

Vista Field Airport

Master Plan Update

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Prepared for:



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1.0 Introduction

In 2001 J-U-B Engineers, Inc assisted the Port of Kennewick to update the Master Plan for the Vista Field Airport. The report provided a history of the airport as well as documentation of then existing conditions with respect to a site description, available utilities, aviation activity and airport design criteria. Comprehensive land use planning of the surrounding area was also discussed. Aircraft forecasts were prepared for the year 2035. Existing deficiencies with respect to ground clearance and airspace clearances were described. Several alternatives were prepared to address the deficiencies in a realistic manner and a preferred option was adopted by the Port Commissioners as the Recommended Master Plan in January, 2002.

A major component of the Updated Master Plan was to recognize the number of larger B-II sized aircraft using the airport. Although it was determined to be unrealistic to provide the FAA recommended Part 77 airspace clearances for B-II aircraft, the adopted airport improvements were selected that would provide ground clearances for B-II aircraft for the runway as well as the north taxiway.

Since the 2002 update, several things have caused a change in Port philosophy, which indicate that it is an appropriate time to revisit the earlier recommendations to refine the layout along the north side of the airport property. The major considerations that prompt this current effort include:

- Expand and/or remodel the existing Fixed-Based Operator (FBO) building rather than construct a new FBO on a different site.
- In cooperation with the City of Kennewick's economic development goals, allow for non-airport related commercial development of Port land along Grandridge Boulevard and Rio Grande Avenue, while retaining space for hangar development and/or buffer zone along the current north fence line.
- Encourage future development associated with air operations in proximity of the FBO building, phasing improvements from west to east.
- Provide aircraft storage space that more closely follows projected need.
- Plan for capital improvements, such as a wash-down and fuel containment areas, in anticipation of regulatory requirements.

This report will begin by describing the various factors and considerations that provide current direction for the site layout. The resulting Hanger/Terminal area will be presented along with the consequential Airport Layout Plan and Capital Improvement Program. Although this report focuses on a new land use scenario for the north side of Vista Field, it is suggested that the reader examine the 2002 Update to get a complete presentation of existing conditions, City of Kennewick comprehensive planning and zoning, airport usage, and discussion regarding the Critical Aircraft and deficiencies at Vista Field.

The completed Master Plan Update will give the Port of Kennewick staff and Commissioners the tools to make informed decisions regarding airport planning and land use. The plan will be a living document that should be updated every 3 to 5 years to reflect the actual airport and land development decisions made by the Port.

2.0 Airport Land Use Planning

This section will discuss the changes in the approach to airport land use planning at Vista Field. The Airport Property Map shown in the 2002 Master Plan Update (Figure 2.1) is still valid.

2.1 Work Completed Since 2002

Since the 2002 Vista Field Master Plan Update was completed, several important activities have occurred, including:

- Widened the north taxiway from 30 feet to 40 feet and shifted centerline to 240 feet from runway (abandon south 12.5 feet of existing taxiway, but retain to reduce dust).
- Widened the southwest taxiway from 24.5 feet to 44.5 feet.
- Widened the southeast taxiway from 28 feet to 40 feet.
- Widened taxiway turning radius 5 feet.
- Installed additional windcones.
- Installed security fencing gates with automated keypad entry.
- Installed signs to indicate to pilots the differences in taxiway design.
- Installed mandatory informational signs for jet aircraft.

Also of note is the fact that the Port has purchased the hangars on the south side of the runway. Previously the hangars were privately owned with the ground being leased from the Port. In order to remove these hangars it would have been necessary to either obtain full owner agreement and support or allow ground leases to expire. Now, with the Port in ownership these hangars can provide operational income until such time as the Port constructs replacement hangars on the north side.

2.2 Considerations for North Side Layout

The project team was provided with several desirable features to consider for incorporation into the layout for the north side of the airport, including:

- There will not be a new FBO building. Rather, an expanded and/or remodeled existing facility with reconfigured parking area is envisioned.
- Scale back the amount of aircraft storage shown to more closely reflect the projected need.
- Locate a new maintenance facility close to the FBO.
- Add a wash-down area for aircraft.
- Add a mobile fuel containment area.
- Consider an access roadway to either Grandridge Blvd or Rio Grande Road. This would also provide access to a landlocked parcel owned by KID that could be purchased or traded with the Port to extend the Port ownership line to include additional airport operations land if necessary, allow for additional through-the-fence potential, or at a minimum increase airport buffer space.
- Continue to work toward providing appropriate ground clearances for B-II large aircraft.
- Maintain ability to phase improvements from west to east.

