STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
AVIATION OFFICE

Statewide Airfield Pavement Management Program
Williston Municipal Airport – X60
(General Aviation)
Williston, Florida
(District 2)

March 31, 2008

Prepared for:
Florida Department of Transportation
Aviation Office

by:
URS Corporation Inc. / MACTEC Engineering & Consulting, Inc. / Planning Technology, Inc. / ASC Geosciences, Inc.

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EXECUTIVE SUMMARY

URS Corporation, Inc., MACTEC Engineering and Consulting, Inc. (MACTEC), Planning Technology, Inc. (PTI), and ASC Geosciences, Inc. (ASCG) were awarded with a contract to provide services in support of the Florida Department of Transportation (FDOT) Aviation Office for Phase II of the Statewide Aviation Pavement Management program. As part of this contract, MACTEC conducted pavement condition survey for airside pavements at Williston Municipal Airport, evaluated the condition and developed a maintenance and rehabilitation program to improve conditions to prescribed minimum levels.

The total pavement area in 2006 at Williston Municipal Airport is 2,217,300 square feet. The breakdown of pavement area for each pavement use is provided as follows:

Pavement Area by Pavement Use

Use	Area, SqFt	% of Total Area
Runway	1,737,300	78
Taxiway	381,800	17
Apron	98,200	5
Total	**2,217,300**	**100**

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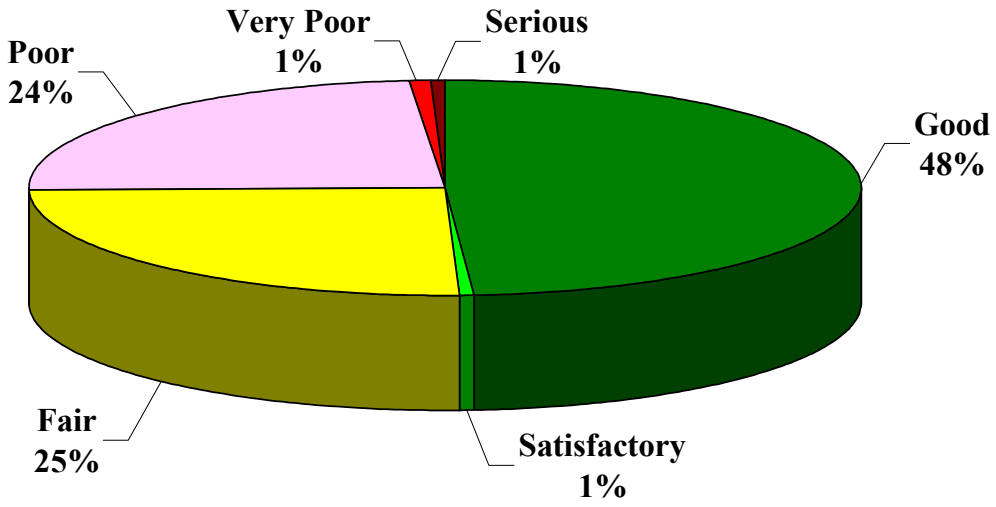
The overall area-weighted Pavement Condition Index (PCI) of the areas in 2006 is 75, representing a Satisfactory overall network condition.

The figure below provides the PCI distribution by rating category for the network. Approximately 49% of the network is in Good and Satisfactory condition while 26% of the network is in Poor to Serious condition.

The condition summary by pavement use table illustrates the area-weighted PCI computed individually for each use. On average, the runways are in Satisfactory condition while the taxiways and aprons are in Fair condition.

Network PCI Distribution by Rating Category



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Condition Summary by Pavement Use

Use	Area-Weighted PCI
Runway	79
Taxiway	59
Apron	63
All	**75**

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The immediate M&R needs include part of Runway 5-23, part of Runway 14-32, Taxiways A, C, AP , and part of Apron. These aprons and taxiways may not be the highest priority for funding but would need to be programmed over several years. These immediate needs are summarized in the following table.

Immediate Major M&R Needs

Branch	Section	Section Area, SqFt	Major M&R Funded**	PCI Before	Maintenance	PCI After
AP	4105	87,500	$324,363	59	Major M&R < Critical	100
RW 14-32	6205	30,300	$190,587	44	Major M&R < Critical	100
RW 14-32	6210	15,000	$204,300	26	Major M&R < Critical	100
RW 14-32	6215	430,000	$1,353,211	61	Major M&R < Critical	100
RW 14-32	6220	215,000	$1,352,350	44	Major M&R < Critical	100
RW 5-23	6105	30,000	$171,480	52	Major M&R < Critical	100
RW 5-23	6110	15,000	$204,300	22	Major M&R < Critical	100
TW A	105	66,200	$416,398	42	Major M&R < Critical	100
TW AP	405	15,500	$53,010	60	Major M&R < Critical	100
TW C	305	188,625	$1,186,451	42	Major M&R < Critical	100
		Total	**$5,456,450**	**75***	**← Network Avg. PCI →**	**96***

* This table shows the area-weighted PCI before and after Major M&R and routine maintenance work for the first year of the 10-year plan. It includes all pavement sections at Williston Municipal Airport, including those sections not shown in this table.
** Cost figures are rounded down. Sum may be different. Costs are adjusted for inflation.

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A forecast of Major M&R needs for a 10-year period, starting from 2008, was developed using an unlimited budget. The analysis identified ongoing maintenance needs and major M&R during that interval.

10 Year M&R Costs under Unlimited Funding Scenario

Year	Preventive	Major M&R >= Critical	Major M&R < Critical	Total
2008	$3,439	$0	$5,456,450	$5,459,889
2009	$23,210	$0	$10,311	$33,521
2010	$38,285	$0	$0	$38,285
2011	$54,949	$0	$76,316	$131,265
2012	$93,230	$0	$0	$93,230
2013	$126,390	$0	$0	$126,390
2014	$174,317	$0	$0	$174,317
2015	$211,832	$0	$0	$211,832
2016	$279,730	$0	$0	$279,730
2017	$330,905	$0	$0	$330,905
Total	**$1,336,287**	**$0**	**$5,543,077**	**$6,879,364**

Note: Cost figures are rounded down. Sum may be different. Costs are adjusted for inflation.

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The 10 year analysis suggests an annual budget on the order of $690,000 would be expected to provide an improvement in the overall condition, where the area-weighted PCI would increase from 75 in 2006 to 79 in 2017. However, as stated above, a number of large projects exist that would need to be programmed over multiple years.

It is important to note that although preventative and some major M&R activities would have to be conducted over several years, the area-weighted PCI value for all Williston Municipal Airport pavements in 2017 may remain near 79. The airport manager should realize that what is most important is that the pavement repair work (preventative and major M&R) that has been identified for Williston Municipal Airport is conducted at some point in the 10-year plan.

1. INTRODUCTION

The State of Florida has more than 100 public airports that are vital to the Florida economy as well as the economy of the United States. These public airports range from small general aviation airports to large international hub airports. These airports serve business travelers, tourism, and cargo operations crucial to the daily life of the people of Florida.

There are millions of square yards of pavement for the runways, taxiways, aprons and other areas that support aircraft operations. The timely and proper maintenance and rehabilitation (M&R) of these pavements allows the airports to operate efficiently, economically and without excessive down time. In order to support the planning, scheduling, and design of the M&R activities, FDOT has implemented pavement management system technology.

This report describes the procedures used to ensure that the appropriate engineering and scientific standards of care, quality, budget, and schedule requirements are implemented at your airport as a result of your participation in the Statewide Aviation Pavement Management Program.

1.1 Purpose

This Florida Airport Pavement Evaluation Report is intended to:

- Describe, briefly, the Florida Department of Transportation (FDOT) Aviation Office Statewide Pavement Management Program and the roles and responsibilities of the program's participants
- Provide background information on pavement management principles, objectives, and benefits to the participating airport
- Outline the procedures used to collect, evaluate and report pavement inspection results at your airport
- Present the findings from the inspection and analysis of the needs for maintenance and rehabilitation activities for this airport.

1.2 FDOT Aviation PMS Program

In 1992, FDOT implemented a Pavement Management System (PMS) program to improve the knowledge of pavement conditions at public airports in the State system, identify maintenance needs at individual airports, automate information management, and establish standards to address future needs. The FDOT Aviation Office participated in the development of a proprietary software pavement management system and developed and populated a pavement management database that provided valuable information for establishing M&R policies, estimating M&R costs, and developing recommendations for performing routine pavement maintenance. This system was implemented and condition surveys performed in 1992 and 1993 and again updated in 1998 and 1999. The proprietary system, AIRPAV, is no longer supported.

In 2004, the FDOT Aviation Office undertook a project to update the PMS Program software utilized for the PMS program. The Aviation Office selected a consultant team consisting of URS Corporation, Inc., MACTEC Engineering and Consulting, Inc. (MACTEC), Planning Technology, Inc. (PTI), and ASC Geosciences, Inc. (ASCG) to aid with the implementation of the program update. This project involved a review of the AIRPAV software and other available

PMS software. As a result of this review, MicroPAVER was selected as the software for the update project. Condition data from the 1998/1999 surveys were converted to the MicroPAVER system.

The inventory of the pavement systems and drawings of the pavements were updated to reflect maintenance, rehabilitation, and construction activities since 1998/1999 to the extent that information was available. Detailed, specific procedures for the inspection and collection of pavement data were developed for this project. A web-site (www.floridaairportpavement.com) was developed for the input of data under secure procedures. The site also has a public section for dissemination of information to the general public.

1.3 Organization

The FDOT Aviation Office manages the day-to-day details of the Statewide PMS and the updates. The Aviation Office Airport Engineering Manager serves as the Program Manager (PM) monitoring the work of the Consultant. The Aviation Office has review and approval authority for each program task.

1.3.1 *Consultant Role*

The Consultant (MACTEC Engineering and Consulting/URS Corporation/Planning Technology/ASC Geosciences) developed the PMS based upon procedures outlined in FAA Advisory Circular 150/5380-6B Guidelines and Procedures for Maintenance of Airport Pavements (FAA/AC) and ASTM D 5340 Standard Test Method for Airport Pavement Condition Index Surveys (2004). The Consultant provides technical and administrative assistance to the Aviation Office PM, during the execution of this program, which involves the continuing evaluation of airport pavements and updating of the PMS. A website is available to view and update airport information, including construction activities and pavement condition data. In addition, pavement evaluation reports will be available for viewing and download from the site (www.floridaairportpavement.com).

1.3.2 *Airport Role*

The airports are the ultimate client for each of the field inspections and reports. Individual airports will be provided final deliverables prepared by the Consultant that have been reviewed and approved by the FDOT Aviation Office. The airport should review system inventory drawings in their folder in the pavement management website and add maintenance and rehabilitation activities conducted on airside pavements on the website system inventory form.

1.4 Pavement Types and Pavement Management

1.4.1 *Pavement basics*

A pavement is a prepared surface designed to provide a continuous smooth ride at a certain speed and to support an estimated amount of traffic for a certain number of years. Pavements are constructed of a combination of subgrade soils, subbases, bases and surfacing. There are mainly two types of pavements;

- Flexible pavement, composed of asphalt concrete (AC) surface, and
- Rigid pavement composed of Portland cement concrete (PCC) surface.

Both pavement types use a combination of layered materials and thicknesses in order to support the traffic loads and protect the underlying subgrade soil. Flexible pavements (AC) dissipate the load from layer to layer until the load magnitude is small enough to be supported by the subgrade soil. In rigid pavements (PCC), the Portland cement concrete supports most of the load, the base or subbase layer is mainly constructed to provide a smooth and continuous platform for the concrete. Due to the different nature of both pavement types and their materials, flexible and rigid pavements have different distresses and failure mechanisms. Understanding the mechanics and failure modes of both pavement types will assist engineers in making adequate and long lasting repairs or rehabilitation to the pavement structures.

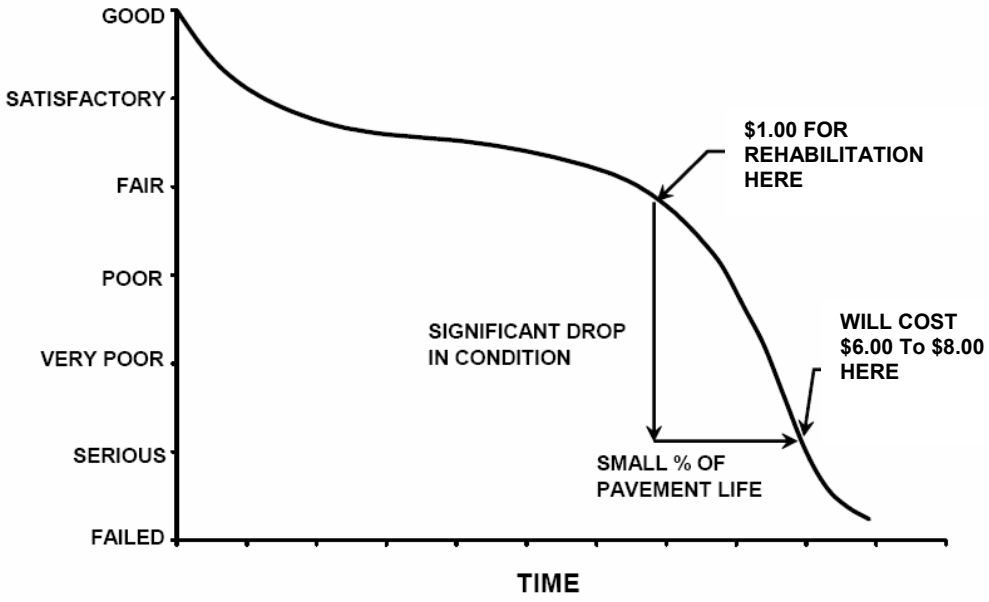
1.4.2 *Pavement Management System Concept*

A pavement management system (PMS) is a tool to assist engineers, planners and managing agencies in making decisions when planning pavement M&R. The management of pavements involves scheduling pavement maintenance and rehabilitation before pavements deteriorate to a condition where reconstruction (the most expensive alternative) is the only solution. Figure 1-1, taken from FAA/AC 5380-7A Pavement Management System, illustrates how a pavement generally deteriorates and the relative cost of rehabilitation at various times throughout its life. Note that during the first 75 percent of a pavement's life, it performs relatively well. After that, however, it begins to deteriorate rapidly. The number of years a pavement stays in "Satisfactory" condition depends on how well it is maintained. The illustration demonstrates the cost of maintaining the pavement above a critical condition before rapid deterioration occurs is much less compared to maintaining pavements after substantial deterioration has occurred.

