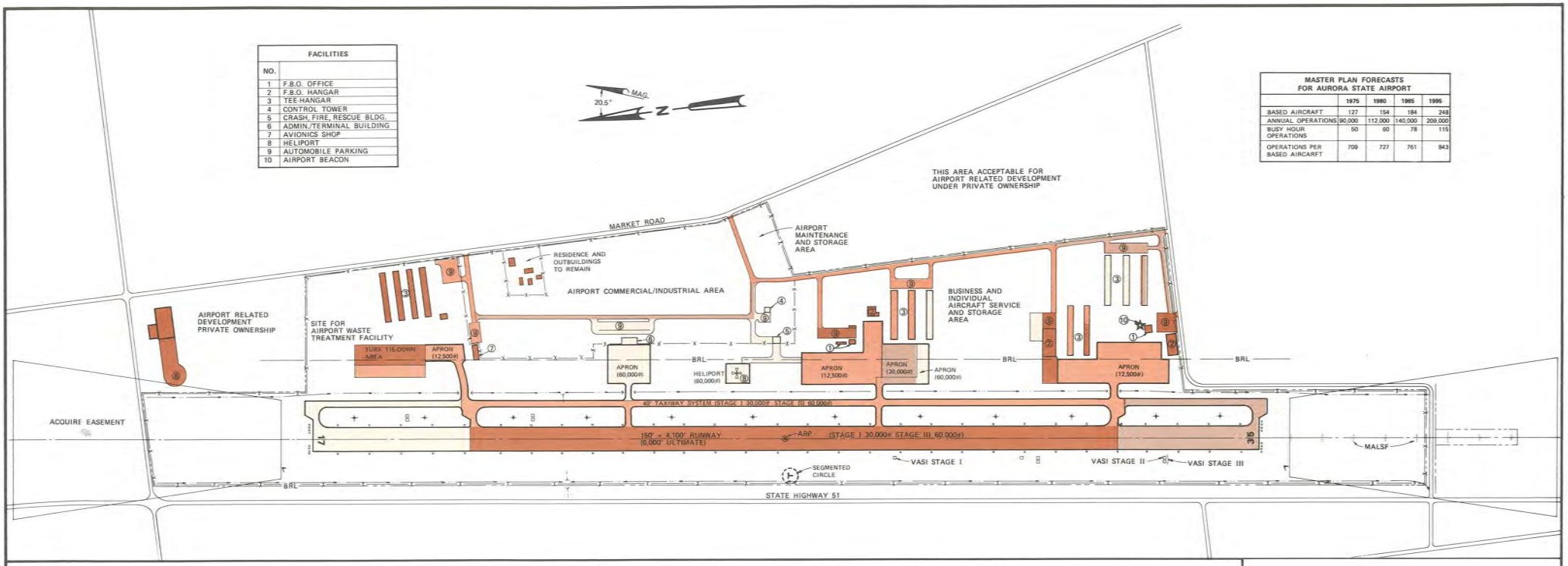

TABLE 10

DEVELOPMENT SCHEDULE

STAGE I — 1975-1980

PROJECT DESCRIPTION	QUANTITY
ACQUIRE LAND FOR AIRPORT DEVELOPMENT	116 ACRES
ACQUIRE AIR EASEMENTS	18 ACRES
REMOVE OBSTRUCTIONS	1.5 ACRES
PAVE AND MARK PARALLEL TAXIWAY SYSTEM (30,000#)	5,100 L.F.
PAVE AND MARK HOLDING APRONS (30,000#)	10,000 S.F.
PAVE AND MARK PARKING APRONS (12,500#)	305,000 S.F.
CONSTRUCT TURF PARKING AREA	10 AIRCRAFT
INSTALL ROTATING BEACON AND TOWER	1 EACH
INSTALL LIGHTED WIND TEE AND SEGMENTED CIRCLE	1 EACH
STRENGTHEN RUNWAY (TO 30,000#)	4,100 L.F.
INSTALL NON-PRECISION RUNWAY MARKING	4,100 L.F.
INSTALL MEDIUM INTENSITY RUNWAY LIGHTS	4,100 L.F.
INSTALL VASI SYSTEM	2 ENDS
INSTALL NON-DIRECTIONAL BEACON	1 EACH
INSTALL TAXIWAY REFLECTORS	5,100 L.F.
PAVE AND MARK AIRPORT ROADWAYS	3,800 L.F.
PAVE AND MARK AUTOMOBILE PARKING FACILITIES	80 AUTOS
CONSTRUCT FENCING	6,000 L.F.
CONSTRUCT TEE-HANGARS (PRIVATE DEVELOPMENT)	34 AIRCRAFT

STAGE II - 1980-1985

PROJECT DESCRIPTION	QUANTITY
EXTEND, PAVE AND MARK RUNWAY (30,000#)	900 L.F.
EXTEND MEDIUM INTENSITY RUNWAY LIGHTS	900 L.F.
EXTEND, PAVE AND MARK TAXIWAY SYSTEM (30,000#)	1,000 L.F.
PAVE AND MARK HOLDING APRON (30,000#)	5,000 S.F.
REPOSITION VASI SYSTEM	1 END
INSTALL MEDIUM INTENSITY EXIT TAXIWAY LIGHTS	700 L.F.
INSTALL LIGHTED WIND CONES	2 EACH
PAVE AND MARK PARKING APRON (30,000#)	56,000 S.F.
INSTALL MALSF APPROACH LIGHT SYSTEM	1 END
INSTALL PARKING APRON LIGHTING	600 L.F.
PAVE AND MARK AIRPORT ROADWAYS	3,200 L.F.
PAVE AND MARK AUTOMOBILE PARKING FACILITIES	30 AUTOS
EXTEND FENCING	3,400 L.F.
CONSTRUCT TEE-HANGARS (PRIVATE DEVELOPMENT)	10 AIRCRAFT

