RICHLAND AIRPORT

PORT OF BENTON

BV

MASTER PLAN UPDATE & FAR PART 150 NOISE MAP

Richland, Washington

JUNE 1989

BELL-WALKER ENGINEERS, Inc.

IN ASSOCIATION WITH: Management and Planning Services Towne, Richards & Chaudiere, Inc.

PORT OF BENTON

MASTER PLAN UPDATE & FAR PART 150 NOISE MAP

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IN ASSOCIATION WITH: Management and Planning Services Towne, Richards & Chaudiere, Inc. RICHLAND AIRPORT MASTER PLAN UPDATE & FAR PART 150 NOISE MAP

FOR PORT OF BENTON

TECHNICAL REPORT

"The Noise Exposure Map(s) and accompanying documentation for the Noise Exposure Map for <u>Richland Airport</u> submitted in accordance with FAR Part 150 with the best available information, are hereby certified as true and complete to the best of my knowledge and belief."

man Signed

Port of Benton

Date

JUNE 1989

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CHAPTER 1

PURPOSE AND SCOPE

PLANNING NEEDS AND OBJECTIVES

Richland Airport is owned and administered by the Port of Benton. The management philosophy for the airport is to provide an aviation facility that accommodates general aviation activity and is compatible with the community. The accommodation of this general aviation activity has previously included commuter air service and currently includes air freight/courier service. It is the primary objective of the Port of Benton to continue this management philosophy for the Richland Airport by updating the existing Airport Master Plan in order to evaluate the role of the airport and to insure flexibility for its future development and operation.

The purpose of the Richland Airport Master Plan update is to provide a basis for decisions concerning the operation, maintenance and capital improvements for the Richland Airport. The report includes a Federal Aviation Regulation Part 150 Noise Exposure Map. The noise map analysis is included in order to identify issues relating to land use compatibility surrounding the airport and potential future impacts.

The airport is presently designated for general aviation. The Port of Benton intends to promote the airport targeting the industrial park executive/commuter and air freight type aircraft. This focus is consistent with the existing zoning of adjacent properties for industrial uses.

The existing Richland Airport Master Plan and the Washington State Airport System Plan identify the role of Richland Airport as general utility with a service level for commuter service. The State System Plan classifies Richland Airport as a regional airport providing facilities for scheduled airline operations. The FAA's current National Plan of Integrated Airport Systems identifies the Richland Airport as a general utility airport fulfilling the service level for general aviation. It forecasts that in ten years it will be a commercial service airport. The 1982 Tri-Cities Regional Airport System Plan also identified Richland Airport as a commuter airport, served by aircraft that could operate from the existing facilities.

During the late 1970's and the early 1980's, the Richland Airport served as a commercial service airport. From the time the existing Richland Airport Master Plan was prepared in 1974 through the 1970's, the aircraft utilized by commuter service operators at the airport were consistent with commercial aircraft operations throughout the northwest. This fleet of aircraft included the Beech 99, Piper Navaho Chieftain and the Sweringer Metro II aircraft. These aircraft are consistent with criteria set forth for a general aviation airport with an operational role designated as general utility. There has been a reluctance by the general public to utilize these type of aircraft for airline service due to their smaller size and limited passenter amenities.

Airport improvements which have occurred since the adoption and approval of the 1975 Airport Master Plan have been consistent with the role designation of a general utility airport serving the previously used commuter service aircraft. These improvements included land acquisition and avigation easements within the clear zone areas and the construction of a new north-south 4,000-foot long and 75-foot wide runway and the closure of Runways 3/21 (2,850 feet x 75 feet) and 12/30 (3,961 feet x 75 feet). Although the 1975 Airport Master Plan recommended a 4,800' x 100'

north-south runway, the runway constructed was limited to 4,000' x 75' due to funding and limited demonstrated need to serve aircraft needing additional runway length. The east-west Runway 7/25 (3,997 feet x 100 feet) has been maintained as the crosswind runway. In addition, new taxiways, service aprons and internal access roads have been constructed. These improvements have been accomplished in order to improve airfield safety and airport facilities and to increase airport compatibility.

During the 1980's there has been a substantial change in the fleet of aircraft northwest commuter airline operators are now using. Deregulation has forced the market place to provide aircraft that is acceptable to the general public for short-haul routes. Commuter aircraft now in service are the McDonnell Douglas MD-80's, Fokker F-28 jets, Friendship F-27 prop jets, Boeing DeHaviland Dash-8 prop jets, British Aerospace Jetstream 31 prop jets, and Metro Sweringer III prop jets. These aircraft are classified as basic transport aircraft as their gross operating weights, approach and/or wing span exceed criteria for general utility airports.

As stated, the primary objective of the Port of Benton's management of the Richland Airport is to provide a facility that accommodates general aviation activity, including commuter air service, and is compatible with the community. Airport planning for future improvements for newer technology aircraft must provide this flexibility for the future successful operation of the facility. Due to the operational inconsistencies between currently used critical commuter aircraft and existing facilities and activity at the airport, it was deemed necessary to prepare an update of the existing airport master plan to evaluate existing and forecasted operations in order to better define facility requirements and land use compatibility issues. The preparation of the FAR Part 150 Noise Map was used to identify airport noise impacts on surrounding land uses based on the FAA Noise Model for predicting noise exposure.

These issues are addressed in the following chapters. Included is a review of existing conditions, forecast for future aviation activity, demand/capacity analysis, noise analysis, evaluation of alternatives, and the recommended improvement program for future airport development.

AIRPORT STUDY AREA

The Richland Airport is located 2.2 miles northwest of downtown Richland. The immediate airport environs include industrial park property immediately east of the aviation activity area north of the airport. South of the airport are mixed commercial, light industrial, and low density residential areas. East of the airport, across the By-Pass Highway, is the West View Acres residential neighborhood. The commercial center of the City of West Richland is located approximately 2 miles southwest of the airport. Undeveloped property is located northwest of the airport.

The airport is on the fringe of currently developing areas of Richland. Industrial development is planned for the Horn Rapids area north of the airport with the construction of streets and utilities for the City of Richland's Horn Rapids Industrial Park having been completed. A remodel of the Cascade Passenger Terminal has been accomplished and the AzurData Building has been leased and remodeled by the U.S. Navy.

The Richland Airport, as listed in the FAA's National Plan of Integrated Airport Systems (NPIAS), is the primary general aviation NEPIAS airport in eastern Benton County and serves Western Franklin County and serves the Tri-Cities' urban area in addition to the rural area surrounding Kennewick, Richland and West Richland. A second general aviation airport, Vista Field, is located in the Tri-Cities adjacent to the Columbia Center Regional Shopping Mall in Kennewick and is owned by the City of Kennewick and is classified as a Basic Utility Stage 2 airport serving aircraft typically weighing less than 8,000 lbs. It is not included within the National Plan of Integrated Airport Systems. A study is currently in progress to determine its future role and the impact of encroachment of development on the airport.

PROJECT SPONSOR

This planning project is funded by a grant from the Federal Aviation Administration through the 1982 Airport Improvement Program (AIP). This program is authorized by the Airport and Airway Improvement Act of 1982. The Port of Benton, as owner and operator of the Richland Airport, is the sponsor for this project. The planning work has been accomplished by Bell-Walker Engineers, Inc., a private consultant, with assistance from Management and Planning Services for land-use planning tasks and Towne, Richards and Chaudiere for noise monitoring and analysis.

PLANNING COMMITTEE

Two planning committees were selected to oversee the development of the master plan and to maintain coordination with related community activities and interested organizations. A technical planning committee consisted of representatives from the City of Richland's planning department, the City of West Richland's planning department, Benton County planning department, Benton Franklin Governmental Conference, and the FAA. A Citizens Advisory Committee was selected to insure the views and concerns of interested citizens in the vicinity of the airport were incorporated into the planning process. This committee included representatives from nearby residents, pilots and businesses.

Specific responsibilities of these planning committees included providing review and comment on the project work program and the subsequent interim reports and other technical products of the study. Formulation of recommendations concerning the preferred airport development and operation were the result of technical analysis and review comments received through the evaluation of alternatives.

Community Involvement

The objective of the community involvement program was targeted to solicit information, suggestions and concerns from the pilots and residents of the Tri-Cities area, specifically from the pilots, residents and businesses located in close proximity to the Richland Airport. Public meetings were held throughout the development of the recommended plan. Public meetings were held at the Port offices, at 7:00 P.M. on February 5, 1985; December 2, 1985; and January 8, 1986. Advisory and Technical planning committee meetings were held in conjunction with the public meetings and also on April 30, 1985, September 28, 1985 and June 18, 1986.

Sponsor Certification of Opportunity for Public Participation

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"As the Manager of the Port of Benton, owner of Richland Airport, I hereby certify that the Airport Master Plan Update & FAR Part 150 Noise Map as developed based on FAA Part 150 criteria has afforded interested persons adequate opportunity to submit their views, data and comments concerning the correctness and adequacy of the draft noise exposure map and descriptions of forecast aircraft operations."

Signed

Date

Port of Benton

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CHAPTER 2

CONCLUSIONS AND RECOMMENDATIONS

GENERAL

The planning process for the development of the Master Plan Update and Federal Aviation Regulation Part 150 Noise Map for Richland Airport has resulted in the conclusion that forecasted aviation activity, including scheduled operations by typical northwest commuter/air freight aircraft can operate at Richland without creating adverse land use noise conflicts as defined by the Part 150 federal legislation. The critical noise contours for 65, 70 and 75 LdN do not exceed the current property boundaries for existing and the forecasted five-year operational levels. The twenty-year forecast of aviation activity and the resultant noise contours predicted based on the FAA Integrated Noise Model result only in a limited land use conflict within the Yakima River floodplain, between the existing clear zone to Runway 1 and Van Giesen Street south of the airport.

As a result of this conclusion that forecasted aviation activity can occur without creating noise conflicts, the technical and planning committees recommend that the airport be consistent with the FAA's National Plan of Integrated Airport Systems (1984-1993) airport role of general utility with its service level including commercial aviation service. This finding is consistent with previously published airport roles for Richland Airport.

It is important to note that this airport role designation does not compete with the Tri-Cities Airport role as a Primary Commercial Service Airport. Scheduled passenger/air freight activity at Richland is forecasted to fulfill the needs of the Tri-Cities/Hanford area by providing service to new routes and markets or routes and markets not fully served by commercial services available at Tri-Cities Airport. As such, this role for Richland Airport is consistent with the Tri-Cities Regional Airport System Plan which stated the "Richland Airport should be retained as a commuter airport served by aircraft that can safely operate from the existing facilities." The key element in this analysis must then consider the current fleet of aircraft that can utilize the airport to provide commuter service by accommodating the aviation needs of the industrial parks and community adjacent to the airport. This review includes a review of commuter aircraft currently operating in the northwest.

To evaluate the type of aircraft and activity that could be allowed to utilize Richland Airport the planning process focused on the predicted noise contours that were generated utilizing the approved forecasts of aviation activity and the FAA Integrated Noise Model. As a result of this review it was recommended by the study's technical and planning committees that any flight operation that was within the limits of the resultant predicted noise contours could be accommodated at Richland Airport. The following are the specific conclusions and recommendations that result from the planning process.

CONCLUSION

 The airport is compatible with its surrounding land uses throughout the 20-year planning period based on forecasted aviation demand and FAR Part 150 Noise Compatibility Criteria. The potential for future noncompatible development near the airport does exist. However, positive measures such as land acquisition and zoning reinforcement can mitigate these issues.

- 2. FAR Part 150 Noise Compatibility Criteria does not reflect a random, disturbance to a residential neighborhood near an airport from an isolated, infrequent aircraft operation, especially during nighttime hours. As a result, residential areas located outside of a 65 LdN noise contour may still be affected by aircraft noise. The Port of Benton should continue to encourage noise abatement procedures foa all airport operations.
- 3. The airport should encourage future improvements toward developing as an industrial airpark which would accommodate daytime corporate, passenger, air freight activity.
- 4. The airport can accommodate forecasted operational activity. However, due to revisions in FAA Advisory Circulars, subsequent to the construction of the north-south runway and parallel taxiway a waiver by the FAA will be necessary for scheduled operations by forecasted critical aircraft as a result of the existing 200' lateral separation between existing runways and parallel taxiways. Reconstruction of the parallel taxiway systems and its effect on T-hangar and service aprons to provide the additional 150' to 200' of required separation would not be cost effective for the limited level of activity forecasted.
- 5. Property acquisition between the clear zone to Runway 1 and Van Giesen would eliminate potential future noise conflicts.
- All property within airport clear zones should be controlled through the acquisition of property and existing easements.
- 7. Due to the crosswind Runway 7/25's length and width of 3,997 feet by 100 feet, aircraft operations can occur on the crosswind that cannot occur on the primary, calm wind Runway 1/19 due to its narrower width of 75'. Runway 1/19 is 75' wide by 4,000' in length.
- Runway 1/19 should continue to be designated the primary, calm wind runway due to prevailing wind conditions and to mitigate adverse noise impacts to the community that would result from concentrated use of Runway 7/25.
- 9. The airport industrial site is well suited for providing air freight facilities related to Hanford activity as well as Tri-Cities commerce. It is also an optimum location for a warehuse distribution center for the Tri-Cities due to its convenient rail, road, and aviation access.
- 10. Approval of the Master Plan Update does not commit funding for the Port of Benton or FAA to fund improvements on the proposed development schedule.

RECOMMENDATIONS

1. Property should be acquired between the clear zone to Runway 1 and Van Giesen Street to provide positive controls in the predicted noise conflict area. This property should be acquired as soon as possible with Port funds to eliminate the potential for land use conflict with existing and forecasted flight operations. Compatible land uses would be controlled by the Port which would preserve the flexibility for future development. Use of FAA funds for acquisition of this property would restrict the potential use of the property beyond what could be compatible development. Relying on zoning to protect this critical approach to the airport could result in future land use conflicts with aviation operations by individual property owners.

- 2. The property controlled by the existing avigation easement south of the airport should be purchased "in fee" to provide positive control of existing clear zone property. This should be done as soon as funding is available. This acquisition, as well as the balance of non-Port owned property located within the west and north runway clear zones, should be included in applications for FAA AIP funding.
- 3. Facility improvements at the airport should include: a precision approach path indicator (PAPI) for Runway 1; extension of the parallel taxiway for Runway 7 to limit the time aircraft are on the crosswind facility.
- Encourage increased airport basing capacity by providing additional tie-down and T-hangar space.
- 5. Planning for runway improvements should make provision for the extension of the 4,000-foot Runway 1/19 to a length of 5,000 feet and including widening from 75 feet to 100 feet to limit the need to use Runway 7/25 except during limited periods of time when wind conditions favor the use of Runway 7/25 for safety reasons. The need for this extension is based on providing for better aviation safety for current airport operations and future requirements for critical air freight and commuter aircraft included in the generation of the noise contours completed in accordance with the airport's commuter service role.
- 6. Revise Tri-Cities Regional Airport System Plan to accommodate a runway extension to 5,000 feet to provide for a safe balanced field length for existing airport operations and to fulfill the airport's role of commuter service by serving the advanced technology of aircraft providing commuter service in the future.
- 7. Port of Benton should continue to coordinate with FAA for future installation of glide slope equipment for full instrument landings at Richland Airport as flight activity increases.
- 8. Port of Benton should budget for the construction of the Auxiliary Butler Loop Road for future industrial development.
- 9. The Port of Benton should encourage airport users to perform their flight operations and engine testing activity during daytime and early nighttime hours to alleviate nighttime aircraft noise disturbance to residential neighborhoods.
- 10. Air freight facilities should be included in planning future improvements. These future facilities should be tailored to meet the needs of the air freight operator and the needs generated by the community and the development of the Port of Benton's and City of Richland's industrial parks.
- 11. Review and update the Richland Airport Master Plan and Airport Layout Plan on a periodic basis as events occur which alter assumptions, analysis, and recommendations contained in this report.