Pavements deteriorate at an accelerated rate with increasing traffic and limited M&R resources. Planned maintenance and rehabilitation, essentially preventing pavements from reaching deteriorated conditions, helps managers/owners/agencies stretch and maximize the use of their budgets and prolong the life of the pavements. A PMS provides a tool to schedule and plan maintenance and rehabilitation based on engineering information and existing and predicted conditions of pavements.

There are several components or elements that are essential to a PMS. The first steps in the implementation of a PMS are to know and clearly identify what needs to be managed, the limits of the managing agency's responsibilities and the condition of the existing pavements. Once the cause and the extent of pavement problems are known, the appropriate maintenance and/or rehabilitation can be planned. By using local unit costs and expected yearly budgets, a multi year M&R plan can be determined.

Figure 1-1: Pavement Life Cycle



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Pavements deteriorate even if they do not carry any traffic. Pavement distresses may be attributed to climate, environment, materials, construction or traffic. Knowing the cause, extent and predominance of pavement distresses helps determine the most appropriate maintenance or rehabilitation work needed. Planning and applying preventive maintenance prolongs pavement life and minimizes future pavement repair costs. By projecting the rate of deterioration, a life cycle cost analysis can be performed for various alternatives, and the optimal time of application of the most feasible alternative can be determined. Such a decision is critical in order to avoid higher M&R costs at a later date.

A PMS enables the managing agency to identify and maintain the pavement conditions, keeping them at the upper end of the service life-condition curve. At this point, the total annual costs between maintaining a good pavement above a critical condition is much less than rehabilitating a poor pavement that has rapidly deteriorated beyond a critical condition level.

A PMS is a long-term planning tool that will result in an overall improvement of the pavement network condition and will also result in savings by applying the appropriate maintenance and rehabilitation activity at the appropriate time. Accurate estimates and timely M&R decisions and budgeting are of great importance when managing approximately 300 million square feet of Florida airside pavements.

1.4.3 *Pavement Inspection Methodology for PMS*

Pavement condition assessment is one of the primary decision variables in any airport pavement management system. Pavement condition assessments generally include visual surveys in

accordance with ASTM D 5340, *Standard Test Method for Airport Pavement Condition Index Surveys* and structural evaluation. Pavement condition surveys assess the functional condition of the pavement surface. Typically, most problems within a pavement structure will eventually reflect to the pavement surface. The structural condition and relative support of the pavement layers can be assessed utilizing non-destructive deflection testing (NDT) as well as other in-depth engineering evaluation or sampling and testing methods.

Pavement sections are broken down into sample units as established in FAA AC 150/5380-6B and ASTM D 5340. Sample unit sizes are approximately 5000 ± 2000 square feet for AC-surfaced pavements and 20 ± 8 slabs for PCC-surfaced pavements. Before the field inspections, the sampling plan was developed based on previous sampling and modified based on the available knowledge of branches, sections, use patterns, construction types and history. The sampling rate used for FDOT Statewide Pavement Management Program is provided in Table 1-1 below.

Table 1-1: Sampling Rate for FDOT Condition Surveys

AC Pavements			PCC Pavements		
N	n		N	n	
	Runway	Others		Runway	Others
1-4	1	1	1-3	1	1
5-10	2	1	4-6	2	1
11-15	3	2	7-10	3	2
16-30	5	3	11-15	4	2
31-40	7	4	16-20	5	3
41-50	8	5	21-30	7	3
≥51	20% but ≤20	10% but ≤10	31-40	8	4
			41-50	10	5
			≥51	20% but ≤20	10% but ≤10

Where *N = total number of sample units in section*
n = number of sample units to inspect

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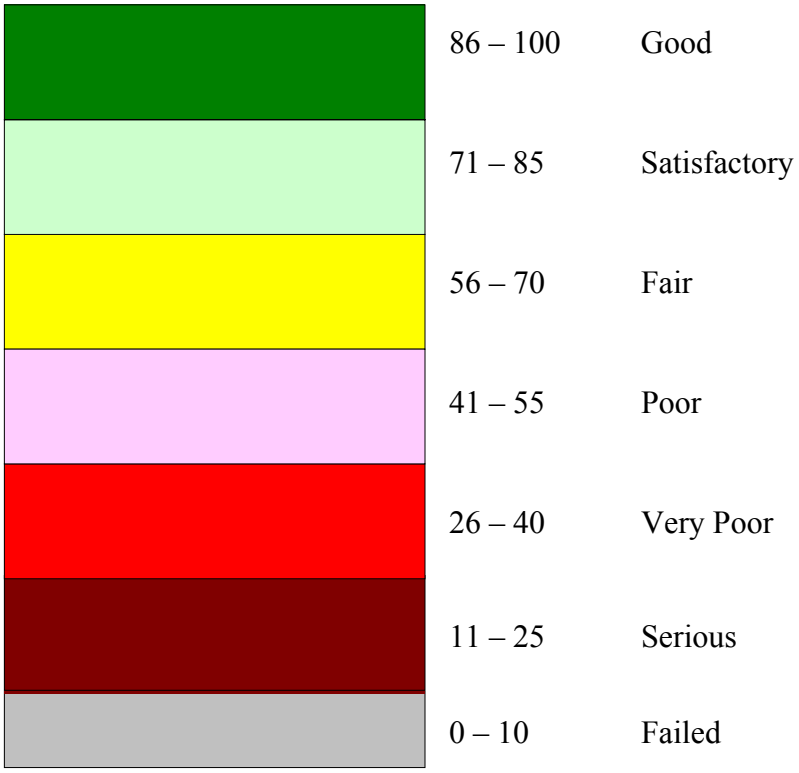
The sample units to inspect are determined by a systematic random sampling technique. This means that the locations are determined such that they are distributed evenly throughout the section. In the case when nonrepresentive distresses are observed in the field, additional sample units were added.

The distress quantities and severity levels from the sample units are used to compute the PCI value for each section. PCI values range from 0 to 100. MicroPAVER provides a rating scale that relates PCI to pavement condition, with a PCI between 0 and 10 considered 'Failed' pavement and a PCI between 86 and 100 considered 'Good' pavement, with five other conditions for PCI values between 11 and 85. Figure 1-2 shows the PCI scale.

Figure 1-2: PCI Rating Scale



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1.5 Definitions

Aviation Office - The Aviation Office is charged with responsibility for promoting the safe development· of aviation to serve the people of the State of Florida. The Aviation Office worked closely with FDOT District Aviation Specialists, during development of this project. District Aviation Specialists will consult with airport owners in implementation of project recommendations.

Base Course - Base Course is a layer of manufactured material, usually crushed rock (aggregate) or stabilized material (asphalt or concrete or Florida Limerock), immediately beneath the surface course of a pavement, which provides support to the surface course.

Branch – (Facility in prior system) - A runway, taxiway or apron is called a Branch. This is an easy reference to a recognizable component of airport pavement. In this report, Branch ID maintains the original AirPAV identification where 100 series through 3000 series facilities are taxiways, 4000 and 5000 series facilities are aprons (the 5000 series represent runup aprons and turnarounds), and 6000 series facilities are runways. It also includes the common designation for the item e.g. RW 18-36.

Category - The Category classifies the airport according to the type and volume of aircraft traffic, as follows:

- GA – for general aviation or community airports
- RL – for regional relievers or small hubs
- PR – for primary

Critical PCI – The PCI value considered to be the threshold for M&R decisions. PCI above the Critical generate economical activities expected to preserve and prolong acceptable condition. M&R for PCI values less than Critical make sense only for reasons of safety or to maintain a pavement in operable condition. A pavement section is expected to deteriorate very quickly once it reaches the Critical PCI and the unit cost of repair increases significantly.

Distress Type - A distress type is a defined visible defect in pavement evidenced by cracking, vertical displacement or deterioration of material. In PCI technology, 16 distinct distress types for asphalt surfaced and 15 for Portland cement concrete surfaced pavements have been described and rated according to the impact their presence has on pavement condition.

Florida DOT (FDOT) - Florida Department of Transportation was represented in this project by the Office of Aviation.

Localized M&R (Maintenance and Repair) – Localized M&R is a temporizing activity performed on existing pavement to extend its serviceability and/or to improve rideability. Localized M&R can be applied either as a safety (stop-gap) measure or preventive measure. Common localized maintenance methods include crack sealing, joint sealing, and patching.

Global M&R- Global M&R is defined as activities applied to entire pavement sections with the primary objective of slowing the rate of deterioration. These activities are primary for asphalt surfaced pavements, e.g. surface treatments.

MicroPAVER – A commercially available software subsidized by FAA and agencies in the US Department of Defense developed to support engineered management of pavement assets using a condition based approach. This software has the functionality such that if properly implemented, maintained and operated it meets the pavement management system requirements described by FAA in Advisory Circular 150/5380-7A.

Minimum Condition Level - A threshold PCI value established by FDOT to represent the targeted minimum pavement condition that is desirable in the Florida Airport System. These values were established with consideration of pavement function and airport type. For instance, runways have higher minimum condition levels than aprons, and Primary airports have higher minimum condition levels than General Aviation airports.

Major M&R (e.g. Rehabilitation) – Activities performed over the entire area of a pavement section that are intended to restore and/or maintain serviceability. This includes asphalt overlays, milling and replacing asphalt pavement, reconstruction with asphalt, reconstruction with Portland Cement Concrete (PCC) pavements, and PCC overlays.

Network Definition – (Airport Sketch in prior system) – A Network Definition is a CAD drawing which shows the airport pavement outline with Branch and Section boundaries. This sketch is intended to assist the user of the report to quickly associate information from the text to a location on the airport. This drawing also includes the PCI sample units and is used to identify

those sample units to be surveyed, i.e. the sampling plan. The Network Definition for the airport in this report is in Appendix A along with a table of inventory data.

Pavement Condition Index (PCI) – The Pavement Condition Index is a number which represents the condition of a pavement segment at an instant in time. It is based on visual identification and measurement of specific distress types commonly found in pavement which has been in service for a period of time. The definitions and procedures for determining the PCI are found in ASTM D 5340-04, "Standard Test Method for Airport Pavement Condition Index Surveys," published by ASTM International.

Pavement Evaluation – A systematic approach undertaken by trained and experienced personnel intended for determination of the condition, serviceability, and best corrective action for pavement. Techniques to standardize pavement evaluation include the Pavement Condition Index procedures.

Pavement Management – Pavement management is a broad function that uses pavement evaluation and pavement performance trends as a basis for planning, programming, financing, and maintaining a pavement system.

Rank – Pavement rank in MicroPAVER determines the priority to be assigned to a pavement section when developing an M&R plan. Pavement sections are ranked as follows according to their use:

- P – for Primary pavements, such as primary runways, primary taxiways, and primary aprons
- S – or Secondary pavements, such as secondary runways, secondary taxiways, and secondary aprons
- T – for Tertiary pavements such as "T' hangars and slightly used aprons

Reconstruction – Reconstruction includes removal of existing pavement, preparation of subgrade, and construction of new pavement with new, or recycled materials. Reconstruction is indicated when distress types evident at the surface indicate failure in the pavement structure or subgrade of a type, and to an extent, not correctable by less extensive construction.

Rehabilitation – Rehabilitation represents construction using existing pavement for a foundation. Rehabilitation most commonly consists of an overlay of existing pavement with a new asphalt or concrete surface. Recently, technology has expanded the options to include recycling of existing pavement, and incorporating engineering fabrics or thin layers of elasticized materials to retard reflection of distress types through the new surface.

Sample Unit – Uniformly sized portions of a Section as defined in ASTM D 5340. Sample units are a means to reduce the total amount of pavement actually surveyed using statistics to select and survey enough area to provide a representative measure of Section PCI. Sample Unit sizes are 5,000 ± 2,000 square feet for AC-surfaced pavements and 20 ± 8 slabs for PCC-surfaced pavements.

Section – (Feature in prior system) - Sections subdivide Branches into portions of similar pavement. Sections are prescribed by pavement structure, age, condition and use. Sections are identified on the airport Network Definition. They are the smallest unit used for determining M&R requirements based on condition.

Section ID – A short form identification for the pavement Section that maintains the original AirPAV identification where 100 series through 3000 series sections are taxiways, 4000 and 5000 series sections are aprons (the 5000 series represent run-up aprons and turnarounds), and 6000 series sections are runways.

Use – In MicroPAVER use is the term for the function of the pavement area. This is either Runway, Taxiway, or Apron for purposes of the FDOT Statewide Aviation Pavement Management System.

2. NETWORK DEFINITION

Williston Municipal Airport (X60) was the first airport opened in the City of Williston, Florida and is directly controlled by the City of Williston with a paid Fixed Based Operations (FBO) manager. The airport focuses primarily on serving general aviation aircraft and is served by two intersecting runways. These runways are Runway 05-23 and Runway 14-32. Runway 05-23 is served by a partial parallel taxiway. This airport is designated as a General Aviation (GA) airport and is located in District 2 of the Florida Department of Transportation.

The pavements within the network are defined in MicroPAVER in terms of manageable units that help to organize the data into similar groups. An organizational hierarchy is used to establish these units. The airport pavement network is subdivided into separate branches (runways, taxiways, or aprons) that have distinctly different uses. Branches are then divided into sections with similar pavement construction and performance that may share other common attributes. Sections are manageable units used to organize the data collection and are treated individually during the rehabilitation planning stage.

The network definition is used to identify changes in the network since the most recent update in 1998/1999 and also to plan the field inspection activities for 2006 survey. Prior to the field inspection process, the network definition drawing was updated. The purpose of this update is to compare the previous airport configuration and history with the current airport configuration and history and update the existing drawing showing network branch, section and sample unit designations to match the current configuration. This drawing serves not only as a primary guide for the airfield inspectors but also as an important history record.

The updated network definition fields of Williston Municipal Airport are provided in Table 2-1 and the updated network definition drawing of the airport is given in Appendix A. The field of ***Rank*** in Table 2-1 is defined in the definitions section in section 1.

Table 2-1: Williston Municipal Airport Network Definition

Branch Name	Section ID	Rank
APRON	4105	P
HANGAR APRON	4205	P
	4210	P
RUNWAY14-32	6205	P
	6210	P
	6215	P
	6220	P
	6235	P
	6240	P
RUNWAY 5-23	6105	P
	6110	P
	6115	P
	6120	P
	6125	P
	6127	P
	6130	P

Table 2-1: Williston Municipal Airport Network Definition

Branch Name	Section ID	Rank
TAXIWAY A	105	P
APRON TAXIWAY	405	P
TAXIWAY B	205	P
TAXIWAY C	305	P
HANGAR TAXIWAY	505	P

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3. PAVEMENT INVENTORY

The detailed pavement inventory was updated to reflect the network definition update and field inspection results.

