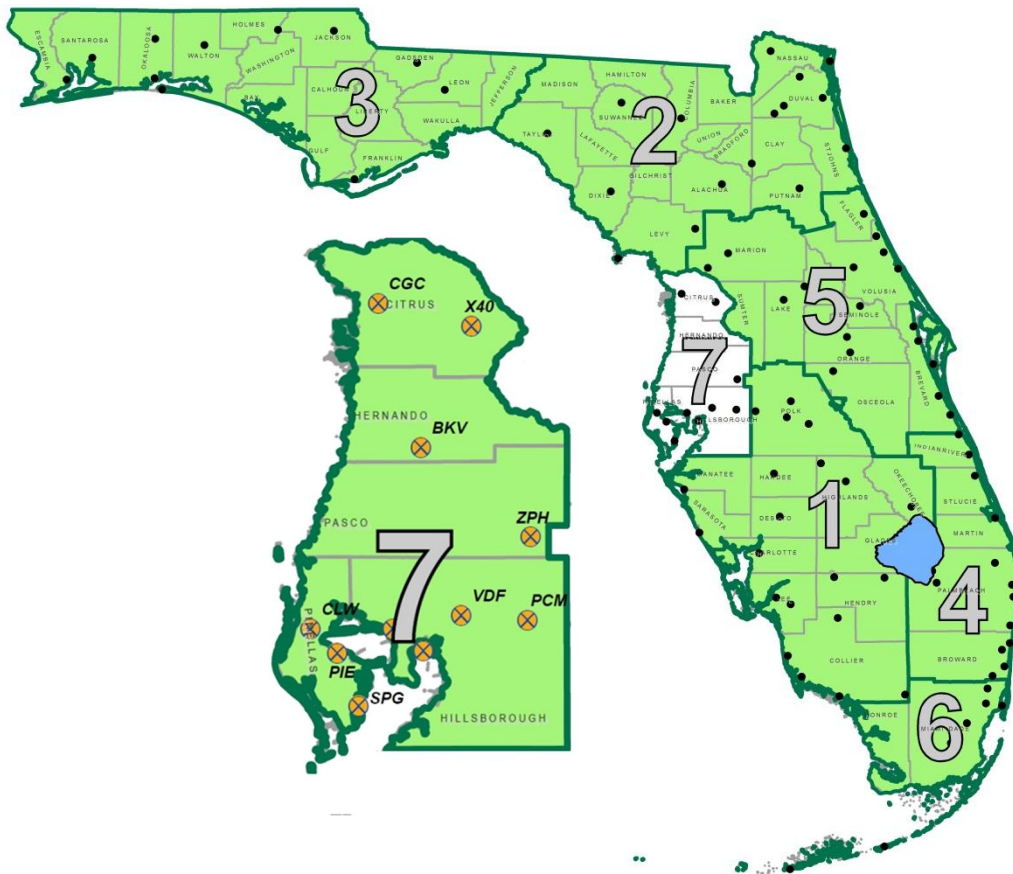




**STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION  
AVIATION OFFICE**

**Statewide Airfield Pavement  
Management Program**

**District 7 Report**



June 2012

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- Appendix A Glossary of Terms
- Appendix B M&R Cost Schedules and Critical PCIs
- Appendix C Airport Condition Maps and Major Rehabilitation Project Tables

## **EXECUTIVE SUMMARY**

Airfield pavement facilities represent a large capital investment in the Florida Airport System. Timely airport maintenance and strategic rehabilitation are essential as repair costs increase significantly in proportion to deterioration. Airport distresses can also contribute to the development of loose debris and decreased rideability quality, which can be a significant safety concern for aircraft.

In 2010, the FDOT Aviation Office selected a Consultant team consisting of Kimley-Horn and Associates, Inc. and their Subconsultants, AMEC, Penuel Consulting, LLC and All About Pavements, Inc., to provide services in support of FDOT in the continuing evaluation and updating of the existing SAPMP to be completed over fiscal years 2011 and 2012. Pavement condition surveys were performed for airside pavements for the following airports located in District 7:

- BKV – Hernando County Airport
- CGC – Crystal River Airport
- CLW – Clearwater Airpark
- PCM – Plant City Airport
- PIE – St. Petersburg-Clearwater International Airport
- SPG – Albert Whitted Airport
- TPF – Peter O Knight Airport
- VDF – Tampa Executive Airport
- X40 – Inverness Airport
- ZPH – Zephyrhills Municipal Airport

Tampa International Airport, which is managed by the Hillsborough County Aviation Authority, declined to participate in the FDOT SAPMP and therefore was not inspected as part of this update.

District 7's overall PCI is at a 73, which corresponds to a 'Satisfactory' condition. **Table I: Condition Summary by Airport** below represents the results of the PCI inspection at each airport within the District. Average PCI values for the airports in District 7 ranged from 61 (Fair) to 96 (Good). Specific individual airport results are identified in individual airport reports provided to the airports. **Table II: Runway Condition Summary by Airport** indicates the PCI values for every runway within the District, grouped by airport. **Figure I-A: Runway Condition** graphically depicts the percentage of the District's runways below the FDOT Minimum PCI, and **Figure I-B: Runway Pavement Condition Comparison to FDOT Minimum PCI** shows the PCIs of the District's runways in comparison to the FDOT Minimum PCI.

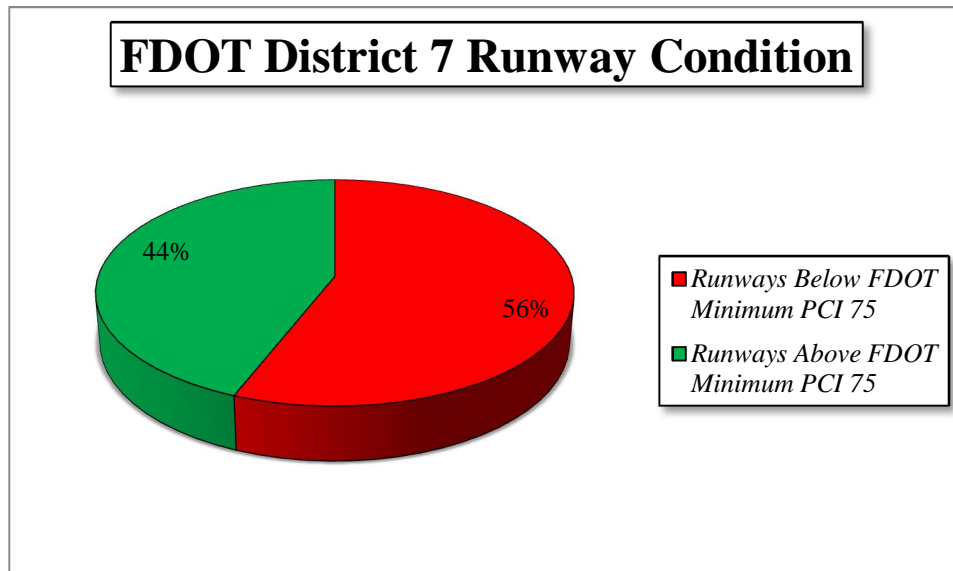
**Table I: Condition Summary by Airport**

<b>FAA Identifier</b>	<b>Airport Name</b>	<b>Type</b>	<b>Runway PCI</b>	<b>Taxiway PCI</b>	<b>Apron PCI</b>	<b>Overall PCI</b>	<b>Overall Condition Rating</b>
BKV	Hernando County Airport	GA	56	65	68	61	Fair
CGC	Crystal River Airport	GA	76	88	59	75	Satisfactory
CLW	Clearwater Airpark	RL	64	55	62	61	Fair
PCM	Plant City Airport	GA	79	71	76	76	Satisfactory
PIE	St. Petersburg-Clearwater International Airport	PR	79	60	61	70	Fair
SPG	Albert Whitted Airport	RL	67	64	78	70	Fair
TPF	Peter O Knight Airport	RL	78	81	97	82	Satisfactory
VDF	Tampa Executive Airport	RL	77	74	81	78	Satisfactory
X40	Inverness Airport	GA	100	94	90	96	Good
ZPH	Zephyrhills Municipal Airport	GA	58	62	74	63	Fair
<b>District 7 Overall =</b>			<b>73</b>	<b>71</b>	<b>75</b>	<b>73</b>	<b>Satisfactory</b>

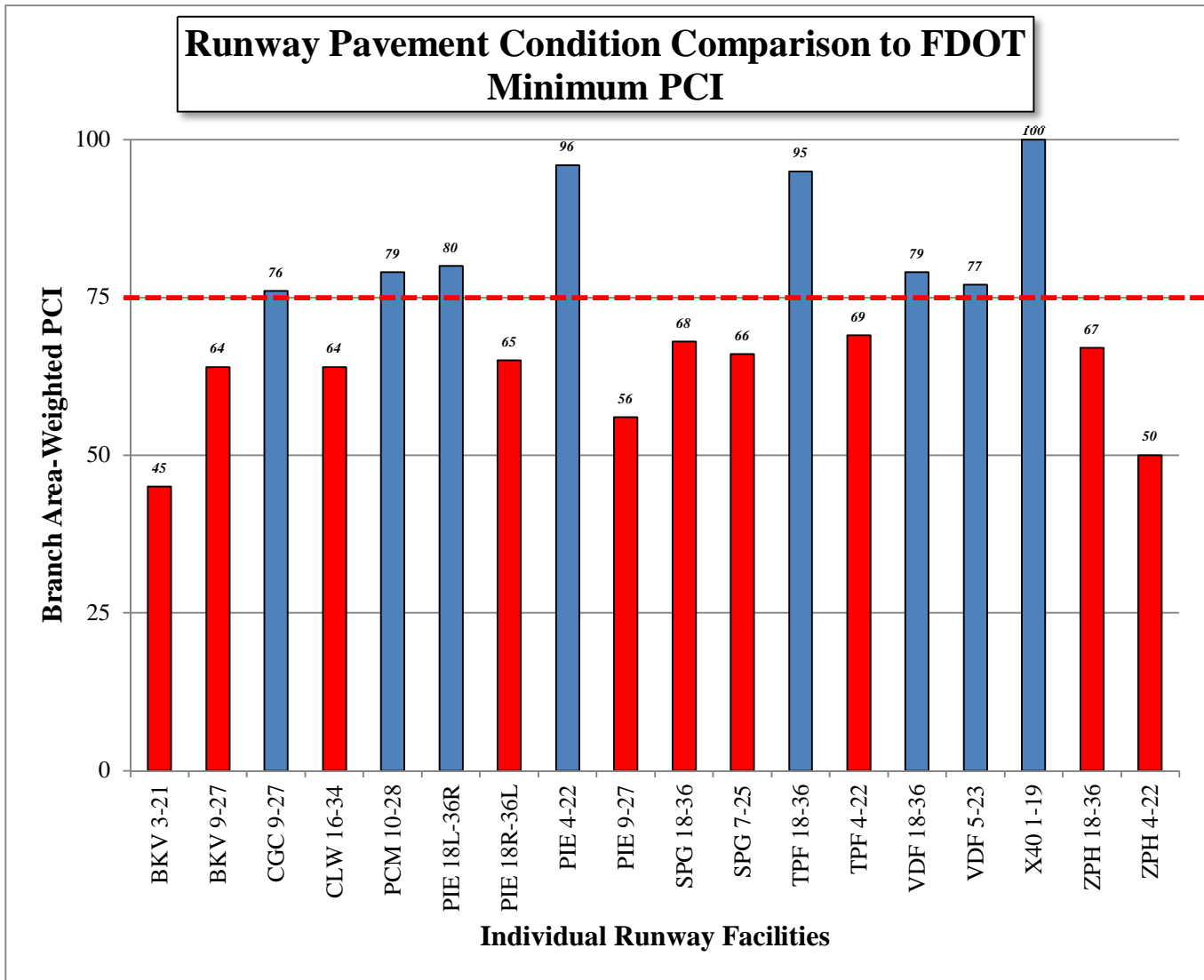
**Table II: Runway Condition Summary by Airport**

FAA Identifier	Airport Name	Airport Type	Runway Facility	Length	Width	Weighted Average PCI	Below Critical	Below FDOT
BKV	Hernando County Airport	GA	3-21	5,015	150	45	X	X
BKV	Hernando County Airport	GA	9-27	7,002	150	64	X	X
CGC	Crystal River Airport	GA	9-27	4,557	75	76		
CLW	Clearwater Airpark	RL	16-34	3,496	50	64	X	X
PCM	Plant City Airport	GA	10-28	3,948	75	79		
PIE	St. Petersburg-Clearwater International Airport	PR	18L-36R	9,730	150	80		
PIE	St. Petersburg-Clearwater International Airport	PR	18R-36L	4,000	75	65		X
PIE	St. Petersburg-Clearwater International Airport	PR	4-22	5,903	150	96		
PIE	St. Petersburg-Clearwater International Airport	PR	9-27	5,165	150	56	X	X
SPG	Alberted Whitted Airport	RL	18-36	2,864	150	68		X
SPG	Alberted Whitted Airport	RL	7-25	3,677	75	66		X
TPF	Peter O. Knight Airport	RL	18-36	2,687	75	95		
TPF	Peter O. Knight Airport	RL	4-22	3,580	100	69		X
VDF	Tampa Executive Airport	RL	18-36	3,259	75	79		
VDF	Tampa Executive Airport	RL	5-23	5,000	100	77		
X40	Inverness Airport	GA	1-19	2,600	40	100		
ZPH	Zephyrhills Municipal Airport	GA	18-36	4,954	100	67		X
ZPH	Zephyrhills Municipal Airport	GA	4-22	4,999	100	50	X	X
<b>Weighted Average =</b>						71		56%