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CHAPTER 3

FACILITY INVENTORY

RICHLAND AIRPORT

The Richland Airport consists of approximately 600 acres with a north-south runway identified as Runway 1/19 and an east-west runway identified as Runway 7/25. These runways are 4,000-feet long and 75-feet wide and 3,997-feet by 100-feet wide respectively. Both runways are asphaltic concrete and are in good condition. Runway 1/19 has a full length parallel taxiway with periodic taxiway access points leading to the runway ends and a high speed exit 1,300 feet from the south end of Runway 1/19. A partial parallel taxiway serves the east end of Runway 7/25. The taxiway is located between its intersection with Runway 1/19 and continues east to Runway end 25.

A service apron at the intersection of the two runways provides fifty tie-downs for based and itinerant aircraft. In addition, a tie-down area adjacent to the Fixed Based Operator (FBO) facilities, 1,300 feet south, provides an additional fifty tie-downs for based and itinerant aircraft.. At this location aviation fuel is provided by the FBO from the fuel pumps located on the ramp area fronting the FBO building. T-hangars have been constructed along the flight line adjacent to the Runway 1/19 parallel taxiway and a large arch metal quonset hangar is used for aircraft storage adjacent to the FBO and air freight facility.

Navigational aids at the airport provide for a Medium Intensity Approach Lighting System (MALS) for Runway 19 and an Omni Directional Approach Lighting System (ODALS) for Runway end 7 approaches. In addition, a VOR approach is available for Runway end 25.

Both runways have Medium Intensity Runway Lighting Systems. The taxiways are marked with reflectors. A segmented circle and wind tee is located west of Runway 19 and north of Runway 7/25. An FAA-installed VASI is located on the 25 end of Runway 7/25. The rotating beacon is located on the roof of the control tower which is no longer in use. The building is now operated by Airborne Express.

Vehicular access to Richland Airport is provided by the primary access from SR 240 By-Pass Highway located north of Van Giesen Street. Access is also available to the terminal area from Van Giesen Street by access located west of the SR 240 By-Pass Highway.

Facilities not used for aviation purposes at this time within the airport terminal area are the two-story passenger terminal building and service apron previously utilized by the commuter service airlines. The commuter maintenance hangar west of the terminal building is currently used to store based aircraft. A fuel facility, not used, but available, is located on the service apron between the terminal building and maintenance hangar. A 150-space parking lot is adjacent and east of the terminal building. Several parcels of property are available for lease from the Port of Benton for industrial and aviation uses. The majority of these parcels are served by Butler Loop Road which has been constructed adjacent to the main access for the new service apron located at the intersection of the runway. Future T-hangar space is located along the south side of the Runway 7/25 taxiway.

History of Richland Airport

The airport originated in 1944 to accommodate light patrol aircraft utilized for observation during the construction of the Atomic Energy Commission (AEC) facilities at Hanford. It was considered to be only a semi-permanent World War II installation for defense purposes. It was estimated to serve for approximately five years. In 1946 improvements were made to the airfield which included a runway light system. The system included salvage wire above ground and temporary cone lights. At that time the airport consisted of an east-west runway approximately 4,000 feet long constructed entirely of pierced steel planks, a northeast-southwest runway that was 2,500 feet in length constructed of asphalt plus 350 feet of pierced steel planking. It was during this period that the large frame quonset hangar was erected and a control tower and radio room were constructed on the southeast side of the airfield. These two are still in use. The quonset hangar is south of the FBO and the building with the old control tower is used by the air freight service.

In 1948 design improvements were initiated for the AEC airport. The design was to conform to the Civil Aeronautics Administration standards for Class 3 runways. The runway strengths were to accommodate aircraft up to 65,000 pounds gross take-off The design improvements were not completed until 1949. weight. Drawings and specifications were issued for contract early in 1949. Improvements included the removal of all steel planking with the installation of base course aggregates and asphalt pavement and the installation of runway lighting consisting of 600-volt underground wiring and permanent flush light fixtures. All construction was completed in this project by December of 1949. The east-west Runway 7/25 was 3,997 feet in length and the northeast-southwest Runway 3/21 was 2,850 feet in length. The northwest-southeast Runway 12/30 was 3,961 feet. An additional 400 feet of runway on Runway 12/30 came about by an error in understanding of the drawings and later was incorporated as a permanent change.

In 1960 the AEC initiated actions to provide for public use of the airport. A 40-acre tract on the north side of the airport at the eastern end was deeded to the Port of Benton along with rights for public use of the runways. Plans were developed for taxiways, hangars, tie-down spaces and a Fixed Base Operator (FBO) office in this area. Then, in 1961, before construction of the 40-acre tract had progressed beyond grading and paving, the AEC deeded to the Port the runways, large area frame hangar and a building to be used for an FBO. The Desert Air Flight Center opened operations on December 1, 1961 when Mr. Eddie Burnett made the first public landing at Richland Airport. Mr. Burnett replaced the red beacon lens with a green lens, officially opening the airport to the public.

Gradually, additional facilities and land were turned over to the Port until a 1966 transfer of the final 50 acres of the AEC property on the south side of the airport completed the boundaries until the 1977 ADAP FAA project provided for the construction of the north-south Runway 1/19. Included in the 1977 FAA ADAP project was the removal of Runway 3/21 and Runway 12/30. These runways were obliterated to alleviate community concerns with over-flight of residential areas created by these runways. The resultant north-south Runway 1/19 was constructed for use as a replacement to the removal of Runways 12/30 and 3/21.

Since that time additional land has been purchased to protect the Runway 19 (north end) clear zone. Property and easements now extend to the SR 240 By-Pass Highway right-of-way. In addition, the FAA's installation of the ODAL's approach lighting system to Runway 7 (west end) resulted in property acquisition for construction and maintenance of the facility.

LAND USE ENVIRONMENTAL ANALYSIS

The airport property and its immediate environs are analyzed in the next sections in terms of:

- ° Land use
- ° Circulation
- ° Flooding
- ° Utilities

Specific issues of concern in the airport master planning process are identified.

LAND USE

The Richland Airport is located 2.2 miles northwest of downtown Richland. The airport vicinity is partially developed north and west of the airport. Ringing the airport to the north, east and south are mixed commercial and light industrial uses. Directly east of the airport and across the By-Pass Highway is the West View Acres residential neighborhood.

The airport is on the fringe of developed areas of Richland. A City of Richland industrial park has been planned with streets and utilities having been constructed on property north of the airport. Schwan's Foods has constructed a food distribution center on the airport's Butler Loop Road.

The airport property includes about 600 acres of land and has two cross runways: Runway 7/25 (3,997 feet) and Runway 1/19 (4,000 feet). The terminal, most airport related development, and other general industrial commercial development is concentrated east of Runway 1/19 and between the State Route 240 (SR 240) By-Pass Highway. Land to the south of this runway is located within the Yakima River floodplain. The airport has an easement over two single-family residences located within the clear zone at the end of the main north-south runway. Land to the north of this runway is in industrial uses, specifically wastewater treatment for the Lamb Weston Plant. The land west of the airport is currently undeveloped.

Land use issues to be addressed in the master planning process will include:

- [°] The most appropriate allocation of land uses within the airport property for aviation-oriented versus commercial/industrial development.
- Development of additional commercial/industrial uses to the east of the airport.
- ° Retention of existing low intensity and density uses to the north, south and west of the airport.
- * Resolving land use conflicts to the east of the airport with established residential neighborhoods.
- [°] Minimizing potential land use conflicts between the airport and proposed development in the Horn Rapids area and West Richland.





CIRCULATION

Regional access to the airport is provided by SR 240 By-Pass Highway connecting from Highways 12 and I-82. Highway travel distances are about 220 miles to Seattle, 150 miles to Spokane, 220 miles to Portland and 70 miles to Yakima. Pasco and Kennewick are located immediately adjacent to Richland; Pasco to the east and Kennewick to the southeat. Tri-Cities Airport is 15 miles to the east of Richland Airport.

The most direct access to the airport is provided by the By-Pass Highway. City arterials providing access are Swift Boulevard, Van Giesen Street and Saint Street. The commercial and light industrial uses located to the east of the airport are serviced by Terminal Drive which connects the airport access road (Airport Way) to the By-Pass Highway. The SR 240 By-Pass Highway rings Richland on the west edge of Richland and provides access to both the Hanford Reservation and the industrial/residential development on Stevens Drive. Van Giesen Street/Highway, located to the south of the airport, provides access to the community of West Richland.

The Ben Franklin Transit Authority operates within the Tri-Cities area and provides public transit service by either scheduled routes or commuter service. The commuter service is available during peak hours to major employment centers in the Hanford Reservation. Regular bus routes operate on Van Giesen south of the airport. There is currently no direct bus service to the airport.

rail service, located immediately to the east of the airport, is provided by AEC Railroad and Union Pacific to the Department of Energy's property north of the airport. Spur service is provided to the Lamb Weston food processing plant.

ENVIRONMENTAL HAZARDS - FLOODING AND WINDS

Some of the airport property acquired for the construction of Runway 1/19 is located within the floodplain zone of the Yakima River. Surface water flooding is a potential hazard for the area forming the clear zone at the south end of Runway 1/19. Runway 1/19 is not affected by this potential. Development limitations (floodplain zoning) apply to this clear zone area because of its location within the floodplain. These limitations effect both the density and type of development possible within the floodplain.

Issues related to flooding south of the airport are:

- ° The benefits from the regulatory limits to development within the floodplain area.
- * The flooding constraints to development as they relate to the usage of the land south of the main runway.

Winds averaging 9.2 mph are experienced over the summer months. Winter winds are less intense with an average of only 6.7 mph. Prevailing winds are from the southwest (stronger winds) and from the west-northwest. Directly west of the airport is an area of dunes. The potential of sand storms exists as a result of the combination of prevailing winds and the dune formation. Care should be taken in future development of this area to minimize the reduction of natural vegetation in this area, to reduce the potential of dust/sand storms blowing across the airport.





UTILITIES

Sewer, water and electrical services to the airport area are provided by the City of Richland. The City has extended utility service to the Phase 1 Industrial Park area of the planned Horn Rapids community. Utility service within the airport is handled in several different ways. Those parcels which are privately owned are connected to the city utilities. Those parcels which the Port owns and leases have on-site septic systems. City water and electricity are provided to all sites.

REGULATORY CONTROLS ANALYSIS

Local policies that influence development and land use compatibility of the Richland Airport and environs include:

- ° Richland Airport Master Plan, Port of Benton
- * Richland Comprehensive Plan
- ^o Horn Rapids Community Plan
- ° Richland Zoning Ordinance

Regulatory bodies which may impact the development near the airport are the City of Richland, City of West Richland, Benton County, and the FAA. Each local agency is highlighted in the following discussion as to its relevance to the airport and to the airport's relationship with the surrounding community. Specific issues deserving attention in the airport master planning process are identified.

RICHLAND COMPREHENSIVE PLAN

Public policy statements, goals and objectives for the overall development of the community of Richland are stated in the Richland Comprehensive Plan adopted in 1976. Several general land use policy statements apply to the airport including, "The City's Land Use Plan should reflect compatibility of land uses while ensuring a desirable relationship between various uses, facilities, and services." More specifically, "The City should ensure the use of sight and sound buffers and buffer zones between non-compatible land uses, in order to minimize adverse impacts." The airport is specifically mentioned in the Land Use Summary: "Recreational/agricultural uses are proposed as a buffer between the Richland Airport are proposed to develop with limited industrial uses, generally of a nature requiring development of a new industrial zoning classification which will ensure maximum compatibility with nearby residential uses."

The Richland Airport is within the Horn Rapids community. Development of this area is directed by the Horn Rapids Community Plan as a sub-element of the Comprehensive Plan. The plan outlines the City's intent of developing a variety of land uses within the community. The Land Use Plan/Map is designed to allow flexibility in its application and implementation. Broad categories of industrial, commercial and residential districts are presented for development. The airport and its immediate environs are identified for industrial uses. Residential development has been proposed to the northwest of the airport along SR 240. The net density of residential units for the area is 6.5 dwelling units per acre. Specific locations for low, medium and high density residential development have not been identified.



RICHLAND ZONING ORDINANCES

The Richland Zoning Ordinance is an implementation of the Richland Comprehensive Plan. The specific land uses identified at the airport are in conformance, for the most part, with the intent of the Comprehensive Plan to preserve and continue industrial uses at and around the airport. The specific zones located around the airport are as follows:

- Airport property is zoned as a Medium Industrial District (I-M) for manufacturing and industrial uses typically.
- Agricultural (AG) uses are permitted to the west with residential limited to a minimum density.
- South of the airport is a combined district of both floodplain and agricultural uses. Both of these districts limit the intensity and type of development to limit potential damage from flooding within the Yakima River floodplain.
- Directly east of the airport between Terminal Drive and the By-Pass Highway is a mixture of zones. The primary one, however, is a General Business Zone (C-3). This commercial zone permits an array of uses which allows retail contact with the public together with incidental shop work, storage and warehousing or light manufacturing, and extensive outdoor storage and display. The wide array of uses permitted in the central business zone are also permitted in the C-3 zone including retail, hotel, and motel accommodations, offices, restaurants, and miscellaneous retail/manufacturing for government offices.
- Across the By-Pass Highway is an established residential neighborhood, West View Acres. This area is appropriately zoned for continued residential uses, (R-IM) i.e., single-family detached homes. Schools, churches, community clubhouses, art galleries, libraries and parks are incidentally permitted.
- ^o The City has referenced an airport zone within its zoning ordinance as developed by the Port of Benton. Part of the product of this study is to define the airport influence zone based on the predicted noise contours as developed as part of this study.

The City of Richland passed Resolution No. 5-75 as part of the approval process for the 1975 Richland Airport Master Plan. This resolution contained the following criteria:

- Runway length limited to 4,000 feet
- ° Runway strength adequate for aircraft up to 12,500 pounds gross weight
- Noise levels at airport boundaries not to exceed those established by state standards
- ° One airport access to SR 240 By-Pass Highway

The runway length, pavement strength, and noise criteria are the critical issues being addressed as part of this study. No change in the existing non-standard right-turn approach or in airport access is being considered. The provision of a runway extension to 5,000 feet to serve aircraft heavier than 12,500 pounds gross weight is being considered on the basis that noise impacts would not exceed zoning and land use standards.

CITY OF WEST RICHLAND

The City of West Richland is located directly west of the airport. Development of the City of West Richland is anticipated to fill the "horn" of the Yakima River and south to Highway 12. The concentration of existing community development is located along the east side of this land peninsula and at Van Giesen Street. The full array of land use designations of agricultural, residential, manufacturing, commercial and industrial uses are anticipated in the City's zoning designations.

Issues which will need to be addressed within the airport master planning process are:

* The impact of airport operations on this community and potential mitigation measures.

BENTON COUNTY

Benton County does have jurisdiction over some lands which are potentially within the sphere of influence of the Richland Airport. These lands are either unclassified or are designated for agricultural uses. The County has recently released an updated Zoning and Comprehensive Plan. Issues to be addressed in the Airport Master Plan, with regard to the county controlled lands are:

Delineation of compatible use types for those lands within the Airport Influence Area and under the county's control.

DESCRIPTION OF ECONOMIC BASE - TRI-CITIES

INTRODUCTION

The purpose of this study is to examine and evaluate the economic impacts of Richland Airport on the Tri-Cities area currently and prospectively. Further, the area's economic base directly impacts the nature and size of the airport and its activities.

The Tri-Cities includes the Cities of Richland (containing the airport), West Richland, Pasco and Kennewick. Tri-Cities is located at the confluences of the Yakima, Snake and Columbia Rivers, 214 miles southeast of Seattle.