STAGE III — 1985-1995

PROJECT DESCRIPTION	QUANTITY
EXTEND, PAVE AND MARK RUNWAY (60,000#)	1,000 L.F.
STRENGTHEN AND MARK RUNWAY (TO 60,000#)	5,000 L.F.
EXTEND MEDIUM INTENSITY RUNWAY LIGHTS	1,000 L.F.
EXTEND, PAVE AND MARK TAXIWAY SYSTEM (60,000#)	1,200 L.F.
STRENGTHEN AND MARK TAXIWAY SYSTEM (TO 60,000#)	6,100 L.F.
PAVE AND MARK HOLDING APRON (60,000#)	5,000 S.F.
INSTALL MEDIUM INTENSITY TAXIWAY LIGHTS	6,500 L.F.
PAVE AND MARK PARKING APRONS (60,000#)	98,000 S.F.
EXPAND VASI SYSTEM	2 ENDS
INSTALL MICROWAVE LANDING SYSTEM (OR EQUIVALENT)	1 END
INSTALL PARKING APRON LIGHTING	1,200 L.F.
CONSTRUCT CRASH, FIRE, RESCUE STATION	2,500 S.F.
CONSTRUCT CONTROL TOWER (BY FAA)	1 EACH
PAVE AND MARK HELIPORT	19,000 S.F.
PAVE AND MARK AIRPORT ROADWAYS	500 L.F.
PAVE AND MARK AUTOMOBILE PARKING FACILITIES	90 AUTOS
CONSTRUCT TERMINAL/ADMINISTRATION BUILDING	5,000 S.F.
EXTEND FENCING	2,500 L.F.
CONSTRUCT TEE-HANGARS (PRIVATE DEVELOPMENT)	90 AIRCRAFT

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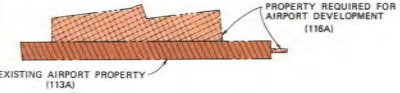

ULTIMATE AIRPORT PROPERTY

AURORA STATE AIRPORT

DEVELOPMENT STAGING

FIGURE 30

CH2M HILL

ECONOMIC FEASIBILITY

The basis for capital improvements needs has been carefully developed in previous tasks of this study. The safety, capacity, and service benefits to the users have been established. The economic feasibility of including these projects in the Master Plan depends much upon the availability of funds.

Total funds for capital investments over the 20-year forecast period are $3.3 million. A breakdown of these costs is shown in Table 11 in 1975 dollars. Costs are planning capital cost estimates based on industry data. Site characteristics adjustments have been made but without specific engineering design analyses.

Of the total, much of the capital development would be done entirely with federal or with private funds. Most of the remaining work is eligible for FAA cost sharing. The FAA share has been 83.54 percent and may be increased to 90 percent. Oregon State funds required at 83.54 percent funding would be $767,000 or an average of $38,300 for the 20-year period.

The Master Plan accepts this investment level as practical. It also accepts the benefits to the public to be reasonable although it is difficult to determine the distribution of benefits due to the regional impact of the airport.

FINANCING PLAN

The ability to implement the Master Plan depends to a large measure upon the soundness of the airport's financial plan. The Master Plan recommends that the Airport be financially self-supporting.

At such time as there is definite assurance that the Master Plan will be implemented it will be necessary to develop detailed financial and management plans.

Table 12 shows the level of revenues required to meet projected expenses in terms of 1975 dollars. In developing a management program for the airport revenue goals should be established and a program carried out to develop income for the airport.

TABLE 11

CAPITAL DEVELOPMENT PROGRAM

PROJECT DESCRIPTION	ESTIMATED COST* (including contingency) ($000)	ELIGIBLE FAA SHARE** ($000)	OAD SHARE ($000)
STAGE I – 1975-1980			
ACQUIRE LAND FOR AIRPORT DEVELOPMENT	580	485	95
ACQUIRE AIR EASEMENTS	36	30	6
REMOVE OBSTRUCTIONS	3	2	1
PAVE AND MARK PARALLEL TAXIWAY SYSTEM (30,000#)	166	139	27
PAVE AND MARK HOLDING APRONS (30,000#)	7	6	1
PAVE AND MARK PARKING APRONS (12,500#)	206	172	34
CONSTRUCT TURF PARKING AREA	3	2	1
INSTALL ROTATING BEACON AND TOWER	9	7	2
INSTALL LIGHTED WIND TEE AND SEGMENTED CIRCLE	4	3	1
STRENGTHEN RUNWAY (TO 30,000#)	185	155	30
INSTALL NON-PRECISION RUNWAY MARKING	5	4	1
INSTALL MEDIUM INTENSITY RUNWAY LIGHTS	39	33	6
INSTALL VASI SYSTEM	15	13	2
INSTALL NON-DIRECTIONAL BEACON	10	–	10
INSTALL TAXIWAY REFLECTORS	4	3	1
PAVE AND MARK AIRPORT ROAWAYS	61	51	10
PAVE AND MARK AUTOMOBILE PARKING FACILITIES	19	–	19
CONSTRUCT FENCING	29	24	5
CONSTRUCT TEE-HANGARS (PRIVATE DEVELOPMENT)	212	–	–
TOTALS	1,381*	1,129*	252*
STAGE II – 1980-1985			
EXTEND, PAVE AND MARK RUNWAY (30,000#)	98	82	16
EXTEND MEDIUM INTENSITY RUNWAY LIGHTS	9	7	2
EXTEND, PAVE AND MARK TAXIWAY SYSTEM (30,000#)	35	29	6
PAVE AND MARK HOLDING APRON (30,000#)	4	3	1
REPOSITION VASI SYSTEM	3	2	1
INSTALL MEDIUM INTENSITY EXIT TAXIWAY LIGHTS	5	4	1
INSTALL LIGHTED WIND CONES	3	2	1
PAVE AND MARK PARKING APRONS (30,000#)	39	33	6
INSTALL MALSF APPROACH LIGHT SYSTEM	30	25	5
INSTALL PARKING APRON LIGHTING	9	7	2
PAVE AND MARK AIRPORT ROADWAYS	53	44	9
PAVE AND MARK AUTOMOBILE PARKING FACILITIES	8	–	8
EXTEND FENCING	21	17	4
CONSTRUCT TEE-HANGARS (PRIVATE DEVELOPMENT)	63	–	–
TOTALS	317*	255*	62*
STAGE III – 1985-1995			
EXTEND, PAVE AND MARK RUNWAY (60,000#)	113	94	19
STRENGTHEN AND MARK RUNWAY (TO 60,000#)	343	287	56
EXTEND MEDIUM INTENSITY RUNWAY LIGHTS	10	8	2
EXTEND, PAVE AND MARK TAXIWAY SYSTEM (60,000#)	43	36	7
STRENGTHEN AND MARK TAXIWAY SYSTEM (TO 60,000#)	93	78	15
PAVE AND MARK HOLDING APRON (60,000#)	10	8	2
INSTALL MEDIUM INTENSITY TAXIWAY LIGHTS	49	41	8
PAVE AND MARK PARKING APRONS (60,000#)	73	61	12
EXPAND VASI SYSTEM	10	8	2
INSTALL MICROWAVE LANDING SYSTEM (OR EQUIVALENT)	94	94	–
INSTALL PARKING APRON LIGHTING	18	15	3
CONSTRUCT CRASH, FIRE, RESCUE STATION	106	–	106
CONSTRUCT CONTROL TOWER (BY FAA)	400	400	–
PAVE AND MARK HELIPORT	14	12	2
PAVE AND MARK AIRPORT ROADWAYS	9	7	2
PAVE AND MARK AUTOMOBILE PARKING FACILITIES	21	–	21
CONSTRUCT TERMINAL/ADMINISTRATION BUILDING	188	–	188
EXTEND FENCING	50	42	8
CONSTRUCT TEE-HANGARS (PRIVATE DEVELOPMENT)	188	–	–
TOTALS	1,644*	1,191*	453*
GRAND TOTALS	3,342*	2,575*	767*

*Costs are shown in 1975 dollars. Appropriate escalation factors must be applied for extrapolation to future years.