The total pavement area in 2006 at Williston Municipal Airport is 2,217,300 square feet. The breakdown of pavement area for each pavement use is provided in Table 3-1.

Table 3-1: Pavement Area by Pavement Use

Use	Area, SqFt	% of Total Area
Runway	1,737,300	78
Taxiway	381,800	17
Apron	98,200	5
Total	**2,217,300**	**100**

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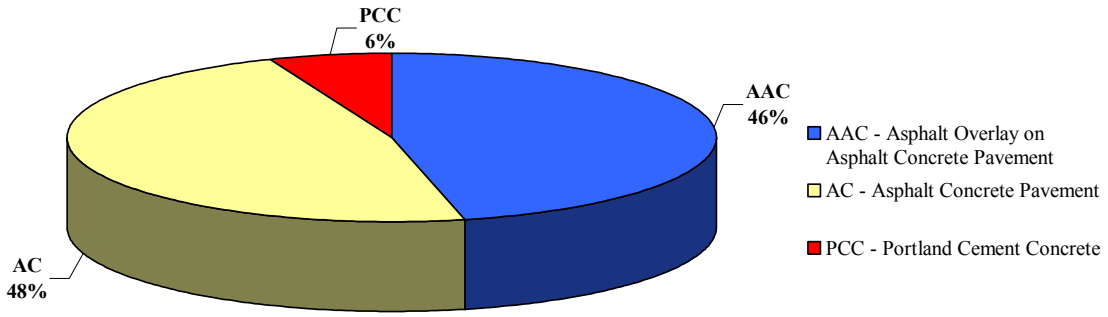
Figure 3-1 presents the breakdown of the pavement area at Williston Municipal Airport by surface type.

Figure 3-1: Pavement Area by Surface Type



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Details of pavement section information including section dimensions, rank, surface type, last construction date and last inspection date are given in Appendix A.

4. PAVEMENT CONDITION

Pavement conditions were inspected in accordance with the methods outlined in FAA AC 150/5380-6B and ASTM D 5340 "Standard Practice for Airport Pavement Condition Index Surveys." These procedures define distress type, severity and quantity for sampling areas within each section to determine the Pavement Condition Index (PCI).

Pavement condition inspections at Williston Municipal Airport were performed in October 2006. Data were recorded in the field using hand-held PDA (personal digital assistant) technology. The identifying information for each sample unit was pre-loaded into the PDA, and the survey results were entered directly, at the time of inspection. This simplified data handling and management.

During the inspections Global Positioning System (GPS) coordinates were recorded at the centroid of each sample unit. The centroid is usually the geometric center of the area but in cases where sample units are irregular in shape this is the center of mass. These data are presented in tables on updated Network Definition drawings available from the website.

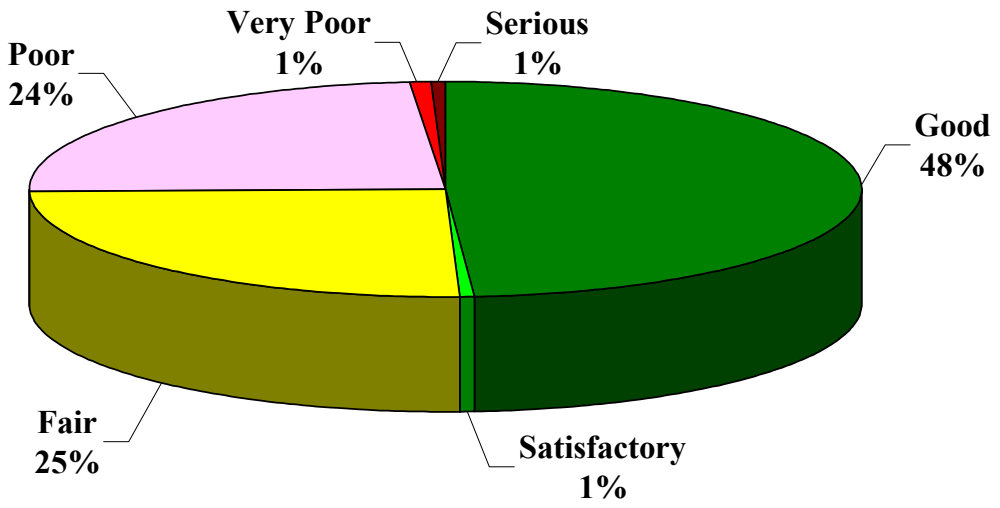
After the completion of data collection, the data were imported into MicroPAVER and PCI values were calculated for the pavement sections.

Appendix B includes detailed distress data generated by MicroPAVER, Appendix C contains a table and a map of PCI results by section inspected in 2006, and Appendix D contains a table of PCI results by branch.

According to the 2006 survey, the overall area-weighted PCI at Williston Municipal Airport is 75, representing a Satisfactory overall network condition.

Figure 4-1 provides the PCI distribution by rating category for the network.

Figure 4-1: Network PCI Distribution by Rating Category



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Approximately 49% of the network is in Good and Satisfactory condition while 26% of the network is in Poor to Serious condition. Table 4-1 illustrates the area-weighted PCI computed individually for each pavement use.

Table 4-1: Condition by Pavement Use

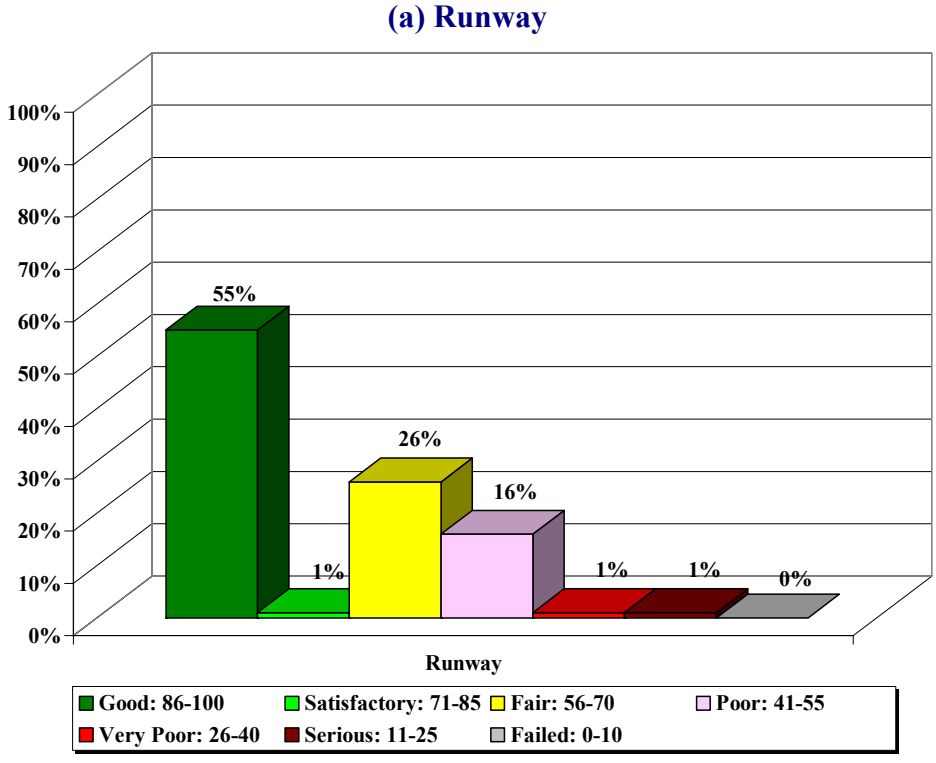
Use	Area-Weighted PCI
Runway	79
Taxiway	59
Apron	63
All	**75**

Prepared by VVD *Checked by TH*

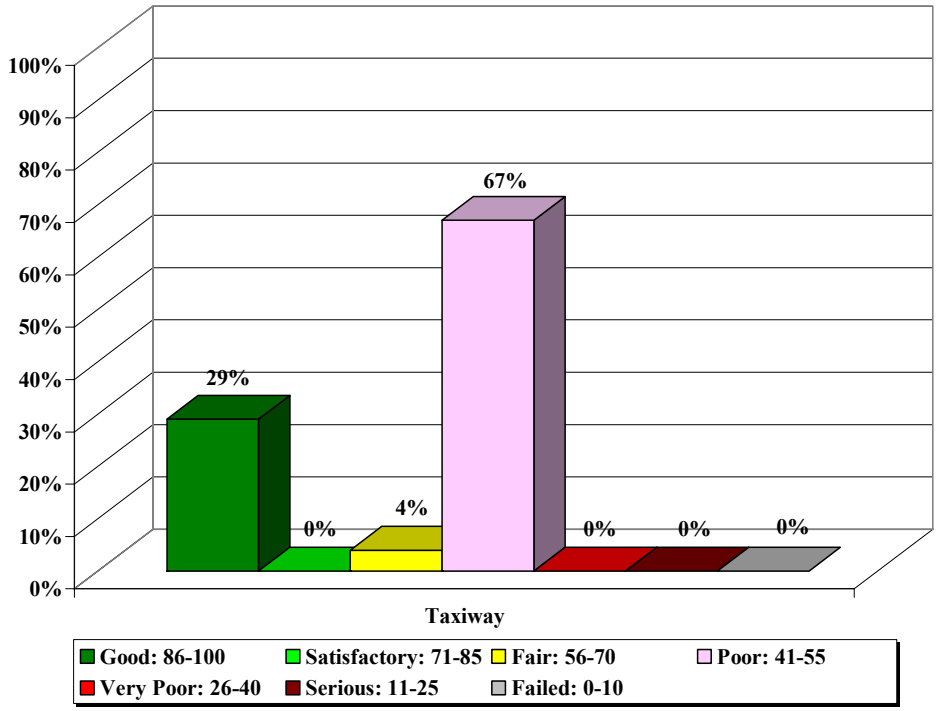
On average, the runways are in Satisfactory condition while the taxiways and aprons are in Fair condition.

Figure 4-2 presents the breakdown of PCI by range for each pavement use.

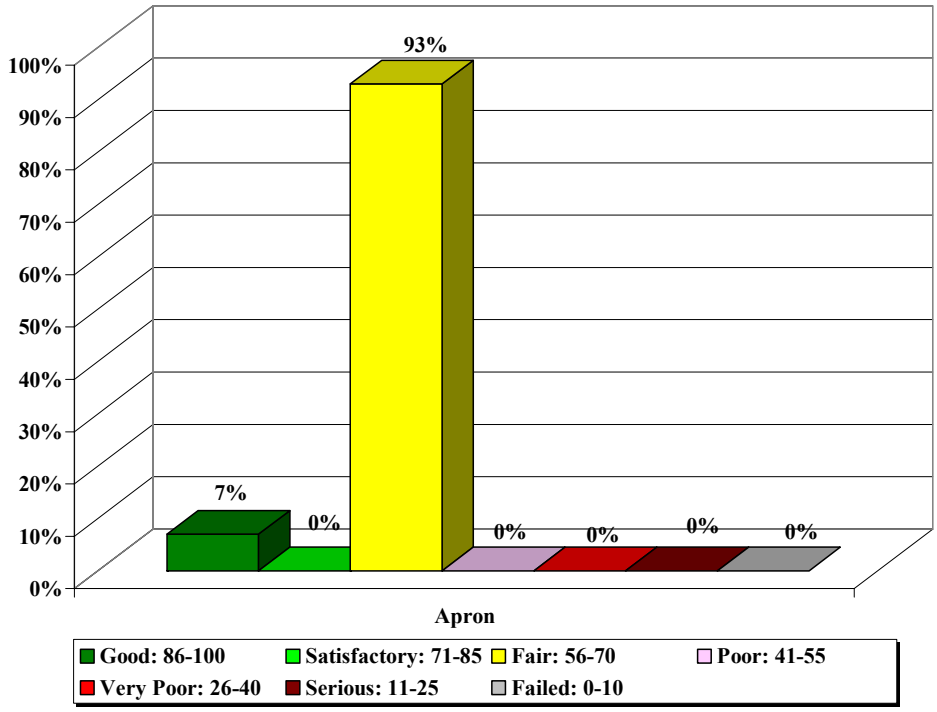
Figure 4-2: Percentage of Pavement Area within Each PCI Range by Pavement Use



(b) Taxiway



(c) Apron

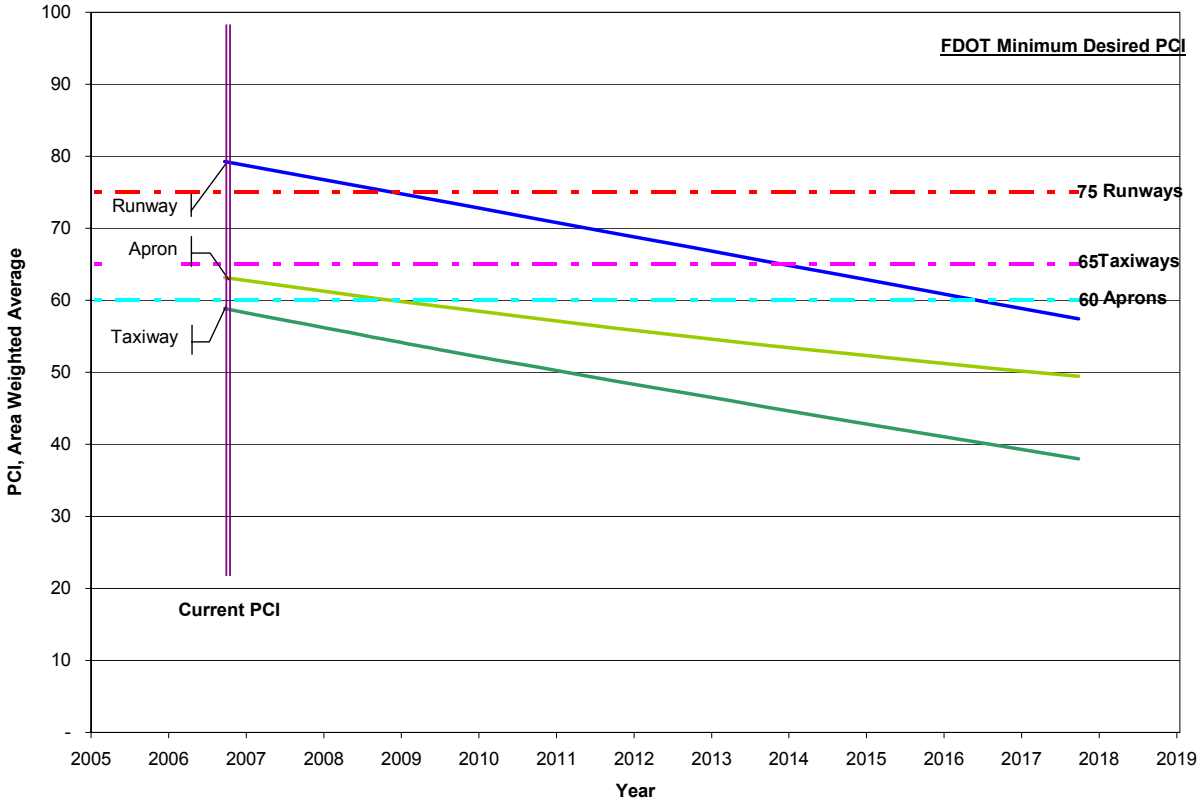


Prepared by VVD *Checked by TH*

5. PAVEMENT CONDITION PREDICTION

Performance prediction models or deterioration curves for PCI were used to develop a condition forecast. The performance models were developed for combinations of variables such as pavement use (runway, taxiway or apron), surface type (AC or PCC) and airport category (GA, RL, or PR). Figure 5-1 illustrates the predicted performance of pavements at Williston Municipal Airport based on current condition, age since last construction and the deterioration model appropriate for the type of pavement. The figure presents the forecast for each pavement use and displays the FDOT minimum condition criteria for General Aviation (GA) airports.