POPULATION - EXISTING

The Tri-Cities Metropolitan Statistical Area (MSA), which includes a portion of Benton and Franklin Counties, contains the fourth largest population area in the state. Of the total 1986 population contained in the MSA approximately 75 percent resided in Benton County with the remaining 25 percent based in Franklin County. The Cities of Richland and West Richland contained 33 percent of the Benton County population. Tables 3-1 and 3-2 provide historical population trends for the Tri-Cities and Benton and Franklin Counties.

TABLE 3-1

POPULATION	-	RICHLAND	AND	TRI-CITIES	BY	CENSUS	YEARS

Year	City of <u>Richland</u>	Percent Change	Tri-Cities <u>MSA</u>	Percent <u>Change</u>
1987	30,280	+ .13	139,600	+ .22
1986	30,240	9	139,300	-1.2
1985	30,508	-9.1	140,900	-2.5
1980	33,578	27.7	144,469	54.8
1970	26,290	11.6	93,356	9.3
1960	23,548	8.0	85,412	31.5
1950	21,809	-	64,933	-

Source: Tri-Dec (Tri-Cities Industrial Development Council) 1987

TABLE 3-2

POPULATION - BENTON AND FRANKLIN COUNTIES

	1986	1895	1984	1983	1982	1981	1980	1970	Percent 1980- 1984	Change 1970- <u>1984</u>
Area Total	139,300	140,900	144,000	144,700	147,900	150,100	144,469	93,356	- 7.2	+ 49.2
Benton County	104,000	105,200	107,700	108,700	111,700	113,400	109,444	67,540	- 8.3	+ 54.0
Kennewick	36,600	36,990	37,240	35,700	35,350	34,700	34,397	15,212	+ 5.5	+140.6
Richland	30,240	30,508	31,660	32,000	33,550	33,700	33,578	26,290	-10.3	+ 15.0
Prosser	4,010	3,980	4,180	4,150	4,170	4,120	4,049	2,954	- 2.7	+ 35.7
West Richland	3,720	3,730	3,650	3,869	3,934	3,793	2,938	1,143	+ 1.9	+225.5
Franklin County	35,300	35,700	36,300	36,000	36,200	36,700	35,025	25,816	+ 3.8	+ 36.7
Pas co	18,420	18,700	18,930	19,100	19,050	18,700	18,425	13,920	+ 1.5	+ 32.3

Source: U.S. Department of Commerce, Bureau of the Census and Washington State Department of Labor, Market, and Economic Analysis 1987.

From 1970 to 1986 the population of the Tri-Cities grew by 57 percent. The City of Richland grew by 15 percent and the City of West Richland grew by 226 percent. Washington State's population increased by 25 percent over the same period. The majority of the increase in population between 1970 and 1980 was due to in-migration as is shown in Table 3-3. The in-migration was primarily due to expanded construction activity at Hanford.

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	Population Change 1970-1980	Natural Increase	Net Immigration	Percent Change Due to <u>Immigration</u>
Benton County	41,904	8,177	33,727	80.5
Franklin County	9,209	4,137	5,072	55.1
Total	51,113	12,314	38,799	76.0

POPULATION - CHANGE DUE TO IMMIGRATION FOR BENTON AND FRANKLIN COUNTIES

Source: Washington State Employment Security Department

From 1981 to 1986 the population of Tri-Cities contracted by 2 percent, the City of Richland decreased by 10 percent and the City of West Richland by 2 percent. This trend is due to the mothballing of Washington Nuclear Project (WNP) #4 and the deferment of WNP #1.

Table 3-4, on the following page, provides the 1980 population of the Tri-Cities by race, ethnic group and minority status.

TABLE 3-4

POPULATION BY RACE, ETHNIC GROUP AND MINORITY STATUS

(Benton, Franklin and Walla Walla Counties and Washington State 1980 Census and 1982 Estimates)

	Benton County		Frankli	n County	Tot	al	Washington State	
Population Group	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1980 Census								
Total Population	109,444	100.0	35,025	100.0	144,469	100.0	4,132,156	100.0
White	103,107	94.2	30,025	85.7	133,132	92.2	779,170	91.5
Black	857	0.8	1,452	4.1	2,309	1.6	105,574	2.6
American Indian, Eskimo & Aleut	779	0.7	234	0.7	1,013	.7	60,804	1.5
Asian & Pacific Islander ¹	1,458	1.3	330	0.9	1,1788	1.2	102,537	2.5
Other	3,243	3. Q	2,984	8.5	6,227	4.3	84,071	2.0
Spanish Origin	4,598	4.2	5,412	15.5	10,010	6.9	120,016	2.9
Minority Group ²	8,009	7.3	7,523	21.5	15,532	10.8	406,278	9.8
1982 Estimates ³								
Total Population	111,700	100.0	36,1200	100.0	147,900	100.0	4,264,000	100.0
White	104,845	93.9	30,815	85.1	135,660	91.7	3,877,580	90.9
Black	910	0.8	1,480	4.1	2,390	1.6	110,930	2.6
American Indian, Eskimo & Aleut	845	0.8	270	0.7	1,115	.8	62,830	1.5
Asian & Pacific Islander ¹	1,700	1.5	420	1.2	2,120	1.4	123,790	2.9
Other	3,400	3.0	3,215	8.9	6,615	4.5	88,845	2.1
Spanish Origin ⁴	4,800	4.3	5,750	15.9	10,550	7.1	125,900	3.0
Minority Group ²	8,550	7.7	7,950	22.0	16,500	11.2	441,100	10,3

¹ Includes Japanese, Chinese, Filipino, Hawaiian, Korean, Asian Indian, South-East Asian, Vietnamese, Guamanian and Samoan.

² The minority groups consist of all races other than White plus those Whites of Spanish Origin.

³ The 1982 population estimates by race are from the Office of Financial Management. Estimates of less than 25 persons are not shown, but are included in totals.

⁴ Employment Security Research and Analysis, 1982 Spanish Origin estimates rounded to nearest 50.

^{*} Detail may not add to total due to rounding.

Franklin County has a higher percentage of persons with Spanish, Asian and Black heritage than either Benton County or the State of Washington. People of Spanish origin comprised the highest minority percentage of the Tri-Cities population at 16.9 percent.

The population of the Tri-Cities was younger than the average for the state with a greater percentage of the population 18 years and younger. Further, the percentage of 65 years and older was less than the state average. In 1980, the median age was 27.4 years compared to the state median age of 29.8 years. The population is concentrated into two age groups, 0 to 18 years and younger and 25 to 44 years as shown in Table 3-5.

TABLE 3-5

POPULATION DISTRIBUTION BY AGE - 1980

Age	Benton County	Franklin County	Washington State
Total	100.0%	100.0%	100.0%
5 and under	10.4	12.9	8.8
6 to 18	22.6	22.22	20.6
19 to 24	10.6	11.5	11.6
25 to 44	32.1	27.1	29.8
45 to 64	17.7	18.7	18.8
65 and over	6.6	7.6	10.4

Source: Washington State Employment Security Department.

POPULATION - FORECAST

Population projections are provided in Table 3-6 for the City of Richland/West Richland, and the Tri-Cities MSA.

TABLE 3-6

POPULATION FORECAST - CITY OF RICHLAND AND THE TRI-CITIES

Year	City of Richland and West Richland	Tri-Cities (MSA)
1980	38,690	144,469
1985	47,103	137,500
1990	56,067	147,004
1995	64,146	155,475
2000	71,030	166,675

Extrapolations from previous growth rates.

Source: Tri-Dec (Tri-Cities Industrial Development Council) 1987.

Tri-Cities MSA population is expected to expand at 1.4 percent per year from 1986 through 2000.

EMPLOYMENT

Tri-Cities has a varied economic base ranging from a service sector mainly dedicated to providing research and supporting services for projects at the Department of Energy (DOE) Hanford site, and to a flourishing wine grape industry.

Table 3-7 lists the three largest manufacturing and non-manufacturing employers in the Tri-Cities by geographical location.

The Tri-Cities non-agricultural wage and salary employment figures are provided in Table 3-8.

The total non-agricultural employment increased by 55 percent from 1975-1982, while the period from 1982-1986 revealed a decrease in overall employment of 6.6 percent. The decline was primarily caused by the mothballing of the Supply Systems Washington Nuclear Project #4 in the fall of 1981 and the deferment of the Washington Nuclear Project #1 in April of 1982.

Local manufacturing expanded during 1975-1982 by 37.7 percent and was one of the few sectors to expand during 1981-1982. The expansion during this period can be attributed to the gain in employment in the chemical and allied products industry. This sector can be divided into those local firms that contract to the Department of Energy at Hanford and those that produce agricultural chemicals for local consumption and export. In 1982, 64 percent of all manufacturing employees worked in this industry. This trend has continued during the 1982-1986 time period.

Associated with manufacturing was the food and kindred products industry of which food processing is the major component. This industry showed a slight decline during the 1980's and has opportunities for growth with the recent location of new wineries in the area.

Contract construction and the service sectors employment trends are directly related to the growth of projects at Hanford. Contract construction grew the fastest over the period from 1975-1981 expanding by 151 percent. Contract construction also declined by the largest percentage, 70 percent during 1982-1986. The service sector, with 25 percent of all workers, is the largest sector providing activities ranging from personal services to highly specialized engineering design, research and development.

The transportation and public utilities increased by the smallest percentage from 1975-1981. The steady loss of railroad jobs was the primary determinant. Further, some of the decline in transportation and in public utilities was caused by the lack of local population growth. This decline has been 8.5 percent from 1982 to 1986.

Employment in wholesale and retail trade, tied to consumer spending, expanded by 65 percent during the period from 1975-1981 and has remained fairly constant through 1986.

The historical growth trends shown in the public sector were similar to the growth experienced in the overall employment figures.

TABLE 3-7

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EMPLOYMENT - PRIMARY TRI-CITIES EMPLOYERS

Name of Company	Employment	Products
Manufacturing		
Kennewick		
U & I Incorporated	1,000	Potatoes Food Processing
Sandvik Special Metals	290	Titanium & Zyncnium Tubing
Chevron Chemical Company	180	Fertilizer
Pasco		
IBP, Inc.	1,200	Meat Processing (Walla Walla Co.)
Taterboy	450	Food Processing
Boise Cascade Corrugated	107	Paper Products (Walla Walla Co.)
Richland		
Westinghouse Hanford Operation	5,400	Nuclear Materials
Kaiser Engleers	1,365	Construction at DOE
Advanced Nuclear Fuels Corp.	800	Fuel Assemblies
Lamb-Weston, Inc.	550	Fruit & Vegetable Processing
Non-Manufacturing		
Kennewick		
Kennewick School District	1,200	Education
City of Kennewick	210	Municipality
Tri-Cities Herald 181	full-time	Newspaper
92	part-time	
Pasco		
Pasco School District	650	Education
Columbia Basin College	200	Education
City of Pasco	140	Municipality
Richland		
Westinghouse	4,800	Research
Battelle Northwest	2,800	Research
Washington Public Power Supply	1,455	Private Utility Development Corp.

Source: Department of Trade and Economic Development and Port of Benton, 1987.

TABLE 3-8

NON-AGRICULTURAL WAGE AND SALARY EMPLOYMENT

Tri-Cities (Annual Average)

													Percent	Change
	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1982- 1986	1975- 1982
TOTAL	54,740	53,890	53,390	53,220	58,650	63,940	58,710	59,680	55,170	47,360	41,080	37,910	- 6.7	+54.7
TOTAL MANUFACTURING	11,490	11,520	10,870	10,800	9,530	9,300	9,200	9,310	8,930	8,040	7,310	6,920	+20.6	+37.7
Food and Kindred Products	2,110	2,420	2,370	2,300	2,190	2,220	2,420	2,530	2,540	2,300	2,300	2,050	- 3.7	+ 6.8
Printing and Publishing	330	320	330	320	330	340	420	470	530	510	470	490	0	-32.7
Chemicals & Allied Products	8,100	7,860	7,210	7,200	6,110	5,760	5,340	5,280	4,760	4,180	3,540	3,390	+32•6	+80.2
Fabricated Matal Products & Machinery (Excluding Electrical)	370	360	340	360	390	370	390	330	330	360	460	600	- 5.1	-35.0
Other Manufacturing	580	560	620	620	360	460	480	540	610	530	450	310	+61.1	+16.1
CONTRACT CONSTRUCTION	2,750	2,990	3,240	3,140	9,180	13,550	8,900	11,110	9,810	7,400	5,330	5,390	-70-0	+70.3
TRANSPORTATION AND PUBLIC UTILITIES	2,040	2,010	2,100	2,120	2,230	2,410	2,450	2,430	2,340	2,010	1,890	1,740	- 8.5	+28•2
WHOLESALE AND RETAIL TRADE	11,540	11,050	11,040	10,820	11,530	11,770	11,180	11,390	10,460	9,040	8,080	6,990	+ 0.1	+64.9
FINANCE, INSURANCE AND REAL ESTATE	1,570	1,560	1,610	1,610	1,670	1,590	1,670	1,670	1,480	1,330	1,090	930	- 6.0	+79.6
SERVICES	15,420	14,950	14,950	15,040	14,660	15,180	15,280	14,380	13,630	12,070	10,610	9,660	+ 5.2	+51.8
GOVERNMENT	9,930	9,810	9,580	9,630	9,850	10,140	10,030	9,390	8,520	7,470	6,770	6,280	+ 0.8	+56.8
LABOR-MANAGEMENT DISPUTES	0	0	0	60	0	0	1,040	0	0	0	1,530	0	-	

Source: Washington State Dept. of Labor Market & Economic Analysis 1987

The apparent trends in non-agricultural employment projected in 1982 are provided in Table 9.

TABLE 3-9

FORECAST OF NON-AGRICULTURAL EMPLOYMENT

BENTON AND FRANKLIN COUNTIES

	1990	1989	<u>1985</u>	1984	<u>1983</u>	% Change (1984- <u>1989)</u>
TOTAL	61,560	63,391	(54,080)	52,870	55,360	+13.8
MANUFACTURING	11,770	11,956	(11,460)	10,800	10,100	+ 2.7
Food and Kindred Products	2,380		2,460	2,300	2,100	- 3.2
Printing and Publishing	360		340	320	330	+ 5.9
Chemicals & Allied Products	7,990		7,750	7,200	6,730	+ 3.1
Primary & Fabricated Metal Products	320		350	360	410	- 8.6
Other Manufacturing	560		560	620	530	-0-
CONSTRUCTION	4,510	6,578	3,090	3,140	5,720	+46.0
TRANSPORTATION AND PUBLIC UTILITIES	1,780	2,408	1,690	2,120	2,130	+ 5.3
WHOLESALE AND RETAIL TRADE	12,720	12,526	11,320	10,780	11,090	+12.4
FINANCE INSURANCE AND REAL ESTATE	1,710	1,848	1,620	1,600	1,620	+ 5.6
SERVICES	18,840	17,106	15,410	14,940	15,010	22.3
GOVERNMENT	10,170	10,401	9,490	9,490	9,630	7.2

Source: Washington State Dept. of Labor Market & Economic Analysis 1987 Forecast.

Overall employment continued to decline through 1984. Total manufacturing is projected to expand, but some categories are flat or declining. All other sectors are expected to continue to expand during 1985-1990 time period. The completion and commercial operation of Washington Nuclear Project #2 and the subsequent loss of construction employment is the major reason for the referenced decline in employment through 1984. Table 3-10 lists the major agricultural crops.

TABLE 3-10

TRI-CITIES TOP AGRICULTURAL PRODUCTS (Ranking in 1983 Dollar Value)

Crop	Acres	Revenue
Sweet Corn	68,000	\$31 Million
Field Corn	64,000	31 Million
Pasture	24,800	
Alfalfa	76,700	29 Million
Potatoes	39,261	75 Million
Wheat	359,500	59 Million
Orchard	18,885	35 Million
Concord Grapes	6,975	
Wine Grapes	4,510	

Source: Tri-Cities Chamber of Commerce, Washington State Employment Security Department, 1983.