**Figure I-A: Runway Condition**



**Figure I-B: Runway Pavement Condition Comparison to FDOT Minimum PCI**



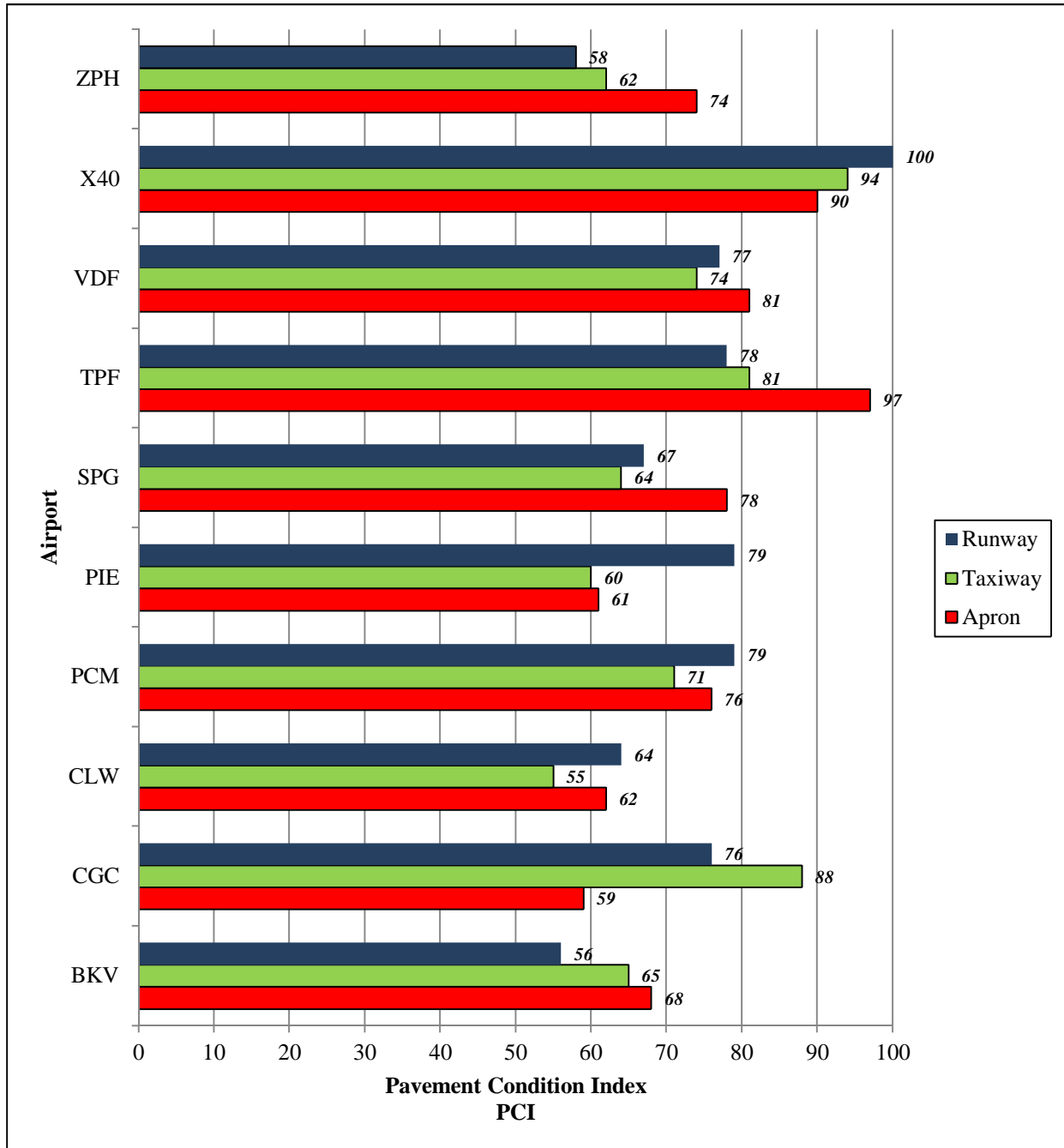
Pavement use has an influence on the pavement condition of each facility. For example, the amount and type of distresses observed on a primary runway can vary from a maintenance apron based on frequency and variety of traffic loads experienced. **Table III: Summary of Area by Use by Airport** provides a breakdown of the airport areas by pavement use. **Figure II: PCI by Pavement Use by Airport** graphically shows the PCI for each pavement use at each airport.



**Table III: Summary of Area by Use by Airport**



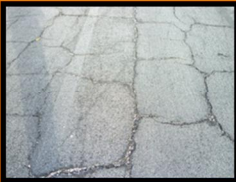

<b>FAA Identifier</b>	<b>Airport Name</b>	<b>Type</b>	<b>Runway Area (SqFt)</b>	<b>Taxiway Area (SqFt)</b>	<b>Apron Area (SqFt)</b>	<b>Total Area (SqFt)</b>
BKV	Hernando County Airport	GA	1,800,000	1,235,049	807,982	3,843,031
CGC	Crystal River Airport	GA	342,169	256,252	252,238	850,659
CLW	Clearwater Airpark	RL	254,775	175,560	177,965	608,300
PCM	Plant City Airport	GA	300,152	242,811	316,537	859,500
PIE	St. Petersburg-Clearwater International Airport	PR	3,190,585	1,760,486	1,279,032	6,230,103
SPG	Albert Whitted Airport	RL	694,857	573,107	587,771	1,855,735
TPF	Peter O Knight Airport	RL	551,817	471,780	189,710	1,213,307
VDF	Tampa Executive Airport	RL	744,425	609,066	1,165,874	2,519,365
X40	Inverness Airport	GA	375,007	251,628	141,334	767,969
ZPH	Zephyrhills Municipal Airport	GA	1,004,882	811,042	467,234	2,283,157
<b><i>District 7 Overall =</i></b>			<b>9,258,669</b>	<b>6,386,781</b>	<b>5,385,676</b>	<b>21,031,126</b>

**Figure II: PCI by Pavement Use by Airport**



**Figure III: Pictorial Representation of PCIs and Ratings** below illustrates characteristic pavement surfaces associated with various ranges of PCIs and Ratings, along with typical repair activities for the PCI ranges.

**Figure III: Pictorial Representation of PCIs and Ratings**

	PCI	REPRESENTATIVE PAVEMENT SURFACE	REPAIR ACTIVITIES
ROUTINE MAINTENANCE	86 - 100		Pavements with PCI indexes above 85, or 'Good' may require periodic joint/crack sealing and local patching.
PAVEMENT PRESERVATION	65 - 85		Pavements with PCI conditions ranging from 'Satisfactory' to 'Good' may require surface treatments (seal coat), thin overlays, and/or joint/crack sealing.
MAJOR REHABILITATION	40 - 64		Pavements that have deteriorated below a PCI 65, or within the range of 'Poor' to 'Fair' conditions may require major rehabilitation such as pavement mill and overlay or PCC restoration activity.
MAJOR REHABILITATION	0 - 39		Pavements that have deteriorated below a PCI 40, or within the range of 'Failed' to 'Very Poor' conditions may require major reconstruction.

The immediate major rehabilitation needs, or needs that have been programmed to be completed in the first year of the 10-year M&R plan based on an unlimited budget in District 7 are summarized in **Table IV: Summary of Immediate Major Rehabilitation Needs**.

**Table IV: Summary of Immediate Major Rehabilitation Needs**

FAA Identifier	Airport Name	Type	Current Average PCI	Current Condition Rating	Immediate Major Rehabilitation Need Costs
BKV	Hernando County Airport	GA	61	Fair	\$13,410,221.27
CGC	Crystal River Airport	GA	75	Satisfactory	\$1,088,889.06
CLW	Clearwater Airpark	RL	61	Fair	\$2,368,362.60
PCM	Plant City Airport	GA	76	Satisfactory	\$548,643.63
PIE	St. Petersburg-Clearwater International Airport	PR	70	Fair	\$23,099,479.59
SPG	Albert Whitted Airport	RL	70	Fair	\$3,958,006.82
TPF	Peter O Knight Airport	RL	82	Satisfactory	\$1,463,567.19
VDF	Tampa Executive Airport	RL	78	Satisfactory	\$377,333.57
X40	Inverness Airport	GA	96	Good	\$115,044.90
ZPH	Zephyrhills Municipal Airport	GA	63	Fair	\$6,819,853.68
<b>District 7 Overall =</b>			<b>73</b>	<b>Satisfactory</b>	<b>\$53,249,402.31</b>

The identified major rehabilitation projects summarized above and further explained in each individual airport report have been determined based on the Critical Pavement Condition Index Criteria. The criteria establishes recommended minimum PCI values that pavement facilities should not deteriorate past based on facility use and airport type.

A forecast of major rehabilitation needs for a 10-year period was developed using an unlimited budget. The analysis identified ongoing maintenance needs and major rehabilitation during that interval. The resulting major rehabilitation needs, excluding maintenance needs, by airport are provided in **Table V: Summary of 10-Year Major Rehabilitation Costs by Airport** below.

**Table V: Summary of 10-Year Major Rehabilitation Costs by Airport**

FAA Identifier	Airport Name	Type	Current Average PCI	Current Condition Rating	10-Year Major Rehabilitation Need Cost
BKV	Hernando County Airport	GA	61	Fair	\$15,770,524.05
CGC	Crystal River Airport	GA	75	Satisfactory	\$2,446,992.19
CLW	Clearwater Airpark	RL	61	Fair	\$2,759,380.54
PCM	Plant City Airport	GA	76	Satisfactory	\$1,754,878.81
PIE	St. Petersburg-Clearwater International Airport	PR	70	Fair	\$29,968,870.02
SPG	Albert Whitted Airport	RL	70	Fair	\$5,836,278.54
TPF	Peter O Knight Airport	RL	82	Satisfactory	\$1,753,154.95
VDF	Tampa Executive Airport	RL	78	Satisfactory	\$3,979,822.99
X40	Inverness Airport	GA	96	Good	\$208,323.53
ZPH	Zephyrhills Municipal Airport	GA	63	Fair	\$9,830,310.21
<b>District 7 Overall =</b>			<b>73</b>	<b>Satisfactory</b>	<b>\$74,308,535.83</b>

The development of the aforementioned costs is based on planning level assumptions with regards to the type of rehabilitation being performed. **Table VI: M&R Activities by Condition** summarizes the M&R activities based on PCI values, as established by the FDOT.

**Table VI: M&R Activities by Condition**

	Activity	PCI Trigger
Maintenance	Crack Sealing and Full-Depth Patching	90
		80
Rehabilitation	Mill and Overlay (AC) or Concrete Pavement Restoration (PCC)	70
		60
		50
		40
		30
	Reconstruction	20

It is important to state that design level efforts are necessary in determining the final rehabilitative construction activity.

## **1. INTRODUCTION**

### **1.1 Project Background**

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. There are millions of square yards of pavement for the runways, taxiways, aprons and other areas of these airports that support aircraft operations. The timely and proper maintenance and rehabilitation 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 based on pavement evaluation and pavement management performance trends, the Florida Department of Transportation (FDOT) Aviation Office implemented the Statewide Airfield Pavement Management Program (SAPMP) in 1992.

In 2010, the FDOT Aviation Office selected a Consultant team consisting of Kimley-Horn and Associates, Inc. and their Subconsultants, AMEC, Penuel Consulting, LLC and All About Pavements, Inc., to provide services in support of FDOT in the continuing evaluation and updating of the existing SAPMP to be completed over fiscal years 2011 and 2012. Pavement condition surveys were performed for airside pavements for the following airports located in District 7:

- BKV – Hernando County Airport
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- VDF – Tampa Executive Airport
- X40 – Inverness Airport
- ZPH – Zephyrhills Municipal Airport

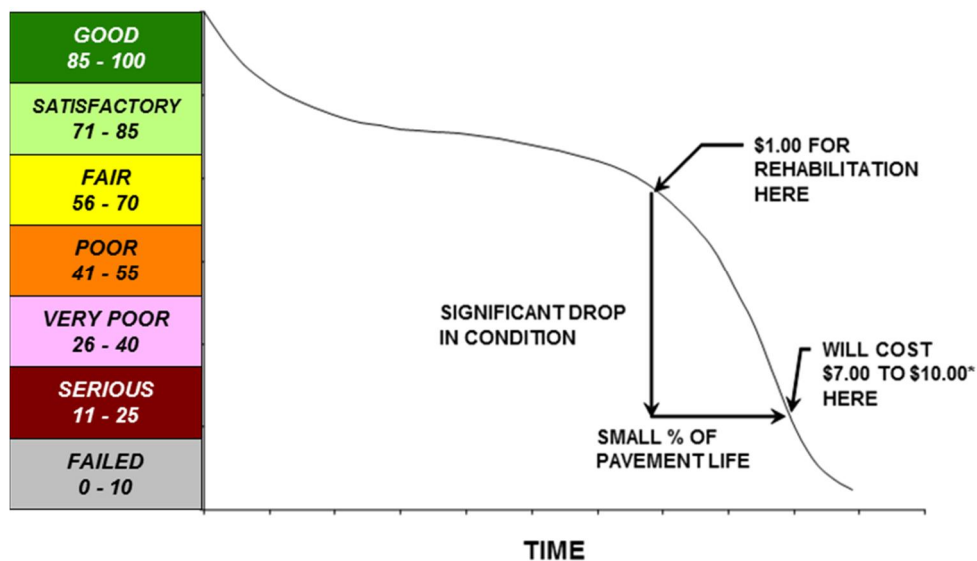
Tampa International Airport, which is managed by the Hillsborough County Aviation Authority, declined to participate in the FDOT SAPMP and therefore was not inspected as part of this update.

### **1.2 Purpose**

The primary goal of the SAPMP update is to provide individual airports with pavement condition ratings as well as recommendations for immediate and long-term major rehabilitation on the basis of pavement condition. This approach is intended to focus pavement M&R in areas where the most urgent need is with the overall goal of minimizing costs by improving pavements before they deteriorate to a point where the cost to rehabilitate is increasing at a higher rate than would have been experienced if repaired earlier.

**Figure 1-1: Pavement Life Cycle** below, taken from FAA/AC 5380-7A “Airport Pavement Management Program”, illustrates how a pavement generally deteriorates and the relative cost of rehabilitation at various times throughout its life. Note that during the first portion 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 “good” condition depends on how well it is maintained. As 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.

**Figure 1-1: Pavement Life Cycle**



Source: FAA/AC 150/5380-7A “Airport Pavement Management Program”  
\*Modified to reflect current construction costs.

The inspections and analysis that were done were performed in accordance with the methods identified in ASTM D 5340-04 and in the FAA Advisory Circular 150/5380-6B to comply with the FAA Airport Improvement Program (AIP) requirements. The tasks required to achieve this objectives at each airport include:

- Obtain recent construction history from the Airport to update the Pavement Inventory CADD drawings and database from the previous SAPMP update;
- Perform a visual Pavement Condition Index (PCI) survey of the airfield pavements at the Airport;
- Update the MicroPAVER database to analyze the PCI field data and determine the current condition of the airfield pavements;
- Predict the future deterioration of the pavements using performance models based on condition data collected from current and previous inspections;

- Develop a 10-year M&R plan to address the pavement maintenance/rehabilitation needs;
- Estimate the anticipated costs associated with the suggested immediate and future M&R activities based on statewide average construction costs.