Figure 5-1: Predicted PCI by Pavement Use



Prepared by VVD *Checked by TH*

Appendix C presents the tabular summary of the predicted Section PCI for each year from 2008 to 2017.

6. MAINTENANCE POLICIES AND COSTS

6.1 Policies

Maintenance and rehabilitation (M&R) policies are sets of rules used to develop repair recommendations for distresses encountered during the visual inspections.

Maintenance refers to repair-type activities that are applied to specific distress types on the pavement. These activities are preventative and/or corrective in nature, and are recommended to help achieve the performance goal.

Table 6-1 provides the list of the maintenance activities used in MicroPAVER to treat specific distress types. These repairs are used in an analysis only if there is an inspection within one year prior to the first year of the analysis period. MicroPAVER applies repairs to these distresses and adjusts the PCI based on specific rules.

Rehabilitation is warranted when the pavement condition decreases below a critical point such that the deterioration is extensive or rate of deterioration is so great that routine maintenance is no longer cost-efficient. This critical point is called "Critical PCI." The critical PCI levels for different pavement and branch types established in Phase I of Statewide Pavement Management Program were reviewed and updated for development of the M&R plan for the airport. Sections above critical PCI levels receive routine maintenances while pavements predicted to deteriorate below their respective critical PCI level during the analysis period will be identified for Major M&R. Table 6-2 gives the critical PCI levels for General Aviation Airports.

Table 6-1: Routine Maintenance Activities for Airfield Pavements

Surface	Distress	Severity*	Work Type	Code	Work Unit
AC	Alligator Crack	M, H	Patching - AC Deep	PA-AD	SqFt
	Bleeding	N/A	No Localized M&R	NONE	SqFt
	Block Crack	M, H	Crack Sealing – AC	CS-AC	SqFt
	Corrugation	L, M, H	Patching - AC Deep	PA-AD	SqFt
	Depression	M, H	Patching - AC Deep	PA-AD	SqFt
	Jet Blast	N/A	Patching - AC Deep	PA-AD	SqFt
	Joint Ref. Crack	M, H	Crack Sealing – AC	CS-AC	Ft
	L & T Crack	M, H	Crack Sealing – AC	CS-AC	Ft
	Oil Spillage	N/A	Patching - AC Shallow	PA-AS	SqFt
	Patching	M, H	Patching - AC Deep	PA-AD	SqFt
	Polished Agg.	N/A	No Localized M&R	NONE	SqFt
	Raveling	L	Surface Sealing - Rejuvenating	SS-RE	SqFt
		M	Surface Seal - Coal Tar	SS-CT	SqFt
		H	Microsurfacing	MI-AC	SqFt
	Rutting	M, H	Patching - AC Deep	PA-AD	SqFt
	Shoving	M, H	Grinding (Localized)	GR-LL	SqFt
	Slippage Crack	N/A	Patching - AC Shallow	PA-AS	SqFt
	Swelling	M, H	Patching - AC Deep	PA-AD	SqFt
PCC	Blow-Up	L, M, H	Patching - PCC Full Depth	PA-PF	SqFt
	Corner Break	M, H	Patching - PCC Full Depth	PA-PF	SqFt
	Linear Crack	M, H	Crack Sealing – PCC	CS-PC	Ft
	Durability Crack	H	Slab Replacement – PCC	SL-PC	SqFt
		M	Patching - PCC Full Depth	PA-PF	SqFt
	Jt. Seal Damage	M, H	Joint Seal (Localized)	JS-LC	Ft
	Small Patch	M, H	Patching - PCC Partial Depth	PA-PP	SqFt
	Large Patch	M, H	Patching - PCC Full Depth	PA-PF	SqFt
	Popouts	N/A	No Localized M&R	NONE	SqFt
	Pumping	N/A	No Localized M&R	NONE	SqFt
	Scaling	H	Slab Replacement – PCC	SL-PC	SqFt
	Faulting	M, H	Grinding (Localized)	GR-PP	Ft
	Shattered Slab	M, H	Slab Replacement – PCC	SL-PC	SqFt
	Shrinkage Crack	N/A	No Localized M&R	NONE	Ft
	Joint Spall	M, H	Patching - PCC Partial Depth	PA-PP	SqFt
	Corner Spall	M, H	Patching - PCC Partial Depth	PA-PP	SqFt

*L = Low, M = Medium, H = High

Prepared by BX *Checked by TH*

Table 6-2: Critical PCI for General Aviation Airports

Use	Critical PCI
Runway	65
Taxiway	65
Apron	65

Prepared by BX *Checked by TH*

It should be noted that critical PCI is not the same as Minimum PCI or Minimum Condition. The Minimum PCI is a value set by the user so pavement sections are rehabilitated before they fall below the set minimum. Table 6-3 gives the targeted, or desired, Minimum PCI values for runways, taxiways, and aprons of General Aviation Airports.

Table 6-3: Desired Minimum PCI for General Aviation Airports

Minimum PCI		
Runway	**Taxiway**	**Apron**
75	65	60

Prepared by BX *Checked by TH*

Typical Major M&R activities range from overlays to reconstruction. Based on the critical PCI values in Table 6-2 and our experience with pavement management systems, the PCI trigger range when the likely activity would be a mill and resurface was 31 to 55 and reconstruction at a PCI of 30 or lower. One important concept of pavement management systems is that it is cost effective to maintain pavements that are already in good condition rather than wait for them to get worse and require more expensive rehabilitation. With this objective, microsurfacing has been recommended to maintain pavements that have a PCI from 56 and 79. Microsurfacing is a surface treatment suggested for pavements in Fair to Satisfactory condition to extend the pavement life by five to seven years.

Crack sealing and full-depth patching are the M&R activities recommended to repair pavements with PCI values between 80 and 90. MicroPAVER considers these as preventative M&R with their primary objective being to slow the rate of pavement deterioration. While the trigger PCI for mill and overlay has been set to 55, MicroPAVER also assigns mill and overlay to sections with a PCI greater than 55 if they exhibit some structural distress. Table 6-4 summarizes the M&R activities for General Aviation Airports based on PCI value.

Table 6-4: M&R Activities for General Aviation Airports

	Activity	PCI Range
Maintenance	Crack Sealing and Full-Depth Patching	80 and 90
Rehabilitation	Microsurfacing (AC) or Concrete Pavement Restoration (PCC)	56 to 79
	Mill and Overlay (AC) or Concrete Pavement Restoration (PCC)	31 to 55
	Reconstruction	30 and less

Prepared by BX *Checked by TH*

6.2 Unit Costs

FDOT cost databases for airports and highway pavement maintenance and rehabilitation were reviewed in Phase I of Statewide Pavement Mangement Program in order to determine meaningful costs for the program. Table 6-5 presents the unit costs summary.

Table 6-5: Maintenance Unit Costs for FDOT

Code	Name	Cost	Unit
PA-AL	Patching – AC Leveling	$2.00	SqFt
PA-AS	Patching – AC Shallow	$4.00	SqFt
PA-PF	Patching – PCC Full Depth	$50.00	SqFt
PA-PP	Patching – Partial Depth	$35.00	SqFt
SL-PC	Slab Replacement	$15.00	SqFt
CS-PC	Crack Sealing – PCC	$2.00	Ft
UN-PC	Undersealing – PCC	$3.00	Ft
CS-AC	Crack Sealing – AC	$2.00	Ft
GR-PP	Grinding (Localized for PCC)	$20.00	Ft
GR-LL	Grinding (Localized for AC)	$6.00	SqFt
JS-LC	Joint Seal (Localized)	$1.75	Ft
JS-SI	Joint Seal – Silicon	$2.50	Ft
PA-AD	Patching – AC Deep	$7.00	SqFt
OL-AT	Overlay – AC Thin	$1.50	SqFt
SS-CT	Surface Seal – Coal Tar	$0.20	SqFt
SS-RE	Surface Seal – Rejuvenating	$0.15	SqFt
ST-SS	Surface Treatment – Slurry Seal	$0.25	SqFt
ST-ST	Surface Treatment – Sand Tar	$0.25	SqFt
MI-AC	Microsurfacing	$0.90	SqFt

Prepared by BX *Checked by TH*

The improvement in condition due to maintenance actions applied to specific distresses is only performed when an inspection is recent and only in the first year of the M&R analysis. In subsequent years MicroPAVER calculates M&R costs based on expected unit costs for pavements in a range of PCI. That is, for low PCI it is expected that the repair would be significant (e.g. reconstruction) and therefore very costly. Using available unit cost data the Major M&R Cost By Condition table was set up as shown in Table 6-6. The cost assigned to each range of PCI is based on a Transportation Cost Report provided by Office of Planning Policy of FDOT where the unit costs of reconstruction and resurfacing of airfield pavements were included. These costs were then assigned to the appropriate PCI range to arrive at a cost per square foot necessary to restore pavements at that PCI level to new condition, i.e. a PCI of 100.

Table 6-6: M&R Activities and Unit Costs by Condition for General Aviation Airports

	Activity	PCI Trigger	Cost/SqFt
Maintenance	Crack Sealing and Full-Depth Patching	90	$0.06
		80	$0.24
Rehabilitation	Microsurfacing (AC) or Concrete Pavement Restoration (PCC)	70	$0.69
		60	$3.42
	Mill and Overlay (AC) or Concrete Pavement Restoration (PCC)	50	$6.29
		40	$6.29
	Reconstruction	30	$13.62
		20	$13.62

Prepared by BX *Checked by TH*

A 3% inflation rate per year was applied to the unit costs during the M&R analysis.

7. PAVEMENT REHABILITATION NEEDS ANALYSIS

Maintenance and Rehabilitation (M&R) analyses were performed after the condition data were calculated and MicroPAVER was customized with the maintenance policies and cost settings described in the previous section.

The objective of the M&R analysis is to observe the effect of different fiscal scenarios on the network condition, over a period of ten years, starting from 2008. The analysis was conducted using an unlimited budget. An unlimited budget allows all M&R needs to be identified along with the associated cost regardless of priority.

Table 7-1 presents the M&R needs list of immediate needs for Major M&R, i.e. Year 1 of the forecast. The importance of this listing is that it points out the major activities triggered by the current condition of the pavements.

The 10 year forecast results are shown in Figure 7-1, illustrating the effect on pavement condition (PCI) of doing no maintenance versus having unlimited funds and performing all M&R actions based on the policies.

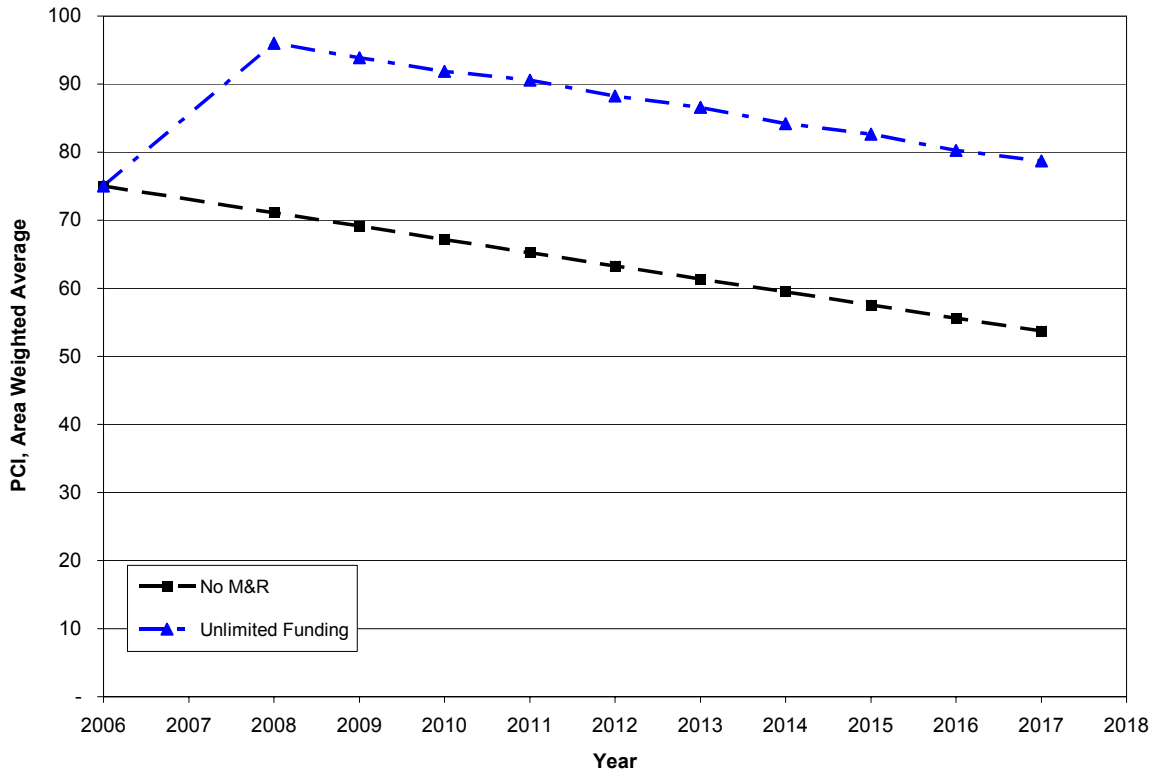
Table 7-1: Summary of Immediate Major M&R Needs

Branch	Section	Section Area, SqFt	Major M&R Funded**	PCI Before	Maintenance	PCI After
AP	4105	87,500	$324,363	59	Major M&R < Critical	100
RW 14-32	6205	30,300	$190,587	44	Major M&R < Critical	100
RW 14-32	6210	15,000	$204,300	26	Major M&R < Critical	100
RW 14-32	6215	430,000	$1,353,211	61	Major M&R < Critical	100
RW 14-32	6220	215,000	$1,352,350	44	Major M&R < Critical	100
RW 5-23	6105	30,000	$171,480	52	Major M&R < Critical	100
RW 5-23	6110	15,000	$204,300	22	Major M&R < Critical	100
TW A	105	66,200	$416,398	42	Major M&R < Critical	100
TW AP	405	15,500	$53,010	60	Major M&R < Critical	100
TW C	305	188,625	$1,186,451	42	Major M&R < Critical	100
		Total	**$5,456,450**	**75***	**← Network Avg. PCI →**	**96***

* This table shows the area-weighted PCI before and after Major M&R and routine maintenance work for the first year of the 10-year plan. It includes all pavement sections at Williston Municipal Airport, including those sections not shown in this table.
** Cost figures are rounded down. Sum may be different. Costs are adjusted for inflation.