Benton and Franklin Counties comprise approximately 1,226,000 acres of which 400,000 are irrigated. Primary crops are potatoes with gross revenues of \$75 million, wheat \$59 million, corn \$31 million and alfalfa \$29 million. There are eight rapidly expanding wineries which are becoming nationally competitive. Five potato processing plants and a large meat packing plant are located in the area. The 1980 livestock value was \$126 million. Farm income is expected to decline in the short term following national trends.

Table 3-11 provides historical unemployment figures for the Tri-Cities area.

TABLE 3-11

UNEMPLOYMENT - TRI-CITIES AREA (Overall Yearly Average)

	1982	1983	1984	1985
Tri-Cities	14.2%	13.5%	12.9%	13.3%

Source: Washington State Employment Security Department

Unemployment in the Tri-Cities has remained quite high since 1980 and remains at 13%-14% in 1985 due to the stoppage of two power plant projects in the Tri-Cities. This trend is expected to continue for at least the next two years.

PERSONAL INCOME

Personal income is tied to the quantity and the quality (wage rate and skills required) of employment in an area. Table 3-12 provides covered wages for the years 1980-1982, 1985, and 1986 by industry. Table 3-13 provides a comparison of average 1982 non-agricultural pay for Benton and Franklin Counties and the State. Table 3-14 provides a breakdown of households by annual household income for 1979, the latest year this information has been summarized in this manner.

TABLE 3-12

WAGES BY INDUSTRY

BENTON AND FRANKLIN COUNTIES

(\$000)

Industry	1986	1985	1982	1981	1980
Agricultural Forestry and Fishing	\$ 35,514,000	\$ 37,006,015	\$ 35,647	\$ 32,781	\$ 29,996
Construction	71,945,000	80,231,136	296,780	382,881	218,957
Manufacturing	341,651,000	324,264,352	239,502	213,733	182,226
Transportation and Public Utilities	32,754,000	33,455,785	32,469	34,342	30,621
Wholesale Trade	36,745,000	33,119,368	27,616	28,396	26,927
Retail Trade	91,656,000	87,576,731	89,193	84,329	80,877
Finance Insurance and Real Estate	22,503,000	21,471,709	21,691	21,298	20,945
Services	331,480,000	301,587,861	293,442	289,441	274,732
Government	226,258,000	215,928,858	191,342	187,674	163,821
Not Elsewhere Classified		1,151,576,788	293	293	454
Total Wages	\$1,238,588,000	\$1,151,576,788	\$1,227,976	\$1,275,326	\$1,029,567

\$1,238,588,000 \$1,151,576,788 \$1,227,976 \$1,275,326 \$1,029,567

Source: Washington State Dept. of Labor Market & Economic Analysis, 1987

TABLE 3-13

AVERAGE MONTHLY NON-AGRICULTURAL PAY BY INDUSTRY

(Benton, Franklin Counties and Washington State)

	Benton	Franklin W	ashington
	County	County	State
TOTAL	\$1,880	\$1,14	1 \$1,481
TOTAL MANUFACTURING	2,244	1,170	2,007
Food & Kindred Products Printing & Publishing Chemicals & Allied Products Primary & Fabricated Metal Product	1,484 1,207 2,276 s 1,880	1,140 1,13 N/A 2,13	6 1,517 5 1,441 2,271 2 2,195
MINING	2,574	N/A	2,049
CONTRACT CONSTRUCTION	2,699	1,852	2 2,046
TRANSPORTATION & PUBLIC UTILITIES	1,619	1,494	4 1,911
WHOLESALE AND RETAIL TRADE	795	995	5 1,074
FINANCE, INSURANCE & REAL ESTATE	1,138	1,164	4 1,398
SERVICES	1,850	870) 1,126
Business Services	2,318	1,190	1,324
GOVERNMENT	1,819	1,457	1,595

Source: Washington State Employment Security Department, Second Quarter, 1982

TABLE 3-14

ANNUAL HOUSEHOLD INCOME - DISTRIBUTIONS BY HOUSEHOLDS

(Benton and Franklin Counties and Washington State)

	Benton	Franklin	Washington
Income Class	County	County	State
Less than \$4,999	7.6	12.6	11.3
\$ 5,000 to \$ 9,999	9.8	13.2	14.7
\$10,000 to \$14,999	11.5	15.0	14.5
\$15,000 to \$19,999	12.8	14.1	13.9
\$20,000 to \$24,999	14.4	13.2	13.4
\$25,000 to \$29,999	13.4	10.9	10.2
\$30,000 to \$39,999	17.5	12.7	12.2
\$40,000 to \$49,999	7.7	4.4	5.0
\$50,000 to \$74,999	4.3	2.6	3.5
\$75,000 or More	1.0	1.3	1.3
Average Annual Household Income 1979	\$24,406	\$20,642	\$21,345

Source: Washington State Employment Security Department, 1979

Average monthly wages in Franklin County in 1982 were 3 percent less than the state averages. In Benton County average monthly wages for firms doing business at Hanford were 14 percent higher than the state average. Those firms are in the categories of chemicals and allied products, contract construction and services to business. For firms with no direct business at Hanford, wages fell below the state averages. Those industries included food processing, printing and publishing, primary and fabricated metal products, communications, public utilities, trade and the financial sectors.

Table 3-14 provides statistics on the income profile of the Tri-Cities area as compared to the state. Benton County had a larger percentage of household incomes between the range of \$20,000 and \$75,000 than either Franklin County or the state. Benton County also had a smaller percentage of household incomes between \$20,000 and less than \$4,999 than either Franklin County or the state.

RETAIL SALES

Table 3-15 provides the historical retail sales volumes for the City of Richland as compared to the overall Tri-Cities MSA.

Retail sales expanded faster than population and employment growth until 1982. Retail sales then began to decline and is expected to continue to decline through 1985 following the same trends in employment and population.

TABLE 3-15

TOTAL RETAIL SALES¹

Year	City of Richland	Benton & Franklin <u>MSA</u>
1986	\$170,616,225	\$ 914,708,583
1985	170,357,305	884,284,588
1984	205,471,730	909,760,125
1983	227, 572, 767	1,402,824,056
1982	212,285,191	1,480,640,300
1980	179,407,672	1,439,631,638
1975	105,605,159	

Actual Sales Figures

Source: Tri-Dec (Tri-Cities Industrial Development Council) 1987
LEVY RATES

Table 3-16 provides the range of levy rates for the Cities of Kennewick, Pasco, West Richland and Richland.

TABLE 16

RANGE OF LEVY RATES FOR THE TRI-CITIES

(Per \$1,000 Valuation)

Taxing Jurisdiction	Low	High	Airport Property
State	\$ 3.5633	\$ 3.5633	\$3.5633
Schools	3.5486	3.8894	3.2509
Ports	.4372	1.0465	.4012
Fire			
County Road			
Library			
Hospitals	.2539	.0365	
Mosquito		.1118	.1118
Cities	2.0521	2.5891	2.9069
County	1.1677	1.1677	1.1677
Total	\$11.0218 (Pasco)	\$12.7006 (W. Richland)	\$11.4018

Source: Tri-Cities County Assessor, 1985

Levy rates per \$1,000 assessed value in the Tri-Cities range from \$11.0218 to \$12.7006 depending on the taxing district. The lowest levy rate was in Pasco and the highest in West Richland. Richland levy rates ranged from a low of \$11.1824 to a high of \$12.2070. The Port airport levy rate is \$11.4018 per \$1,000 assessed value.

CONSTRUCTION ACTIVITY

Another indicator of economic health is to examine the level of construction activity. Historical data on the number of building permits and the value of construction for the City of Richland and for the Tri-Cities area are provided in Table 3-17.

TABLE 17

BUILDING PERMITS

	Year	Permits Issued	Valuation
City	of Richland		
	1986 1985 1984 1983 1982 1980 1975	1,934 2,304 2,174 2,496 1,891 1,615 2,811	\$16,159,402 17,736,934 14,679,602 15,785,048 13,163,439 32,534,450 36,480,459
Bento	on & Franklin Counties (Unincorpo	orated)	
	1986	873	14,176,924
	1985	1,095	17,437,555
	1984	852	13,930,310
	1983	1,026	10,659,958
	1982	735	23,147,467
	1980	816	26,540,372
	1975	1,166	22,323,004

(City of Richland, Benton and Franklin Counties)

Source: Tri-Dec (Tri-Cities Industrial Development Council) 1987

The number of building permits issued and the total value steadily increased for both city and counties until 1975. The City of Richland reached a peak in 1975 at 2,811 permits issued at a value of \$36,480,459 and then decreased for the next five years. Both Benton and Franklin Counties also peaked in 1975 at 1,166 permits issued and at a total valuation of \$26,540,372 in 1980. The number of permits issued increased steadily again after 1980 in the City of Richland, but the valuation of those permits remained essentially the same. According to the County Assessor, this trend was the result of curtailed new development and an increase in permits issued for remodeling and renovation.

Calendar year 1987 appears to be the best year in nearly a decade for new construction in the Tri-Cities. Total construction in Kennewick is \$41,429,000 in 1987 compared with \$17,039,000 in 1986. This is the result of \$13,989,000 worth of new residential and commercial developments which occurred by October 1, 1987 with the following to be started by years end:

- \$7,000,000 hockey and sports arena at Vista Field.
- \$6,000,000 expansion and renovation of Kennewick General Hospital.
- ° \$400,000 phase one construction of Columbia Plaza Shopping Mall.
- ° \$1,000,000 new mall by Northwest Developers, Inc.

- \$600,000 addition to Marine Land Village.
- ° \$140,000 office building.

Richland is estimated to have approximately \$21,000,000 in new construction in 1987 compared to \$16,159,402 in 1986. Included in this total for 1987 is a 114-unit \$4,500,000 retirement home on George Washington Way and \$1,300,000 worth of renovation to Carmichael Junior High School. These totals indicate more people have confidence in the local economy.

RICHLAND AIRPORT - EXISTING CONDITIONS

INTRODUCTION

On December 1, 1961, the Richland Airport was opened for commercial use. The Port of Benton was deeded the final portions of the 327 acres of airport property in 1966 and has owned and operated it since. Prior to 1961 the airport was used to patrol the Atomic Energy Commission (AEC) project at Hanford.

The airport is presently designated for general aviation. The Port of Benton intends to promote the airport targeting the industrial park executive commuter and air freight type aircraft. This emphasis is reflected in the zoning of the areas surrounding the airport. EMPLOYMENT

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Table 3-18 provides the firms and their present number of employees on airport property based on estimates from the Port of Benton.

TABLE 3-18

EMPLOYERS	AND	EMPLOYEES	ON	AIRPORT	PROPERTY

<u>Company</u> <u>Full T</u>	ime Part	: Time
DIRECT AIRPORT LEASES		
Airport Mini Storage 0	1	
Airborne Freight 9	C)
Rogers Surveying 3	0)
Bogart Aviation 4	C)
Interropoint 2	C).
H.T. Fuels 0	1	
Schwan's Foods 5	0)
TRADE CENTER BUILDING		
Reduction Engineering 5	C)
Basin Engineering 4	C)
Westinghouse 7	C	1
VITRO BUILDING		
Xerox 10	C)
Wang Labs 3	0)
Data General 4	0	j.
Westinghouse 95	0	l .
Science App., Inc. 4	0	1
C&L Terminals 1	0	
AZURDATA BUILDING		
U.S. Navy Reserve 7	220	(Weekends)
TOTAL 173	222	

Source: Port of Benton, November 1987

ECONOMIC OUTLOOK

While the primary driver of employment in the Tri-Cities is Hanford, recent economic diversification provides a broader economic base for the urban area. Consequently, if Hanford undergoes a period of curtailed government funding (the closing of the N-Reactor), Tri-Cities will experience a moderate decline in employment, lost income, decreased retail sales, and very little new construction.

Future projected trends:

- Substantial growth is not foreseen for agriculture in the Tri-Cities area in the short term, except possibly in the expanding wine industry and growth which has occurred in development of orchards. It is forecasted that the Tri-Cities area will be the fourth largest apple growing region in the United States by year 2000.
- * The Tri-Cities is attempting to attract high tech firms and light industry into the area with some success, but the competition from other areas of the state and other states is strong.

The future for the Tri-Cities indicates an attempt to diversify away from dependency on Hanford towards businesses that take advantage of the Tri-Cities' best qualities. This trend can be seen in the flourishing wine industry and the encouragement of high tech and light industry in the area. Hanford's economic impact has created artificially high levels of employment, population and business than would otherwise exist in the Tri-Cities area. This ensures Tri-Cities' economic dependence on the decisions of the DOE well into the future despite the aforementioned trends. Possible new projects at Hanford that could affect the economics of the Tri-Cities area includes:

- Although highly unlikely based on recent decisions, Hanford has been discussed as national waste repository employing 1,100 people during construction and 900 for decades of operation. Projected cost is 7 billion dollars to build and operate the facility.
- ° Continued funding for the Fast Flux facility to test materials for world breeder reactors. Employment will remain the same.
- * WPPSS is seeking approval to continue construction of nuclear plants at Hanford and Satsop, providing new construction jobs.

The Richland Airport has benefited from the existence of Hanford since the airport's inception as a landing strip for patrol planes. Today, Hanford increases the area's population of professional individuals living in the Tri-Cities. Combined with the near perfect weather conditions for flying, the airport would appear to have a bright future to serve corporate travel and general aviation. The future is also indirectly dependent on Hanford's economic health and the compatibility of surrounding land uses and aviation activity.



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CHAPTER 4

AVIATION FORECASTS AND NOISE ANALYSIS

The primary purpose for developing an aviation forecast is to establish a basis upon which future airport development requirements may be established. For this reason the validity and integrity of the forecasts must be such that the decision making officials can act on future development proposals with a high degree of confidence. As in all forecasting efforts, the degree of reliability is a function of the time frame under consideration as well as other related factors. Since the forecast for the Richland Airport Master Plan Update/FAR Part 150 Noise Map comprises a 20-year time frame the competence in the numbers generated for the short range planning period through the immediate 5-year term will instill a higher competence level than those presumed for the long range or 10- to 20-year time frame. As a result, this forecast should be re-evaluated throughout the planning period to assure that economic conditions and other assumptions have not changed significantly to alter or invalidate the forecast data generated in this analysis.

The forecasts generated in this report are considered reliable throughout the study period as the basic assumptions utilized in the development of the study remain consistent through the planning period. In reviewing the primary uses of the forecast it is important to know that the study goals are best served by taking a liberal view of potential future activity. In so doing it allows the likelihood of realized demand exceeding forecasts to be very slight. As a result, the forecasts represent a worst-case situation which is considered to be liberal in terms of likely future activity levels. If future activity levels fall short of the forecasts, the result would be a planned airport facility which will serve post 20-year planning needs. Conversely, if the airport activity were to exceed the forecasts, efficient and orderly development of the airport would be threatened. The forecasts presented in this report are deemed to be realistic for presenting long-term planning requirements by addressing short-term development issues.

General aviation accounts for the bulk of civil aircraft operations. It encompasses everything from crop dusting in small aircraft to passenger and cargo charters in the largest aircraft. It includes 98 percent of all registered civil aircraft and 95 percent of all airports. In fact, at other than the large and medium hub airports, most of the aircraft activity at commercial service airports is general aviation. Pipeline patrol, search and rescue operations, medical transport, business and executive flying in both fixed-wing aircraft and helicopters, charters, air taxi, flight training, personal transportation and the many other industrial, commercial and recreational uses of airplanes and helicopters fall in the province of general aviation. The magnitude of general aviation activity in the United States is illustrated in Table 4-1.