This document is intended to serve as a district summary of airport facility pavement condition and both immediate and long-term major rehabilitation based on needs for each airport. Furthermore, this document is intended to:

- Describe, briefly, the Florida Department of Transportation Aviation Office Statewide Airfield Pavement Management Program and the roles and responsibilities of the program's participants;
- Provide information on the pavement management principles, objectives, and methods used to update the existing program;
- Provide average results of the PCI survey at each airport based on pavement facility use, ranking, and type (i.e. Runway, Taxiway, Apron, Primary, Secondary, Tertiary, AC, AAC, APC, PCC, etc.);
- Provide the results of the M&R Analysis that identified both the immediate and 10-Year major rehabilitation project needs on an airport and district wide basis.



## **2. SYSTEM INVENTORY AND AIRPORT NETWORK DEFINITION DEVELOPMENT**

### **2.1 System Inventory Update**

A significant element to the development and update of the SAPMP has been to identify recent and anticipated construction activity that affects the pavement composition and performance. With cooperation from the airport facility personnel, the project team was able to gather airport specific information that included changes in pavement geometry, new or reconstructed pavements since the last inspection and anticipated pavement rehabilitation that would negate the findings of a visual inspection done in the short term. At the beginning of each phase for this update, FDOT SAPMP participants responded to the Aviation Office with project specific information on the recent and anticipated work. In addition to the construction activity, updates to pavement facility designators (i.e. re-designation, magnetic declination, and/or decommissioning) were reported.

This information was considered during the updating of pavement section areas on the individual airport Network Definition Map. The construction activity information provided by the airport is depicted on the System Inventory Update Map for each facility. This information was also included in the updates to the SAPMP specific MicroPAVER software database.

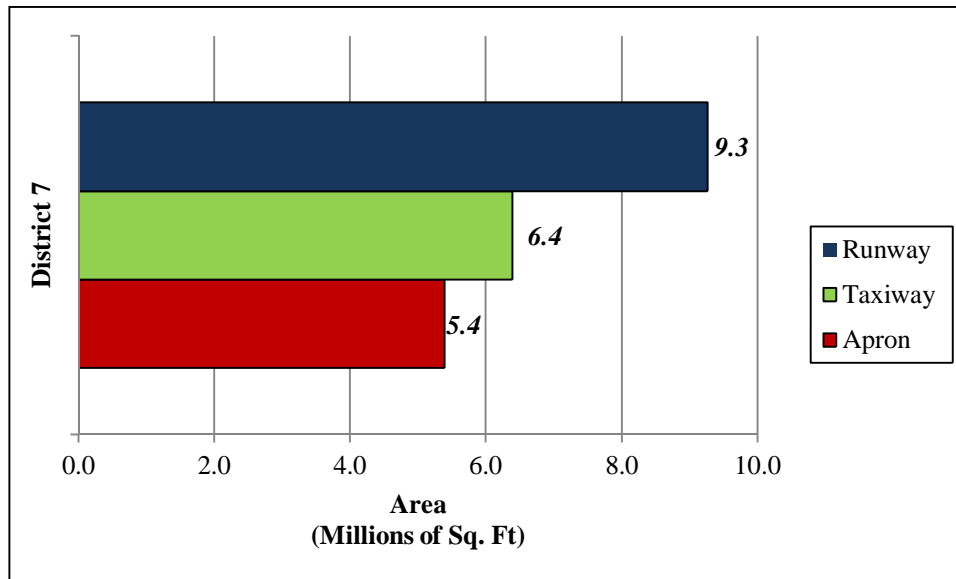
### **2.2 Network Definition Update**

Based on the information identified in the System Inventory Map, the geometry of the Network Definition specific to the pavement area sections has been updated to reflect the changes. The purpose of developing pavement area sections is to track future pavement performance as well as to plan for future projects. The Network Definition Map categorically identifies pavement geometry, pavement composition, and sample identification. The updated areas by use for each airport are summarized in **Table 2-1: Summary of Area by Use by Airport**. **Figure 2-1: District Pavement Area by Use** below depicts the district pavement area by use, and **Figure 2-2: Pavement Area by Use by Airport** provides a breakdown of pavement area by usage at each airport.

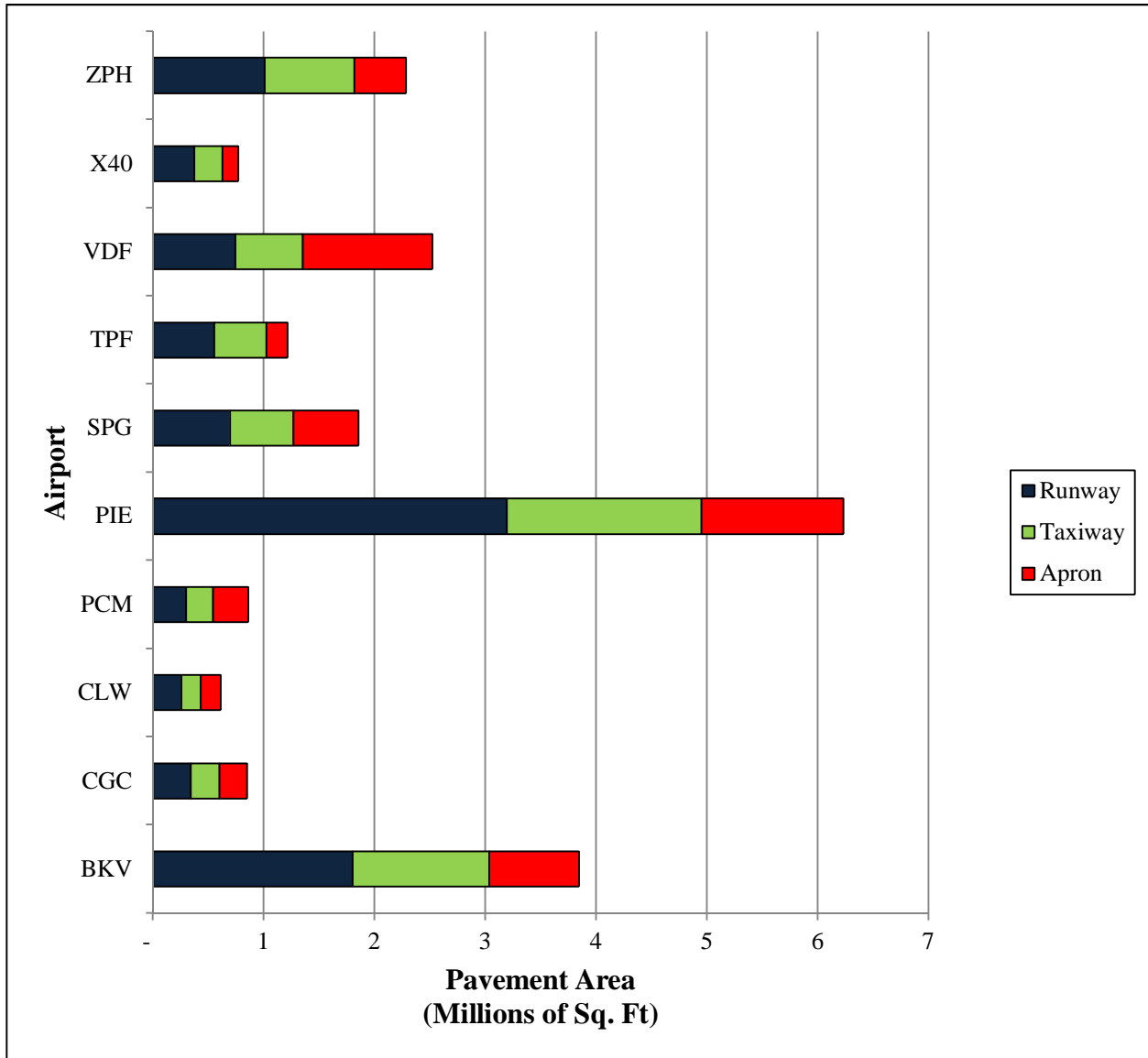
**Table 2-1: Summary of Area by Use by Airport**

FAA Identifier	Airport Name	Type	Runway Area (SqFt)	Taxiway Area (SqFt)	Apron Area (SqFt)	Total Area (SqFt)
BKV	Hernando County Airport	GA	1,800,000	1,235,049	807,982	3,843,031
CGC	Crystal River Airport	GA	342,169	256,252	252,238	850,659
CLW	Clearwater Airpark	RL	254,775	175,560	177,965	608,300
PCM	Plant City Airport	GA	300,152	242,811	316,537	859,500
PIE	St. Petersburg-Clearwater International Airport	PR	3,190,585	1,760,486	1,279,032	6,230,103
SPG	Albert Whitted Airport	RL	694,857	573,107	587,771	1,855,735
TPF	Peter O Knight Airport	RL	551,817	471,780	189,710	1,213,307
VDF	Tampa Executive Airport	RL	744,425	609,066	1,165,874	2,519,365
X40	Inverness Airport	GA	375,007	251,628	141,334	767,969
ZPH	Zephyrhills Municipal Airport	GA	1,004,882	811,042	467,234	2,283,157
<i>District 7 Overall =</i>			<b>9,258,669</b>	<b>6,386,781</b>	<b>5,385,676</b>	<b>21,031,126</b>

**Figure 2-1: District Pavement Area by Use**



**Figure 2-2: Pavement Area by Use by Airport**



As part of this process, the individual airport network maps have been referenced in the State Plane Coordinate System. This update included the referencing of aerial imagery supplied by FDOT to the Network Definition Maps resulting in a GIS based navigation map for use on mobile GPS data collection units.

### 3. PAVEMENT EVALUATION

#### 3.1 Pavement Condition Survey

The pavement condition survey was performed using the methods described in ASTM D 5340-04 and FAA Advisory Circular 150/5380-6B. These inspections were performed by a minimum of two inspection personnel that have undergone appropriate FDOT training, demonstrated adequate experience, and have been approved by AO-PM. The visual surveys were performed with significant coordination with airport personnel to ensure minimal impacts on airport operations while maintaining safety. When appropriate, pavement inspectors were escorted by authorized airport personnel.

The inspection of pavement facilities is limited to the identified sample units. The number of sample units inspected in each pavement section was determined to achieve a confidence level of representative distresses throughout the facility. The sampling rate used for the FDOT SAPMP is identified in **Table 3-1: Sampling Rate for FDOT Condition Surveys**.

**Table 3-1: 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

#### 3.2 Pavement Condition Summary

The pavement condition results from each airport have been developed by analyzing the specific pavement distresses using U.S. Army Corp of Engineers CERL MicroPAVER 5.2.4 software. In adherence to the ASTM D 5340-04, the pavement condition index ranges from 100 to 0 with corresponding condition ratings of “Good” to “Failed”, respectively. **Figure 3-1: PCI Rating Scale** depicts the standard index with the corresponding condition ratings and color identification used for this program update.

**Figure 3-1: PCI Rating Scale**

PCI Range	Pavement Condition Rating
86 - 100	Good
71 - 85	Satisfactory
56 - 70	Fair
41 - 55	Poor
26 - 40	Very Poor
11 - 25	Serious
0 - 10	Failed

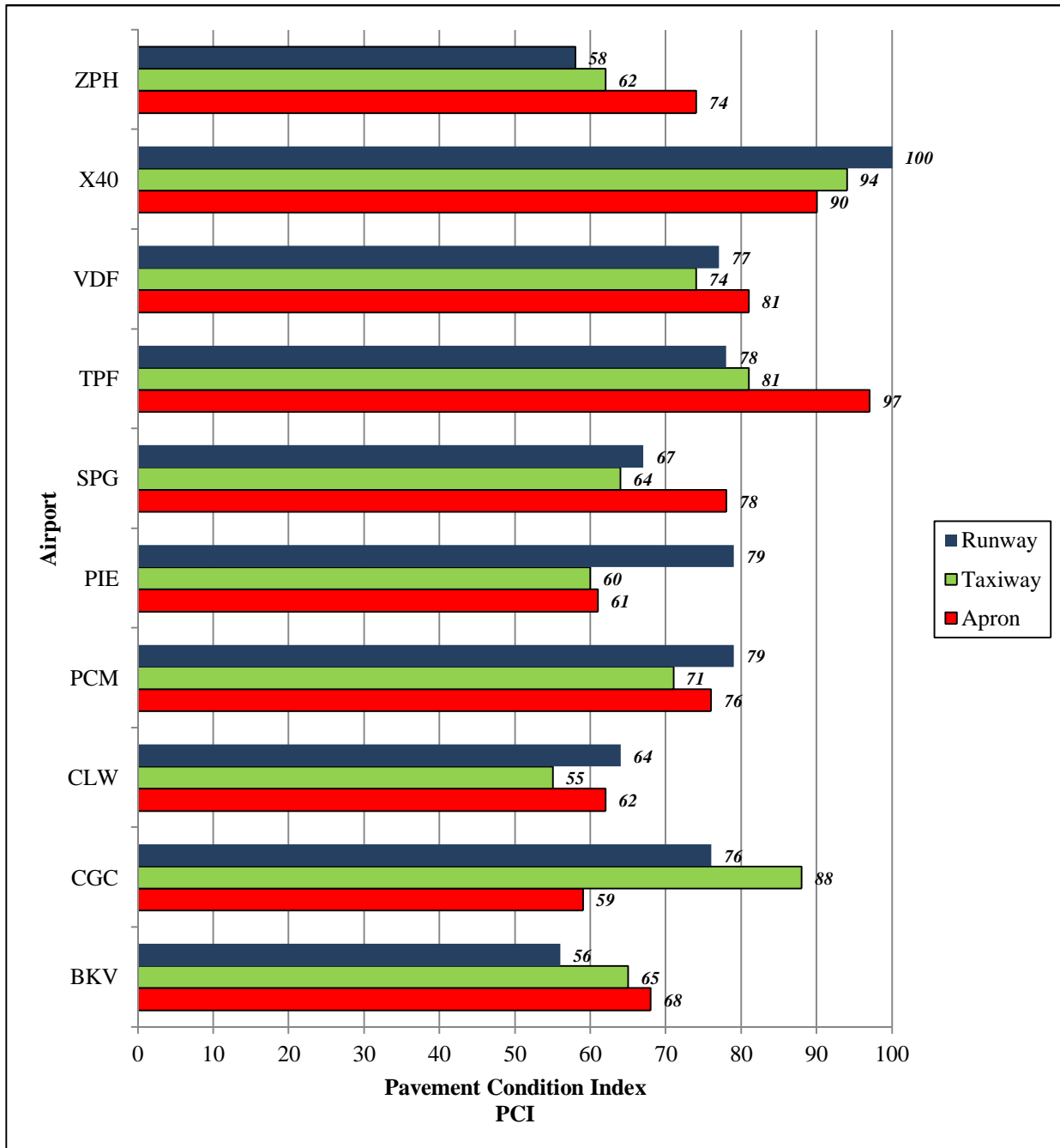
District 7’s overall PCI is at a 73, which corresponds to a ‘Satisfactory’ condition. **Table 3-2: Condition Summary by Airport** below represents the results of the PCI inspection at each airport within the District. Specific individual airport results are identified in each individual airport report.