Prepared by VVD *Checked by TH*

Figure 7-1: Budget Scenario Analysis



Prepared by VVD *Checked by TH*

The following network level observations can be made from the figure above:

- The PCI will deteriorate from 75 in 2006 to 54 in 2017 if no M&R activities are performed.
- The PCI will remain at or above 79 through the 10-year analysis period under the unlimited budget scenario. A 2017 PCI of 79 with this scenario is 25 PCI points higher than a "No M&R" scenario. The total cost for Major M&R over this 10-year period is about $6.9 million.

8. MAINTENANCE AND REHABILITATION PLAN

The M&R analysis results include activities that likely exceed a typical annual budget level. These activities would need to be evaluated for feasibility and desirability based on the airport's future plans. In an effort to identify appropriate budget levels the 10 year M&R analysis was evaluated to determine levels needed to address several specific areas: preventive maintenance, major activities for pavements in poor condition (Major M&R for PCI less than Critical), and activities that would be desirable to preserve good pavement conditions where they exist (Major M&R for PCI greater than or equal to Critical).

Table 8-1 provides the summary results under the critical PCI scenario.

Table 8-1: M&R Costs under Unlimited Funding Scenario

Year	Preventive	Major M&R >= Critical	Major M&R < Critical	Total
2008	$3,439	$0	$5,456,450	$5,459,889
2009	$23,210	$0	$10,311	$33,521
2010	$38,285	$0	$0	$38,285
2011	$54,949	$0	$76,316	$131,265
2012	$93,230	$0	$0	$93,230
2013	$126,390	$0	$0	$126,390
2014	$174,317	$0	$0	$174,317
2015	$211,832	$0	$0	$211,832
2016	$279,730	$0	$0	$279,730
2017	$330,905	$0	$0	$330,905
Total	**$1,336,287**	**$0**	**$5,543,077**	**$6,879,364**

Note: Cost figures are rounded down. Sum may be different. Costs are adjusted for inflation.

Prepared by VVD *Checked by TH*

Approximately 98% of the total Major M&R cost is required in the first year (2008). This is a consequence of Runway 5-23, Runway 14-32 and large areas of the taxiway (Taxiway C) being below Critical PCI.

According to the 2006 inspections, parts of Runway 5-23 are in Serious to Poor condition even though the average PCI value is 96. Also parts of Runway 14-32 are in Very Poor to Fair condition with an average PCI value of 57. Parts of these runways have immediate need for repair. In addition, large areas of Taxiway C need further evaluation to identify capital project(s) that may be funded separately. The unlimited budget scenario provides the basis for estimating the total repair cost. In reality, it is neither operationally nor fiscally prudent.

Appendix E provides details of M&R plan by year under the unlimited funding scenario and the map of the 10-year M&R plan was provided in Appendix F. It is important to understand that a PMS is a network level tool and the M&R costs provided in this report are only for planning purposes.

9. VISUAL AIDS

9.1 GIS Linked Shape File

The pavement inventory data and pavement condition were linked to the airport's shape file to graphically show the inventory and condition of the airport via color coding shown on the shape file. The coding provides a visual representation that illustrates the PCIs for each pavement section.

Selected digital photographs taken during the pavement inspection were provided in an Appendix G to provide visual support to special pavement conditions or distress observed during the inspection of the facility.

10. RECOMMENDATIONS

Pavement condition inspections were performed at Williston Municipal Airport and a 10-year M&R plan was developed based on the unlimited funding scenario.

The following recommendations were made based on 2006 condition inspections and M&R analysis results:

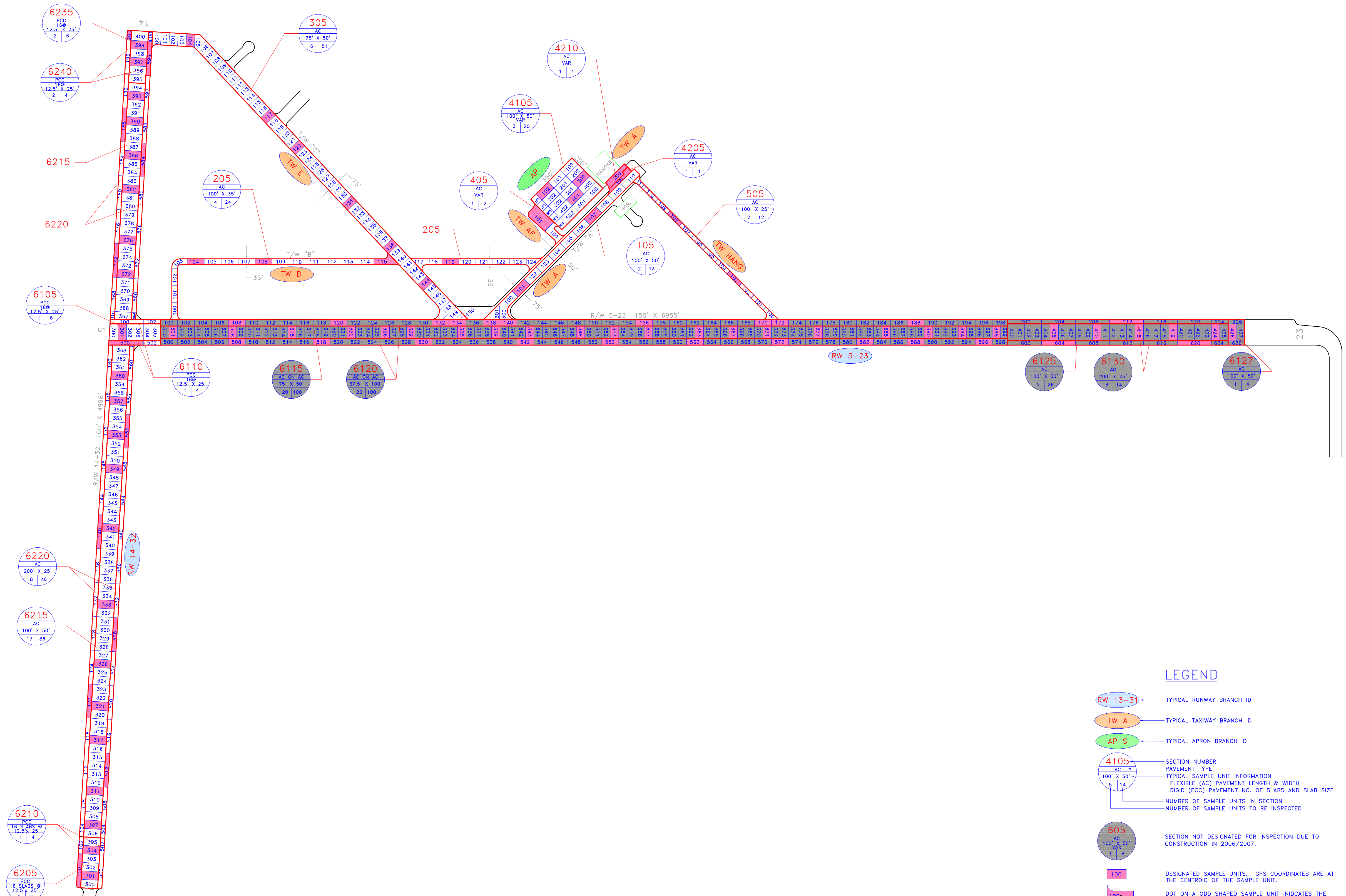
- Runway 5-23 is in an overall Good condition, with an area-weighted PCI of 96. A relatively small part of this runway is in Serious to Poor condition, and some immediate repair is recommended.
- Runway 14-32 is in an overall Fair condition, with an area-weighted PCI of 57. Parts of this runway with Poor to Serious Condition have been identified for immediate repair.
- Several Taxiways (A, C, and AP) and large areas of Apron will require significant funding to improve them above Minimum PCI levels. Further evaluation of these features is necessary in order to develop repair plans and timing for future budgets. These needs can not be addressed with typical annual expenditures as they amount to several million dollars.

APPENDIX A

NETWORK DEFINITION MAP
AND
PAVEMENT INVENTORY TABLE

GPS COORDINATES - WILLISTON MUNICIPAL AIRPORT				
Location	Section	Sample	Latitude	Longitude
TW A	105	101	29.35726574	-82.47238265
TW A	105	105	29.35832836	-82.47239079
TW A	105	107	29.35886635	-82.47238543
TW B	205	104	29.35397381	-82.47672785
TW B	205	108	29.35470538	-82.47590352
TW B	205	115	29.35602595	-82.47441524
TW B	205	119	29.35663267	-82.47371878
TW C	305	104	29.35623478	-82.47993042
TW C	305	117	29.3562918	-82.477891
TW C	305	122	29.35627102	-82.47721089
TW C	305	131	29.35623426	-82.47580786
TW C	305	138	29.3561948	-82.47470762
TW C	305	144	29.35617114	-82.47379852
TW AP	405	101	29.35825046	-82.47302674
TW HANG	505	103	29.35980069	-82.46966435
TW HANG	505	108	29.35980924	-82.47121298
AP	4105	102	29.35863757	-82.47332928
AP	4105	300	29.35912304	-82.47304833
AP	4105	401	29.35886861	-82.47289196
AP HANG	4205	100	29.35949202	-82.47250157
AP HANG	4210	200	29.35947517	-82.47257931
RW 5 run-up center	-	-	29.35199579	-82.47719461
RW 5 run-up left	-	-	29.35210489	-82.47729756
RW 5 run-up right	-	-	29.35184827	-82.47706264
RW 5 Center	-	-	29.35252997	-82.47651969
RW 5 Left	-	-	29.35262775	-82.47663812
RW 5 Right	-	-	29.35244622	-82.47642096
RW 5/23	6105	301	29.35213318	-82.4770553
RW 5/23	6110	500	29.35205354	-82.47687192
RW 23 Center	-	-	29.36555757	-82.46180024
RW 23 Left	-	-	29.36546142	-82.46168146
RW 23 Right	-	-	29.36565656	-82.46191292
RW 14 run-up center	-	-	29.35577278	-82.48073723
RW 14 run-up left	-	-	29.35590612	-82.48056252
RW 14 run-up right	-	-	29.35563874	-82.48089548
RW 14 Center	-	-	29.3551608	-82.48009552
RW 14 Left	-	-	29.3552515	-82.47998277
RW 14 Right	-	-	29.35506908	-82.48022978
RW 14/32	6205	301	29.34563286	-82.47048327
RW 14/32	6205	304	29.34595685	-82.47080605
RW 14/32	6210	100	29.34556459	-82.47066896
RW 14/32	6210	504	29.34622936	-82.47081661
RW 14/32	6215	307	29.34625762	-82.47110956
RW 14/32	6215	311	29.34666005	-82.47150279
RW 14/32	6215	317	29.347273	-82.47214357
RW 14/32	6215	321	29.34767831	-82.4725617
RW 14/32	6215	326	29.34818781	-82.47307321
RW 14/32	6215	333	29.34891534	-82.47380526
RW 14/32	6215	342	29.34980857	-82.47470138
RW 14/32	6215	349	29.35054808	-82.47543177
RW 14/32	6215	353	29.35096212	-82.47585295
RW 14/32	6215	357	29.35139061	-82.47627734
RW 14/32	6215	360	29.35166896	-82.47656011
RW 14/32	6215	372	29.35277266	-82.47767095
RW 14/32	6215	376	29.35319073	-82.47810773
RW 14/32	6215	382	29.35378826	-82.47872911
RW 14/32	6215	386	29.35417083	-82.47913714
RW 14/32	6215	390	29.35460742	-82.47954476
RW 14/32	6215	393	29.35491774	-82.47984035
RW 14/32	6220	120	29.34760398	-82.47276133
RW 14/32	6220	140	29.34966706	-82.47479669
RW 14/32	6220	172	29.35280943	-82.47795768
RW 14/32	6220	188	29.35443424	-82.47962752
RW 14/32	6220	512	29.3470338	-82.47164878
RW 14/32	6220	528	29.3486587	-82.47329207
RW 14/32	6220	552	29.35111898	-82.47575175
RW 14/32	6220	584	29.35423806	-82.47893358
RW 14/32	6235	397	29.35542402	-82.48036686
RW 14/32	6235	399	29.35564142	-82.4805776
RW 14/32	6240	200	29.3556205	-82.48080679
RW 14/32	6240	596	29.35559328	-82.48027465
RW 32 Center	-	-	29.34610287	-82.47093657
RW 32 Left	-	-	29.34600552	-82.47104725
RW 32 right	-	-	29.34619939	-82.470825
RW 32 run-up center	-	-	29.34548582	-82.4703333
RW 32 run-up left	-	-	29.34535012	-82.47051588
RW 32 run-up right	-	-	29.34562016	-82.47016317

Notes: Geodetics represent decimal degrees (GS - 84 Datum)
All GPS coordinates are at the centroid of the sample units.