**FAA share based on 1975 criteria. Pending legislation many alter amounts shown.

TABLE 12

AIRPORT REVENUE GOALS

($000-1975 Dollars)

	SHORT RANGE 1975-1980		MID-RANGE 1980-1985		LONG RANGE 1985-1995		20 YEAR PERIOD 1975-1995	
	ANNUAL AVERAGE	TOTAL	ANNUAL AVERAGE	TOTAL	ANNUAL AVERAGE	TOTAL	ANNUAL AVERAGE	TOTAL
EXPENDITURES TO MEET MASTER PLAN GOALS								
OPERATION AND MAINTENANCE								
MAINTENANCE AND REPAIR	8	40	9	45	11	110	9.8	195
MATERIALS AND EQUIPMENT	3	15	3	15	4	40	3.5	70
SALARIES	0	0	6	30	20	200	11.5	230
ADMINISTRATION	2	10	2	10	3	30	2.5	50
TOTAL	13	65*	20	100*	38	380*	27.3	545*
CAPITAL IMPROVEMENTS								
STATE'S SHARE **	50.4	252*	12.4	62*	45.3	453*	38.4	767*
TOTAL REVENUES REQUIRED TO MAKE AURORA STATE AIRPORT FINANCIALLY INDEPENDENT	63.4	317*	32.4	162*	83.3	833*	65.6	1312*

*Cost are shown in 1975 dollars. Appropriate escalation factors must be applied for extrapolation to future years.

**State's share based on 1975 criteria. Pending legislation may alter amounts shown.

MANAGING A CONTINUING PROGRAM

These actions are required by the Division of Aeronautics:

- This airport Master Plan should be adopted and implementation commenced immediately.
- Application should be made to the FAA for funds to support the Implementation Plan.
- In order for the State to implement the Master Plan the State needs to control the land involved. Therefore acquisition of the land for the terminal area should be accomplished without delay.
- The parallel taxiway and exit taxiway system must be constructed immediately. This is necessary to protect public safety and to provide adequate runway capacity.
- Other needed developments should be started as indicated by the Master Plan.
- The airport maintenance program should be accelerated, particularly as regards runway pavement rehabilitation and airfield surface drainage improvements.
- The State should continue to work closely with Marion and Clackamas Counties to develop compatible land use planning.
- The State should work closely with Marion and Clackamas Counties to develop zoning changes on and near the airport as recommended by the Master Plan.
- At this time no appropriate alternatives for airport ownership seem to exist. The State should retain ownership of the airport because its closure would have a critical adverse impact on the Oregon Aviation System.
- The State should take a more active part in the management of the entire airport and particularly give more attention to user service and problems.
- The State should develop an airport management program and increase its airport staff as necessary to administer the airport operation and development program.
- The State's financial policy should be to make the airport more self-supporting. This should be accomplished by obtaining more direct control of the sources of airport revenues. Revenues should be increased in accordance with area competition and inflation rates. Lease rates should be reviewed frequently and kept up-to-date.
- Airport traffic surveys should be made periodically and incorporated into the Master Plan and the Oregon Aviation System Plan.
- A program to collect weather data should be initiated and used for facility planning.
- The State should schedule periodic reviews of the Master Plan. It should be revised whenever necessary to keep it current.
- In updating the Master Plan the State should work closely with the airport users, local governments, and citizens. A flexible attitude and approach to the planning process should be maintained.
- Also it is important to keep the public and public agencies informed as to what impacts off-airport plans may impose on this public facility. Also it is important to provide encouragement and assistance to other agencies having jurisdiction over matters that affect this airport.

APPENDIX

APPENDIX

- BIBLIOGRAPHY
- CORRESPONDENCE
- SUMMARY OF MEETINGS
- TECHNICAL DATA
  - SITE SUFFICIENCY STUDY
  - AVIATION FORECASTS
  - NEF LAND USE COMPATIBILITY
  - WIND DATA

APPENDIX

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AC 150/5060-2 Airport Site Selection

AC 150/5060-1A Airport Capacity Criteria Used in Preparing the National Airport Plan

AC 150/5060-3A Airport Capacity Criteria Used in Long-Range Planning

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AC 150/5190-3A Model Airport Hazard Zoning Ordinance

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AC 150/5300-5 Airport Reference Point

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AC 150/5325-5B Aircraft Data

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CORRESPONDENCE

DEPARTMENT OF TRAN PORTATION
FEDERAL AVIATION ADMINI..RATION

NORTHWEST REGION
FAA BUILDING, BOEING FIELD
SEATTLE, WASHINGTON 98108

JAN 8 1976

Mr. Paul Burket
Aeronautics Division
Oregon State Department
of Transportation
Salem, Oregon 97310

Original filed - Airport Section
Copy assigned to Reg. by sl
Attachments to
Date 1/12/76 Suspense date

Attention: Mr. Roy Raasina

Dear Paul:

We have completed our review of the Site Sufficiency Study and Summary of Findings for Aurora State Airport transmitted by your letter of November 25, 1975.

This study assembles the best available information on airport sites in the vicinity of the existing Aurora State Airport, and it has been concluded that the existing airport should be tentatively approved for initial development as a utility airport conditioned on approval of an airport layout plan.

This tentative approval is necessary because there have been no previous ADAP or FAAP grants at this location. Tentative approval of the site permits the PGP project to proceed to the airport layout plan phase which will determine the precise nature of future development including the potential for ultimate development as a transport airport. This approval also establishes eligibility of the site for federal funds under the ADAP program.

This approval does not indicate that airport development at the site is environmentally acceptable in accordance with the National Environmental Policy Act of 1969 (P.L. 91-190) and does not imply any commitment of federal funding.

Sincerely,

for George L. Bailey
ROBERT O. BROWN
Chief, Airports Division, ANW-600

cc:
Ray Costello
Mal Miner
Dick Reynolds

REC'D AERONAUTICS
JAN 12 1976

STATE OF OREGON
AERONAUTICS DIVISION

3040 25th STREET S.E. • SALEM, OREGON • 97310 • Phone 378-4880

ROBERT W. STRAUS
GOVERNOR

PAUL E. BURKET
Aeronautics Administrator

March 31, 1976

Marion County Board of Commissioners
Marion County Courthouse
Salem, OR 97301

Gentlemen:

Thank you for the privilege of presenting the Aurora State Airport Master Plan Final Draft at your regular meeting this date.