TABLE 4-1

GENERAL AVIATION

ACTIVITY INDICATORS

Registered Aircraft - Active	210,000	CY-83	(E)
Airports Served (Open to Public)	5,987	CY-83	
Hours Flown (Millions)			
Business/Executive	11.9	CY-82	
Air Taxi/Commuter	4.3	CY-82	
Instructional	4.9	CY-82	
Personal	8.2	CY-82	
Industrial/Agricultural/Other	6.8	CY-82	
Airmen (Licensed Pilots)	718,000	CY-83	
Passengers Carried (Millions)	100	(E)	
Registered Aircraft/10,000 Persons	9.6	CY-83	

Note: E = Estimate Source: FAA

General aviation airport development is usually intended to accommodate smaller aircraft. Although the general aviation fleet includes transport type equipment similar to that used by the major airlines, 80 percent of general aviation aircraft are single-engine piston aircraft. There are approximately 172,000 aircraft currently based at National Plan of Integrated Airport Systems (NPIAS) airports, of which 71,000 are based at general aviation airports. An additional 49,000 are based at reliever airports. Eighty-two percent of U.S. aircraft are based at NPIAS locations.

The FAA has established general aviation airport categories based on aircraft design considerations. The Basic Utility (BU) airport accommodates most single and many of the smaller twin-engine aircraft, about 95 percent of the general aviation fleet. General Utility (GU) airports accommodate virtually all general aviation aircraft with maximum gross take-off weights of 12,500 pounds or less. Typical runway lengths, at an assumed elevation of 500 feet mean sea level and at a temperature of 85 degrees Fahrenheit, are 3,200 feet for BU airports and 4,300 feet for GU airports.

Other general aviation airport designs are based on transport type aircraft or business jets.

Methodology

The forecasting effort has relied on previous forecasts and summaries and economic analysis completed for this study. The forecast analysis was directed specifically at general aviation activity. General aviation activity relates to the use of aircraft for recreational purposes, corporate business use, air taxi/charter operations, pilot training, and sport aviation.

Much has changed since the work was begun on the 1975 plan. The recession has eliminated many marginal aviation operators, energy prices have been fluctuating, and aviation demand of all types seems to vary for reasons that may be more complex than in earlier decades. Administratively there have been many changes; the eligibility of certain types of private airports for public grants, the recognition that the air carrier/commuter/GA classification of airports no longer fits actual activity.

Historical Trend of Aviation Activity

A review of the history of aircraft operational forecasts for the airport is shown in Table 4-2 and 4-3. Table 4-2 summarizes the aviation forecasts included in the 1974 Airport Master Plan. This forecast estimated future activity for year 1992 at 90,300 annual operations. It included based aircraft increasing from 50 in 1972 to 149 in 1992. Table 4-3 identifies an aviation forecast update that was done in 1978. This analysis was done at a period of time when Cascade and Columbia Pacific Airlines were both operating at the Richland Airport. Both airlines were recording their highest operational activity during this time frame. As a result, a projection based on the growth of these two airlines was forecasted to continue through a 20-year period from 1978 to 1998. With these tables as background information, the existing forecast for the Richland Airport was prepared. It reflects the economic development discussed.

The aviation forecast prepared as a result of the planning process for this Master Plan Update is shown in Table 4-4. This forecast reflects the population and economic background of the Tri-Cities area and is influenced by the historical aviation activity at the airport as represented in the previous table.

TABLE 4-2

1974 AIRPORT MASTER PLAN

AVIATION FORECASTS

Year	Based Aircraft	Itin. Ops.	Local <u>Ops</u> .	Commuter Ops.	TOTAL
1972	50	8,500	12,500	2,200	23,200
1977	80	15,200	24,000	3,000	42,200
1982	101	21,200	37,000	3,400	61,900
1992	149	31,600	55,000	3,700	90,300

TABLE 4-3

1978 AVIATION FORECAST UPDATE

Year	Based Aircraft	Itin.* <u>Ops.</u>	Local Ops.	TOTAL**
1978	65	40,000	29,300	69,300
1983	90	67,500	41,400	108,900
1988	123	104,500	57,200	161,700
1998	177	155,000	84,000	237,300

* Includes Commuter Activity

Columbia Pacific Airlines	-	270 ops/wk; 62,000 Passengers in 1977.
Cascade Airlines		130 ops/wk; 1,865 Passengers in their first
		3 months operation at the airport.

** Basis of forecast included Richland Flying Service expanding charter & instruction capability & purchasing truck for jet fuel service (first time available at airport). Flight, Inc. anticipated full time service (charter, air taxi, fuel service) during summer of 1978.

TABLE 4-4

AIRPORT MASTER PLAN UPDATE

AVIATION FORECAST

			Future	
		Com	muter/Air Freight	
Based	Itin.	Local	Aircraft	
Aircraft	Operations	Operations	Operations	TOTAL
110	32,500 ⁽¹⁾	27,500	-0-(2)	60,000 ⁽³⁾
120	36,000	30,000	3,500	69,500
135	42,500	33,750	4,000	80,250
180	63,000	45,000	7,000	115,000
	Based <u>Aircraft</u> 110 120 135 180	BasedItin.AircraftOperations11032,500(1)12036,00013542,50018063,000	BasedItin.LocalAircraftOperationsOperations11032,500 (1)27,50012036,00030,00013542,50033,75018063,00045,000	Future Commuter/Air FreightBasedItin.LocalAircraftAircraftOperationsOperationsOperations110 $32,500^{(1)}$ $27,500$ $-0-^{(2)}$ 120 $36,000$ $30,000$ $3,500$ 135 $42,500$ $33,750$ $4,000$ 180 $63,000$ $45,000$ $7,000$

(1) 32,500 includes daily AirPac air freight operations for Airborne Express

- (2) Annual operations level by future critical aircraft which cannot currently operate at airport.
- (3) 17,172 annual operations have recently been estimated at Richland Airport utilizing aircraft activity counters. The existing level of activity of 60,000 annual operations included in this forecast considers the recent annual activity level experienced eight years ago and the need to use a range of forecasts that creates a realistic 'worst-case' prediction for future noise impacts.

The Rens Aircraft Activity Counter was utilized at Richland Airport to sample aircraft operations during the 1985 and 1986 time frame. The activity counter is calibrated to count each aircraft which takes off from the airport during the sampling period. This count is recorded by a digital counter which is tripped by the take-off noise of the aircraft. An audit of the count is provided by the recording of four seconds of take-off noise for each event. A review of this cassette tape will indicate if some other noise besides an aircraft on take-off was counted. Review of the tape will also indicate if the aircraft was single or twin engine piston, jet or helicopter. The adjusted count data is adjusted to account for landings as well as take-offs. Seasonal samplings are obtained in order to estimate the annual aircraft activity at the airport.

Based on the results of the Rens Aircraft Activity Counters, this forecast is liberal or on the high side to adequately allow for effective planning to be accomplished. Using realistic activity levels that are on the high side will result in airport noise contours which include more area which allows the airport a buffer for compatible land uses. The column for commuter/air freight (critical aircraft) operations reflects operational activity that would exceed the design criteria for the existing runway system. This activity level is based on the critical aircraft being utilized for passenger service and/or air freight/carrier mail service. The forecast is consistent with the long-range forecast prepared as part of the 1974 Airport Master Plan. Table 4-5 identifies typical commuter service aircraft. Commuter service aircraft for Richland was determined to be those with seating capacity in the range of 20 to 40. The DeHaviland Dash 8 and Beech 1900 aircraft were identified as future critical aircraft.

TABLE 4-5

TYPICAL COMMUTER SERVICE AIRCRAFT CHARACTERISTICS

AIRCRAFT	AIRLINE	SEATS	WINGSPAN	SPEED	WT	LENGTH
BAE ATP		50	100.5'(3)(1)	$110(B)^{(2)}$	50,500 ⁽³⁾	4,000 ⁽⁴⁾
BAe 31	United Express	19	52.0'(2)	110(B)	15,200	5,000
BAe 31 (Super)	Future	19	52.0'(2)	110(B)	16,200	4,800
BAe 111(400)	Future	75	88.6'(3)	137	88,500	5,000
BAe 146	PSA	85	86.5'(3)	120(B)	93,000	4,600
BAe 748 (H.S.)	-	48	98.5'(3)	94(B)	46,500	3,500
Beech 1900	-	19	54.5'(2)	120(B)	15,245	4,800
Boeing 737	-	132	93.0'(2)	137(C)	116,000	5,000
Boeing 757	-	186	125.0'(4)	135(C)	220,000	5,000
Boeing 767	-	255	156.0'(4)	130(C)	300,000	7,100
Convair 580	Western	53	105.3'(3)	107(B)	52,000	4,600
Dash 7	-	48	93.0'(3)	83(A)	44,000	3,200
Dash 8	Horizon	37	85.0'(3)	-?	34,500	4,400
DC-9-30	PSA	115	93.5'(3)	127(C)	121,000	6,000
Embraer Brasila	Western Express	30	50.3'(2)	92(B)	13,000	3,800
Fokker F-28	Horizon	60	82.3'(2)	121(B)	71,000	4,200
Fairchild F-27	Horizon	40	75.2'(2)	109(B)	42,000	5,500
Metro III	Horizon, Empire					
	Airways	18	57.0'(2)	101(B)	14,500	3,500
MD-80	PSA	135	108.0'(3)	132(C)	140,000	6,000
Cessna 310	San Juan Airlines	4	37.0'(1)	105(B)	5,500	2,400
Cessna 402/404	Airfreight Express	s 6	46.3'(1)	95(B)	8,450	2,800
Piper Navaho	Western	8	40.7'(1)	100(B)	6,500	4,000
Beech 99	-	12	46.0'(1)	87(B)	10,900	3,800
Citation	Corporate	8	50.6'(2)	114(B)	17,000	3,800

- (1) FAA Aircraft Design Group Designation
- (2) FAA Approach Speed Category Designation
- (3) Gross Aircraft Take-off Weight
- (4) Minimum Runway Length

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These forecasts establish the basis for developing the existing and long-term noise exposure contours for the Richland Airport. However, by utilizing Dash 8 aircraft as a future critical aircraft for the purpose of generating future realistic noise contours that encompass the largest amount of land area an operational problem is created for the airport. FAA Advisory Circulars which were revised in 1983 after the construction of the north-south runway and parallel taxiway now require a lateral separation between the centerlines of the runway and taxiway of 350 feet for Utility Airports and 400 feet for Transport Airports. The existing separation is 200 feet. The reconstruction of the parallel taxiway would be a costly improvement and would also require adjustments to the existing service apron and tie-down areas. For this reason it is assumed a waive to the lateral separation criteria would be made by the FAA due to the limited activity level (less than 10 daily flights by year 2006) projected for Dash 8/Beech 1900 type aircraft.

The use of this type of aircraft at Richland Airport is considered for purposes of defining short-term improvements that improve the margin of safety for existing flight operations and accommodate the aircraft types used for preparing future noise exposure impacts.

In order to provide an adequate balanced field length for the Cessna 404 at gross weight and 86° F would require an extension of runway 1/19 from 4,000 feet to 4,680 feet. This aircraft currently provides scheduled air parcel service at the airport six days a week. This service is planned to expand to the use of a Beech B-99 within the next year. To better service this important aviation need and to better resopnd to the current commuter market as referenced by the critical aircraft contained in Table 4-6 it is recommended the runway be expanded to 5,000' x 100'.

CRITICAL AIRCRAFT

AIRCRAFT	BALANCED FIELD LENGTH
BAe 31	5,000
BAe 31 (Super	4,800
BAe 111 (400	5,000
BAe 146	4,600
Beech 1900	4,800
Convair 580	4,600
Dash 8	4,400
Fokker F-28	4,200

Such an extension would improve the safety of the airport operations, both to the immediate airport users and to the surrounding community. The length of the runway, from a safety point of view, has been a concern with previous interested commuter airline operators and continues to be a concern today for those parties interested in utilizing the airport for commuter services. It has also been a prohibiting factor in attracting air industrial park tenants. It must be emphasized that these aircraft operations are included within the aviation forecasts and the noise analysis.

AVIATION NOISE

This section describes work performed to develop existing (1985) and future aircraft noise contours for Richland Airport. The noise contours are shown in Figure 4-1 and 4-2. Two methods were used to determine existing noise levels in the area surrounding the airport: field measurements using noise monitors, and an aircraft noise prediction computer model. The field measurements were used to validate the noise prediction model, and to measure non-aircraft noise from highway traffic and trains. The following pages describe the noise prediction method and the predicted future aircraft noise levels.

LDN NOISE METRIC

The day-night average sound level (Ldn) noise descriptor, or metric, is a measure of cumulative noise exposure that can be used to define the effect of noise on a community. Ldn was used to assess aircraft noise exposure at Richland Airport.

An Ldn is a measure of 24-hour noise exposure which is computed from the levels, durations, number of events, and times (day or night) of the noise. Ldn is the energy average, or "equivalent," sound level in decibels (dB) over 24 hours with a 10 dB penalty for noise occurring during the more noise sensitive nighttime hours of 10 p.m. to 7 a.m. The measured Ldn at a particular location may not be equal to the sound level occurring at a particular instant in time, since it represents the average energy of the fluctuating noise. Similarly, the measured Ldn for a 24-hour period may differ from a yearly Ldn since daily conditions will vary about the yearly average. Averaging metrics such as Ldn correlate highly with human response to noise, so that noise can be assessed in an objective manner.

Ldn NOISE IMPACT CRITERIA

The Ldn noise metric is currently used by the Federal Aviation Administration (FAA), Environmental Protection Agency (EPA) and Department of Housing and Urban Development (HUD). The FAA FAR Part 150 land use compatibility criteria based on Ldn are given in Appendix E. The following is a summary of FAA, EPA and HUD noise criteria as they apply to noise sensitive (residential) land use. Criteria for non-residential land use are given in Appendix A.

Document	Ldn	Residential Land Use
FAA FAR Part 150	Below 65	Compatible
	65 and above	Non-compatible, conditional
EPA Region X (1)	Not exceeding 65	Acceptable: no noise impact generally associated with these levels.
	Above but not exceeding 65	Adverse noise impacts: lowest noise level possible should be strived for.
	Above 65 but not exceeding 70	Significant adverse noise impacts: allowable only in unusual cases.
	Above 70	Unacceptable public health and welfare impacts.
HUD 24 CFR Part 150	Not exceeding 65	Acceptable
	Above 65 but not exceeding 75	Normally unacceptable, special approvals and requirements.
	Above 75	Unacceptable

(1) Noise Guidelines for Environmental Impact Statements, January 1975.

Based on consideration of these criteria, noise critical areas have been defined in this study as those which experience noise exposures above 65 Ldn in 1985.

Ldn NOISE CONTOURS

Ldn noise levels can be shown by a series of contour lines superimposed on a map of the airport and its environs. The levels are calculated for points on the ground using the FAA Integrated Noise Model (INM) computer model and data concerning existing aircraft operations at the airport. The Ldn noise level represents the average sound energy received at a given location from the accumulation of aircraft noise over a 24-hour period, with a 10 dB penalty for noise events occurring during nighttime hours of 10 p.m. to 7 a.m.

Ldn mapping is used in this study as a tool to assist in land use planning around the airport. Ldn calculations are a means of showing average noise impacts, but may not precisely define impacts at a specific location at a specific time.

Ldn contours can nevertheless be used to: (1) identify an existing or potential aircraft noise-land use conflict; (2) assess relative noise level impacts of various airport alternatives; (3) assist in the preparation of airport environs land use plans; and (4) provide guidance in the development of land use control devices, such as zoning ordinances, subdivision regulations, and building codes.

Noise computation maps showing the area in acres for existing (1985) and future noise contours are shown in Figures 4-A, 4-B and 4-C respectively.

The following section describes the Integrated Noise Model which was used to develop the airport noise contours.

INTEGRATED NOISE MODEL

Noise contour maps were prepared for existing 1985 aviation activity using the FAA Integrated Noise Model (INM) Version 3 computer program. INM has been specified by FAA as one of two models acceptable for federally-funded airport noise studies. Version 3 superseded Version 2 in October 1982, and is the current program version.