LEGEND

- RW 13-31 — TYPICAL RUNWAY BRANCH ID
- TW A — TYPICAL TAXIWAY BRANCH ID
- AP S — TYPICAL APRON BRANCH ID
- 4105 — SECTION NUMBER
- AC — PAVEMENT TYPE
- 100' X 50' — TYPICAL SAMPLE UNIT INFORMATION
  - FLEXIBLE (AC) PAVEMENT LENGTH & WIDTH
  - RIGID (PCC) PAVEMENT NO. OF SLABS AND SLAB SIZE
- 14 — NUMBER OF SAMPLE UNITS IN SECTION
- 5 — NUMBER OF SAMPLE UNITS TO BE INSPECTED
- 605 (AC, 100' X 50', VAR, 1, 8) — SECTION NOT DESIGNATED FOR INSPECTION DUE TO CONSTRUCTION IN 2006/2007.
- 100 — DESIGNATED SAMPLE UNITS. GPS COORDINATES ARE AT THE CENTROID OF THE SAMPLE UNIT.
- 100• — DOT ON A ODD SHAPED SAMPLE UNIT INIDCATES THE CENTROID LOCATION.

SOURCE: SYSTEM INVENTORY DRAWING PREPARED BY URS CORPORATION, JUNE 2005.

0 150 300

RUNWAY LENGTHS DEPICTED IN THIS DRAWING ARE FOR PAVEMENT MANAGEMENT PURPOSES ONLY AND MAY NOT MATCH PUBLISHED RUNWAY LENGTHS.

NUMBER	DATE	REVISIONS
1	Mar-18	Draft Report
0	Feb-06	Initial Submittal

DESIGNED: FL | DRAWN: GB | CHECKED: | DATE: 9-06-2007

URS

MACTEC
Engineering and Consulting, Inc.
Tallahassee, Florida
850-656-1293

NETWORK DEFINITION DRAWING

WILLISTON MUNICIPAL AIRPORT
LEVY COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

93

IDENTIFIER
X60

FDOT DISTRICT
2

Table A-1: Pavement Inventory

Network Name	Network ID	Branch Name	Branch ID	Section ID	Length, Ft	Width, ft	Area, SqFt	Rank	Surface	Last Const. Date	Last Insp. Date
WILLISTON MUNICIPAL AIRPORT	X60	APRON	AP	4105	340	255	87,500	P	AC	1/1/1990	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	HANGAR APRON	AP HANG	4205	180	20	4,300	P	AAC	1/1/1985	10/11/2006
WILLISTON MUNICIPAL AIRPORT	X60	HANGAR APRON	AP HANG	4210	160	40	6,400	P	AC	1/1/1985	8/5/2002*
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6205	303	100	30,300	P	PCC	1/1/1942	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6210	600	25	15,000	P	PCC	1/1/1942	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6215	4,300	100	430,000	P	AC	1/1/1942	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6220	8,600	25	215,000	P	AC	1/1/1942	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6235	300	100	30,000	P	PCC	1/1/1942	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6240	600	25	15,000	P	PCC	1/1/1942	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6105	300	100	30,000	P	PCC	1/1/1942	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6110	600	25	15,000	P	PCC	1/1/1942	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6115	5,010	75	375,750	P	AAC	1/1/2006	1/1/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6120	10,020	38	375,750	P	AAC	1/1/2006	1/1/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6125	1,270	100	127,000	P	AAC	1/1/2006	1/1/2006
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6127	150	100	15,000	P	AAC	1/1/2006	1/1/2006

See note at end of table.

Table A-1: Pavement Inventory

Network Name	Network ID	Branch Name	Branch ID	Section ID	Length, Ft	Width, ft	Area, SqFt	Rank	Surface	Last Const. Date	Last Insp. Date
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6130	2,540	25	63,500	P	AAC	1/1/2006	1/1/2006
WILLISTON MUNICIPAL AIRPORT	X60	TAXIWAY A	TW A	105	1,324	50	66,200	P	AAC	1/1/1982	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	APRON TAXIWAY	TW AP	405	250	45	15,500	P	AC	1/1/1990	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	TAXIWAY B	TW B	205	2,360	35	82,725	P	AC	1/1/1986	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	TAXIWAY C	TW C	305	2,515	75	188,625	P	AC	1/1/1942	10/10/2006
WILLISTON MUNICIPAL AIRPORT	X60	HANGAR TAXIWAY	TW HANG	505	1,150	25	28,750	P	AC	12/25/1999	10/11/2006

Note: If new construction, then survey date = last construction date and PCI is set to 100 by MicroPAVER.

* Sections not surveyed due to reasons such as re-sectioning, no escort, not accessible at the time of survey.

APPENDIX B

PCI RE-INSPECTION REPORT

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: AP Name: APRON Use: APRON Area: 87,500.00 SqFt

Section: 4105 of 1 From: - To: - Last Const.: 1/1/1990
Surface: AC Family: FDOT-GA-AP-AC Zone: Category: Rank: P
Area: 87,500.00 SqFt Length: 340.00 Ft Width: 255.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 22 Surveyed: 3
Conditions: PCI:61.00 |
Inspection Comments:

Sample Number: 102 Type: R Area: 5,000.00 SqFt PCI = 43
Sample Comments:
52 M 52 L

Sample Number: 300 Type: R Area: 5,000.00 SqFt PCI = 62
Sample Comments:
48 L 52 L 52 M

Sample Number: 401 Type: R Area: 5,000.00 SqFt PCI = 77
Sample Comments:
48 L 52 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: AP HANG Name: HANGAR APRON Use: APRON Area: 10,700.00 SqFt

Section: 4205 of 2 From: - To: - Last Const.: 1/1/1985
Surface: AAC Family: FDOT-GA-AP-AAC Zone: Category: Rank: P
Area: 4,300.00 SqFt Length: 180.00 Ft Width: 20.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/11/2006 Total Samples: 2 Surveyed: 1
Conditions: PCI:69.00 |
Inspection Comments:

Sample Number: 100 Type: R Area: 7,400.00 SqFt PCI = 69
Sample Comments:
48 L 48 M 48 H

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: AP HANG Name: HANGAR APRON Use: APRON Area: 10,700.00 SqFt

Section: 4210 of 2 From: - To: - Last Const.: 1/1/1985
Surface: AC Family: FDOT-GA-AP-AC Zone: Category: Rank: P
Area: 6,400.00 SqFt Length: 160.00 Ft Width: 40.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 8/5/2002 Total Samples: 1 Surveyed: 1
Conditions: PCI:97.00 |
Inspection Comments:

Sample Number: 200 Type: R Area: 9,000.00 SqFt PCI = 97
Sample Comments:
48 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 14-32 Name: RUNWAY14-32 Use: RUNWAY Area: 735,300.00 SqFt

Section: 6205 of 6 From: - To: - Last Const.: 1/1/1942
Surface: PCC Family: FDOT-GA-PCC Zone: Category: Rank: P
Area: 30,300.00 SqFt Length: 303.00 Ft Width: 100.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 6 Surveyed: 2
Conditions: PCI:45.00 |
Inspection Comments:

Sample Number: 301 Type: R Area: 16.00 Count PCI = 37
Sample Comments:
68 N 63 L 63 M 63 H 74 L 65 L

Sample Number: 304 Type: R Area: 16.00 Count PCI = 53
Sample Comments:
63 L 63 M 68 N 74 L 65 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 14-32 Name: RUNWAY14-32 Use: RUNWAY Area: 735,300.00 SqFt

Section: 6210 of 6 From: - To: - Last Const.: 1/1/1942
Surface: PCC Family: FDOT-GA-PCC Zone: Category: Rank: P
Area: 15,000.00 SqFt Length: 600.00 Ft Width: 25.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 6 Surveyed: 1
Conditions: PCI:27.00 |
Inspection Comments:

Sample Number: 100 Type: R Area: 16.00 Count PCI = 27
Sample Comments:
63 H 63 M 63 L 68 N 74 M 65 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 14-32 Name: RUNWAY14-32 Use: RUNWAY Area: 735,300.00 SqFt

Section: 6215 of 6 From: - To: - Last Const.: 1/1/1942
Surface: AC Family: FDOT-GA-RW-AC Zone: Category: Rank: P
Area: 430,000.00 SqFt Length: 4,300.00 Ft Width: 100.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 20 Surveyed: 17
Conditions: PCI:63.00 |
Inspection Comments:

Sample Number: 307 Type: R Area: 5,000.00 SqFt PCI = 63
Sample Comments:
48 L 43 L

Sample Number: 311 Type: R Area: 5,000.00 SqFt PCI = 64
Sample Comments:
43 L 48 L

Sample Number: 317 Type: R Area: 5,000.00 SqFt PCI = 67
Sample Comments:
43 L 48 L

Sample Number: 321 Type: R Area: 5,000.00 SqFt PCI = 65
Sample Comments:
43 L 48 L

Sample Number: 326 Type: R Area: 5,000.00 SqFt PCI = 65
Sample Comments:
48 L 43 L

Sample Number: 333 Type: R Area: 5,000.00 SqFt PCI = 63
Sample Comments:
48 L 43 L

Sample Number: 342 Type: R Area: 5,000.00 SqFt PCI = 67
Sample Comments:
48 L 43 L

Sample Number: 349 Type: R Area: 5,000.00 SqFt PCI = 63
Sample Comments:
43 L 48 L

Sample Number: 353 Type: R Area: 5,000.00 SqFt PCI = 63
Sample Comments:
47 L 43 L

Sample Number: 357 Type: R Area: 5,000.00 SqFt PCI = 62
Sample Comments:
48 L 43 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Sample Number: 360 Type: R Area: 5,000.00 SqFt PCI = 62
Sample Comments:
48 L 43 L

Sample Number: 372 Type: R Area: 5,000.00 SqFt PCI = 60
Sample Comments:
43 L 48 L

Sample Number: 376 Type: R Area: 5,000.00 SqFt PCI = 61
Sample Comments:
43 L 48 L

Sample Number: 382 Type: R Area: 5,000.00 SqFt PCI = 61
Sample Comments:
43 L 48 L

Sample Number: 386 Type: R Area: 5,000.00 SqFt PCI = 61
Sample Comments:
48 L 43 L

Sample Number: 390 Type: R Area: 5,000.00 SqFt PCI = 61
Sample Comments:
43 L 48 L

Sample Number: 393 Type: R Area: 5,000.00 SqFt PCI = 64
Sample Comments:
43 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 14-32 Name: RUNWAY14-32 Use: RUNWAY Area: 735,300.00 SqFt

Section: 6220 of 6 From: - To: - Last Const.: 1/1/1942
Surface: AC Family: FDOT-GA-RW-AC Zone: Category: Rank: P
Area: 215,000.00 SqFt Length: 8,600.00 Ft Width: 25.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 54 Surveyed: 8
Conditions: PCI:46.00 |
Inspection Comments:

Sample Number: 120 Type: R Area: 5,000.00 SqFt PCI = 41
Sample Comments:
43 M 43 L 52 L

Sample Number: 140 Type: R Area: 5,000.00 SqFt PCI = 46
Sample Comments:
43 L 43 M 52 L

Sample Number: 172 Type: R Area: 5,000.00 SqFt PCI = 53
Sample Comments:
43 L 50 L 52 L 52 M

Sample Number: 188 Type: R Area: 5,000.00 SqFt PCI = 40
Sample Comments:
48 L 43 L 52 L 52 M 50 L

Sample Number: 512 Type: R Area: 5,000.00 SqFt PCI = 42
Sample Comments:
43 M 52 L

Sample Number: 528 Type: R Area: 5,000.00 SqFt PCI = 41
Sample Comments:
43 L 43 M 52 L

Sample Number: 552 Type: R Area: 5,000.00 SqFt PCI = 47
Sample Comments:
43 L 43 M 52 L

Sample Number: 584 Type: R Area: 5,000.00 SqFt PCI = 59
Sample Comments:
43 L 48 L 52 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 14-32 Name: RUNWAY14-32 Use: RUNWAY Area: 735,300.00 SqFt

Section: 6235 of 6 From: - To: - Last Const.: 1/1/1942
Surface: PCC Family: FDOT-GA-PCC Zone: Category: Rank: P
Area: 30,000.00 SqFt Length: 300.00 Ft Width: 100.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 6 Surveyed: 2
Conditions: PCI:68.00 |
Inspection Comments:

Sample Number: 397 Type: R Area: 16.00 Count PCI = 72
Sample Comments:
63 L 73 N 68 N 74 L 65 L

Sample Number: 399 Type: R Area: 16.00 Count PCI = 65
Sample Comments:
68 N 63 L 74 L 65 M

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 14-32 Name: RUNWAY14-32 Use: RUNWAY Area: 735,300.00 SqFt

Section: 6240 of 6 From: - To: - Last Const.: 1/1/1942
Surface: PCC Family: FDOT-GA-PCC Zone: Category: Rank: P
Area: 15,000.00 SqFt Length: 600.00 Ft Width: 25.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 3 Surveyed: 2
Conditions: PCI:77.00 |
Inspection Comments:

Sample Number: 200 Type: R Area: 4.00 Count PCI = 66
Sample Comments:
63 L 68 N 65 M

Sample Number: 596 Type: R Area: 16.00 Count PCI = 80
Sample Comments:
68 N 75 L 73 N 65 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 5-23 Name: RUNWAY 5-23 Use: RUNWAY Area: 1,002,000.00 SqFt

Section: 6105 of 7 From: - To: - Last Const.: 1/1/1942
Surface: PCC Family: FDOT-GA-PCC Zone: Category: Rank: P
Area: 30,000.00 SqFt Length: 300.00 Ft Width: 100.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 6 Surveyed: 1
Conditions: PCI:53.00 |
Inspection Comments:

Sample Number: 301 Type: R Area: 16.00 Count PCI = 53
Sample Comments:
68 N 63 L 63 M 65 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 5-23 Name: RUNWAY 5-23 Use: RUNWAY Area: 1,002,000.00 SqFt

Section: 6110 of 7 From: - To: - Last Const.: 1/1/1942
Surface: PCC Family: FDOT-GA-PCC Zone: Category: Rank: P
Area: 15,000.00 SqFt Length: 600.00 Ft Width: 25.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 3 Surveyed: 1
Conditions: PCI:23.00 |
Inspection Comments:

Sample Number: 500 Type: R Area: 16.00 Count PCI = 23
Sample Comments:
68 N 63 L 63 M 63 H 65 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 5-23 Name: RUNWAY 5-23 Use: RUNWAY Area: 1,002,000.00 SqFt

Section: 6115 of 7 From: - To: - Last Const.: 1/1/2006
Surface: AAC Family: FDOT-GA-RW-AAC Zone: Category: Rank: P
Area: 375,750.00 SqFt Length: 5,010.00 Ft Width: 75.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

NOTE: * Pre-Construction PCI *****
Last Insp. Date: 8/5/2002 Total Samples: 94 Surveyed: 8
Conditions: PCI:52.00 |
Inspection Comments: IMPORTED FROM AIRPAV