Representatives of state, your county and city planning departments have been members of the Advisory Committee during the planning process, and in addition to personal contact with our staff and planners, they have had opportunities to review the draft plan and submit comments. Two Planning Advisory Committee meetings have been held in Salem and two public meetings in North Marion County. All comments received to date have been reviewed, considered and incorporated in this Revised Final Draft.

It is of great importance that we receive your comments on this draft so they may also be considered in the final report. Our goal is to complete a comprehensive master plan for the airport which will assist us in developing a facility to meet the aeronautical needs of the area. We consider this airport to be of great importance, not only locally within its immediate environs, but on a regional, state-wide and national basis.

The plan is scheduled for final printing on or about the 21st of April and submittal to the FAA soon thereafter. It is of much concern to our Division and the FAA that the land use and environmental aspects of the plan are in reasonable and acceptable conformity with your county's comprehensive plans. Should you or your planning staff require additional assistance in review of the plan prior to your submittal of comments, please notify us in order that our planners will be ready to clarify any subject matter in the plan that may be questionable or unclear to you.

A DIVISION OF THE DEPARTMENT OF TRANSPORTATION
A MEMBER OF NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

Your assistance and comments in finalyzing this plan will be greatly appreciated.

Sincerely,

PAUL E. BURKET,
Aeronautics Administrator

PEB:RMR:sh

cc: Mr. Mal Miner
Mr. Ray Costello

CH2M HILL
engineers
planners
economists
scientists

20 April 1976

C9198.70

Mr. Randy Curtis
Marion County Planning Department
3180 Center Street N. E., Room 230
Salem, Oregon 97301

Dear Mr. Curtis:

Subject: Zone Change Case No. 76-8
Woodburn-Hubbard Area-Wide Rezoning

As mentioned in the letter of 13 April 1976 from the Oregon Aeronautics Division, I am submitting comments on the subject rezoning. Our comments pertain strictly to the Aurora State Airport and its master plan, for which CH2M HILL is consultant to the Aeronautics Division, owner.

The airport master plan's purpose is to identify airport needs and to determine practical solutions to satisfying those needs with minimum impact upon the airport environs. The master plan identifies traffic growth projections through 1995 and establishes facilities layouts, schedules and budget requirements for airport development through that period. It also sets forth recommendations for zoning on the airport and for zoning and land use around the airport, particularly where measurable impacts are predicted to occur.

The revised final draft of the Aurora State Airport master plan is in the hands of the Marion County Commissioners and was most recently discussed at the Commissioners' hearing 31 March 1976. No subsequent revisions have been made.

The recommendations of the airport master plan are a result of analysis of the on-airport needs of future air traffic and analysis of the off-airport impacts of this traffic. The recommendations for layout development and airport and air traffic management, if carried out, will minimize but will not altogether eliminate impacts.

In order to minimize impacts, which will be mostly from aircraft noise, and to make airport and adjacent land use compatible, the following comments relate the airport master plan to Case No. 76-8, Woodburn-Hubbard Area-Wide Rezoning.

1. The present airport zone, Public Amusement (PA), is inappropriate because permitted uses are incompatible with a publicly owned and operated airport. Also the term "amusement" is a misnomer and is misleading. The Oregon Aeronautics Division is not operating an amusement facility. In fact, both the national and state departments of transportation identify the Aurora State Airport as a vital link in the national and state air transportation systems. We suggest that Marion County adopt the airport master plan recommendation for an Airport Development Zone (or similar such term) described as follows:

   > Permitted uses to include operation of an airport. Conditional uses to be limited to aviation related commercial and/or industrial businesses in appropriate areas with respect to aeronautical facilities. There must be a demonstrated aviation link to commercial and/or industrial use in this zone.

   The dimensions recommended in the airport master plan are slightly larger than those shown on the proposed rezoning map. Adoption of the master plan recommendations will both protect the airport and will prevent non-aviation commercial development in the airport development zone. As minimum rezoning the zoning of the Aurora State Airport should at least match that of the other public airport in Marion County, McNary Field. It presently does not.

2. Increased densities of residential development or concentrations of people should be discouraged off the runway ends for the citizens' own well being because of the potential noise exposure forecasts explained in the airport master plan. Fortunately, existing land use is generally compatible with operation of the airport and would be further improved by the proposed F-20 rezoning. However, we would prefer the rezoning to be EFU for still better compatibility. We continue to recommend that the airport buffer zone be identified and defined by an Airport Buffer Overlay Zone, described in the master plan as follows:

An overlay surrounding an existing or potential airport impact area to be superimposed and used in conjunction with existing zoning. It is defined by the existing or forecast NEF 30 noise countour whichever encompasses the largest area. The purpose is to provide for uses that preclude concentrations of people in the Aurora State Airport Buffer Zone. Exclusive farm use (EFU) with limited commercial area is recommended. The permitted uses in the overlay zone override conflicting uses in the zones beneath the overlay.

3. Additionally, the airport master plan proposes an Airport Obstruction Surfaces Overlay Zone to restrict construction of high objects hazardous to flight and thus to public safety. The suggested overlay zone is defined in the airport master plan as follows:

> An additional overlay superimposed over and surrounding the planned airport development and dimensioned according to Federal Aviation Regulation Part 77, Objects Affecting Navigable Airspace. The obstruction surfaces overlay shown in the master plan match imaginary surfaces for the ultimate airport without the conical surface. No area farther than 10,000 feet from the airport primary surface is affected.

The failure of Marion County to adopt this overlay zone would expose the county population to little adverse impact, but inaction would expose the most potential for restricting safe flight operations near the airport during low visibility weather.

The zoning and land use recommendations in the Aurora State Airport master plan are provided to assist Marion and Clackamas counties to maintain compatible land use in the vicinity of this busy, growing public airport. While these recommendations may not be the only solutions, they were developed through analysis by the study team and through the citizen involvement process and are the preferred solutions. They are also based upon precedence established at other public airports and are recommended by the Federal Aviation Administration as being highly successful, tested solutions.

Thank you for this opportunity to submit these comments. Please feel free to contact Roy Raasina at the Oregon Aeronautics Division or me if you have any questions.

Yours very truly,

Malcolm R. Miner
Manager, Aurora State Airport
Master Plan Project

skl

(Same letter sent (with variations as to dates, etc., and omitting last paragraph, page 2,) to Clackamas County and Mayors of Wilsonville and Aurora.)