Differences from the earlier Version 2 include a reduced level versus distance relationship and generally greater attenuation (sound reduction) at lateral locations. Because of these changes, noise predictions using Version 3 could be several dB lower than for Version 2, especially at lateral locations 1000 feet or more from the flight path.

The INM program calculates and combines noise levels for individual aircraft on distinct flight tracks, and considers the rate of climb or descent, horizontal speed, and engine thrust level of each aircraft event. The program data base contains sound level versus distance data at various thrust settings for each aircraft type. Aircraft events during nighttime hours of 10 p.m. to 7 a.m. are penalized 10 dB in accordance with the Ldn definition. Several modifications to the program are possible to adjust the program to a particular airport situation. No modifications were found to be necessary in this study.

Aircraft operation inputs to the program are based on the average number of daily operations during the year for each aircraft type. Other program inputs include the runway locations and orientations, take-off and landing flight tracks, and airport altitude and temperature. The following is a discussion of the program inputs for Richland Airport. A summary of the Noise Model Input Data is provided in Table 4-6.

Fleet Mix and Aircraft Activity

Air carrier and commuter fleet mix and activity levels for existing conditions were obtained from published airline schedules and contacts with the airlines. Air taxi, military and general aviation activity levels for existing conditions were obtained from the Airport Master Records. In addition, airport personnel reviewed the fleet mix and activity level data.

The following table is a summary of the total annual operations used for the Ldn noise predictions. Average daily operations are the following numbers divided by 365.

Total Operations for Computer Noise Determinations

Operation Description	1985 Existing
General Aviation:	
Local Itinerant	27,500 32,500
Total	60,000



4-10

FIG. 4-A



4-11

FIG. 4-B



4-12

FIG, 4-C

TABLE 4-6 NOISE MODEL INPUT DATA OPERATIONS FOR RICHLAND AIRPORT

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		1985 OPER	ATIONS		TO	BĻ	17 07	RH	17 25	T O A	<u>HY 01</u>	F 0 0	HY 19
AIRCRAFT	TOTAL	STOTAL	2NI GHT	DAY	NIGHT	DAY	NIGHT	่ อดห	NI GHT	DAY	NIGHT	DAY	NIGHT
COHSEP COHTEP COHJET DASH 8	32500.00 32500.00 32500.00 0.00	93.00 6.00 1.00 100.00	2.00 2.00 2.00 0.00	40.58 2.62 0.44 0.00	0.83 0.05 0.01 0.00	0.01 0.05 0.01 0.00	0.02 .00 .00 0.00	3.25 0.21 0.03 0.00	0.07 00. 00. 0.00	18.26 1.18 0.20 0.00	0.37 0.02 .00 0.00	18.26 1.18 0.20 0.00	0.37 0.02 .00 0.00
COHSEP COHTEP COHJET DASH 8						2.43 0.16 0.03 0.00	0.05 .00 .00 0.00	1.62 0.10 0.02 0.00	0.03 .00 .00 0.00		2 2		
COHTEP	TOUCH & G 27500.00 27500.00	94.00 6.00	0.00 0.00	35.41 2.26	0.00 0.00	2.48 0.16	0.00	1.06 0.07	0.00 0.00	15.93 1.02	0.00 0.00	15.93 1.02	0.00 0.00
		1990 OPERI	ALIONS		roi	RH	<u>17 07</u>	RI	17 22	E S	<u>HY 01</u>	F 0 0	HY 19
AIRCRAFT	TOTAL	XTOTAL	ZNI GHT	DAY	NIGHT	DAY	NIGHT	, DAY	NI GHT	1.0. N I DAY	NIGHT -	1.0. % DAY	NIGHT
COHSEP COHTEP COHJET DASH 8	36000.00 36000.00 36000.00 3500.00	93.00 6.00 1.00 100.00	2.00 2.00 2.00 0.00	44.95 2.90 0.48 4.79	0.92 0.06 0.01 0.00	0.90 0.06 0.01 0.10	0.02 .00 .00 0.00	3.60 0.23 0.04 0.38	0.07 .00 .00 0.00	20.23 1.30 0.22 2.16	0.41 0.03 .00 0.00	20.23 1.30 0.22 2.16	0.41 0.03 .00 0.00
COHSEP CONTEP CONJET DASH B		,		e M		1. 2.70 0.17 0.03 0.29	.HNU 0.06 .00 .00 0.00	1.80 0.12 0.02 0.19	.ANU 0.04 .00 .00 0.00				
CONTEP CONSEP	TOUCH & GO 30000.00 30000.00	0 94.00 6.00	0.00	38.63 2.47	0.00	2.70 0.17	0.00	1.16	0.00 0.00	17.38 1.11	0.00	17.38	0.00 0.00
	i	2005 OPER	TIONS			BL	<u>17 07</u> .	<u>Et</u>	17 25 ·	R	<u>HY 01</u>	B	<u>HY 19</u>
AIRCRAFT	TOTAL	XTOTAL	2NI GHT	DAY	NI GHT	DAY	NIGHT	DAY	NI GHT	0AY	NIGHT	r.o. a DAY	LAND EA. NIGHT
CONSEP CONTEP CONJET DASH 0	63000.00 63000.00 63000.00 7000.00	93.00 6.00 1.00 100.00	2.00 2.00 2.00 0.00	78.66 5.07 0.85 9.59	1.61 0.10 0.02 0.00	1.57 0.10 0.02 0.19	0.03 .00 .00 0.00	6.29 0.41 0.07 0.77	0.13 0.01 .00 0.00	35.39 2.28 0.38 4.32	0.72 0.05 0.01 0.00	35.39 2.28 0.38 4.32	0.72 0.05 0.01 0.00
COMSEP CONTEP CONJET DASH 8						4.72 0.30 0.05 0.58	.HKU 0.10 0.01 .00 0.00	3.15 0.20 0.03 0.38	-HNU 0.06 .00 .00 0.00				
CONFEP CONSEP	TOUCH & G 45000.00 45000.00	0 94.00 6.00	0.00 0.00	57.95 3.70	0.00 0.00	4.06 0.26	0.00 0.00	1.74	0.00 0.00	26.08 1.66	0.00 0.00	26.08 1.66	0.00 0.00
GA & COH GA & COH	<u>% Runhay</u> ! I - To I - Land	UTILIZATI RHY 07 2.00 6.00	DH RHY 25 8.00 4.00	RHY 01 45.00 45.00	RHY 19 45.00 45.00	1	IOTE: T.O COM COM	.=TAKE OF ISEP=G.A. ITEP=G.A.	F LAND=I COMPOSITE COMPOSITE	LANDING SJNGLE I STWIN EN	COM=CONNER ENGINE SINE	CIAL GA	=GEN AVIATION

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Time of Day Split

The percentage split of daytime and nighttime operations were estimated to be 1.1 percent for itinerant operations and 0 percent for local operations.

Runway Use

The estimated percentages of runway use are shown in the following table.

Runway	Use Percentage o Departure	of All	Operations <u>Arrivals</u>
7	4%		3%
25	1%		2%
1	22.5		22.5
19	22.5		22.5

The table shows the predominant northeast and southwest directions of air traffic flow, using Runways 1 and 19.

Flight Tracks

Flight tracks were established based on conversations with airport management personnel. Aircraft were assumed to fly on a 3-degree glide slope for landings, and to follow standard INM Version 3 profiles on departure.

Runway Use During Monitoring

Runway use during noise monitoring was obtained from personnel at Bogart Aviation. It was estimated that 25 operations occurred each day, 80 percent single engine and 20 percent twin engine general aviation. Daily runway use was summarized as follows:

Runway	Depa	Use Percentage arture	of All	Operations <u>Arrivals</u>
7	12	2		12
25	5)		0
1	19)		19
19	19)		19

NOISE MODEL CALIBRATION

The accuracy of the noise prediction model was evaluated by comparing the 1985 computed noise levels with existing noise levels measured at six locations around the airport. The following table compares the measured and computed Ldn at the noise measurement locations.

4 - 14

	Location	Computed Ldn	Measured Ldn
1.	2021 Stevens Drive	-	56
2.	2019 Blue Avenue	-	54
3.	515 Cascade Street	-	51
4.	1770 Buckskin Loop	59	56
5.	1800 Buckskin Loop	58	55
6.	2730 Van Giesen Street	-	57

Based on this comparison, no adjustments were made to the predicted levels. It is recommended, however, that the contours be applied conservatively, taking into account the possibility that noise levels at lateral locations could be higher than predicted by the model.

LAND USE ANALYSIS

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The results of the noise model for Richland Airport are indicated on Figures 4-1, 4-2, and 4-3. Figure 4-1 identifies the 1985 noise affected areas at the airport. The area of impact is located in the south clear zone of Runway 1/19. The 65 Ldn noise contour crosses property which is within the existing clear zone but is not currently owned by the Port of Benton. The property is presently in low density residential use and affects approximately four residential units although none of the units are within the noise contour itself. The potential conflict in the future with increased development within this area would result in approximately eight dwelling units units being affected. Currently, avigation easements exist over the properties affected.

The results of the 1990 predicted noise level is shown on the Figure 4-2 for Richland Airport. Again, the only property affected is property within the clear zone south of Runway 1/19. There is no change in the impact over the 1985 noise contour. This time frame is most critical for the development of the noise exposure map for Richland Airport. FAR Part 150 criteria establishes that noise conflicts within the 5-year time frame be mitigated.

As can be seen from the results of the noise model, the impacts are minimal and are currently controlled with existing avigation easements purchased by the Port of Benton. Acquisition of the affected parties was attempted as part of the 1977 Airport Development Program which resulted with the construction of the north-south Runway 1/19. Negotiations with the property owner resulted in the fact that they were unwilling to relocate but were agreeable to the avigation easements and wish to remain on the property. As stated before, the property is within the Yakima flood plain and as such, has building restrictions placed upon it. The long-term or 20-year planning period noise impact is reflected on the year 2005 noise affected area map shown on Figure 4-3. That is the result of the increase in forecasted operations combined with the use of critical aircraft.

The noise contours for Runway 7/25 remain on current airport property. The 65 Ldn noise contour for Runway 1/19 extends beyond the existing clear zone on both the north and south ends of the runway. At the north end the contour extends to SR 40 By-Pass Highway. The land currently outside of existing airport boundaries is zoned for industrial use or roadway right-of-way. The contour extends south of

the main runway to Van Giesen Street. This land is again within the Yakima River floodplain although the property immediately abutting Van Giesen Street is zoned for commercial industrial uses. The 70 and 75 contours remain on existing airport property for both runways.

As a result, the only impact of significance for the long-term forecasted noise impact from the airport is the property adjacent to Van Giesen Street south of Runway 1/19. Noise impacts can be mitigated in this area either by purchase of additional avigation easements or in the acquisition of the property. These predicted noise contours are based on commuter/air freight aircraft such as the Dash 8 or Beech 1900 and the high range for general aviation forecasts presented in the forecast section.

Strategies for mitigating land use incompatibilities relate primarily to acquisition, conversion, or reinforcement. Selected strategies should be geared for the long-term scenario. Property acquisition is aggressive action which provides positive control of the property and would be accomplished at a higher cost initially but could be the least expensive if zoning allowed the development of a facility that was in conflict with airport operations or was sensitive to the overflight of the property.

Conversion of existing land use zoning designations is a moderate public action which is used to change conflicting potential land use problems to appropriate development compatibility and can be accomplished at varying public/pilot responsibilities and costs. The reinforcement strategy is the least aggressive public action and provides incentives for appropriate development at lower cost and still provides mitigative and preventive measures for preventing incompatibility land use development. Again, these strategies are only relevant as far as the 20-year plan for the airport for the minimal amount of property outside existing airport boundaries between Van Giesen and the clear zone to Runway 1.









CHAPTER 5

FINANCING PLAN AND STAGING PROGRAM

FINANCING PLAN AND STAGING PROGRAM

Forecasts of operating revenues, operation and maintenance expenses were made in order to assist with the long term budgeting evaluation required to incorporate the capitol costs resulting from the development program. The financial analysis is based on the following assumptions:

- 1. All forecasts are based on 1987 dollars.
- 2. All projections are in accordance with the forecasted growth for aviation activity and are based on current budget information.

Assumptions used in developing this financial analysis are discussed in the following sections.

FINANCIAL OPERATION

The Richland Airport receives revenues from property rental, landing fees, tie-down fees, gas fees, investment funds and from tax monies.

Table 5-1 provides historical levels of operating revenues and expenses for the years 1982 through 1986.

TABLE 5-1

RICHLAND AIRPORT - STATEMENT OF REVENUES AND EXPENSES

			<u>1982</u>		1983		1984		1985		1986
0per	ating Revenues										
Fees											
	Landing Tie-downs	\$	281 3,000	\$	270 3,311	\$	250 4,000	\$	250 3,371	\$	740 3,124
Gas Rent	al Income		1,351 45,274		2,298 42,551		2,916 48,612	_	1,758 70,318	_	1,456 56,799
	Total Revenue	\$	49,906	\$	48,430	\$	58,210	\$	76,087	\$	62,119
Oper	ating Expenses										
	Property Maintenance Administration & General	\$1	.33,937 21,215	\$	141,161 25,285	\$	135,070 25,473		91,830 27,823	: 	103,137 25,750
	Total Expenses	\$1	55,152	\$	166,446	\$	160,543	\$	119,653	\$1	128,887
	Net Income (Loss)	(\$1	05,246)	(\$	118,016)	(\$	102,333)	(\$	43,566	(\$	\$66,768)

Source: Port of Benton

While the airport receives rental and lease income, the Port provides additional funding for airport capital improvements and maintenance through the Port District Levy. This funding varies on an annual basis depending on scheduled improvements and periodic maintenance projects. Operating expenses for the airport remained essentially the same for 1982-1986 time frame.

The airport is serviced by the City of Richland for water and sewer services, and police and fire protection. The Port owns a fire truck which is kept at the Richland Airport in case of emergency.

Revenues

Revenues currently collected at the Richland Airport include fees for landings, tie-downs, and aviation fuel. These fees have fluctuated with actual general aviation activity with a high of \$740.00 recorded in 1986. However, the most significant revenue generated at the airport is rental income derived from the leasing of airport for aviation or other business uses. Rental income revenue has increased from \$45,274.00 in 1982 to \$56,798.61 in 1986. It is estimated the 1987 revenue will be approximately \$59,400. The 1988 budget includes \$70,000 of revenues from rental income. It is anticipated this growth in rental income will continue to occur at the airport due to the increase in aviation activity forecasted and the airport property available for development. For estimating purposes the forecasted aviation activity was used as a basis. An annual increase in rental income of 8 percent reflects growth trends and costs. This rate is a moderate growth that is higher than the annual rates which occurred during the early 1980's but is lower than the growth rate which would be projected from current interest and activity at the airport.

An increase in revenue from airport fees for landings, tie-downs, and aviation fuel is also projected based on the increase in airport activity contained in the aviation forecasts.

OPERATING EXPENSES

Annual property maintenance is the major item of expense attributed to the operation of the airport. This item includes the cost of labor and materials used for repairs and maintenance of runways, taxiways, aprons, buildings, and utilities. It also includes the depreciation of these facilities. For calendar years 1985 and 1986 the cost associated with depreciation has been over 60 percent of the total expense attributed to property maintenance. As a result, the actual cost of labor and materials associated with property maintenance was \$30,911 in 1985 and \$39,621 in 1986.

Administration and general expenses includes administrative and general salaries, insurance, employee pension and benefits, taxes, and advertising and promotion. These costs have ranged from \$21,215 in 1982 to \$27,823 in 1985. It is anticipated that the administrative and general expenses will increase at a moderate of 8 percent per year based on the 1982 to 1985 time period.

Capitol Improvements

The capitol improvement program for the airport identifies the primary improvement projects which are recommended and provides an estimated time period for their accomplishment. The scheduling of the improvement is phased to be consistent with short-term (5-year period from 1987 through 1991), mid-term (5-year period from 1992 through 1996) and long-term (10-year period from 1997 through 2006). The focus of the improvement program is the short-term time period. Table 5-1 provides the Richland Airport Improvement Program.