**Table 3-2: Condition Summary by Airport**

FAA Identifier	Airport Name	Type	Runway PCI	Taxiway PCI	Apron PCI	Overall PCI	Overall Condition Rating
BKV	Hernando County Airport	GA	56	65	68	61	Fair
CGC	Crystal River Airport	GA	76	88	59	75	Satisfactory
CLW	Clearwater Airpark	RL	64	55	62	61	Fair
PCM	Plant City Airport	GA	79	71	76	76	Satisfactory
PIE	St. Petersburg-Clearwater International Airport	PR	79	60	61	70	Fair
SPG	Albert Whitted Airport	RL	67	64	78	70	Fair
TPF	Peter O Knight Airport	RL	78	81	97	82	Satisfactory
VDF	Tampa Executive Airport	RL	77	74	81	78	Satisfactory
X40	Inverness Airport	GA	100	94	90	96	Good
ZPH	Zephyrhills Municipal Airport	GA	58	62	74	63	Fair
<i>District 7 Overall =</i>			<b>73</b>	<b>71</b>	<b>75</b>	<b>73</b>	<b>Satisfactory</b>

Pavement use has an influence on the pavement condition of each facility. For example, the amount and type of distresses observed on a primary runway can vary from a maintenance apron based on frequency and variety of traffic loads experienced. **Figure 3-2: PCI by Pavement Use by Airport** graphically shows the PCI for each pavement use at each airport within the District.

**Figure 3-2: PCI by Pavement Use by Airport**



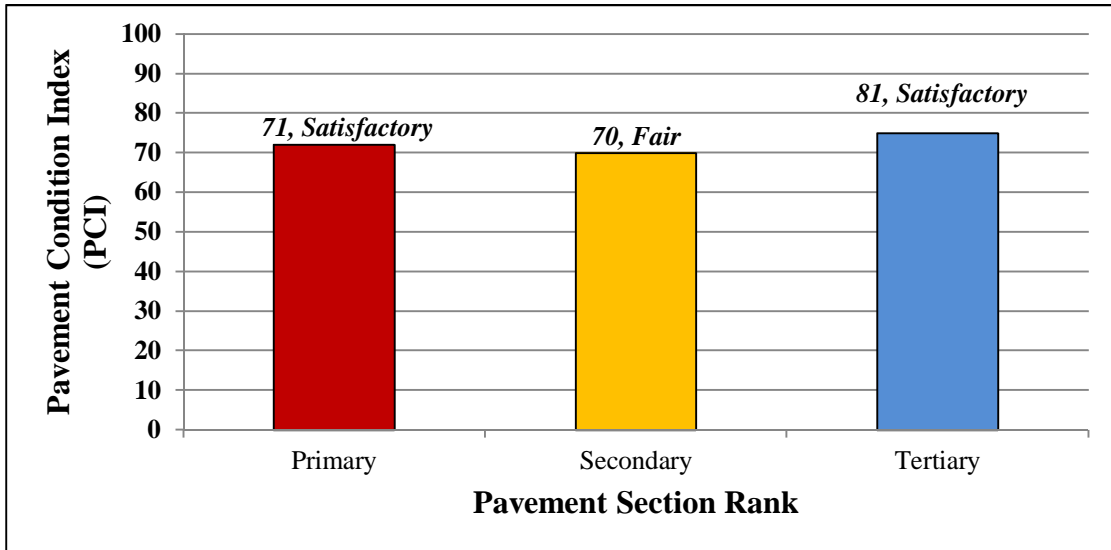
A summary of the area-weighted PCI for each pavement use for all pavements throughout the District are shown below in **Figure 3-3: PCI by Pavement Use**.

**Figure 3-3: PCI by Pavement Use**



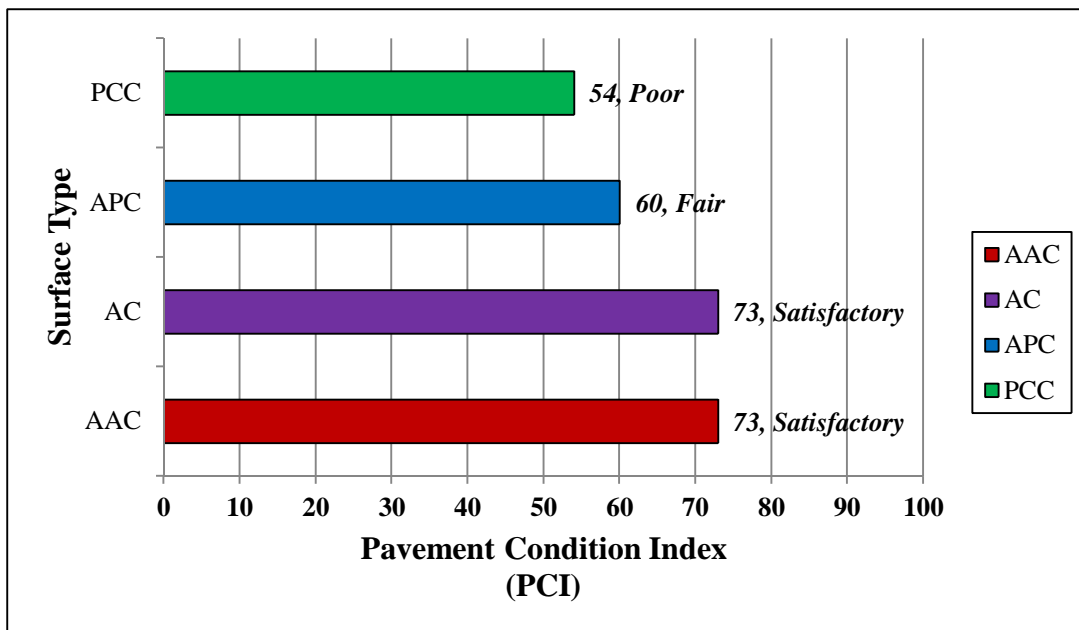
**Figure 3-4: PCI by Pavement Rank** below illustrates the area-weighted PCI within the District for Primary, Secondary and Tertiary pavements. The pavement facility ranking was established during the 1998/1999 survey and has been updated based on airport feedback. Primary pavements are considered to be of highest importance, examples include a primary runway and its parallel taxiway. Secondary pavements examples include a secondary crosswind runway and its parallel taxiway. Tertiary pavements examples can be active aprons such as a maintenance area or a non-active aircraft equipment storage apron.

**Figure 3-4: PCI by Pavement Rank**



Pavement facility surface types include four common types of pavement: Portland cement concrete (PCC), asphalt concrete overlaid on Portland cement concrete (APC), asphalt concrete (AC), and asphalt concrete overlay on asphalt concrete (AAC). **Figure 3-5: PCI by Surface Type** summarizes the PCI based on the various pavement types within the District. Whitetopping, a pavement type that consists of a thin concrete overlay on an asphalt concrete pavement does exist at several airports in the Florida Airport System. However, it does not exist at any airports in District 7.

**Figure 3-5: PCI by Surface Type**





#### 4. MICROPAYER ANALYSIS

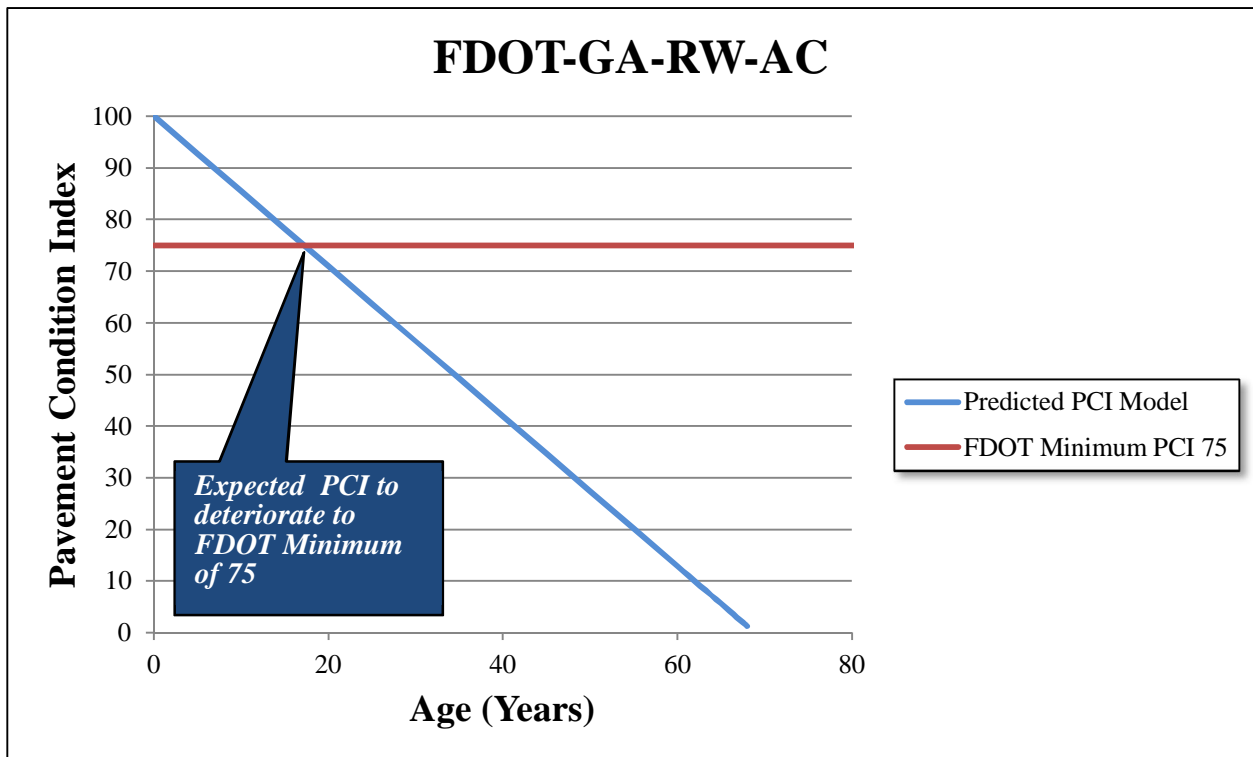
##### 4.1 Performance Modeling

A significant benefit of consolidating Florida’s Airport System’s pavement infrastructure within the FDOT SAPMP is the large amount of pavement condition data recorded using consistent methods of measurement. The historic pavement condition, or performance trend, has been compiled throughout the entire State system since the inception of the SAPMP and is used in the development of Performance Models. These models have been categorically arranged and developed to predict the future conditions of pavements based on Florida’s specific characteristics of climate, construction materials, and operations. Each model has been developed based on the following criteria:

- AIRPORT TYPE (Primary, Regional Reliever, or General Aviation)
- > FACILITY USE (Runway, Taxiway, or Apron)
- >>FACILITY SURFACE TYPE (AC, AAC, APC, or PCC)

The following figure, **Figure 4-1: Example Performance Model**, represents the condition data collected for all participating General Aviation airport runways constructed of AC pavement. The approximate deterioration observed for these pavement types, excluding outliers, is about 1.5 PCI points per year. Appropriate curves have been developed for the identified airport types, facility use, and pavement material.

**Figure 4-1: Example Performance Model: FDOT-GA-RW-AC**



The historic trends of pavement performance at Florida airport facilities for all performance models are consolidated within the program database. This information is utilized in the prediction of pavement performance based on the current PCI determined from the inspections that took place between 2011 and 2012. Major rehabilitation is planned based on the predicted PCI. The intent of this for both the individual airport and the District to be aware of anticipated rehabilitation work based on condition.

#### **4.2 Maintenance Policies**

FDOT utilizes the distress data collected to estimate maintenance work efforts for pavement area sections that would benefit from this work, specifically sections with a PCI ranging from 65 to 100. Examples of maintenance work include crack sealing, area patching, seal coat applications, and other routine maintenance efforts that typically can be performed in a short time frame by airport maintenance personnel. This maintenance, or repair-type activity, is intended to preserve and extend pavement condition above the critical condition.

**Table 4-1: Routine Maintenance Activities for Airfields** provides the list of the maintenance activities used in MicroPAVER to treat specific distress types based on the FDOT Distress Repair and Maintenance Manual. MicroPAVER applies repairs to these distresses and adjusts the PCI based on specific rules. These repairs are used only in the first year of an analysis.

**Table 4-1: Routine Maintenance Activities for Airfield Pavements**

Surface	Distress	Severity*	Work Type	MicroPaver Code	Work Unit
Asphalt Concrete Pavement	Alligator Crack	M, H	Patching - AC Deep	PA-AD	SqFt
	Bleeding	N/A	No Localized M&R	NONE	N/A
	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	N/A
	Raveling / Weathering	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	
Portland Cement Concrete Pavement	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	N/A
	Pumping	N/A	No Localized M&R	NONE	N/A
	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	N/A
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

### 4.3 Major Rehabilitation Planning

Major rehabilitation is warranted when the pavement condition decreases below a critical point such that the deterioration is extensive or the 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 the previous SAPMP update were used in this update for the development of the Major M&R plan for the airports. 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. Appendix B identifies the Cost by Condition and Critical PCI used in the development of major rehabilitation. **Table 4-2: M&R Activities by Condition** summarizes the M&R activities based on PCI values, as established by the FDOT.

**Table 4-2: M&R Activities by Condition**

	Activity	PCI Trigger
Maintenance	Crack Sealing and Full-Depth Patching	90
		80
Rehabilitation	Mill and Overlay (AC) or Concrete Pavement Restoration (PCC)	70
		60
		50
		40
	Reconstruction	30
		20

Special consideration is given to pavements that exhibit a significant amount of structural distresses while maintaining a PCI above the critical condition. The presence of structural distresses may be attributed to the greater fatigue load being applied to the pavement than the original design capacity. Therefore in certain situations, pavement sections may be triggered for work due to structural distresses found rather than solely based on PCI values determined.