ROBERT W. STRAUB
Governor

PAUL E. BURKET
Aeronautics Administrator

STATE OF OREGON
AERONAUTICS DIVISION

3040 25th STREET S.E. • SALEM, OREGON • 97310 • Phone 378-4880

May 20, 1976

Marion County Board of Commissioners
Marion County Courthouse
Salem, OR 97301

Gentlemen:

Aurora State Airport Master Plan,
Coordination with Local Governments

In continuation of our coordination with local governments on this project, this letter is to inform you that the Aurora State Airport Master Plan will be published shortly. Elected officials and their planning staffs of the jurisdictions involved, as well as local citizens, have received information from the Airport Master Plan including discussion of impacts on areas surrounding the airport. The plan presents recommendations as to how local governments may use the Airport Master Plan to their advantage in local planning.

At this time, the airport master planning process is nearing completion. The latest document, the revised final draft plan dated March 1976, was formally presented to you March 31, 1976. It is the result of approximately one year's study by the Consultant, who was assisted by the staff of the Division of Aeronautics and the multi-agency Advisory Committee. The Citizen Involvement Process and our coordination with interested local governments also provided significant input into the plan.

The study's development process has included ten review and coordination meetings and presentations. A list of such meetings and presentations is attached. Notices of master plan meetings were published in 15 newspapers, and through United Press International and Associated Press. Notices were also sent out for bulletin boards at ten airports including Aurora. Approximately 200 citizens have attended the public meetings, and the Advisory Committee representing the

following organizations has been in close contact with the study throughout.

Aurora Planning Commission
Clackamas County Planning Department
Columbia Region Association of Governments (CRAG)
Oregon Department of Environmental Quality (DEQ)
Oregon Division of Aeronautics
Federal Aviation Administration
Land Conservation and Development Commission (LCDC)
Marion County Planning Department
Mid-Willamette Valley Council of Governments
Oregon Department of Transportation (ODOT)
Port of Portland
Soil Conservation Service, U.S. Department of Agriculture

We believe there is adequate assurance that all important issues have been addressed and that all interested parties have had opportunity to provide comments.

Final planning coordination according to LCDC requirements has been accomplished with all concerned units of local government. According to procedures advised by LCDC, the Oregon Division of Aeronautics, airport owner, has presented the revised final draft Airport Master Plan to all affected local governments. The Plan has been explained, questions answered, and comments have been invited. Offers were made for the study team to attend work sessions with local government staffs.

It is the hope of the Division of Aeronautics to see the Aurora State Airport Master Plan recognized and taken under advisement by surrounding jurisdictions as they develop their comprehensive plans. We recommend that you adopt the Aurora State Airport Master Plan as an element in your comprehensive plan, at least on an interim basis. We also anticipate that your local government will keep the Airport Master Plan recommendations under advisement and maintain close coordination with the Division of Aeronautics in any action affecting this important public airport.

We trust that Marion County will take prompt action to adopt airport zoning recommendations contained in the Plan. This will assist greatly in reducing the confusion regarding current development plans and will permit land owners to properly plan development of their property in conformance with public interests. Proper zoning will assure protection of the airport through continued compatible land use. (Please refer to CH2M-Hill's letter of 20 April 1976 to Randy Curtis, Planning Director, regarding Zone Change Case No. 76-8, copy attached.)

When we announced in our letter to you dated March 31, 1976 our intentions to print the Airport Master Plan report about 21 April, we understood that you needed a little more time for review. However, more than 45 days have elapsed since the Plan was presented to you and we are now well behind our programmed printing schedule. Neither comments nor requests for further information have been received. Airport tenants, users and neighbors are being somewhat adversely affected by the delays being experienced, and further delays can only add to the total costs of the project.

Since no communications have been received from you, we have scheduled presentation of the Plan to the Oregon Transportation Commission at its regular meeting on May 25, 1976. Following their acceptance of the plan the final document will be printed and it should be available in early June.

We look forward to receiving your response indicating your acceptance of the Plan, at least on an interim basis or with qualifications, so this planning study may be brought to an orderly conclusion. We also anticipate continuing communications with you for necessary refinement, updating and implementation of the Plan and sincerely thank you for your past cooperation.

Sincerely,

PAUL E. BURKET,
Aeronautics Administrator

PEB:sh
Enc: 2
cc: Mr. Malcolm Miner, CH2M-Hill, Inc.
Mr. George Buley, FAA

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

NORTHWEST REGION
FAA BUILDING KING COUNTY INT'L AIRPORT
SEATTLE, WASHINGTON 98108

JUN 11 1976

Mr. Paul Burket, Administrator
Aeronautics Division
Oregon Department of Transportation
3040 25th Street Southeast
Salem, Oregon 97310

Dear Mr. Burket:

The Aurora State Airport Layout Plan received May 24, 1976, is conditionally approved and a copy is enclosed. The plan appears to be excellent in both format and content, and we accept it as compliance with the Grant Agreement dated May 5, 1975.

Approval of the plan does not indicate that the United States will participate in the cost of any development proposed other than that which is presently programmed. When airport construction, alteration, or deactivation is undertaken, such action requires notification and review in accordance with the provision of either Part 77 or Part 157 of the Federal Aviation Regulations.

This approval considers only the safety, utility, and efficiency of the airport, and it is conditioned on acceptance of the plan under local and state land use laws. Please provide documentation which indicates that the plan is acceptable for use by all local agencies with jurisdiction over area-wide planning and land development controls. We encourage the appropriate agencies to adopt land use and height restrictive zoning ordinances based on this plan in a timely manner since action toward this end is a prerequisite of the Airport Development Aid Program (ADAP).

The approval indicated by my signature is given subject to the condition that portions of the proposed land acquisition and the runway extensions may not be undertaken without prior written environmental approval by the FAA in accordance with Order 5050.2B.

Original filed - Airports Section
Copy Assigned to Ray by sk
Attachments to Ray
Date 6/14/76 Suspense date _____

REC'D AERONAUTICS
JUN 14 1976

We have enjoyed working with you and your consultant on this project and we look forward to implementation of the plan. Please attach this letter to the Airport Layout Plan and retain it in your files for future use under ADAP.

Sincerely,

George L. Buley

GEORGE L. BULEY
Chief, Airports Planning Branch, ANW-610

Enclosure

cc:
Mr. Ray Costello
Mr. Mal Miner
Mr. Dick Reynolds

SUMMARY OF MEETINGS

Date: 2 July 1975
Where: Salem, Oregon
Who: Advisory Committee
Purpose: To start up the project, to discuss the initial inventory findings, to invite the Advisory Committee to provide input to the project and to outline the procedures for so doing.
Attendees: Oregon Division of Aeronautics, CH2M HILL, Oregon Department of Transportation (ODOT), Marion County Planning Department, Clackamas County Planning Department, Aurora Planning Commission, Columbia Region Association of Governments (CRAG), Mid-Willamette Valley Council of Governments (COG), Oregon Land Conservation and Development Commission (LCDC), Port of Portland and U.S. Department of Agriculture, Soil Conservation Service (USDA, SCS).