This schedule of improvements includes two key projects that will improve the safety and effectiveness of the airport, land acquisition in Phase 1, and the extension and widening of Runway 1/19 in Phase 2.

Land acquisition is recommended in Phase 1 in order for the Port to acquire those properties that could be developed in the future based on current zoning and result in a potential conflict with airport activities. The properties included are those parcels located between Buckskin Loop Road and Van Giesen Street that are within the predicted 65 LdN noise contour for the 20-year time period. This property is in the floodplain of the Yakima River approximately 20 feet below Runway 1/19 profile elevation. As such, there is only limited concern that future development would encroach into the runway approach surface. The major concern is the routine overflight of the property that will occur and the annoyance that could create to property owners. For this reason it has been recommended for the Port to purchase the property and lease it back to the current owners for use as pasture land and open space or development compatible with airport activities including the overflight of the property by aircraft landing and taking off.

The recommended purchase of the other properties identified result in the acquisition of property within clear zones that are not currently owned by the Port and/or in which the Port only has an avigation easement for due to previous funding limitations.

The extension and widening of the runway included in Phase 2 will allow the airport to alleviate runway length concerns existing airport users experience and to better fulfill its role as a commercial service, general utility airport by allowing the type of aircraft now used for commuter service and air freight by business operating in the northwest. Table 5-2 identifies the aircraft contained in Table 4-5 which would be able to operate at Richland with the runway extension. Additional aircraft would be able to operate on Runway 1/19 due to its widening from 75' to 100'. These aircraft could presently operate on Runway 7/25, however, defining which aircraft are affected is difficult as it requires a combination of factors including approach speeds and insurance details. The revised Airport Layout Plan is shown in Figure 5-2. TABLE 5-2

Pha	se l (Short-term 1987-1991		
1. 2. 3.	Extend parallel taxiway (7/25) Rwy. 1 - PAPI System Land Acquisition	\$ 19 60	95,000* 20,000* 00,000*
	<pre>6 parcels/30 acres (Buckskin Loop to Van Giesen - south) ° 2 parcels/11 acres</pre>	\$315,000 ⁽¹⁾	
	<pre>(w/existing easements - south) 1 parcel/9 acres (clear zone - west) 1 parcel/5.6 acre</pre>	68,000 117,000	
4.	(clear zone/with easement - north) Aerial Photo Update of ALP	100,000	4,000*
5. 6.	Install additional regulator for lighting system Construct T-hangar spaces		8,000*
		Subtotal \$ 82	27,000
	*FAA eligible funding at 90% FAA & 10% Port **Private financing (1)FAA funding not included for land acquisition	FAA Share \$ 40 Port Share \$ 30	60,800 66,200
Pha	se 2 (Mid-term 1992-1996)		
1. 2. 3. 4. 5. 6.	Extend and widen Rwy 1/19 to 100' x 5,000' Install glide slope for ILS (FAA) Butler Loop Auxiliary Road Automated weather reporting system New G.A. operations building w/auto parking Construct T-hangar spaces	1,25 2 10	50,000* FAA 31,000 25,000 05,000 **
	,	Subtotal \$1,46	51,000
	*FAA eligible funding at 90% FAA & 10% Port **Private financing	FAA Share \$1,12 Port Share 33	25,000 36,000
Pha	se 3 (Long-term 1997-2006)		
1. 2. 3.	Construct cargo facility Construct T-hangar spaces Construct new tie-down areas	37	75,000 ** 00,000*
		Subtotal \$ 67	75,000
	*FAA eligible funding at 90% FAA & 10% Port **Private financing	FAA Share \$ 27 Port Share 40	70,000 05,000

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CRITICAL AIRCRAFT

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BALANCED FIELD LENGTH

BAe 31 BAe 31 (Super) BAe 111(400) BAe 146 Beech 1900 Convair 580 Dash 8 Fokker F-28

5,000 4,800 5,000 4,600 4,800 4,600 4,400 4,200

Including this development program in the future airport budget results in the following schedule of cash flow projections.

TABLE 5-4

DEVELOPMENT SCHEDULE AND CASH FLOW PROJECTION

			COSTS	RI	EVENUES	TOTALS		
Pha	se 1 (1987-1991)							
1. 2. 3. 4. 5. 6.	Capitol program Property and maintenance expense Administration and general expense Airport fees Rental income Other income	\$ \$1	366,200 500,000 315,000	\$	31,800 490,000 28,600 550,400	(\$	630,800)	
Pha	se 2 (1992-1996)							
1. 2. 3. 4. 5.	Capital program Property and maintenance costs Administration and general expense Airport fees Rental income	\$ \$ 1	336,000 575,000 378,000	\$	56,400 686,000 742,400	(\$	546,600)	
Pha	se 3 (1997-2006)							
1. 2. 3. 4. 5.	Capitol program Property and maintenance costs Administration and general expense Airport fees Rental income	\$ 1 1	405,000 ,495,000 ,058,400	\$ 2	161,600 ,200,000	(\$		
		\$2	,958,400	\$2	,361,600	(5	220,800)	

As can be seen from the cash flow projections, the airport operates at a loss throughout the twenty-year period. The key elements of expense are the capitol improvement program for the future airport improvements and the property and maintenance costs which continue to include depreciation at a 60 percent rate of the items' total cost.

Based on summary cash flow protection, outside revenue sources will be helpful to assist the Port's funding of the long-term program. Specifically, project funding assistance should include the extension and widening of Runway 1/19, access and construction of new T-hangar area, and construction of terminal/FBO building. Private funding is a possibility for the development of additional T-hangar facilities and in the FBO building. Alternative public funding resources are described in the following material.

FUNDING ALTERNATIVES AND RESOURCES

Federal Aviation Administration

It is assumed that 90 percent FAA funding will be available to the Port of Benton for airport improvements which include acquisition of property, construction of runway extension, taxiway, service apron, and airfield lighting systems. However, use of FAA funding for the acquisition of non-clear zone property has not been included in the cash flow projection.

FAA funding would not be available for construction of T-hangars, it is assumed private financing would be utilized for T-hangar construction.

Washington State Department of Transportation

Funding is available to the Port of Benton from the State - Division of Aeronautics for airfield improvements. Although this level fluctuates by state legislative action, the State could assist with any of the projects identified.

Community Economic Revitalization Board

The Community Economic Revitalization Board (CERB) is an independent agency composed of legislators, agency leaders and business leaders and staffed by the Washington State Department of Trade and Economic Development. This agency was organized to stimulate economic development through job creation. CERB provides monies for loans or loan/grant combinations dedicated to infrastructure development projects which have a specific private industry impact. These loans are at a low rate (a function of prevailing interest rates), with a payback period as long as twenty years.

Study projects are ineligible for CERB funding; only capital improvements are eligible. In order to receive these funds, the public body seeking funds must have a particular project "locked in" with a private firm. Examples include a sewer line or access road, which the city is financing as part of an agreement with a manufacturing firm to locate in that city. Job creation is the ultimate goal of the CERB - in particular, manufacturing-related jobs.

Economic Development Administration

The Economic Development Administration provides grants and loan guarantees for studies and capital projects with the goal of job creation. Like CERB funds, EDA funds are available only when a firm project commitment has been made by a private investor. The EDA has a national scope, so jobs generated by a potential project must be new jobs, not jobs relocated from another area of the country.

The local Economic Development District prioritizes potential projects which then are evaluated by the State Economic Development Officer. EDA projects involving airport development are very unusual.

Farmer's Home Administration

The Farmer's Home Administration has four types of loan programs:

- 1. Rural Rental Housing Program
- 2. Community Water & Waste Program
- 3. Community Facility Program
- 4. Business & Industrial Loan Program

The Port would potentially be eligible to receive funds under either the Community Facility Program or the Business & Industrial Loan Program.

The future public terminal area improvements could potentially be funded under a community facility loan, as these improvements would be open to the public, and could potentially produce revenues to retire the debt against this loan. As in all FHA loans, if private credit is available at comparable rates and terms, the applicant is required to seek private credit. Currently, FHA loans are being let at approximately 8 percent. There may be moderate potential for funding through this option.

If a significant number of jobs were created through the proposed airport improvements, a loan could be secured through the business and industrial loan program.

APPENDIX

CITIZEN ADVISORY COMMITTEE Richland Airport Master Plan Update

Mr. Nate Ballou 4078 King Drive West Richland, WA 99352 (H) 967-2259

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Mr. Bob Nitrio 470 Mainmast Ct. Richland, WA 99352 (W) 735-8551

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Mr. George Reynolds Bell-Walker Engineers Bellevue, WA 98006 (206) 643-2002



SOUTH 3406 DAVISON BOULEVARD

HANGAR 745

Air Cargo (509) 838-0058

SPOKANE, WASHINGTON 99204-5702

MAY 1 0 1989

Jim Kuntz, Airport Manager

Port of Benton 2952 George Washington Way Richland, WA 99352

Dear Jim:

May 05, 1989

Salair currently operates a fleet of Douglas DC-3 and Convair 440 aircraft in all-cargo service under the authority of our air carrier certificate.

Richland airport would be suitable for our operation of Convair 440's only if the runway is a minimum of 5,000 feet long, and a precision (ILS) approach was available for use when the weather is low.

Should one of our customers decide Richland is a desirable service point, we would be serving the airport 5 days per week on a year-round basis.

Sincerely,

Paul Salerno Vice-President
Inland Pacific Airlines, Inc.

Olympia Airport 7647 Old Highway 99 S.E, Olympia, WA 98501 (206) 943-5033 • (206) 866-1531

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June 23, 1988

Jim Kuntz Port of Benton 2952 George Washington Way Richland, WA 99352

Dear Jim,

It was a pleasure taiking to you on the telephone the other day. Your concern and enthusiam is very much appreciated. Inland Pacific is alive and well and we are getting closer to a public announcement every day.

Since your Airport Master Plan is currently in revision, I would offer the following thoughts with the nope that they might impact the decision making process as it relates to that document.

1. The economic road ahead is going to be rough for your community and I suspect that the planners will be looking for a broader and more diverse agricultural and industrial base as well as an expanded role in the service business sectors.

2. I believe that a properly planned and utilized airport can play a major role in bringing new business and people into an area or community.

3. The Richland Airport needs some improvements that I know will make it more attractive to potentia! users (such as Inland Pacific). To that end, I submit the following specific recommendations:

A. Longer runways. Especially the one most often

used during the summer. Corporate jets and commuter airliners need at least 5000 feet and preferably 6000 feet of runway for legal and safe operations.

B. A precision instrument approach. Your airport currently has four non-precision approaches. The best of these permits descents to 473 feet above the ground. An ILS system would cut that to 200 feet and assure more successful landings during nightime hours and days of bad weather and reduced visability. 4. The physical facilities (taxiways, ramps, etc.) are adequate or could be made so through the normal repair process so they are really not a factor that needs to be addressed here.

You and your staff are concerned and involved, and I salute you for your efforts to date, and thank you for the help and hospitality that you have shown me and my staff.

If we may be of any other service to you Jim, please do not hesitate to ask and if you are ever in Olympia, please stop by and see us.

Sincerely,

Edward D. Cleeves Chairman of the Board

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June 17, 1988

Mr. Jim Kuntz Airpart Manager Richland Airport 2952 George Washington Way Richland, WA 99352

Dear Jim:

Airpac Airlines supports your runway extension project.

We currently land at the Richland Airpart Tuesday through Saturday morning and depart Monday through Friday in the late afternoon.

The flight is a dedicated flight for Airborne Express, the overnight express courier company.

We are currently using a Cessna 404 on the service, and anticipate that the Beech B-99, a larger aircraft will replace it within the year.

A larger runway is needed first for safety reasons. The no flap accelerate/stop distance for the Cessna 404 at gross weight and only 86° is 4,680 feet.

Therefore, an engine failure at VMC (87kts) and a rejected takeoff would result in the aircraft rolling well off the end of the current 4,000' runway.

Good luck in your objective of obtaining a longer runway, in the interest of safety.

Sincerely,

Gregory S. Thompson President



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December 15, 1987

Port of Benton 2952 George Washington Way Richland, WA 99352

Attn: Mr. Jim Kuntz Airport Manager

Dear Jim:

Thank you for your October 30, 1987 letter continuing our dialogue regarding service to the Richland airport. Two main hurdles remain in our path to provide service to Richland; the state of the Richland Tri-Cities economy and the length of Richland's runways. While we wait for signs that both will improve, we will remain in contact with you regarding our plans.

Please accept my personal and our collective best wishes for a happy and peaceful Holiday Season.

Sincerely,

EMPIRE AIRWAYS

Me

M. E. Spelde President

MES/sa

ZONING ORDINANCE

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RICHLAND AIRPORT

PORT OF BENTON

ZONING ORDINANCE

RICHLAND AIRPORT Benton County, Washington

Date: July 12, 1978

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AN ORDINANCE regulating and restricting the height of structures and objects of natural growth, and otherwise regulating the use of property, in the vicinity of the public airport by creating airport approach zones, transition zones, horizontal zone and conical zone; establishing the boundaries thereof; providing for changes in the restrictions and boundaries of such zones; defining certain terms used herein referring to the Richland AIRPORT ZONING MAP which is incorporated in and made a part of this ordinance; and providing for the enforcement thereof.

THIS ORDINANCE is hereby adopted by resolution of the Port of Benton Board of Commissioners.

Pursuant to the authority conferred by State of Washington Code RCW 14.12, it is hereby found that the lives and property in the vicinity of the airport and the users of the airport are to be afforded by the degree of protection deemed necessary by reducing hazards and to safeguard the operation of the public airport. Accordingly, it is declared:

1. That it is necessary in the interest of the public health, public safety and general welfare that the creation or establishment of airport hazards be prevented.

2. That obstructions to the landing, taking off, and maneuvering of aircraft can in effect reduce or destroy the utilization of the airport and the public investment therein, and:

3. That the prevention of these hazards should be accomplished, to the extent legally possible, by exercise of the police power without compensation. It is further declared that both the prevention of hazards to airport operations and the elimination, removal, alteration, mitigation, or marking and lighting of existing airport hazards are public purposes for which the Port of Benton may raise and expend public funds and acquire such interest or rights in land to carry out the purpose of this ordinance.

IT IS HEREBY RESOLVED this 12th day of July 78, as follows:

SECTION I: SHORT TITLE

This Ordinance shall be known and may be cited as Richland AIRPORT ZONING ORDINANCE."

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SECTION II: DEFINITIONS

As used in this Ordinance, unless the context otherwise requires:

- 1. AIRPORT means Richland Airport.
- AIRPORT ELEVATION Means the established elevation of the highest point on the usable landing area.
- 3. AIRPORT HAZARD Means any structure, tree or use of land which obstructs the airspace required for, or is otherwise hazardous to, the flight of aircraft in landing or taking off at the airport.
- AIRPORT REFERENCE POINT Means the point established as the approximate geographic center of the airport landing area and so designated.
- 5. BOARD OF ADJUSTMENT Means a board consisting of five (5) members appointed by the Port of Benton.
- 6. HEIGHT For the purpose of determining the height limits in all zones set forth in this Ordinance and shown on the zoning map, the datum shall be mean sea level elevation unless otherwise specified.
- 7. INSTRUMENT RUNWAY Means a runway equipped or to be equipped with a precision electronic navigation aid or landing aid or other air navigation facilities suitable to permit the landing of aircraft by an instrument approach under restricted visibility conditions.
- 8. LANDING AREA Means the area of the Airport used for the landing, taking off or taxiing of aircraft.
- 9. NONCONFORMING USE Means any pre-existing structure, tree, natural growth or use of land which is inconsistent with the provisions of this Ordinance or an amendment thereto.
- NONINSTRUMENT RUNWAY Means a runway other than an instrument runway.
- 11. PERSON Means an individual, firm, partnership, corporation, company, association, joint stock association, or body politic, and includes a trustee, receiver, assignee, administrator, executor, guardian, or other representative.
- 12. RUNWAY Means the surfaced area of an airport landing strip.
- 13. STRUCTURE Means an object constructed or installed by man, including, but without limitation, buildings, towers, smokestacks, and overhead transmission lines.
- 14. TREE Means any object of natural growth.