**4.4 Budget Analysis Approach**

The scope of this update was to identify the overall work required for major rehabilitation using comparative costs based on the condition survey and predicted pavement performance. As mentioned previously, the criteria for major rehabilitation is based on the MicroPAVER set critical PCI of 65. From the previous SAPMP updates, FDOT has developed desired minimum PCI values based on the airport type and facility use, which are shown in **Table 4-3: FDOT Minimum Service Levels**. The rehabilitation activity identified is based on the critical PCI of 65.

**Table 4-3: FDOT Minimum Service Levels**

Use	FDOT Minimum PCI		
	GA	RL	PR
Runway	75	75	75
Taxiway	65	65	70
Apron	60	65	65

The development of major rehabilitation work expressed in the individual airport reports was based on an ‘unlimited budget’ or unconstrained budget scenario. This scenario was selected in particular as a means to identify project activity based on the condition need. This information is intended to be used as a planning tool to determine project selection based on airport priority, facility use, and traffic demand, among other factors.

The major rehabilitation costs of the projects identified are determined using a cost scale range based on the PCI of the pavement area sections. The cost study performed for pavement work such as mill and overlay and reconstruction identified varying costs based on airport type. The schedule of costs used for the major rehabilitation is referenced in Appendix B.

#### 4.5 Immediate Major Rehabilitation Need

Based on the condition surveys performed in 2011 and 2012, major rehabilitation has been identified for pavement area sections that resulted in a current condition below 65. The following table, **Table 4-4: Summary of Immediate Major Rehabilitation Needs**, identifies the immediate major rehabilitation need for each airport under the unlimited funding scenario. The breakdown of these costs on an individual airport basis can be found in Appendix C.

**Table 4-4: Summary of Immediate Major Rehabilitation Needs**

FAA Identifier	Airport Name	Type	Current Average PCI	Current Condition Rating	Immediate Major Rehabilitation Need Costs
BKV	Hernando County Airport	GA	61	Fair	\$13,410,221.27
CGC	Crystal River Airport	GA	75	Satisfactory	\$1,088,889.06
CLW	Clearwater Airpark	RL	61	Fair	\$2,368,362.60
PCM	Plant City Airport	GA	76	Satisfactory	\$548,643.63
PIE	St. Petersburg-Clearwater International Airport	PR	70	Fair	\$23,099,479.59
SPG	Albert Whitted Airport	RL	70	Fair	\$3,958,006.82
TPF	Peter O Knight Airport	RL	82	Satisfactory	\$1,463,567.19
VDF	Tampa Executive Airport	RL	78	Satisfactory	\$377,333.57
X40	Inverness Airport	GA	96	Good	\$115,044.90
ZPH	Zephyrhills Municipal Airport	GA	63	Fair	\$6,819,853.68
<i>District 7 Overall =</i>			<b>73</b>	<b>Satisfactory</b>	<b>\$53,249,402.31</b>

#### 4.6 10-Year Major Rehabilitation Program

Based on the condition surveys performed in 2011 and 2012 and the predicted pavement condition using the performance models, major rehabilitation has been identified for additional pavement area sections that are expected to reach a condition below 65 in the next 10 years. **Table 4-5: Summary of 10-Year Major Rehabilitation Costs by Airport** below identifies the major rehabilitation need for each airport over a program period of 10 years assuming an

unlimited budget. It includes the immediate needs identified in **Table 4-4: Summary of Immediate Major Rehabilitation Needs**.

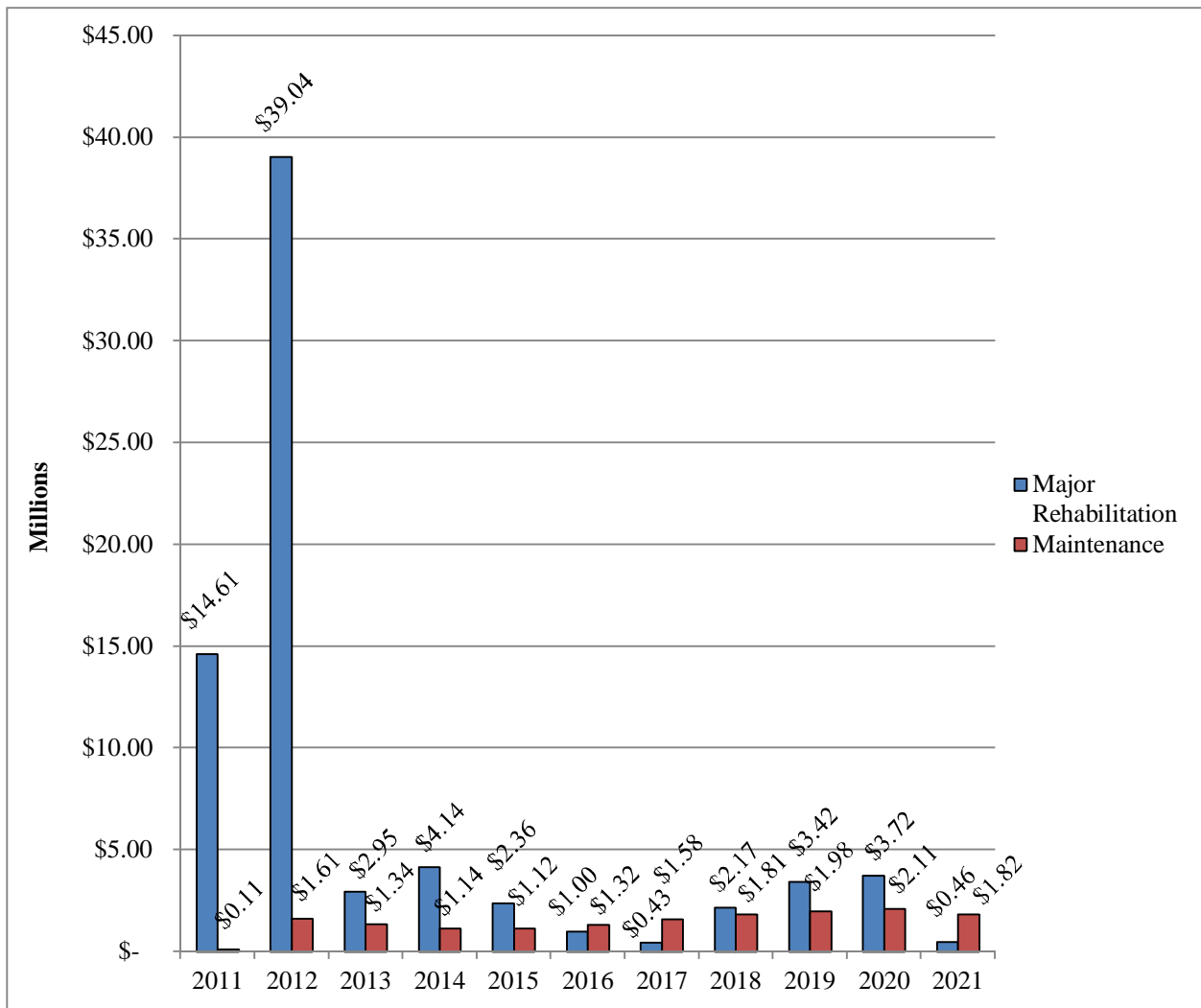
The breakdown of these costs on an individual airport basis can be found in Appendix C.

**Table 4-5: Summary of 10-Year Major Rehabilitation Costs by Airport**

FAA Identifier	Airport Name	Type	Current Average PCI	Current Condition Rating	10-Year Major Rehabilitation Need Cost
BKV	Hernando County Airport	GA	61	Fair	\$15,770,524.05
CGC	Crystal River Airport	GA	75	Satisfactory	\$2,446,992.19
CLW	Clearwater Airpark	RL	61	Fair	\$2,759,380.54
PCM	Plant City Airport	GA	76	Satisfactory	\$1,754,878.81
PIE	St. Petersburg-Clearwater International Airport	PR	70	Fair	\$29,968,870.02
SPG	Albert Whitted Airport	RL	70	Fair	\$5,836,278.54
TPF	Peter O Knight Airport	RL	82	Satisfactory	\$1,753,154.95
VDF	Tampa Executive Airport	RL	78	Satisfactory	\$3,979,822.99
X40	Inverness Airport	GA	96	Good	\$208,323.53
ZPH	Zephyrhills Municipal Airport	GA	63	Fair	\$9,830,310.21
<i>District 7 Overall =</i>			<b>73</b>	<b>Satisfactory</b>	<b>\$74,308,535.83</b>

**Figure 4-2: Summary of 10-Year Major Rehabilitation and Maintenance Costs by Plan Year** depicts the 10-year major rehabilitation and maintenance needs under an unlimited funding scenario for all airports in District 7 by plan year.

**Figure 4-2: Summary of 10-Year Major Rehabilitation and Maintenance Costs by Plan Year**



Tables 4-6 and 4-7 below list the major rehabilitation costs and maintenance needs costs, respectively, by airport for each plan year.

**Table 4-6: 10-Year Major Rehabilitation Costs by Airport by Year**

FAA Identifier	Type	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
BKV	GA	\$13,410,221.27	\$408,846.36	\$1,790,162.44	\$161,293.98	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	n/a	\$15,770,524.05
CGC	GA	\$1,088,889.05	\$0.00	\$75,461.56	\$0.00	\$0.00	\$0.00	\$0.00	\$311,128.59	\$27,140.04	\$944,372.95	n/a	\$2,446,992.19
CLW	RL	n/a	\$2,368,362.61	\$101,705.11	\$42,091.84	\$71,503.87	\$57,956.15	\$0.00	\$0.00	\$117,760.96	\$0.00	\$0.00	\$2,759,380.54
PCM	GA	n/a	\$548,643.63	\$0.00	\$12,387.58	\$18,911.33	\$385,270.95	\$0.00	\$0.00	\$0.00	\$776,468.06	\$13,197.26	\$1,754,878.81
PIE	PR	n/a	\$23,099,479.59	\$77,471.84	\$885,454.12	\$1,241,048.17	\$138,931.45	\$267,697.31	\$160,305.97	\$2,352,692.06	\$1,381,992.80	\$363,796.71	\$29,968,870.02
SPG	RL	n/a	\$3,958,006.82	\$0.00	\$780,265.58	\$401,836.77	\$213,060.61	\$99,389.75	\$0.00	\$23,711.75	\$290,381.30	\$69,625.96	\$5,836,278.54
TPF	RL	n/a	\$1,463,567.19	\$0.00	\$0.00	\$202,108.32	\$0.00	\$0.00	\$45,893.00	\$0.00	\$41,586.44	\$0.00	\$1,753,154.95
VDF	RL	n/a	\$377,333.57	\$402,976.58	\$322,551.15	\$291,306.87	\$120,805.92	\$58,530.03	\$1,579,157.92	\$795,130.49	\$16,322.26	\$15,708.20	\$3,979,822.99
X40	GA	\$115,044.90	\$0.00	\$0.00	\$93,278.63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	n/a	\$208,323.53
ZPH	GA	n/a	\$6,819,853.68	\$499,149.09	\$1,842,913.02	\$137,168.41	\$80,819.23	\$0.00	\$75,651.10	\$107,097.31	\$267,658.37	\$0.00	\$9,830,310.21
<b>Annual Total =</b>		<b>\$14,614,155.22</b>	<b>\$39,044,093.45</b>	<b>\$2,946,926.62</b>	<b>\$4,140,235.90</b>	<b>\$2,363,883.74</b>	<b>\$996,844.31</b>	<b>\$425,617.09</b>	<b>\$2,172,136.58</b>	<b>\$3,423,532.61</b>	<b>\$3,718,782.18</b>	<b>\$462,328.13</b>	<b>\$74,308,535.83</b>



**Table 4-7: 10-Year Maintenance Costs by Airport by Year**

FAA Identifier	Type	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
BKV	GA	\$57,648.29	\$172,805.68	\$22,531.72	\$13,889.79	\$18,962.66	\$87,692.52	\$139,721.75	\$248,493.59	\$368,229.75	\$472,361.01	n/a	\$1,602,336.76
CGC	GA	\$35,820.55	\$72,149.48	\$71,757.92	\$83,146.99	\$90,772.91	\$105,831.77	\$119,678.93	\$108,110.12	\$120,049.07	\$43,261.82	n/a	\$850,579.56
CLW	RL	n/a	\$44,233.43	\$22,654.29	\$21,296.66	\$18,804.50	\$25,093.09	\$37,554.88	\$54,298.28	\$57,215.87	\$74,177.96	\$90,753.73	\$446,082.69
PCM	GA	n/a	\$53,931.61	\$101,513.94	\$116,382.73	\$131,457.37	\$109,869.45	\$124,272.30	\$141,546.14	\$158,218.32	\$100,802.09	\$113,004.98	\$1,150,998.93
PIE	PR	n/a	\$214,432.81	\$345,716.28	\$340,587.53	\$302,522.80	\$350,644.57	\$413,331.36	\$518,174.15	\$462,125.22	\$493,533.82	\$580,665.57	\$4,021,734.11
SPG	RL	n/a	\$136,867.74	\$189,989.62	\$136,688.37	\$116,822.21	\$119,751.13	\$137,000.93	\$176,750.26	\$221,505.68	\$236,375.51	\$278,609.92	\$1,750,361.37
TPF	RL	n/a	\$30,221.30	\$29,293.28	\$40,592.44	\$38,010.02	\$68,101.26	\$97,644.60	\$125,537.30	\$157,363.00	\$186,440.10	\$215,174.78	\$988,378.08
VDF	RL	n/a	\$447,530.84	\$316,195.76	\$334,608.57	\$355,956.60	\$396,101.21	\$434,440.69	\$335,541.17	\$295,082.39	\$333,967.94	\$377,131.20	\$3,626,556.37
X40	GA	\$14,667.20	\$9,945.30	\$11,222.83	\$3,027.87	\$3,683.33	\$6,907.45	\$16,303.36	\$28,342.18	\$43,064.33	\$57,342.11	n/a	\$194,505.96
ZPH	GA	n/a	\$428,965.59	\$224,556.61	\$51,873.53	\$46,026.33	\$47,220.86	\$58,658.40	\$76,127.71	\$92,848.96	\$114,524.41	\$162,093.62	\$1,302,896.02
<b>Annual Total =</b>		<b>\$108,136.04</b>	<b>\$1,611,083.78</b>	<b>\$1,335,432.25</b>	<b>\$1,142,094.48</b>	<b>\$1,123,018.73</b>	<b>\$1,317,213.31</b>	<b>\$1,578,607.20</b>	<b>\$1,812,920.90</b>	<b>\$1,975,702.59</b>	<b>\$2,112,786.77</b>	<b>\$1,817,433.80</b>	<b>\$15,934,429.85</b>

## **5. CONCLUSION**

The FDOT Aviation Office has updated the Statewide Airfield Pavement Management Program through the pavement condition surveys performed at each participating airport and preparation of M&R planning information in compliance with the FAA Advisory Circular 150/5380-6B. MicroPAVER software was utilized to determine pavement conditions in accordance with ASTM D 5340-04 and develop maintenance and rehabilitation policies consistent with the FDOT Aviation Office policies. These policies were used to identify pavement rehabilitation projects based on the condition of the pavement over a 10-year period that are detailed in the individual airport reports and in Appendix C.