Date: 24 October 1975
Where: Salem, Oregon
Who: Advisory Committee
Purpose: To review the first interim report, "Airport Requirements" and to obtain comments.
Attendees: Division of Aeronautics, CH2M HILL, Aurora Planning Commission, Marion County Planning Department, Federal Aviation Administration (FAA), Mid-Willamette Valley COG, CRAG, Port of Portland, Oregon Department of Environmental Quality (DEQ), ODOT, USDA, SCS and LCDC.

Date: 18 November 1975
Where: North Marion Union High School, Hubbard, Oregon
Who: Public Meeting
Purpose: To review the interim report, "Airport Requirements," to discuss the adequacy of the existing airport site, and to get public input. The meeting was announced through press releases to UPI, AP; it was advertised in 15 local newspapers; and notices were furnished for bulletin boards at ten airports. Approximately 75 citizens attended.

Date: 25 February 1976
Where: Salem, Oregon
Who: Advisory Committee
Purpose: To review the final draft of the Airport Master Plan and to obtain comments for incorporation into the final report.
Attendees: Division of Aeronautics, CH2M HILL, LCDC, USDA, SCS, ODOT, Port of Portland, Marion County Planning Department, and the DEQ.

Date: 26 February 1976
Where: North Marion Union High School, Hubbard, Oregon
Who: Public Meeting
Purpose: To present and discuss the final draft of the Airport Master Plan and to obtain public input. The presentation was made by the Division of Aeronautics, the Federal Aviation Administration, and CH2M HILL.
Attendees: Approximately 50 citizens

Date: 4 March 1976
Where: Salem Airport, Salem, Oregon
Who: The LCDC/Marion County representative, Oregon Division of Aeronautics, and CH2M HILL.
Purpose: To verify the LCDC coordination requirements under the 1973 Land Use Act (ORS Chapter 197) and to insure that they are adequately met under the project.

Date: 31 March 1976
Where: Marion County Courthouse, Salem, Oregon
Who: Marion County Commissioners and Public
Purpose: To present the final draft Airport Master Plan and to finally coordinate with Marion County local government.
Attendees: Two County Commissioners, Marion County planning staff, and approximately five citizens.

Date: 5 April 1976
Where: Wilsonville, Oregon
Who: City Council and Public
Purpose: To present the final draft Airport Master Plan and to coordinate with the City Council and attending public.
Attendees: Four City Councilmen, Mayor, City Administrator and approximately 25 citizens.

Date: 6 April 1976
Where: Aurora, Oregon
Who: City Council and Public
Purpose: To present and coordinate the final draft Airport Master Plan with the City of Aurora.
Attendees: Three City Councilmen, Mayor, Chairman of the Planning Commission, the Section 208 study team and approximately 25 citizens.

Date: 9 April 1976
Where: Clackamas County Courthouse, Oregon City, Oregon
Who: County Commissioners and Public
Purpose: To present and explain the final draft of the Airport Master Plan to the Clackamas County Commissioners.
Attendees: Approximately 20 citizens. No County Commissioners or County staff attended.

Date: 25 May 1976
Where: Salem, Oregon
Who: Oregon Transportation Commission
Purpose: During this regular monthly Commission meeting the Aurora State Airport Master Plan was unanimously approved by the Commission.
Attendees: Full Commission, ODOT officials including Aeronautics Division, CH2M HILL, and spectators.

TECHNICAL DATA

AURORA STATE AIRPORT MASTER PLAN

REPORT OF SITE SUFFICIENCY STUDY

November 1975
By CH2M HILL

INTRODUCTION

The Airport Master Plan work program includes Task G, Site Sufficiency Study. It is a logical conclusion to Phase I work, Airport Requirements, and is required to be submitted to FAA prior to proceeding to Phase III work, Airport Plans.

RECOMMENDATION

The conclusions of this study are that the existing Aurora State Airport site is adequate and that the airport should not be relocated.

PURPOSE

The purpose of this study was first to review the adequacy of the present airport site in light of the needs and impacts developed in previous tasks of the Master Plan.

Second, it includes locating alternative airport sites and comparing them to the present site. The objective of this study is either to recommend to continue using the present airport or to advise investigating alternative sites for a replacement airport.

METHOD

This analysis has been conducted primarily in the office using base data gathered for other tasks and using analyses developed in previous tasks. Limited aerial and ground inspection was made of alternative sites.

The first step of the study was to establish the factors or items upon which to evaluate the airport's adequacy. The procedure for site investigation followed FAA Order NW 5030.1, Airport Site Investigation and Approval; FAA advisory Circular 150/5060-2, Airport Site Selection, and FAA advisory circulars specifying airport planning and design criteria.

Next the existing airport and existing airport site were rated. For this purpose the data from and the findings of Phase I, Airport Requirements, were used.

The final step of the analysis was to identify and compare alternative sites to the present airport. Basic to the identification of alternative sites is identifying the size and boundaries of the area within which alternative airport sites could be considered.

Three main factors influenced this determination. First, an alternative airport site must be able to conveniently serve the same service area that Aurora State Airport serves. Second, within that service area, physical factors must suit airport development and operation. And third, the location of an alternative airport site should be generally convenient to the same access routes as the Aurora State Airport, and should not be considerably closer to another airport. Impacts were examined after sites were chosen.

Consideration was given to operational factors, airspace, navigational aids, physical and engineering factors, area for development, land values, economic factors, and environmental and land use planning aspects. In establishing and identifying alternative airport sites, the Basic Transport airport category was used. Although prior tasks indicate that one runway will suffice for the 20-year period, it was thought that the site should provide adequate space for a short parallel runway, if practical. All sites including the existing airport site would permit this.

FINDINGS

Basically, analysis of the adequacy of the Aurora Site and the evaluation of the alternative sites resulted in a determination that the present Aurora State Airport should continue to fulfill the present airport function. First, the Aurora State Airport has no serious or insurmountable problems. It is well engineered and meets operational criteria. Expansion to meet forecast needs appears feasible.

Airport use is in accordance with compatible land use and the existing airport has minimum environmental impacts. Also, the site has been an airport continuously for 32 years. It has been accepted by the City of Aurora in their Draft Land Use Plan as well as by the Marion County Comprehensive Plan. In a public meeting 18 November 1975, a discussion of this matter indicated unanimous concurrence of those attending to retain the present airport rather than to relocate.