3.0 Recommended Master Plan

3.1 Summary of Recommendations

Working with Port Staff, several alternative layouts for land use development were prepared for the north side of the airport. These alternatives were combined and refined to provide the desired features described in Section 2. The resulting layout is shown in Figure 3.1. This recommended Master Plan maintains the philosophy of providing ground clearances for safe operations of occasional B-II aircraft, however airspace for B-II operations is impossible to achieve due to the presence of buildings outside of Port ownership.

This Master Plan recommends that the Port of Kennewick work with the City of Kennewick and the Kennewick Irrigation District to amend the Comprehensive Plan and Zoning district boundaries to follow the property boundary between the Port and the City, north of the FBO and continuing northeast parallel to the runway, extended across KID owned property to existing zoned land Industrial-Heavy. This should be pursued as the airport operations area and be zoned industrial. Property north of this line, regardless of ownership would be used for airport related activities or other commercial activities. Aircraft storage on land currently not zoned industrial could not occur until the Comprehensive Plan and Zoning boundary amendments are in place.

The underlying airport layout for runways and taxiways includes accommodating B-II aircraft on the north taxiway and B-I Small aircraft on the south taxiway. Following City of Kennewick zoning, tie-downs and hangars were not placed outside of portions of the property anticipated to be industrially zoned. Parameters for the airport layout including runway and taxiway object free areas, aircraft tie-downs, hangars, a new maintenance building and other facilities included in the Recommended Master Plan are presented in Figure 3.1. Hangar and tie-downs shown in the figure provide at least two potential configurations for the orientation of hangars that would meet clearances required; at the time of design a decision could be made on which approach to pursue. Vista Field would remain classified, as it is today, for B-I aircraft, with the north taxiway sized for B-II Large. Appropriate object free areas have been incorporated into this alternative for the larger aircraft when necessary.

Improvements associated with the Recommended Master Plan include:

- Relocate existing hangars on southeast side of airport.
- Relocate existing tie-down areas.
- Relocate fuel pumps.

Upon making the identified improvements, the following unavoidable deficiencies as related to the B-II design status would remain:

- Part 77 Airspace is limited to “Utility” status (aircraft less than 12,500 lbs).
- Infringement upon runway object free area by Brockman Precision.
- South taxiway remains B-I Small since there is insufficient room to widen in the future.

The recommended Master Plan provides opportunities for Port owned leasable land close to Grandridge Boulevard within the commercial zoning area. Some acreage has also been preserved further to the northeast, south of Rio Grande Avenue, for future development including through-the-fence operations.

Future aircraft storage needs have also been met. On the north side, a total of 34 small hangars, as well as tie-downs for 24 small and 2 large aircraft are shown. On the south side 24 small hangars are shown at the east end and 7 executive hangars are shown situated at the west end. Two large airplane tie-downs for the UPS facility are also accommodated, however this apron would not be constructed by the Port, it could be installed by UPS at their expense.

Important to the implementation of the Master Plan is the updating of the City of Kennewick Comprehensive Plan and Zoning boundaries. Prior to construction of the hangars shown along the north boundary line near the FBO, this portion of the property will need to be zoned Industrial; this cannot be accomplished until the Comprehensive Plan is amended. The City typically undertakes amendments on an annual basis, however, given the requirements of the Growth Management Act, next cycle will not be likely to commence until the summer of 2007.

As discussed in the 2002 update, the differences in design of the two taxiways should be identified in the "Airport/Facility Directory" that is published by the FAA. Efforts should be made to make the pilots aware of any differences that are not implied in the Airport Reference Code (ARC) for the airport.

Based on the recommended Master Plan, the Airport Layout Plan was updated and is attached as well.

3.2 Public Involvement

At the Port Commission's request, Port staff invited public comment on the September, 2005 draft of this Update. Invitations were published in the Tri-City Herald on Thursday, October 6, 2005 and Sunday October 9, 2005, requesting written public comments by 5:00 PM October 24, 2005. This deadline was later extended to November 7, 2005. Copies of the January, 2002 Update and the September, 2005 draft Update were made available on the Port's website, at the Port offices, and at the two Kennewick branches of the Mid-Columbia library. Six written public comments were received and are on file in the Port of Kennewick offices. Minor changes to this document were made based on comments received.