This study was focused on identifying current pavement condition and using a condition based tool to assist in the evaluation of pavement performance and identify and prioritize maintenance and rehabilitation needs and costs to maximize useful pavement life. The methods used to determine pavement condition for this program update, as with previous updates, have been performed in accordance with ASTM D 5340-04. The process is intended to provide airport sponsors with guidance in planning pavement maintenance and rehabilitation projects and funding agencies with planning tools for allocation of funds.

A detailed breakdown of pavement condition for each airport is included in Appendix C. As can be seen in this report and by comparing pavement conditions on an airport by airport basis, there is a wide variation in pavement conditions between airports. Recommended major rehabilitation recommendations for each airport are also included in Appendix C. High priority runway projects, based on pavement conditions below the FDOT recommended minimum service level PCI of 75, which the District should consider as immediate needs are listed below. These are not all the needs at each airport in the District and may not be the individual airport's priority, but should be considered in development of funding programs.

BKV – Hernando County Airport

- ➔ **Runway 3-21, full depth pavement reconstruction and PCC restoration \$5.98M**
- ➔ **Runway 9-27, PCC restoration \$2.63M**

CLW – Clearwater Airpark

- ➔ **Runway 16-34, pavement mill and overlay \$0.70M**

PIE – St. Petersburg-Clearwater International Airport

- ➔ **Runway 18R-36L, pavement mill and overlay \$0.53M**

SPG – Albert Whitted Airport

- ➔ **Runway 18-36, pavement mill and overlay \$1.18M**
- ➔ **Runway 7-25, pavement mill and overlay and full depth pavement reconstruction \$0.84M**

TPF – Peter O Knight Airport

- ➔ **Runway 4-22, pavement mill and overlay \$0.80M**

ZPH – Zephyrhills Municipal Airport

- **Runway 18-36, pavement mill and overlay and full depth pavement reconstruction \$1.45M**
- **Runway 4-22, pavement mill and overlay and full depth pavement reconstruction \$3.42M**

# **APPENDIX A**

## **GLOSSARY OF TERMS**

## **Glossary**

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 Program Manager (AO-PM) has review and approval authority for each program task of the SAPMP.

Branch - A Branch designates pavements that have common usage and functionality, such as an entire runway, taxiway, or apron.

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 (certified under Part 139 requirements).

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.

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.

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 program requirements described by the 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.

## **Glossary (Continued)**

Network Definition - A Network Definition is a Computer-Aided Drafting & Design (CADD) drawing which shows the airport pavement outline with Branch and Section boundaries. 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 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 a specific point 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, 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 System (PMS) - A Pavement Management System is a broad function that uses pavement evaluation and pavement performance trends as a basis for planning, programming, financing, and maintaining a pavement system.

Pavement Surface Type - The surface of pavement is identified as one of four types:

- AC – for asphalt surface pavements;
- PCC – for Portland Cement Concrete pavements;
- AAC – for asphalt surface pavements that have had an asphalt overlay at some point in their construction history;
- APC – for composite pavements, which consist of asphalt over Portland Cement Concrete pavement.
- PAC – for composite pavements, which consist of Portland Cement Concrete over asphalt pavement.

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.

## **Glossary (Continued)**

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  $5,000 \pm 2,000$  square feet for AC-surfaced pavements and  $20 \pm 8$  slabs for PCC-surfaced pavements.

Section - 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.

Statewide Airfield Pavement Management Program (SAPMP) – The Statewide Airfield Pavement Management Program is a program implemented in 1992 by the Florida Department of Transportation to plan, schedule, and design the maintenance and rehabilitation activities necessary for the airfield pavement on Florida’s public airports to allow the airports to operate efficiently, economically, and without excessive down time.

System Inventory - A System Inventory is a Computer-Aided Drafting & Design (CADD) drawing which shows the airport pavement outline and identifies airfield construction activities since the last inspection. The System Inventory for the airport is included in Appendix A.

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.

# **APPENDIX B**

## **M&R COST SCHEDULES AND CRITICAL PCIs**



**General Aviation Airports**

**M&R Activities and Unit Costs by Condition**

	<b>Activity</b>	<b>PCI Trigger</b>	<b>Cost/SqFt</b>
Maintenance	Crack Sealing and Full-Depth Patching	90	\$0.06
		80	\$0.24
Rehabilitation	Mill and Overlay (AC) or Concrete Pavement Restoration (PCC)	70	\$3.00
		60	\$3.42
		50	\$6.29
		40	\$6.29
		30	\$13.62
	Reconstruction	20	\$13.62

**Critical PCIs**

<b>Use</b>	<b>Critical PCI</b>
Runway	65
Taxiway	65
Apron	65

**FDOT Minimum Service Level PCIs**

<b>Minimum PCI</b>		
<b>Runway</b>	<b>Taxiway</b>	<b>Apron</b>
75	65	60

## Regional Reliever Airports

### M&R Activities and Unit Costs by Condition

	Activity	PCI Trigger	Cost/SqFt
Maintenance	Crack Sealing and Full-Depth Patching	90	\$0.10
		80	\$0.40
Rehabilitation	Mill and Overlay (AC) or Concrete Pavement Restoration (PCC)	70	\$0.90
		60	\$3.68
		50	\$7.61
		40	\$18.57
		30	\$18.57
	Reconstruction	20	\$18.57

### Critical PCIs

Use	Critical PCI
Runway	65
Taxiway	65
Apron	65

### FDOT Minimum Service Level PCIs

Minimum PCI		
Runway	Taxiway	Apron
75	65	65

**Primary Airports**

**M&R Activities and Unit Costs by Condition**

	<b>Activity</b>	<b>PCI Trigger</b>	<b>Cost/SqFt</b>
Maintenance	Crack Sealing and Full-Depth Patching	90	\$0.20
		80	\$0.80
Rehabilitation	Mill and Overlay (AC) or Concrete Pavement Restoration (PCC)	70	\$1.40
		60	\$4.23
		50	\$8.55
		40	\$8.55
		30	\$20.88
	Reconstruction	20	\$20.88

**Critical PCIs**

<b>Use</b>	<b>Critical PCI</b>
Runway	65
Taxiway	65
Apron	65

**FDOT Minimum Service Level PCIs**

<b>Minimum PCI</b>		
<b>Runway</b>	<b>Taxiway</b>	<b>Apron</b>
75	70	65

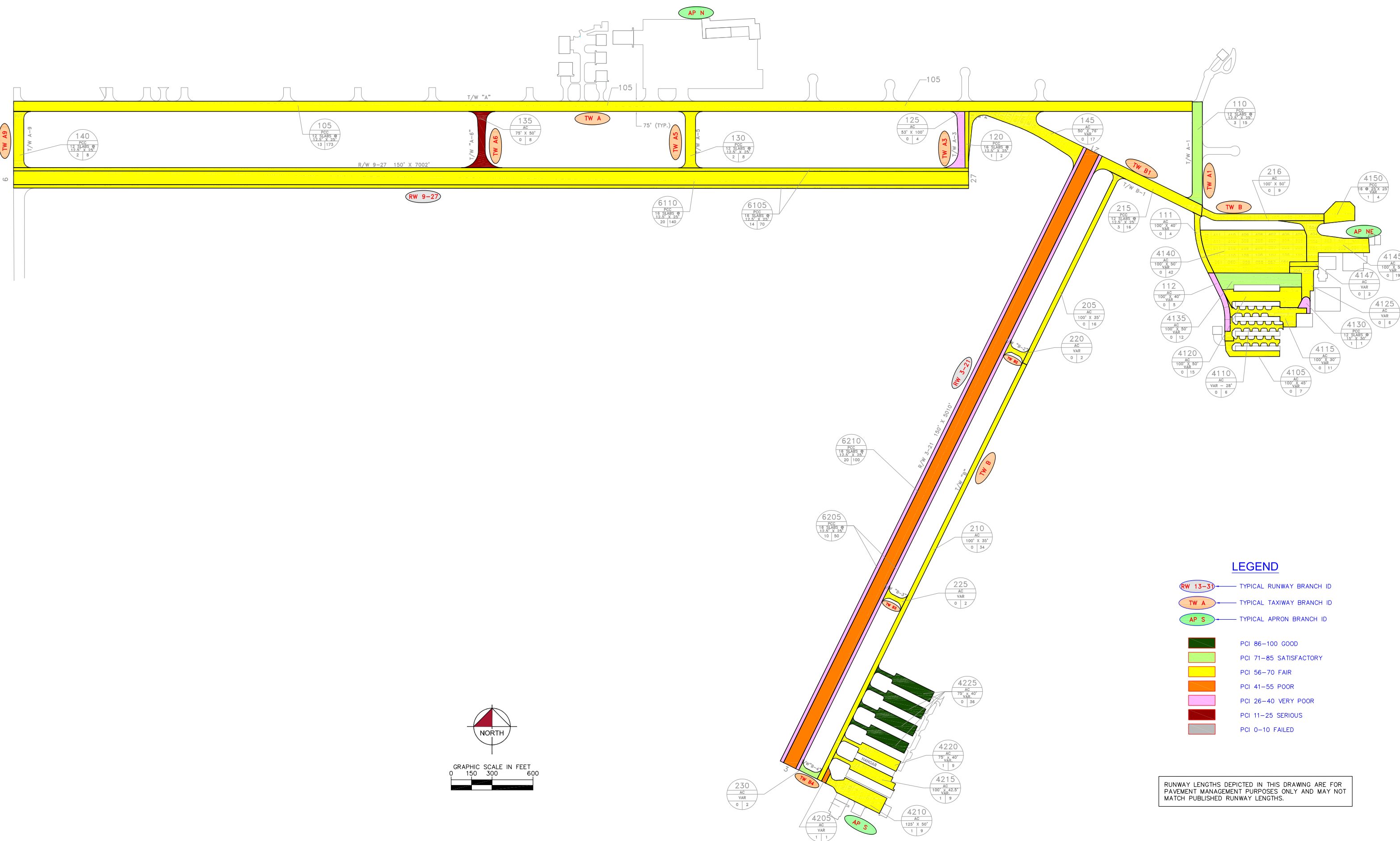
## Maintenance Unit Costs

### Maintenance Unit Costs for FDOT

<b>Code</b>	<b>Name</b>	<b>Cost</b>	<b>Unit</b>
GR-LL	Grinding (Localized for AC)	\$2.10	SqFt
PA-AL	Patching – AC Leveling	\$2.30	SqFt
PA-AS	Patching – AC Shallow	\$2.90	SqFt
PA-PF	Patching – PCC Full Depth	\$38.11	SqFt
PA-PP	Patching – PCC Partial Depth	\$19.06	SqFt
SL-PC	Slab Replacement – PCC	\$39.11	SqFt
CS-PC	Crack Sealing – PCC	\$4.24	Ft
UN-PC	Undersealing – PCC	\$3.40	Ft
CS-AC	Crack Sealing – AC	\$2.25	Ft
GR-PP	Grinding (Localized for PCC)	\$22.51	Ft
JS-LC	Joint Seal (Localized)	\$2.00	Ft
SH-LE	Shoulder Leveling	\$2.81	Ft
JS-SI	Joint Seal – Silicon	\$2.81	Ft
PA-AD	Patching – AC Deep	\$4.90	SqFt
OL-AT	Overlay – AC Thin	\$2.80	SqFt
SS-CT	Surface Seal – Coal Tar	\$0.40	SqFt
SS-FS	Surface Seal – Fog Seal	\$0.40	SqFt
SS-RE	Surface Seal – Rejuvenating	\$0.40	SqFt
ST-SB	Surface Treatment – Single Bitum.	\$0.30	SqFt
ST-SS	Surface Treatment – Slurry Seal	\$0.55	SqFt
ST-ST	Surface Treatment – Sand Tar	\$0.28	SqFt
MI-AC	Microsurfacing - AC	\$0.65	SqFt

# **APPENDIX C**

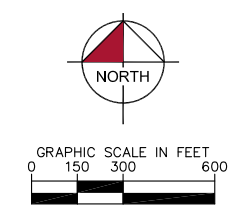
## **AIRPORT CONDITION MAPS AND MAJOR REHABILITATION PROJECT TABLES**



**LEGEND**

- RW 13-31 TYPICAL RUNWAY BRANCH ID
- TW A TYPICAL TAXIWAY BRANCH ID
- AP S TYPICAL APRON BRANCH ID
- PCI 86-100 GOOD
- PCI 71-85 SATISFACTORY
- PCI 56-70 FAIR
- PCI 41-55 POOR
- PCI 26-40 VERY POOR
- PCI 11-25 SERIOUS
- PCI 0-10 FAILED

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



NUMBER	DATE	REVISIONS
DESIGNED:	FL	DRAWN: GB
CHECKED:		DATE: MAY 2011



2011 CONDITION MAP  
**HERNANDO COUNTY AIRPORT**  
**HERNANDO COUNTY, FLORIDA**  
 FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER  
**BKV**  
 FDOT DISTRICT  
**7**