Adequate services are presently being provided by fixed base operators and a considerable hardship on operators and on users could be expected if the airport were to be closed or relocated. As regards land available for development area, there is adequate area just east of the existing runway. Acquisition problems appear to be less for a new airport than elsewhere because of the lack of zoning conflicts at the existing airport as opposed to the need to rezone for a new airport.

As regards economic factors, the cost in developing a new airport could be expected to be significantly higher than that of improving an existing airport. an exact dollar amount, however, cannot be determined because of lack of detailed engineering data and because of uncertainties regarding the cost of land. However, it can be assumed that land values would be approximately the same for all areas. In the case of Aurora State Airport, considerably less acreage (approximately 52 acres) is required, so that even if cost per acre were to be higher, total land cost would be less. A sample comparison is shown below using about $5,000 per acre for land acquisition.

COMPARISON OF APPROXIMATE COSTS*
ESTIMATED FOR 1995 AIRPORT NEEDS

Item	Existing Airport	New Site
Land Acquisition	$ 260,000	$ 830,000
Site Preparation	160,000	250,000
Pavement	540,000	800,000
Lighting	90,000	90,000
Miscellaneous	90,000	120,000
Non-ADAP Items	310,000	600,000
Total Cost Estimate	$1,450,000	$2,690,000

*Using cost estimating methods similar to Oregon Aviation System Plan -- to be refined in Phase III.

Three alternative airport sites were evaluated.

The first alternative site considered is located close to the existing Aurora Airport in northern Marion County. This site is designated as the Freeway Site, as it is located beside the freeway. Possibilities for development here include: to the east of the freeway, a single runway, or to the west of the freeway, two runways.

The second alternative site is located in Clackamas County and is designated as the Clackamas Site. It is that site slightly southeast of the City of Aurora, and lies about 2 miles north of the Lenhardt Airprt. This site includes an area large enough to permit considerable shifting of the runway location and would easily permit development of a parallel runway.

The third alternative site is that shown to the south of the first site. It is located near the City of Hubbard and is designated as the Hubbard Site. It also occupies a sufficient space to permit development of a parallel runway.

All three alternative sites near the Aurora State Airport are generally in the same kind of geographical region. Rural population densities are generally similar and the primary business is agriculture. The same general surface transportation networks serve all three airports. However, the Clackamas Site is somewhat less convenient to major highways. All sites are located in areas designated as Agricultural Use in County Comprehensive Plans.

Topographic features of all sites are generally similar. The area lacks terrain obstructions, is generally level with slow surface runoff, has generally similar good agricultural soil types, and experiences the same general metereological and climatological conditions as for the Aurora State Airport. Engineering problems appear to be about equal for all airport sites and utilities appear to be more or less equally convenient as regards electricity and water. However, approval for waste treatment facilities at new sites will give some problems because of the difficulty of soils meeting the requirements of the DEQ for septic disposal.

In all cases, runway orientation is generally north-south, with a slight shift to the southwest to allow for southwest winds during wintertime cold front passage. Experience at the Aurora State Airport indicates that this orientation would be favorable.

A part of the evaluation of alternative sites included evaluating the effort necessary to develop the alternative site to the condition that exists at the present airport. This would be mainly acquisition of land, grading and paving a General Utility category runway. A second part of the evaluation considered development needed through 1995.

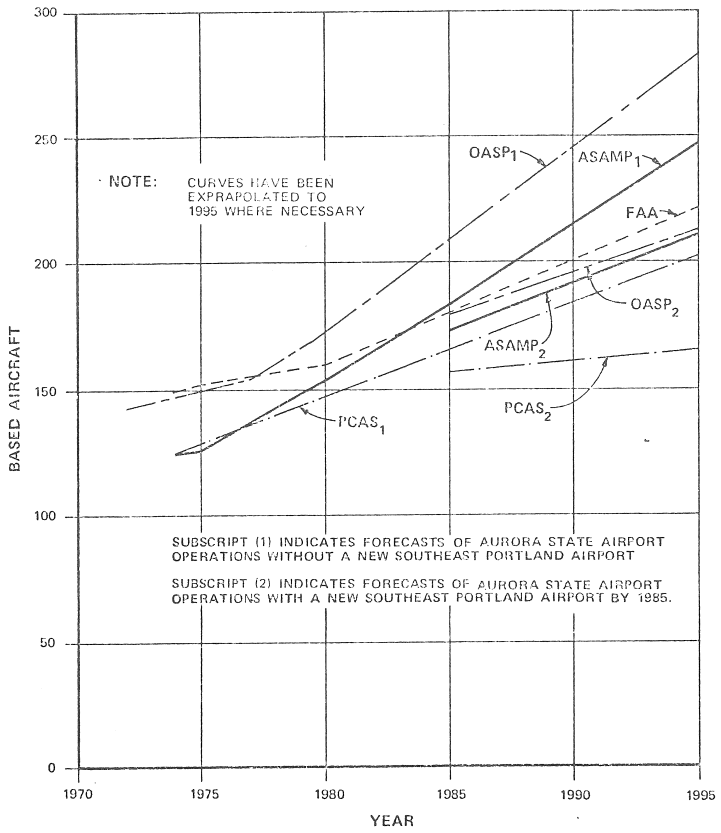
By far the most significant problem at alternative sites would be that of obtaining permission to use the land as an airport. This would necessitate changes in either County Comprehensive Plan. Comprehensive Plans require considerable justification before they can be changed, and public sentiment demonstrated at recent meetings does not indicate support for a new airport (examples are several meetings held in 1975 by the Port of Portland regarding the Portland-Clackamas Airport Study and a meeting held 18 November 1975 to present and discuss the work accomplished by Phase I of the Aurora State Airport Master Plan). Another problem is in actually acquiring the land. This would probably necessitate condemnation and costs could run very high (in the range of $500,000 to $1 million). As shown earlier, development costs would be about double for a new airport.

All of the alternative sites have certain advantages, but they also have disadvantages. One principal disadvantage is the time required to acquire and develop an airport. Another is the high costs anticipated. Another problem is that in moving away from the Aurora State Airport it would probably be necessary to sell the present property and discontinue its use as an airport. This would undoubtedly cause a hardship on the operators presently based at the airport and might create the need to provide relief to them. As regards the Clackamas Site, the people in Clackamas County have already rejected a proposed new airport in that county. Furthermore, the Clackamas site development might necessitate closing the Lenhardt Airport.

On the other hand, the advantage common to all alternative sites is that a fresh new airport could be developed starting with present-day knowledge of needs and present-day criteria. This would permit more flexibility in the development program for the future.