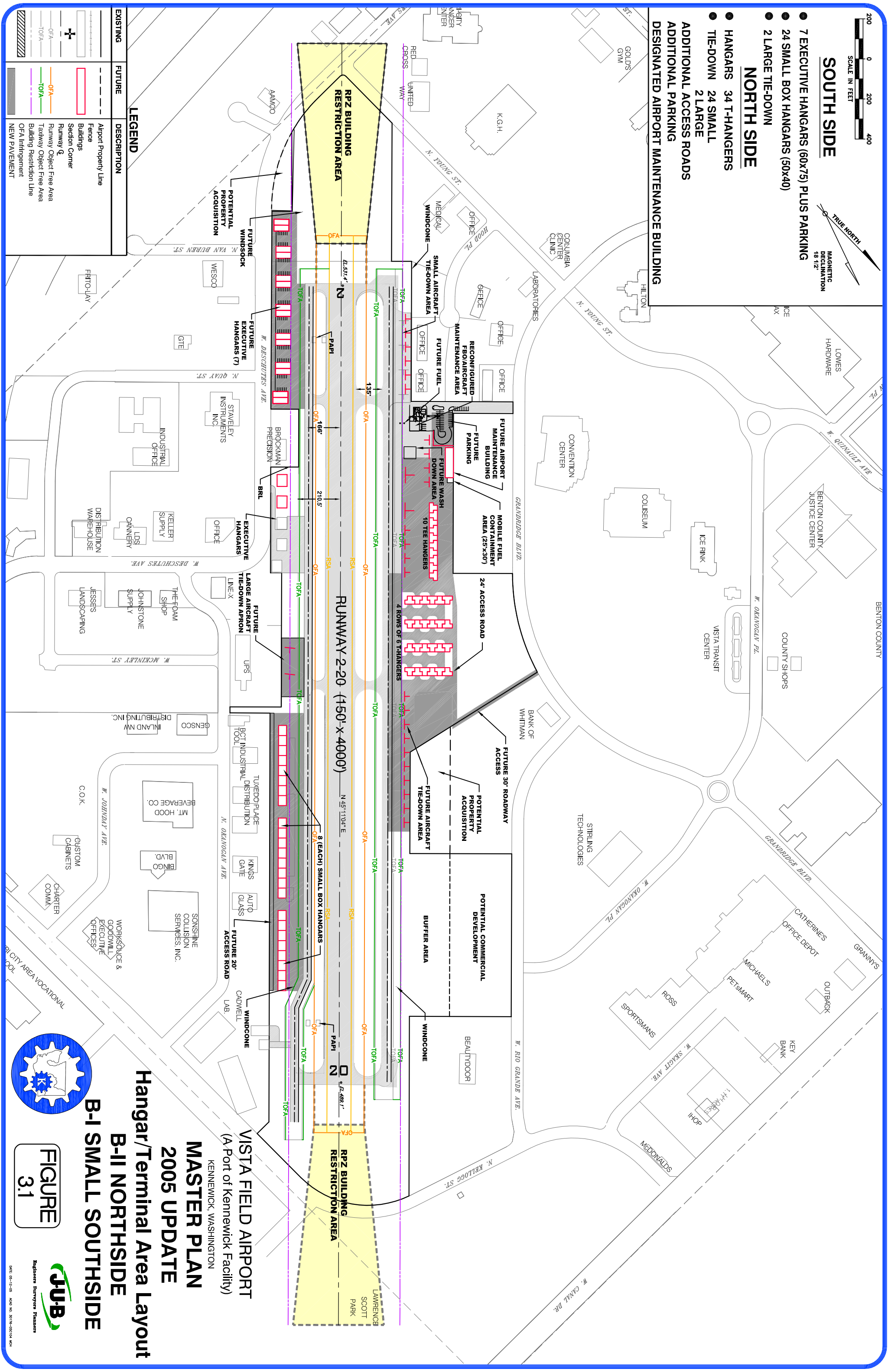


SOUTH SIDE

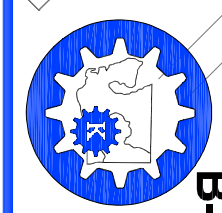
- 7 EXECUTIVE HANGARS (60x75) PLUS PARKING
- 24 SMALL BOX HANGARS (50x40)
- 2 LARGE TIE-DOWN

NORTH SIDE

- HANGARS 34 T-HANGERS
 - TIE-DOWN 24 SMALL
 - 2 LARGE
- ADDITIONAL ACCESS ROADS
DESIGNATED AIRPORT MAINTENANCE BUILDING



EXISTING	FUTURE	DESCRIPTION
		Airport Property Line
		Fence
		Buildings
		Section Corner
		Runway Q
		Runway Object Free Area
		Taxiway Object Free Area
		Building Restriction Line
		OFA Infringement
		NEW PAVEMENT



Hangar/Terminal Area Layout

B-II NORTH SIDE

B-I SMALL SOUTHSIDE

FIGURE
3.1



4.0 Capital Improvement Plan

Based upon the revised Master Plan, a Capital Improvement Plan (CIP) was prepared that includes all major work, costs, and timelines for incorporating changes to Vista Field Airport. The Capital Improvement Plan is merely a prioritized schedule of suggested improvements for Vista Field Airport and is in no way meant to establish a future Port of Kennewick budget.