Sample Number: 301 Type: R Area: 3,750.00 SqFt PCI = 45
Sample Comments:
56 M 48 M

Sample Number: 315 Type: R Area: 3,750.00 SqFt PCI = 52
Sample Comments:
48 M 56 L

Sample Number: 329 Type: R Area: 3,750.00 SqFt PCI = 62
Sample Comments:
48 M 48 H

Sample Number: 343 Type: R Area: 3,750.00 SqFt PCI = 52
Sample Comments:
48 M 43 L 56 L

Sample Number: 357 Type: R Area: 3,750.00 SqFt PCI = 33
Sample Comments:
56 M 48 L 48 M

Sample Number: 371 Type: R Area: 3,750.00 SqFt PCI = 57
Sample Comments:
56 L 48 L 48 M 52 L

Sample Number: 385 Type: R Area: 3,750.00 SqFt PCI = 49
Sample Comments:
56 M 48 L 48 M

Sample Number: 398 Type: R Area: 3,750.00 SqFt PCI = 67
Sample Comments:
43 L 56 L 48 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 5-23 Name: RUNWAY 5-23 Use: RUNWAY Area: 1,002,000.00 SqFt

Section: 6120 of 7 From: - To: - Last Const.: 1/1/2006
Surface: AAC Family: FDOT-GA-RW-AAC Zone: Category: Rank: P
Area: 375,750.00 SqFt Length: 10,020.00 Ft Width: 37.50 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

NOTE: * Pre-Construction PCI *****
Last Insp. Date: 8/5/2002 Total Samples: 94 Surveyed: 7
Conditions: PCI:48.00 |
Inspection Comments: IMPORTED FROM AIRPAV

Sample Number: 120 Type: R Area: 3,750.00 SqFt PCI = 41
Sample Comments:
43 M 48 L 52 L

Sample Number: 130 Type: R Area: 3,750.00 SqFt PCI = 35
Sample Comments:
43 H 43 M 48 M 52 L

Sample Number: 152 Type: R Area: 3,750.00 SqFt PCI = 40
Sample Comments:
43 H 52 M 48 M

Sample Number: 188 Type: R Area: 3,750.00 SqFt PCI = 35
Sample Comments:
43 M 52 M

Sample Number: 508 Type: R Area: 3,750.00 SqFt PCI = 65
Sample Comments:
47 M 43 M

Sample Number: 542 Type: R Area: 3,750.00 SqFt PCI = 53
Sample Comments:
43 M 47 M

Sample Number: 582 Type: R Area: 3,750.00 SqFt PCI = 68
Sample Comments:
43 M

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 5-23 Name: RUNWAY 5-23 Use: RUNWAY Area: 1,002,000.00 SqFt

Section: 6125 of 7 From: - To: - Last Const.: 1/1/2006
Surface: AAC Family: FDOT-GA-RW-AAC Zone: Category: Rank: P
Area: 127,000.00 SqFt Length: 1,270.00 Ft Width: 100.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

NOTE: * Pre-Construction PCI *****
Last Insp. Date: 8/5/2002 Total Samples: 32 Surveyed: 4
Conditions: PCI:39.00 |
Inspection Comments: IMPORTED FROM AIRPAV

Sample Number: 405 Type: R Area: 5,000.00 SqFt PCI = 23
Sample Comments:
52 H 41 L 43 L 48 M 48 L

Sample Number: 410 Type: R Area: 5,000.00 SqFt PCI = 46
Sample Comments:
43 M 48 M 48 L 52 L

Sample Number: 415 Type: R Area: 5,000.00 SqFt PCI = 44
Sample Comments:
52 M 43 M 43 L 48 M

Sample Number: 424 Type: R Area: 5,000.00 SqFt PCI = 44
Sample Comments:
43 M 52 M 48 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 5-23 Name: RUNWAY 5-23 Use: RUNWAY Area: 1,002,000.00 SqFt

Section: 6127 of 7 From: - To: - Last Const.: 1/1/2006
Surface: AAC Family: FDOT-GA-RW-AAC Zone: Category: Rank: P
Area: 15,000.00 SqFt Length: 150.00 Ft Width: 100.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

NOTE: * Pre-Construction PCI *****
Last Insp. Date: 8/5/2002 Total Samples: 4 Surveyed: 2
Conditions: PCI:45.00 |
Inspection Comments: IMPORTED FROM AIRPAV

Sample Number: 426 Type: R Area: 5,000.00 SqFt PCI = 52
Sample Comments:
43 M 52 M 45 L

Sample Number: 620 Type: R Area: 5,000.00 SqFt PCI = 37
Sample Comments:
43 M 52 M 43 L 56 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: RW 5-23 Name: RUNWAY 5-23 Use: RUNWAY Area: 1,002,000.00 SqFt

Section: 6130 of 7 From: - To: - Last Const.: 1/1/2006
Surface: AAC Family: FDOT-GA-RW-AAC Zone: Category: Rank: P
Area: 63,500.00 SqFt Length: 2,540.00 Ft Width: 25.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 1/1/2006 Total Samples: 0 Surveyed: 0
Conditions: PCI:100.00 |
Inspection Comments: Construction/Major M&R inspection record.

Sample Number: Type: Area: 0.00
<NO SAMPLE RECORDS>

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: TW A Name: TAXIWAY A Use: TAXIWAY Area: 66,200.00 SqFt

Section: 105 of 1 From: - To: - Last Const.: 1/1/1982
Surface: AAC Family: FDOT-GA-TW-AAC Zone: Category: Rank: P
Area: 66,200.00 SqFt Length: 1,324.00 Ft Width: 50.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 17 Surveyed: 2
Conditions: PCI:45.00 |
Inspection Comments:

Sample Number: 105 Type: R Area: 5,000.00 SqFt PCI = 44
Sample Comments:
43 M 48 H 48 L

Sample Number: 107 Type: R Area: 5,000.00 SqFt PCI = 45
Sample Comments:
43 M 48 H 48 M 48 M 48 H

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: TW AP Name: APRON TAXIWAY Use: TAXIWAY Area: 15,500.00 SqFt

Section: 405 of 1 From: - To: - Last Const.: 1/1/1990
Surface: AC Family: FDOT-GA-TW-AC Zone: Category: Rank: P
Area: 15,500.00 SqFt Length: 250.00 Ft Width: 45.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 2 Surveyed: 1
Conditions: PCI:62.00 |
Inspection Comments:

Sample Number: 101 Type: R Area: 7,500.00 SqFt PCI = 62
Sample Comments:
48 L 52 L 52 M

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: TW B Name: TAXIWAY B Use: TAXIWAY Area: 82,725.00 SqFt

Section: 205 of 1 From: - To: - Last Const.: 1/1/1986
Surface: AC Family: FDOT-GA-TW-AC Zone: Category: Rank: P
Area: 82,725.00 SqFt Length: 2,360.00 Ft Width: 35.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 21 Surveyed: 4
Conditions: PCI:89.00 |
Inspection Comments:

Sample Number: 104 Type: R Area: 3,500.00 SqFt PCI = 90
Sample Comments:
48 L

Sample Number: 108 Type: R Area: 3,500.00 SqFt PCI = 90
Sample Comments:
48 L

Sample Number: 115 Type: R Area: 3,500.00 SqFt PCI = 86
Sample Comments:
48 L

Sample Number: 119 Type: R Area: 3,500.00 SqFt PCI = 90
Sample Comments:
48 L

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: TW C Name: TAXIWAY C Use: TAXIWAY Area: 188,625.00 SqFt

Section: 305 of 1 From: - To: - Last Const.: 1/1/1942
Surface: AC Family: FDOT-GA-TW-AC Zone: Category: Rank: P
Area: 188,625.00 SqFt Length: 2,515.00 Ft Width: 75.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 10/10/2006 Total Samples: 47 Surveyed: 6
Conditions: PCI:45.00 |
Inspection Comments:

Sample Number: 104 Type: R Area: 3,750.00 SqFt PCI = 40
Sample Comments:
43 L 43 M 52 L

Sample Number: 117 Type: R Area: 3,750.00 SqFt PCI = 39
Sample Comments:
48 L 48 M 43 L 43 M 52 L

Sample Number: 122 Type: R Area: 3,750.00 SqFt PCI = 40
Sample Comments:
48 L 48 M 43 L 43 M 52 L

Sample Number: 131 Type: R Area: 3,750.00 SqFt PCI = 63
Sample Comments:
48 L 48 M 52 L 43 L

Sample Number: 138 Type: R Area: 3,750.00 SqFt PCI = 52
Sample Comments:
43 M 48 L 48 M

Sample Number: 144 Type: R Area: 3,750.00 SqFt PCI = 35
Sample Comments:
50 L 52 L 43 M 48 M

Re-inspection Report

FDOT
Report Generated Date: 3/26/2008
Site Name:

Network: X60 Name: WILLISTON MUNICIPAL AIRPORT

Branch: TW HANG Name: HANGAR TAXIWAY Use: TAXIWAY Area: 28,750.00 SqFt

Section: 505 of 1 From: - To: - Last Const.: 12/25/199
Surface: AC Family: FDOT-GA-TW-AC Zone: Category: Rank: P
Area: 28,750.00 SqFt Length: 1,150.00 Ft Width: 25.00 Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

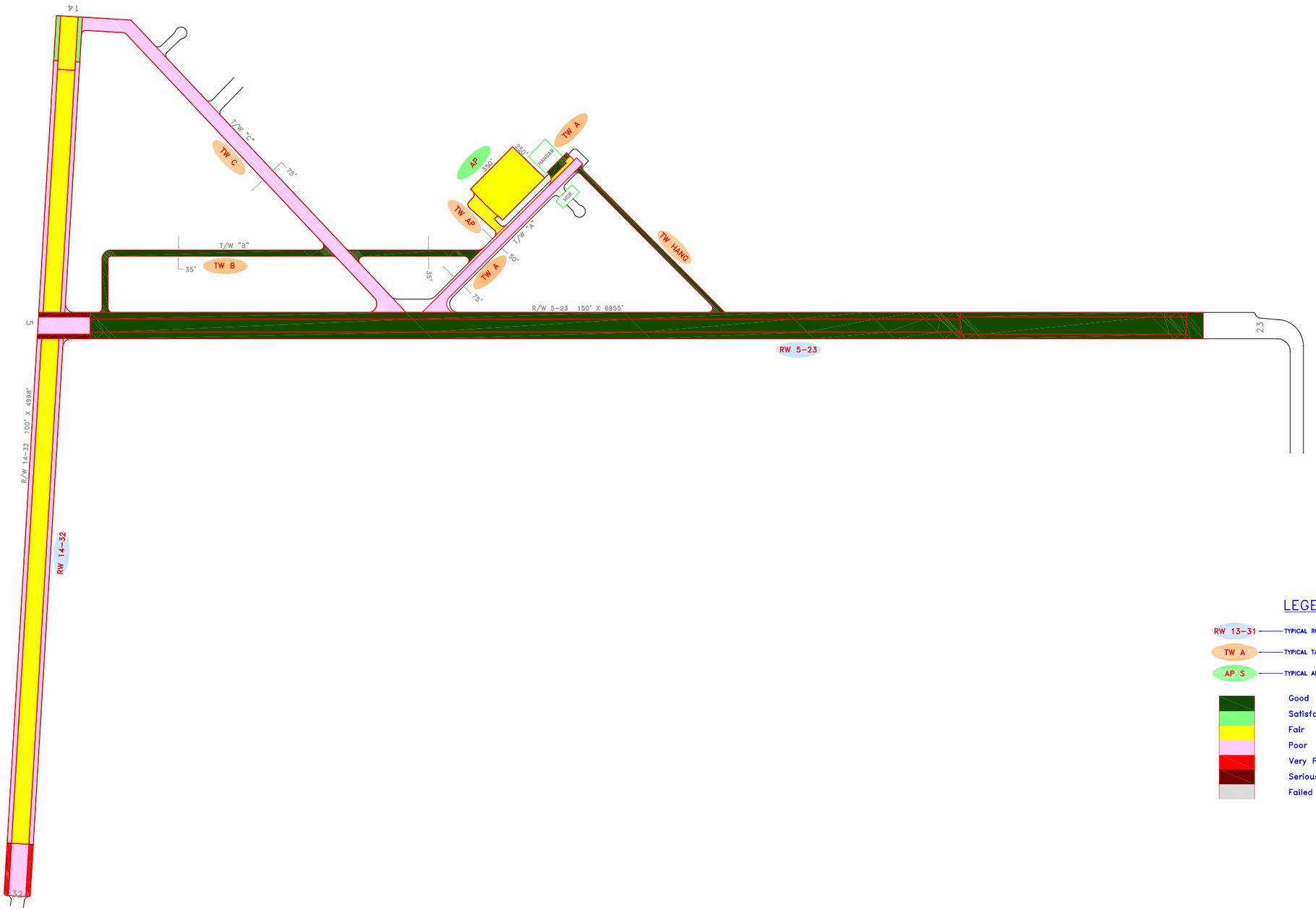
Last Insp. Date: 10/11/2006 Total Samples: 2 Surveyed: 2
Conditions: PCI:93.00 |
Inspection Comments:

Sample Number: 103 Type: R Area: 5,000.00 SqFt PCI = 93
Sample Comments:
48 L

Sample Number: 108 Type: R Area: 5,000.00 SqFt PCI = 93
Sample Comments:
48 L

APPENDIX C

2006 CONDITION MAP AND TABLES



LEGEND

- RW 13-31 — TYPICAL RUNWAY BRANCH ID
- TW A — TYPICAL TAXIWAY BRANCH ID
- AP S — TYPICAL APRON BRANCH ID

- Good
- Satisfactory
- Fair
- Poor
- Very Poor
- Serious
- Failed

0 150 300

RUNWAY LENGTHS DEPICTED IN THIS DRAWING ARE FOR PAVEMENT MANAGEMENT PURPOSES ONLY AND MAY NOT MATCH PUBLISHED RUNWAY LENGTHS.