SECTION III: ZONES

In order to carry out the provisions of this Ordinance, there are hereby created and established certain zones which include all of the land lying under the instrument approach surfaces, noninstrument approach surfaces, transition surfaces, horizontal surface and conical surface. Such surfaces and zones are shown on Richland Airport Zoning Map consisting of one (1) sheet, prepared by Stevens, Thompson & Runyan, Inc. and dated July 12, 1978 which is attached to this Ordinance and made a part hereof. The various zones are hereby extablished and defined as follows:

1. Instrument Runway Approach Surface: Identified by letter "A" on the zoning map, an instrument runway approach surface is established at each end of runway 18/36. The zone begins at a line 200 feet from and perpendicular to each runway end at the runway elevation. The initial width of the zone is 400 feet, widening uniformly to a width of 3300 feet at a distance of 10,200 feet from the runway end. This fan-shaped plane, centered over the extension of the runway centerline, rises from the elevation of the runway at the rate of 1:34 one (1) foot vertically for every thirty four (34) feet of horizontal distance.

2. Noninstrument Approach Surface: Identified by letter "B" on the zoning map, a noninstrument approach surface is established at each end of runway 7/25. The zone begins at a line 200 feet from and perpendicular to each runway end at the runway elevation. The initial width of the zone is 400 feet, widening uniformly to a width of 1,500 feet at a distance of \cdot 5,200 feet from the runway end. This fan-shaped plane, centered over the extension of the runway center line, rises from the elevation of the runway at the rate of (1) foot ver- /, 20 tically for every twenty (20) feet of horizontal distance.

3. Transition Zones: Identified by the letter "T" on the zoning map, transition zones are hereby established adjacent to each instrument and noninstrument runway and approach zone as indicated on the zoning map. Transition zones symmetrically located on either side of runways have variable widths as shown on the zoning map. Transition zones extend outward from a line 200 feet on either side of the centerline of the runways for the length of each runway plus 200 feet on each end and are parallel to and level with such runway centerlines. 1:7 The transition zones along such runways slope upward and outward one (1) foot vertically for each seven (7) feet horizontally to the point where they intersect the surface of the horizontal zone. Further, transition zones are established adjacent to all approach surfaces. These transition zones have variable widths, as shown on the zoning map. Such transition zones flare symmetrically with either side of the runway approach zones from the base of such zones and slope upward and outward at the rate of one (1) foot vertically for each seven (7) feet horizontally to the points where they intersect the surfaces of the horizontal and conical zones at an elevation of 543 feet.

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4. Horizontal Surface: A horizontal surface is hereby established as the area within an oblong surface having a long axis of 24,400 feet, aligned with runway 18/36, and a short axis of 20,300 feet perpendicular to runway 18/36. The horizontal zone is a level plane at an elevation of 543 feet. This zone does not include the approach surfaces and transition zones.

5. Conical Surface: Identified by letter "C" on the zoning map, a conical surface is hereby established as the area which commences at the periphery of the horizontal zone and extends outward there from for a horizontal distance of 4,000 feet. The surface rises from the horizontal surface at the rate of f_{i} , \mathcal{L}_{i} one (1) foot vertically for every twenty (20) feet of horizontal distance, reaching a final height of 743 feet)

SECTION IV: HEICHT LIMITATIONS

Except as otherwise provided in this Ordinance, no structure or tree shall be erected, altered, allowed to grow, or maintained in any zone created by this Ordinance to a height in excess of the height limit herein established for such zone. Such height limitations are hereby established for each of the zones in question as follows:

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- NONINSTRUMENT APPROACH ZONES One (1) foot in height for each forty (40) feet in horizontal distance beginning at a point 200 feet from and at the centerline elevation of the end of the noninstrument runway and extending to a point 10,200 feet from the end of the runway;
- 2. TRANSITION ZONES - One (1) foot in height for each seven (7) feet in horizontal distance beginning at any point 200 feet normal to and at the elevation of the centerline of noninstrument runways, extending 200 feet beyond each end thereof, extending 200 feet beyond each end thereof, extending to a height of 150 feet above the airport elevation which is 393 feet above mean sea level. In addition to the foregoing, there are established height limits of one (1) foot vertical height for each seven (7) feet horizontal distance measured from the edges of all approach zones for the entire length of the approach zones and extending upward and outward to the points where they intersect the horizontal or conical surfaces.
 - HORIZONTAL ZONE One hundred fifty (150) feet above the airport 543 MSV elevation or a height of 543 feet above many and line elevation or a height of 543 feet above mean sea level; Tri3 MSL
 - CONICAL ZONE One (1) foot in height for each twenty (20) feet of zone, extending to a height of 793 feet above the airport elevation.

Where an area is covered by more than one (1) height limitation, the more restrictive limitations shall prevail.

SECTION V: USE RESTRICTIONS

Notwithstanding any other provisions of this Ordinance, no use may be made of land within any zone established by this Ordinance in such a manner as to create electrical interference with radio communication between the airport and aircraft, make it difficult for flyers to distinguish between airport lights and others, result in glare in the eyes of flyers using the airport, impair visibility in the vicinity of the airport or otherwise endanger the landing, taking off, or maneuvering of aircraft.

SECTION VI: NONCONFORMING USES

(a) Regulations not Retroactive. The regulations prescribed by this Ordinance shall not be construed to require the removal, lowering, or other changes or alteration of any structure or tree not conforming to the regulations as of the effective date of this Ordinance, or otherwise interfere with the continuance of any nonconforming use. Nothing herein contained shall require any change in the construction, alteration, or intended use of any structure, the construction or alteration of which was begun prior to the effective date of this Ordinance, and is diligently prosecuted.

(b) <u>Marking and Lighting</u>. Notwithstanding the preceding provision of this Section, the owner of any nonconforming structure or tree is hereby required to permit the installation, operation, and maintenance thereon of such markers and lights as shall be deemed necessary by the Port of Benton to indicate to the operators of aircraft in the vicinity of the airport, the presence of such airport hazards. Such markers and lights shall be installed, operated, and maintained at the expense of the Port of Benton.

SECTION VII: PERMITS

(a) Future Uses. Except as specifically provided in Paragraphs 1, 2, and 3 hereunder, no material change shall be made in the use of land and no structure or tree shall be erected, altered, planted or otherwise established in any zone hereby created unless a permit therefor shall have been applied for and granted. Each application for a permit shall indicate the purpose for which the permit is desired, with sufficient particularly to permit it to be determined whether the resulting use, structure or tree would conform to the regulations herein prescribed. If such determination is in the affirmative, the permit shall be granted.

- In the area lying within the limits of the horizontal zone and the conical zone, no permit shall be required for any tree or structure less than 75 feet of vertical height above the ground, except when because of terrain, land contour or topographic features such tree or structure would extend above the height limits prescribed for such zone.
- 2. In the areas lying within the limits of the noninstrument approach zones but at a horizontal distance of not less than 4,200 feet from each end of the runways, no permit shall be required for any tree or structure less than 75 feet of vertical height above the ground, except when such tree or structure would extend above the height limit prescribed for such noninstrument approach zone.
- 3. In the areas lying within the limits of the transition zones beyond the perimeter of the horizontal zone, no permit shall be required for any tree or structure less than 75 feet of vertical height above the ground except when such tree of structure, because of terrain, land contour or topographic features would extend above the height limit prescribed for such transition zones.

Nothing contained in any of the foregoing exceptions shall be construed as permitting or intending to permit any construction, alteration or growth of any structure or tree in excess of any of the height limits established by this Ordinance except as set forth in Section IV.

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(b) Existing Uses. No permit shall be granted that would allow the establishment or creation of an airport hazard or permit a nonconforming use, structure, or tree to be made or become higher, or become a greater hazard to air navigation, than it was on the effective date of this Ordinance or any amendments therato or than it is when the application for a permit is made. Except as indicated, all applications for such a permit shall be granted.

(c) <u>Nonconforming Uses Abandoned or Destroyed</u>. Whenever the Port of Benton determines that a nonconforming structure or tree has been abandoned or more than 80 percent torn down, physically deteriorated, or decayed, no permit shall be granted that would allow such structure or tree to exceed the applicable height limit or otherwise deviate from the zoning regulations.

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(d) <u>Variances</u>. Any person desiring to erect or increase the height of any structure, or permit the growth of any tree, or use his property, not in accordance with the regulations prescribed in this Ordinance, may apply to the Board of Adjustment for a variance from such regulations. Such variances shall be allowed where it is duly found that a literal application or enforcement of the regulations would result in practical difficulty or unnecessary hardship and the relief granted would not be contrary to the public interest but will do substantial justice and be in accordance with the spirit of this Ordinance.

(e) <u>Hazard Marking and Lighting</u> Any permit or variance granted may, if such action is deemed advisable to effectuate the purpose of this Ordinance and be reasonable in the circumstances, be so conditioned as to require the owner of the structure or tree in question to permit the Port of Benton at its own expense, to install, operate, and maintain thereon such markers and lights as may be necessary to indicate to flyers the presence of an airport hazard.

SECTION VIII: ENFORCEMENT

It shall be the duty of the Port of Benton to administer and enforce the regulations prescribed herein. Applications for permits and variances shall be made to the Port of Benton upon a form furnished by him. Applications required by this Ordinance to be submitted to the Port of Benton shall be promptly considered and granted or denied by him. Applications for action by the Board of Adjustment shall be forthwith transmitted by the Port of Benton.

SECTION IX: BOARD OF ADJUSTMENT

(a) There is hereby created a Board of Adjustment to have and exercise the following powers: (1) to hear and decide appeals from any order, requirement, decision, or determination made by the Port of Benton in the enforcement of this Ordinance; (2) to hear and decide special exceptions to the terms of this Ordinance upon which such Board of Adjustment under such regulations may be required to pass; (3) to hear and decide specific variances.

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(b) The Board of Adjustment shall consist of five (5) members appointed by the Port of Benton and each shall serve for a term of three (3) years and until his successor is duly appointed and qualified. Of the members first appointed, one shall be appointed for a term of one (1) year, two (2) for a term of two (2) years and two for a term of three (3) years. Members shall be removable by the appointing authority for cause, upon written charges, after a public hearing.

(c) The Board of Adjustment shall adopt rules for its governance and procedure in harmony with the provisions of this Ordinance. Meetings of the Board of Adjustment shall be held at the call of the Chairman and at such other times as the Board pf Adjustment may determine. The Chairman, or in his absence the acting chairman, may administer oaths and compel the attendance of witnesses. All hearings of the Board of Adjustment shall be public. The Board of Adjustment shall keep minutes of its proceedings showing the vote of each member upon each question or, if absent or failing to vote, indicating such fact, and shall keep records of its examinations and other official actions, all of which shall immediately be filed in the office of the Port of Benton and shall be a public record.

(d) The Board of Adjustment shall make written findings of fact and conclusions of law giving the facts upon which it acted and its legal conclusions from such facts in reversing, affirming, or modifying any order, requirement, decision, or determination which comes before it under the provisions of this Ordinance.

(e) The concurring vote of a majority of the members of the Board of Adjustment shall be sufficient to reverse any order, requirement, decision or determination of the Port of Benton or to decide in favor of the applicant on any matter upon which it is required to pass under this Ordinance, or to effect any variation in this Ordinance.

SECTION X: APPEALS

(a) Any person aggrieved, or any taxpayer affected, by any decision of the Port of Benton made in his administration of this Ordinance, may appeal to the Board of Adjustment.

(b) All appeals hereunder must be taken within a reasonable time as provided by the rules of the Board of Adjustment, by filing with the Port of Benton a notice of appeal specifying the grounds thereof. Port of Benton shall forthwith transmit to the Board of Adjustment all the papers constituting the record upon which the action appealed from was taken.

(c) An appeal shall stay all proceedings in furtherance of the action appealed from, unless the Port of Benton certifies to the Board of Adjustment, after the notice of appeal has been filed with it, that by reason of the facts stated in the certificate a stay would, in his opinion, cause imminent peril of life or property. In such case, proceedings shall not be stayed except by order of the Board of Adjustment on notice to the Port of Benton and on due cause shown. (d) The Board of Adjustment shall fix a reasonable time for hearing appeals, give public notice and due notice to the parties in interest, and decide the same within a reasonable time. Upon the hearing any party may appear in person or by agent or by attorney.

(e) The Board of Adjustment may, in conformity with the provisions of this Ordinance, reverse or affirm, in whole or in part, or modify the order, requirement, decision or determination appealed from any may make such order, requirement, decision, or determination, as may be appropriate under the circumstances.

SECTION XI: JUDICIAL REVIEW

Any person aggrieved, or any taxpayer affected, by any decision of the Board of Adjustment, may appeal to the State Courts as provided for under Washington Code.

SECTION XII: PENALTIES

Each violation of this Ordinance or any regulation, order, or ruling promulgated hereunder shall constitute a misdemeanor and be punishable by a fine of not more than \$100.00 or imprisonment for not more than thirty (30) days or both such fine and imprisonment, and each day a violation continues to exist shall constitute a separate offense.

SECTION XIII: RIGHT OF ACQUISITION

In any case in which the Port of Benton shall determine

(a) It is desirable to remove, lower, or otherwise terminate a nonconforming structure or use; or

(b) the approach protection necessary cannot, because of constitutional limitations, be provided by airport zoning regulations; or

(c) it appears feasible that the necessary approach protection be provided by acquisition of property rights rather than by airport zoning regulations,

then in either event the Port reserves to itself the right to acquire by purchase, grant, or condemnations in the manner provided by law, such air rights, avigation easement, or other estate or interest in the property or non-conforming structure or use in question as may be necessary to effectuate the full development and operation of said airport.

SECTION XIV: CONFLICTING REGULATIONS

Where there exists a conflict between any of the regulations or limitations prescribed in this Ordinance and any other regulations applicable to the same area, whether the conflict be with respect to the height of structures or trees, the use of land, or any other matter, the more stringent limitation or requirement shall govern and prevail.

SECTION XV: SEVERABILITY

If any of the provisions of this Ordinance or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of the Ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this Ordinance are declared to be severable.

SECTION XV: EFFECTIVE DATE

WHEREAS, the immediate operation of the provisions of this Ordinance is necessary for the preservation of the public health, public safety, and general welfare, an EMERGENCY is hereby declared to exist, and this Ordinance shall be in full force and affect from and after its passage by the and publication and posting as required by law.

ADOPTED	this	day	of	,	19	
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PORT OF BENTON BOARD OF COMMISSIONERS

J.C. RICHARDSON

RICHARD MANN

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RESOLUTION 78-12

RICHLAND AIRPORT ZONING ORDINANCE

WHEREAS the Commission of the Port of Benton passed Resolution 78-5 creating and establishing a Port of Benton Airport Zoning Board to study the safety of zones around the Richland and Prosser Airports; and

WHEREAS at a special meeting held on April 25, 1978, the Port of Benton Commission appointed five members to serve on the Airport Zoning Board; and

WHEREAS the Zoning Board prepared a Richland Airport Ordinance for the Commission's consideration in order to assure public safety, to comply with FAA standards, and to provide public awareness of the physical requirements of air operations;

NOW, THEREFORE, the Port of Benton Commission hereby resolves to adopt this ordinance, a copy of which is attached hereto.

The Port of Benton Commission also resolves to request of the Cities of Richland, West Richland, and Prosser, and of Benton County that they adopt this ordinance in order to assure uniform enforcement of its provisions.

DATED and signed this 12th day of July, 1978

Richard d. Stame RICHARD MANN, Secretary