**Hernando County Airport (BKV)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2011	North East Apron	4105	AC	33,175	\$122,979.80	59	Mill and Overlay	100
2011	North East Apron	4110	AC	20,074	\$91,698.07	56	Mill and Overlay	100
2011	North East Apron	4115	AC	37,347	\$202,756.91	53	Mill and Overlay	100
2011	North East Apron	4120	AC	84,500	\$385,996.16	56	Mill and Overlay	100
2011	North East Apron	4125	AAC	23,918	\$68,740.38	62	Mill and Overlay	100
2011	North East Apron	4130	PCC	5,100	\$69,462.02	25	Reconstruction	100
2011	North East Apron	4140	AC	204,500	\$699,390.49	60	Mill and Overlay	100
2011	North East Apron	4145	AC	72,830	\$416,296.33	52	Mill and Overlay	100
2011	North East Apron	4147	AAC	14,000	\$55,916.03	58	Mill and Overlay	100
2011	North East Apron	4150	PCC	28,908	\$90,973.54	61	PCC Restoration	100
2011	South Apron	4205	AC	3,416	\$19,525.86	52	Mill and Overlay	100
2011	South Apron	4215	AC	26,800	\$99,347.66	59	Mill and Overlay	100
2011	Runway 3-21	6205	PCC	250,000	\$3,405,001.10	25	Reconstruction	100
2011	Runway 3-21	6210	PCC	500,000	\$2,571,000.66	54	PCC Restoration	100
2011	Runway 9-27	6105	PCC	350,000	\$814,800.51	64	PCC Restoration	100
2011	Runway 9-27	6110	PCC	700,000	\$1,820,701.12	63	PCC Restoration	100
2011	Taxiway Alpha	111	AAC	18,032	\$77,195.03	57	Mill and Overlay	100
2011	Taxiway Alpha	112	AC	18,084	\$246,304.16	26	Reconstruction	100
2011	Taxiway Alpha	120	PCC	10,325	\$32,492.80	61	PCC Restoration	100
2011	Taxiway Alpha	125	AC	21,450	\$276,426.23	31	Reconstruction	100
2011	Taxiway Alpha	135	AC	22,160	\$301,819.30	13	Reconstruction	100

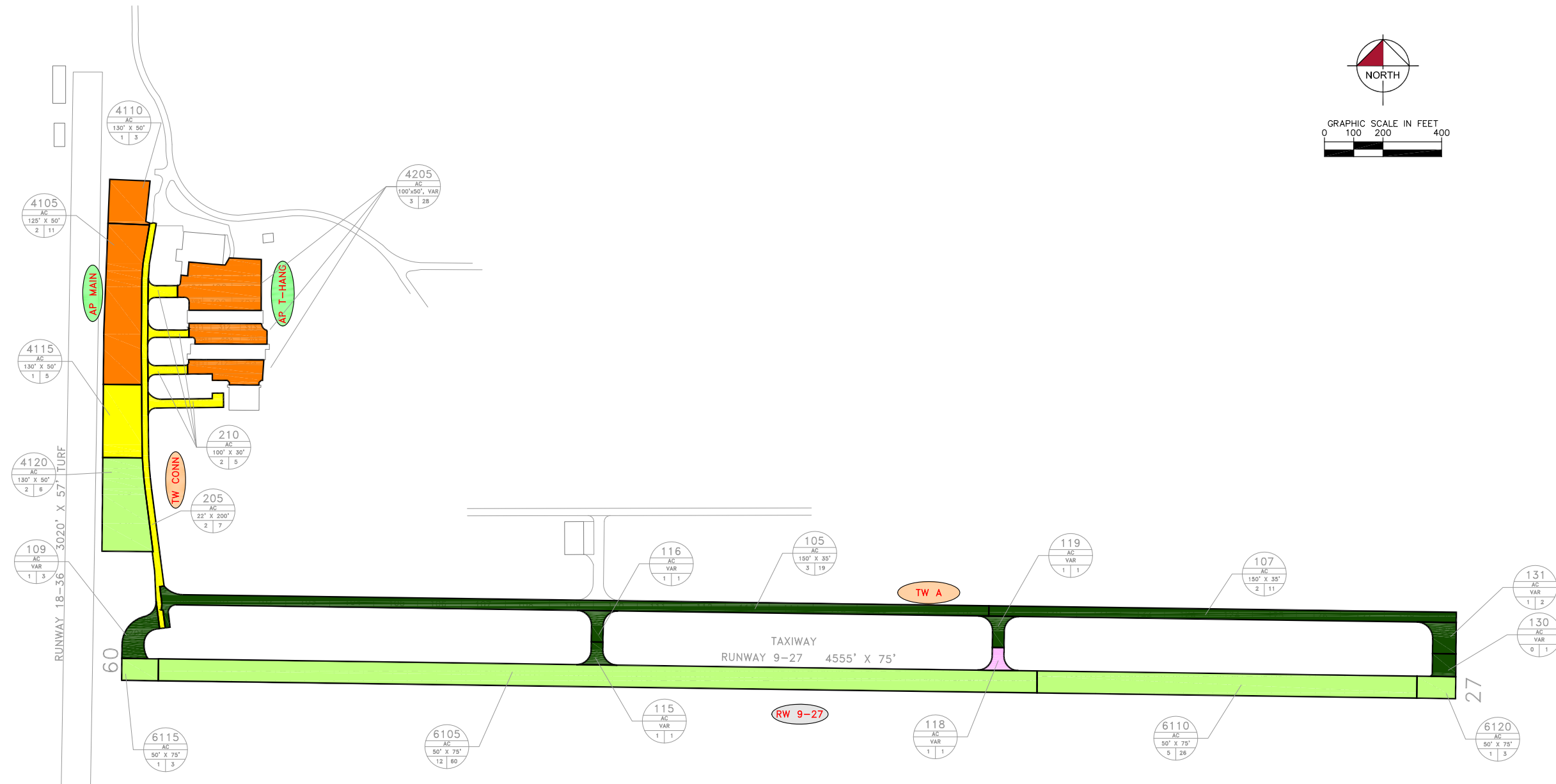
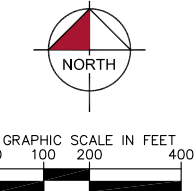
**Hernando County Airport (BKV)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario (Continued)**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2011	Taxiway Alpha	140	PCC	33,000	\$131,802.07	58	PCC Restoration	100
2011	Taxiway Alpha	145	AC	69,000	\$275,586.15	58	Mill and Overlay	100
2011	Taxiway Bravo	205	AC	55,829	\$145,211.32	63	Mill and Overlay	100
2011	Taxiway Bravo	210	AC	118,125	\$471,791.50	58	Mill and Overlay	100
2011	Taxiway Bravo	215	PCC	60,750	\$158,010.85	63	PCC Restoration	100
2011	Taxiway Bravo	216	AC	44,430	\$253,961.91	52	Mill and Overlay	100
2011	Taxiway Bravo	220	AC	8,758	\$25,170.51	62	Mill and Overlay	100
2011	Taxiway Bravo	225	AC	8,758	\$27,561.45	61	Mill and Overlay	100
2011	Taxiway Bravo	230	AC	8,315	\$52,301.35	49	Mill and Overlay	100
2012	North East Apron	4135	AC	58,515	\$140,309.70	64	Mill and Overlay	100
2012	South Apron	4210	AC	50,220	\$120,419.60	64	Mill and Overlay	100
2012	South Apron	4220	AC	29,238	\$70,108.09	64	Mill and Overlay	100
2012	Taxiway Alpha	130	PCC	32,533	\$78,008.98	64	PCC Restoration	100
2013	Taxiway Alpha	105	PCC	648,750	\$1,790,162.44	63	PCC Restoration	100
2014	Taxiway Alpha	110	PCC	56,750	\$161,293.98	63	PCC Restoration	100
<b>Total</b>					<b>\$15,770,524.06</b>	<b>54</b>		<b>100</b>

\* Costs are adjusted for inflation.





**LEGEND**

- RW 13-31 TYPICAL RUNWAY BRANCH ID
- TW A TYPICAL TAXIWAY BRANCH ID
- AP S TYPICAL APRON BRANCH ID
- PCI 86-100 GOOD
- PCI 71-85 SATISFACTORY
- PCI 56-70 FAIR
- PCI 41-55 POOR
- PCI 26-40 VERY POOR
- PCI 11-25 SERIOUS
- PCI 0-10 FAILED

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

NUMBER	DATE	REVISIONS
DESIGNED:	FL	DRAWN: BB
CHECKED:		DATE: MAY 2011



2011 CONDITION MAP  
**CRYSTAL RIVER AIRPORT**  
**CITRUS COUNTY, FLORIDA**  
 FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

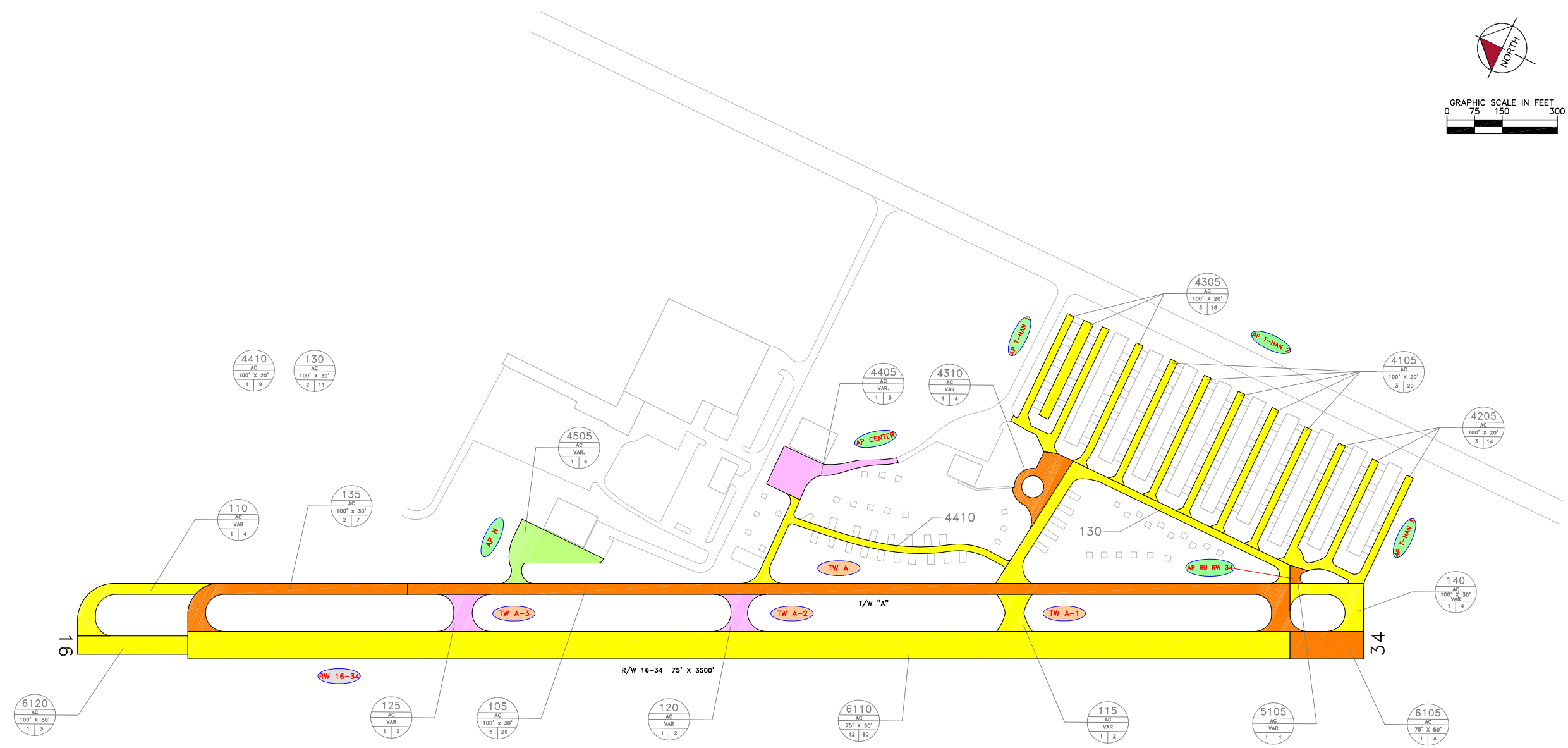
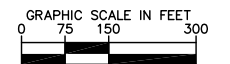
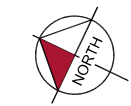
IDENTIFIER  
**CGC**  
 FDOT DISTRICT  
**7**

**Crystal River Airport (CGC)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2011	Main Apron	4105	AAC	70,275	\$341,185.23	55	Mill and Overlay	100
2011	Main Apron	4110	AC	20,051	\$126,120.80	47	Mill and Overlay	100
2011	Main Apron	4115	AC	33,130	\$77,126.69	64	Mill and Overlay	100
2011	T-Hangars Apron	4205	AC	79,853	\$410,604.23	54	Mill and Overlay	100
2011	Connector Taxiway to AP	210	AC	21,510	\$98,257.72	56	Mill and Overlay	100
2011	Parallel Taxiway to RW 9-27	118	AC	4,193	\$35,594.39	37	Reconstruction	100
2013	Connector Taxiway to AP	205	AC	30,554	\$75,461.56	64	Mill and Overlay	100
2018	Runway 9-27	6110	AC	97,261	\$311,128.59	63	Mill and Overlay	100
2019	Parallel Taxiway to RW 9-27	130	AC	9,203	\$27,140.04	64	Mill and Overlay	100
2020	Main Apron	4120	AC	48,929	\$148,622.52	64	Mill and Overlay	100
2020	Runway 9-27	6105	AC	225,605	\$765,639.56	63	Mill and Overlay	100
2020	Runway 9-27	6120	AC	9,913	\$30,110.88	64	Mill and Overlay	100
<b>Total</b>					<b>\$2,446,992.21</b>	<b>58</b>		<b>100</b>

\* Costs are adjusted for inflation.