The following Site Comparison Matrix summarizes why it was concluded advisable to retain the airport at the present site. Mainly the benefits do not appear to warrant the costs.

Note: The above matrix table and an illustration showing the sites compared are shown on page 28, Figure 22, Alternative Airport Sites.

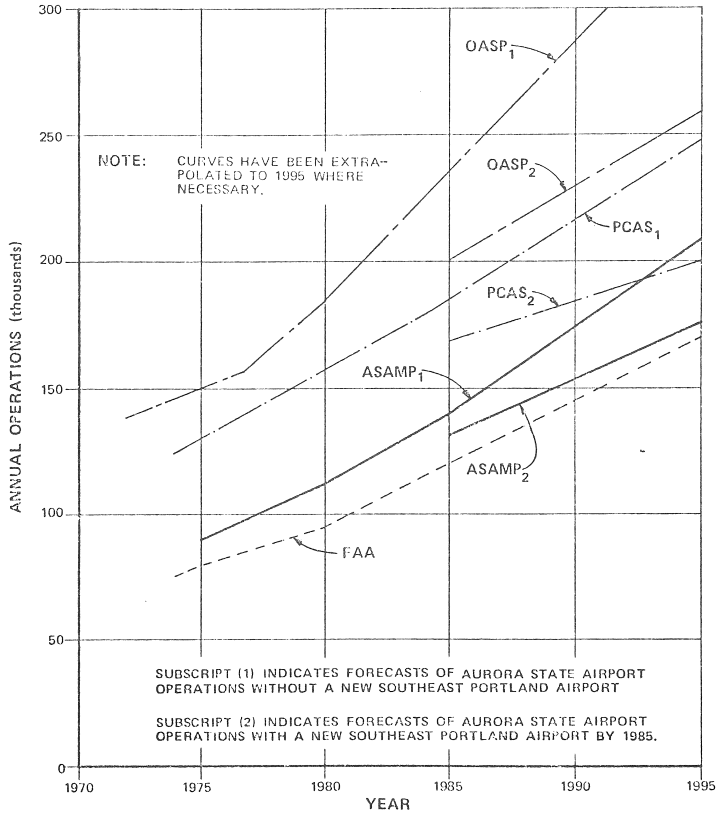


LEGEND

ASAMP – AURORA STATE AIRPORT MASTER PLAN
OASP – OREGON AVIATION SYSTEM PLAN
PCAS – PORTLAND CLACKAMAS AIRPORT STUDY
FAA – FEDERAL AVIATION ADMINISTRATION

AURORA STATE AIRPORT

BASED AIRCRAFT FORECASTS



LEGEND

ASAMP – AURORA STATE AIRPORT MASTER PLAN
OASP – OREGON AVIATION SYSTEM PLAN
PCAS – PORTLAND CLACKAMAS AIRPORT STUDY
FAA – FEDERAL AVIATION ADMINISTRATION

AURORA STATE AIRPORT

ANNUAL OPERATIONS FORECASTS

NEF LAND USE COMPATIBILITY

GENERALIZED LAND USE	NEF RANGE	GENERAL LAND USE RECOMMENDATION
Residential and Educational	less than 30	Satisfactory, with little noise impact and requiring no special noise insulation requirements for new construction.
	30 to 35	New construction or development should be undertaken only after an analysis of noise reduction requirements is made and needed noise insulation features included in the design.
	greater than 35	New construction or development should not be undertaken.
Commercial	less than 35	Satisfactory, with little noise impact and requiring no special noise insulation requirements for new construction.
	35 to 45	New construction or development should be undertaken only after an analysis of noise reduction requirements is made and needed noise insulation features included in the design.
	greater than 45	New construction or development should not be undertaken unless related to airport activities or services. Conventional construction will generally be inadequate and special noise insulation features should be included in construction.
Industrial	less than 40	Satisfactory, with little noise impact and requiring no special noise insulation requirements for new construction.
	40 to 50	New construction or development should be undertaken only after an analysis of noise reduction requirements is made and needed noise insulation features included in the design.
	greater than 50	New construction or development should not be undertaken unless related to airport activities or services. Conventional construction will generally be inadequate and special noise insulation features should be included in construction.
Open	less than 40	Satisfactory, with little noise impact and requiring no special noise insulation requirements for new construction.
	greater than 40	Land uses involving concentrations of people (spectator sports and some recreational facilities) or of animals (livestock farming and animal breeding) should generally be avoided.

AURORA STATE AIRPORT

WIND DATA

PERIOD: May 1968 thru April 1970

	CALM M (MPH)		(5.5) 4-7		(10) 8-12		(15.5) 13-18		(21.5) 19-24		(28) 25-31		(35) 32-38		39+		TOTAL		AVG. VEL. (MPH)	
	OBS	%	OBS	%	OBS	%	OBS	%	OBS	%	OBS	%	OBS	%	OBS	%	OBS	%		
N			568	4.32	117	0.89	4	0.03	0	0							689	5.23	6.32	N
NNE			402	3.05	72	0.55	0	0	1	0.01	0	0					475	3.61	6.22	NNE
NE			58	0.44	0	0											58	0.44	5.50	NE
ENE			61	0.46	2	0.02	4	0.03	0	0							67	0.51	6.23	ENE
E			30	0.23	0	0											30	0.23	5.50	E
ESE			85	0.65	10	0.08	1	0.01	0	0							96	0.73	6.08	ESE
SE			188	1.43	56	0.43	16	0.12	6	0.05	0	0					266	2.02	7.41	SE
SSE			186	1.41	75	0.57	37	0.28	17	0.13	0	0					315	2.39	8.61	SSE
S			484	3.68	258	1.96	104	0.79	17	0.13	1	0.01	0	0			864	6.56	8.39	S
SSW			313	2.38	66	0.50	23	0.17	1	0.01	0	0					403	3.06	6.85	SSW
SW			66	0.50	11	0.08	4	0.03	1	0.01	0	0					82	0.62	6.79	SW
WSN			78	0.59	18	0.14	6	0.05	0	0	0	0					102	0.77	6.88	WSW
W			26	0.20	10	0.08	3	0.02	0	0							39	0.30	7.42	W
WNW			30	0.23	3	0.02	1	0.01	0	0							34	0.26	6.19	WNW
NW			256	1.94	12	0.09	1	0.01	0	0							269	2.04	5.74	NW
NNW			549	4.17	62	0.47	4	0.03	0	0							615	4.67	6.02	NNW
CALM	8758	66.54															8758	66.54		CALM
TOTAL	8758	66.54	3380	25.68	772	5.87	208	1.58	43	0.33	1	0.01	0	0	0	0	13162	100.00		TOTAL