The items included in the CIP are those items that are necessary for the immediate future. The CIP incorporates recommended pavement upgrades set forth in the Pavement Management Program study as performed by Pavement Consultants, Inc. in July of 2000. The results of the study found the majority of pavement at Vista Field to be in “excellent” condition. The weakest section of pavement was found to be the general aviation area immediately surrounding the FBO; therefore, a 2-inch asphalt overlay was suggested for this section of pavement. As the rest of the pavement was found to be in excellent condition, a schedule of fog seals and slurry seals was suggested for the rest of the airport pavement.

The Washington State Department of Transportation (WSDOT) collected pavement condition data during the spring and summer of 2005. This data is being used to prepare a new statewide Airport Pavement Management System Update. Data indicates that pavement condition at the Vista Field airport have deteriorated slightly but are generally good with a portion of the runway having values ranging from 74 to 78 (new pavement receiving a score of 100). A short piece of taxiway on the south side has a value of 57.

As fog seals generally have a short life span, all areas that are called to be fog sealed have been upgraded to slurry seals—which tend to have a longer lifespan. Additionally, some of the phasing of pavement upgrades has been slightly modified from the original Pavement Management Upgrade suggested timeline.

During 2005, the Port undertook planning efforts to redesign the FBO building including expansion. Budget constraints have caused the Port to reevaluate the extent and timing of such improvements.

The Port recently was awarded a 90% grant from WSDOT of \$145,994 (with \$16,222 as 10% Port match) to perform crack seal and slurry seal work on the runway in 2006 (total engineers cost estimate of \$162,216).

Additional pavement improvements are recommended for 2007 that include slurry seals for the majority of the remaining pavement on the north side at Vista Field. As previously mentioned, many of these areas of pavement only require fog seals in Pavement Management Plan; however, since some time has past since the original recommendation, we are suggesting slurry seals as slurry seals tend to be more durable. This work would be done in conjunction with providing new pavement to serve future hangars on the north side as well as a new plane wash-down area.

In 2008, it is anticipated that new hangars will be constructed to take the place of the existing hangars that are currently an Object Free Area infringement. It is likely that replacement hangars and additional hangars will be constructed by private development on ground leased from the Port and as such are not specifically included in the CIP. The Port

may provide pavement and utilities to the site of future hangars. The placement of new T-hangars is shown in the Master Plan drawing. Upon completion of the new hangars, the old hangars on the south side could then be removed. As the cost of the existing hangar removal is yet to be determined, it is not included in the Capital Improvement Plan suggested costs. The relocation of the fuel pumps is also slated for this second phase of work. By re-locating the fuel pumps 20 feet towards the FBO, the fueling area will then be clear of the TOFA requirement for B-II separations on the north taxiway.

In 2009, a 4-inch overlay of the north taxiway will bring the pavement strength up to B-II status. In addition, a 2-inch overlay of the pavement in the FBO general aviation area will take place as suggested in the Pavement Management Plan. A slurry seal for the south taxiway will also be necessary in 2009 for pavement preservation.

Table 4.1 Capital Improvement Plan

	ITEM	UNITS	# UNITS	COST/UNIT	COST
2006	Slurry seal Runway*	SF	600,000	\$0.27	\$162,216
					SUBTOTAL
2007	Slurry Seal between N. Taxiway & Runway*	SF	92,000	\$0.40	\$36,800
	Slurry Seal Large Aircraft Tiedown area*	SF	42,750	\$0.40	\$17,100
	Slurry Seal radius of runway/taxiways*	SF	60,000	\$0.40	\$24,000
	Slurry Seal existing small tiedowns east of FBO*	SF	36,000	\$0.40	\$14,400
	Pave apron, extend utilities for new hangars on north	SF	150,000	\$3.25	\$487,500
	Install wash-down area - with 9" thick slab and collection system	SF	2,500	\$9.00	\$22,500
				SUBTOTAL	\$602,300
2008	Remove old hangars on south ¹	-	-	-	-
	Relocate fuel pumps	LS	1	\$15,000.00	\$15,000
				SUBTOTAL	\$15,000
2009	4" Overlay of N taxiway	SF	80,000	\$0.90	\$72,000
	2" Asphalt Overlay of FBO area*	LS	1	\$66,990.00	\$66,990
	Slurry Seal South Taxiway*	SF	167,600	\$0.50	\$83,800
				SUBTOTAL	\$222,790
				TOTAL	\$1,002,306

* Improvement suggested in the Pavement Management Program

Notes:

1. Removal of old hangars would not take place until after new hangars are built on the north side. This is likely to be a phased program with new hangars replacing old ones in turn. No cost estimate has yet been prepared.

2. A maintenance hangar is also an interest of the Port, however an estimated cost and timeframe have not been developed. A fuel containment area for mobile fueling truck parking would likely be constructed as part of maintenance building. An adjustment to the fence gateway would be desirable at that time.