NUMBER	DATE	REVISIONS
1	Mar-18	Draft Report
0	Feb-06	Initial Submittal

DESIGNED: FL | DRAWN: GB | CHECKED: | DATE: 9-06-2007

MACTEC
Engineering and Consulting, Inc.
Tallahassee, Florida
850-656-1293

2006 Condition Map

WILLISTON MUNICIPAL AIRPORT
LEVY COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE 93

IDENTIFIER X60
FDOT DISTRICT 2

Table C-1: Pavement Condition Index

Network Name	Network ID	Branch Name	Branch ID	Section ID	Length, Ft	Width, ft	Area, SqFt	Rank	Surface	Last Const. Date	Last Insp. Date	2006 PCI
WILLISTON MUNICIPAL AIRPORT	X60	APRON	AP	4105	340	255	87,500	P	AC	1/1/1990	10/10/2006	61
WILLISTON MUNICIPAL AIRPORT	X60	HANGAR APRON	AP HANG	4205	180	20	4,300	P	AAC	1/1/1985	10/11/2006	69
WILLISTON MUNICIPAL AIRPORT	X60	HANGAR APRON	AP HANG	4210	160	40	6,400	P	AC	1/1/1985	8/5/2002*	89
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6205	303	100	30,300	P	PCC	1/1/1942	10/10/2006	45
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6210	600	25	15,000	P	PCC	1/1/1942	10/10/2006	27
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6215	4,300	100	430,000	P	AC	1/1/1942	10/10/2006	63
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6220	8,600	25	215,000	P	AC	1/1/1942	10/10/2006	46
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6235	300	100	30,000	P	PCC	1/1/1942	10/10/2006	68
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY14-32	RW 14-32	6240	600	25	15,000	P	PCC	1/1/1942	10/10/2006	77
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6105	300	100	30,000	P	PCC	1/1/1942	10/10/2006	53
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6110	600	25	15,000	P	PCC	1/1/1942	10/10/2006	23
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6115	5,010	75	375,750	P	AAC	1/1/2006	1/1/2006	98
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6120	10,020	38	375,750	P	AAC	1/1/2006	1/1/2006	98
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6125	1,270	100	127,000	P	AAC	1/1/2006	1/1/2006	98
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6127	150	100	15,000	P	AAC	1/1/2006	1/1/2006	98

See note at end of table.

Table C-1: Pavement Condition Index

Network Name	Network ID	Branch Name	Branch ID	Section ID	Length, Ft	Width, ft	Area, SqFt	Rank	Surface	Last Const. Date	Last Insp. Date	2006 PCI
WILLISTON MUNICIPAL AIRPORT	X60	RUNWAY 5-23	RW 5-23	6130	2,540	25	63,500	P	AAC	1/1/2006	1/1/2006	98
WILLISTON MUNICIPAL AIRPORT	X60	TAXIWAY A	TW A	105	1,324	50	66,200	P	AAC	1/1/1982	10/10/2006	45
WILLISTON MUNICIPAL AIRPORT	X60	APRON TAXIWAY	TW AP	405	250	45	15,500	P	AC	1/1/1990	10/10/2006	62
WILLISTON MUNICIPAL AIRPORT	X60	TAXIWAY B	TW B	205	2,360	35	82,725	P	AC	1/1/1986	10/10/2006	89
WILLISTON MUNICIPAL AIRPORT	X60	TAXIWAY C	TW C	305	2,515	75	188,625	P	AC	1/1/1942	10/10/2006	45
WILLISTON MUNICIPAL AIRPORT	X60	HANGAR TAXIWAY	TW HANG	505	1,150	25	28,750	P	AC	12/25/1999	10/11/2006	93

Note: If new construction, then survey date = last construction date and PCI is set to 100 by MicroPAVER.
* Sections not surveyed due to reasons such as re-sectioning, no escort, not accessible at the time of survey.

Table C-2: Pavement Condition Prediction

Network ID	Branch ID	Section ID	2006 PCI	PCI Forecast									
				2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
X60	AP	4105	61	58	57	56	54	53	52	51	50	49	48
X60	AP HANG	4205	69	65	63	61	60	58	56	54	52	50	48
X60	AP HANG	4210	89	85	83	81	79	77	75	73	71	70	68
X60	RW 14-32	6205	45	43	42	42	41	40	39	38	37	36	35
X60	RW 14-32	6210	27	25	24	24	23	22	21	20	19	18	17
X60	RW 14-32	6215	63	60	59	57	56	54	53	51	50	48	47
X60	RW 14-32	6220	46	43	42	40	39	37	36	34	33	31	30
X60	RW 14-32	6235	68	66	65	65	64	63	62	61	60	59	58
X60	RW 14-32	6240	77	75	74	74	73	72	71	70	69	68	67
X60	RW 5-23	6105	53	51	50	50	49	48	47	46	45	44	43
X60	RW 5-23	6110	23	21	20	20	19	18	17	16	15	14	13
X60	RW 5-23	6115	98	93	91	88	86	83	81	78	76	73	71
X60	RW 5-23	6120	98	93	91	88	86	83	81	78	76	73	71
X60	RW 5-23	6125	98	93	91	88	86	83	81	78	76	73	71
X60	RW 5-23	6127	98	93	91	88	86	83	81	78	76	73	71
X60	RW 5-23	6130	98	93	91	88	86	83	81	78	76	73	71
X60	TW A	105	45	41	39	37	35	33	32	30	28	26	24
X60	TW AP	405	62	60	58	57	56	54	53	51	50	48	46
X60	TW B	205	89	84	82	80	79	77	75	74	72	71	70
X60	TW C	305	45	41	39	37	35	33	31	29	27	25	23
X60	TW HANG	505	93	88	86	83	81	80	78	76	75	73	72

Note: If new construction, then survey date = last construction date and PCI is set to 100 by MicroPAVER.

APPENDIX D

AREA-WEIGHTED PCI RESULTS BY BRANCH

Table D-1 Condition Summary by Branch

Network	Branch Name	2006 PCI
WILLISTON MUNICIPAL AIRPORT	APRON	61
WILLISTON MUNICIPAL AIRPORT	HANGAR APRON	81
WILLISTON MUNICIPAL AIRPORT	RUNWAY14-32	57
WILLISTON MUNICIPAL AIRPORT	RUNWAY 5-23	96
WILLISTON MUNICIPAL AIRPORT	TAXIWAY A	45
WILLISTON MUNICIPAL AIRPORT	APRON TAXIWAY	62
WILLISTON MUNICIPAL AIRPORT	TAXIWAY B	89
WILLISTON MUNICIPAL AIRPORT	TAXIWAY C	45
WILLISTON MUNICIPAL AIRPORT	HANGAR TAXIWAY	93

APPENDIX E

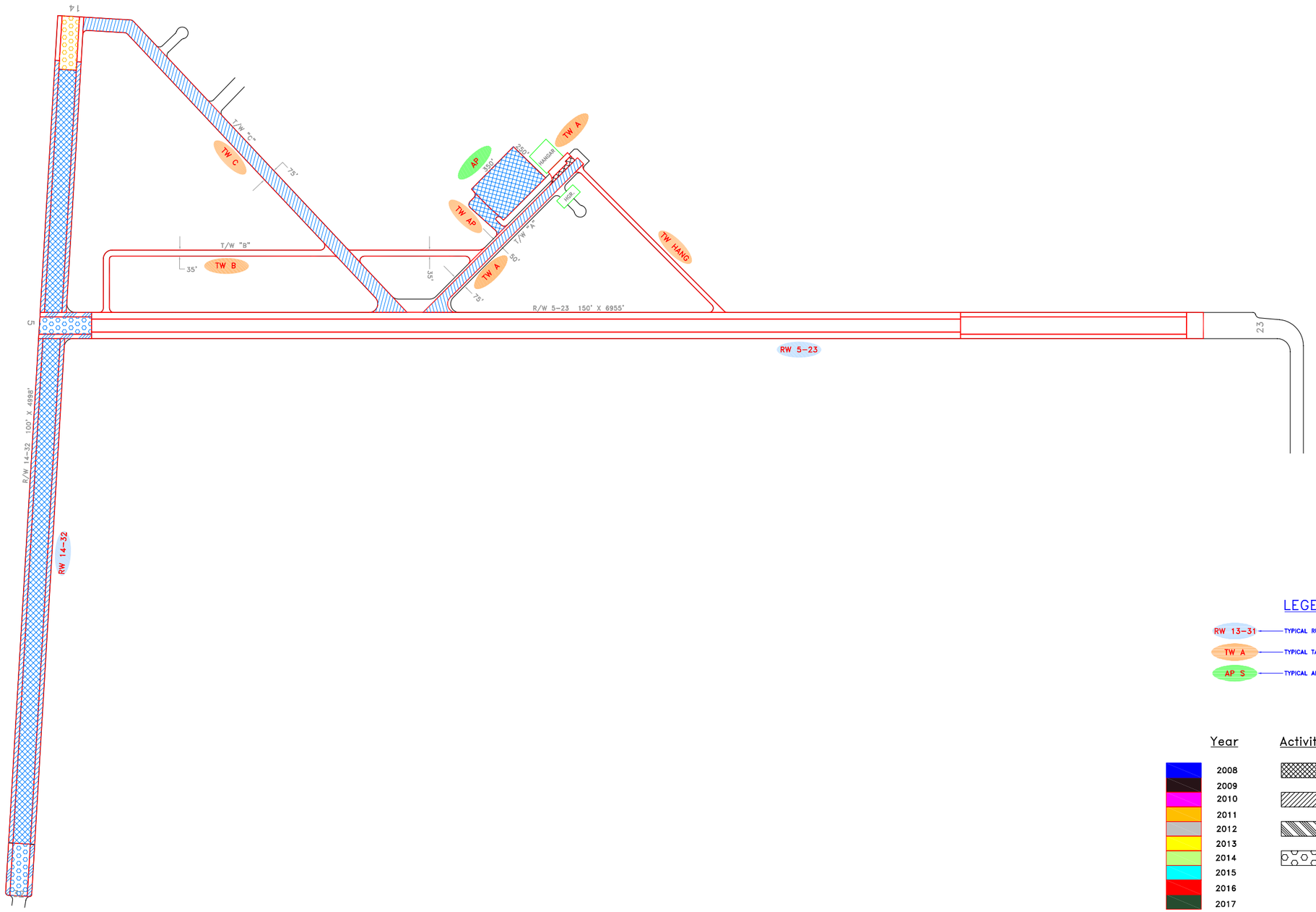
MAJOR M&R PLAN BY YEAR

Table E-1: Major M&R Plan by Year

Network	Branch Use	Branch ID	Section ID	Surface	Area, SqFt	Year	PCI Before Maint.	Activities	PCI After Maint.	Cost
X60	APRON	AP	4105	AC	87,500	2008	59	Microsurfacing	100	$324,363
X60	RUNWAY	RW 14-32	6205	PCC	30,300	2008	44	PCC Restoration	100	$190,587
X60	RUNWAY	RW 14-32	6210	PCC	15,000	2008	26	Reconstruction	100	$204,300
X60	RUNWAY	RW 14-32	6215	AC	430,000	2008	61	Microsurfacing	100	$1,353,211
X60	RUNWAY	RW 14-32	6220	AC	215,000	2008	44	Mill & Overlay	100	$1,352,350
X60	RUNWAY	RW 5-23	6105	PCC	30,000	2008	52	PCC Restoration	100	$171,480
X60	RUNWAY	RW 5-23	6110	PCC	15,000	2008	22	Reconstruction	100	$204,300
X60	TAXIWAY	TW A	105	AAC	66,200	2008	42	Mill & Overlay	100	$416,398
X60	TAXIWAY	TW AP	405	AC	15,500	2008	60	Microsurfacing	100	$53,010
X60	TAXIWAY	TW C	305	AC	188,625	2008	42	Mill & Overlay	100	$1,186,451
X60	APRON	AP HANG	4205	AAC	4,300	2009	64	Microsurfacing	100	$10,311
X60	RUNWAY	RW 14-32	6235	PCC	30,000	2011	64	PCC Restoration	100	$76,316

APPENDIX F

10-YEAR M&R MAP



LEGEND

RW 13-31 — TYPICAL RUNWAY BRANCH ID

TW A — TYPICAL TAXIWAY BRANCH ID

AP S — TYPICAL APRON BRANCH ID

Year	Activity
2008	Microsurfacing
2009	Mill & Overlay
2010	Reconstruction
2011	Concrete Pavement Restoration
2012	
2013	
2014	
2015	
2016	
2017	

0 150 300

RUNWAY LENGTHS DEPICTED IN THIS DRAWING ARE FOR PAVEMENT MANAGEMENT PURPOSES ONLY AND MAY NOT MATCH PUBLISHED RUNWAY LENGTHS.

NUMBER	DATE	REVISIONS
1	Mar-18	Draft Report
0	Feb-06	Initial Submittal

DESIGNED: FL | DRAWN: GB | CHECKED: | DATE: 9-06-2007

URS | ascendances ENGINEERING A BETTER WORLD | PLANNING TECHNOLOGY INC | PANTHER INTERNATIONAL, LLC

MACTEC
Engineering and Consulting, Inc.
Tallahassee, Florida
850-656-1293

10-Year M&R Map

WILLISTON MUNICIPAL AIRPORT
LEVY COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE 93

IDENTIFIER X60
FDOT DISTRICT 2

APPENDIX G

PHOTOGRAPHS

RW 14-32 Section 6240 SU 200: Low Severity Linear Cracking (October 10, 2006)

RW 14-32 Section 6215 SU 386: Low Severity Block Cracking (October 11, 2006)

RW 14-32 Section 6220 SU 188: Medium Severity Weathering (October 11, 2006)

RW 14-32 Section 6220 SU 172: Low Severity Weathering (October 11, 2006)

RW 14-32 Section 6220 SU 172: Low Severity Weathering
(October 11, 2006)

RW 14-32 Section 6220 SU 584: Medium Severity Weathering
(October 11, 2006)

RW 14-32 Section 6215 SU 382: Medium Severity Block Cracking (October 11, 2006)

RW 14-32 Section 6210 SU 100: High Severity Joint Seal Damage
(October 11, 2006)

RW 14-32 Section 6215 SU 307: Medium Severity L/T Cracking (October 11, 2006)

RW 14-32 Section 6220 SU 512: Low Severity Weathering (October 11, 2006)

RW 14-32 Section 6220 SU 512: Low Severity Block Cracking (October 11, 2006)

RW 14-32 Section 6215 SU 317: Low Severity Block Cracking (October 11, 2006)

RW 14-32 Section 6215 SU 349: Medium Severity Block Cracking (October 11, 2006)

TW C Section 305 SU 104: Medium Severity Weathering (October 11, 2006)

TW C Section 305 SU 131: Low Severity Block Cracking (October 11, 2006)

TW B Section 205 SU 115: Low Severity L/T Cracking (October 11, 2006)

TW B Section 205 SU 104: Low Severity L/T Cracking (October 11, 2006)

TW AP Section 405 SU 101: Medium Severity Weathering (October 11, 2006)