**LEGEND**

- RW 13-3 TYPICAL RUNWAY BRANCH ID
- TW A TYPICAL TAXIWAY BRANCH ID
- AP S TYPICAL APRON BRANCH ID
- PCI 86-100 GOOD
- PCI 71-85 SATISFACTORY
- PCI 56-70 FAIR
- PCI 41-55 POOR
- PCI 26-40 VERY POOR
- PCI 11-25 SERIOUS
- PCI 0-10 FAILED

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

NUMBER	DATE	REVISIONS
DESIGNED: BAL	DRAWN: ALB	CHECKED: EVV
DATE: _____		

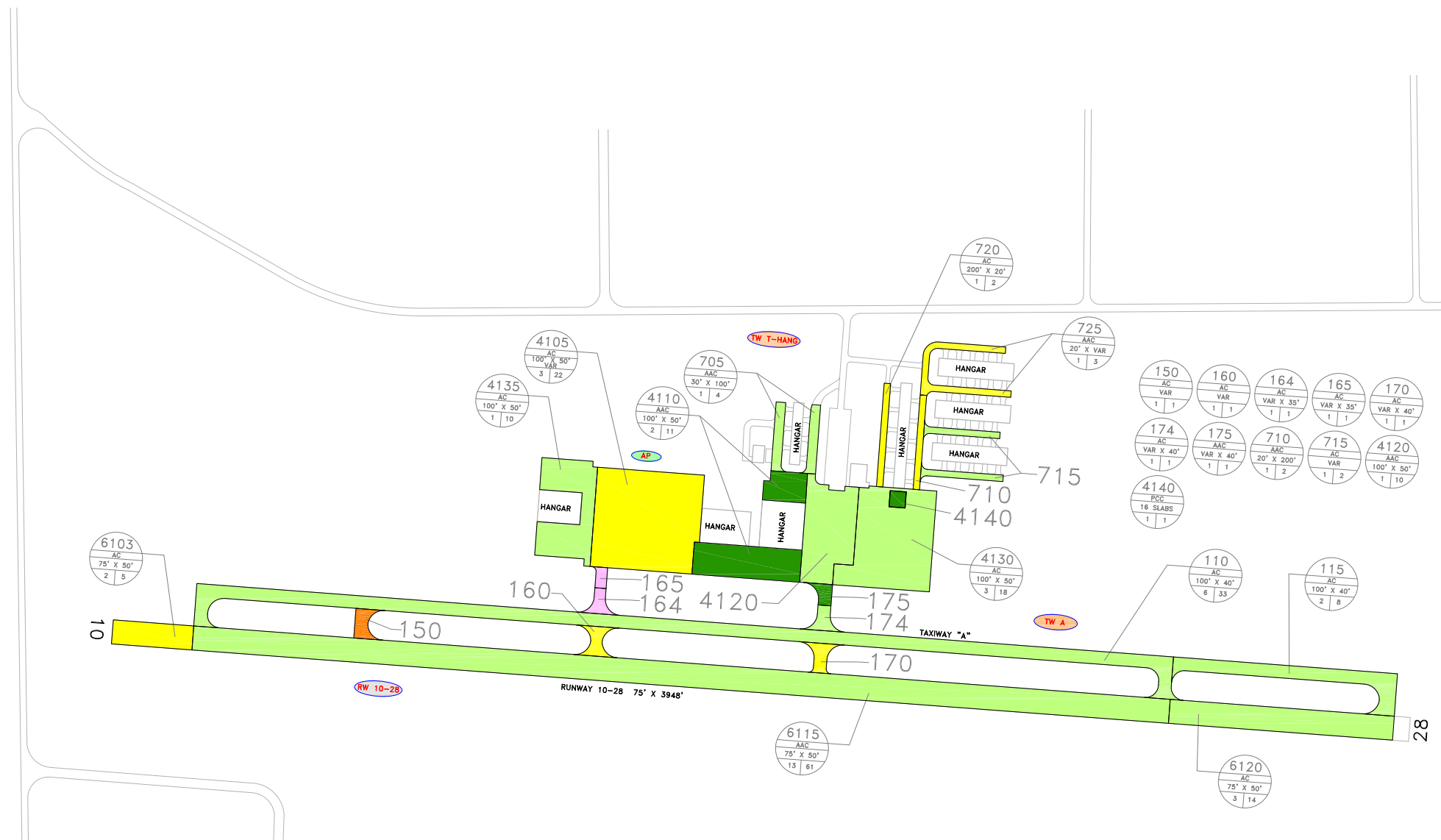
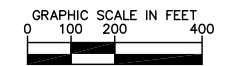


**Clearwater Airpark (CLW)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2012	Center Apron	4405	AC	16,498	\$315,559.83	29	Reconstruction	100
2012	Center Apron	4410	AC	17,175	\$79,003.26	58	Mill and Overlay	100
2012	Run-Up Apron at RW 34	5105	AC	1,446	\$11,333.40	44	Mill and Overlay	100
2012	AP at T-Hangars 1	4305	AC	32,026	\$121,391.79	60	Mill and Overlay	100
2012	AP at T-Hangars 1	4310	AC	12,550	\$98,368.05	44	Mill and Overlay	100
2012	Runway 16-34	6105	AC	15,000	\$105,430.85	52	Mill and Overlay	100
2012	Runway 16-34	6110	AAC	224,775	\$594,538.82	64	Mill and Overlay	100
2012	Taxiway A	105	AAC	78,329	\$487,137.45	54	Mill and Overlay	100
2012	Taxiway A	110	AC	14,667	\$67,469.17	58	Mill and Overlay	100
2012	Taxiway A	130	AC	27,298	\$125,570.20	58	Mill and Overlay	100
2012	Taxiway A	135	AC	22,265	\$156,493.33	52	Mill and Overlay	100
2012	Taxiway A-2	120	AAC	6,567	\$88,535.23	35	Reconstruction	100
2012	Taxiway A-3	125	AAC	6,967	\$117,531.22	32	Reconstruction	100
2013	AP at T-Hangars 2	4105	AC	37,331	\$101,705.11	64	Mill and Overlay	100
2014	Runway 16-34	6120	AC	15,000	\$42,091.84	64	Mill and Overlay	100
2015	AP at T-Hangars 3	4205	AC	24,739	\$71,503.87	64	Mill and Overlay	100
2016	Taxiway A	140	AC	12,540	\$37,332.01	64	Mill and Overlay	100
2016	Taxiway A-1	115	AAC	6,928	\$20,624.14	64	Mill and Overlay	100
2019	North Apron	4505	AC	36,200	\$117,760.96	64	Mill and Overlay	100
<b>Total</b>					<b>\$2,759,380.53</b>	<b>54</b>		<b>100</b>

\* Costs are adjusted for inflation.



**LEGEND**

- RW 13-31 TYPICAL RUNWAY BRANCH ID
- TW A TYPICAL TAXIWAY BRANCH ID
- AP S TYPICAL APRON BRANCH ID
- PCI 86-100 GOOD
- PCI 71-85 SATISFACTORY
- PCI 56-70 FAIR
- PCI 41-55 POOR
- PCI 26-40 VERY POOR
- PCI 11-25 SERIOUS
- PCI 0-10 FAILED

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

NUMBER	DATE	REVISIONS
DESIGNED: BAL	DRAWN: BAL	CHECKED: EVV
DATE:		

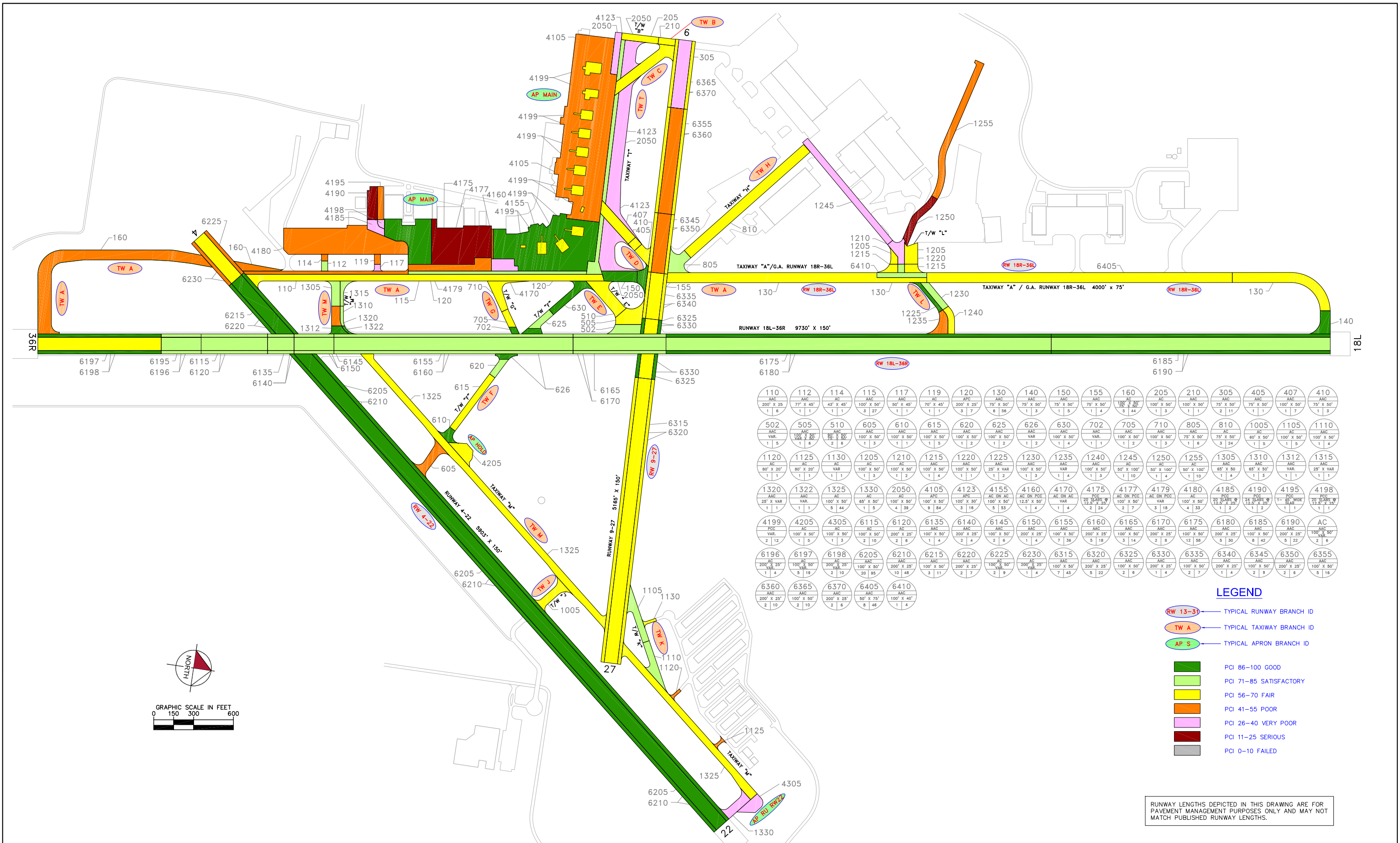


**Plant City Airport (PCM)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2012	Apron	4105	AC	101,892	\$301,622.32	62	Mill and Overlay	100
2012	Runway 10-28	6103	AC	18,856	\$77,569.53	58	Mill and Overlay	100
2012	Taxiway A	150	AC	4,773	\$28,098.94	52	Mill and Overlay	100
2012	Taxiway A	160	AC	5,383	\$14,420.72	63	Mill and Overlay	100
2012	Taxiway A	164	AC	3,873	\$48,484.76	32	Reconstruction	100
2012	Taxiway A	165	AC	2,323	\$20,314.09	37	Reconstruction	100
2012	T-Hangars Taxiway	710	AAC	5,895	\$19,108.55	61	Mill and Overlay	100
2012	T-Hangars Taxiway	725	AAC	13,183	\$39,024.72	62	Mill and Overlay	100
2014	Taxiway A	170	AC	4,870	\$12,387.58	64	Mill and Overlay	100
2015	T-Hangars Taxiway	720	AC	6,460	\$18,911.33	63	Mill and Overlay	100
2016	Taxiway A	110	AC	131,334	\$354,444.06	64	Mill and Overlay	100
2016	Taxiway A	715	AC	10,224	\$30,826.89	63	Mill and Overlay	100
2020	Runway 10-28	6115	AAC	228,796	\$776,468.06	63	Mill and Overlay	100
2021	Taxiway A	174	AC	4,218	\$13,197.26	64	Mill and Overlay	100
<b>Total</b>					<b>\$1,754,878.81</b>	<b>58</b>		<b>100</b>

\* Costs are adjusted for inflation.



110	112	114	115	117	119	120	130	140	150	155	160	205	210	305	405	407	410
200' X 25'	77' X 45'	43' X 45'	100' X 50'	50' X 45'	70' X 45'	200' X 25'	75' X 50'	75' X 50'	75' X 50'	75' X 50'	100' X 50'	100' X 50'	100' X 50'	100' X 50'	100' X 50'	100' X 50'	100' X 50'
1 6	1 1	1 1	3 27	1 1	1 1	3 7	6 56	1 3	1 5	1 4	5 44	1 3	1 1	2 31	1 1	1 7	1 3
502	505	510	605	610	615	620	625	626	630	702	705	710	805	810	1005	1105	1110
VAR.	100' X 50'	90' X 50'	100' X 50'	100' X 50'	100' X 50'	100' X 50'	100' X 50'	VAR.	100' X 50'	VAR.	100' X 50'	100' X 50'	75' X 50'	75' X 50'	60' X 50'	100' X 50'	100' X 50'
1 5	2 8	2 8	1 3	1 1	1 5	1 2	1 2	1 2	1 2	1 1	1 2	1 3	1 8	3 24	1 5	1 5	1 4
1120	1125	1130	1205	1210	1215	1220	1225	1230	1235	1240	1245	1250	1255	1305	1310	1312	1315
80' X 20'	80' X 20'	VAR.	100' X 50'	100' X 50'	100' X 50'	100' X 50'	25' X VAR.	100' X 50'	VAR.	100' X 50'	50' X 100'	50' X 100'	50' X 100'	65' X 50'	65' X 50'	VAR.	25' X VAR.
1 1	1 1	1 1	1 3	1 2	1 4	1 1	1 2	1 3	1 3	1 3	1 10	1 4	1 10	1 4	1 3	1 1	1 1
1320	1322	1325	1330	2050	4105	4123	4155	4160	4170	4175	4177	4179	4180	4185	4190	4195	4198
25' X VAR.	VAR.	100' X 50'	65' X 50'	100' X 50'	100' X 50'	100' X 30'	AS ON POS.	AS ON POS.	AC ON AC	AC ON AC	AC ON POS.	AC ON POS.	AC ON POS.	25' SLABS W 12.2' X 25'	24' SLABS W 12.2' X 25'	1'-6" WIDE	25' SLABS W 12.2' X 25'
1 1	1 1	5 44	1 5	4 38	8 84	3 16	5 53	1 4	1 4	2 24	2 7	4 33	1 2	1 2	1 2	1 1	1 1
4199	4205	4305	6115	6120	6135	6140	6145	6150	6155	6160	6165	6170	6175	6180	6185	6190	AC
PSD	100' X 50'	100' X 50'	100' X 50'	200' X 25'	100' X 50'	200' X 25'	100' X 50'	100' X 50'	100' X 50'	200' X 25'	100' X 50'	100' X 50'	100' X 50'	100' X 50'	200' X 25'	100' X 50'	100' X 50'
2 12	1 5	1 3	2 10	2 6	1 4	2 4	2 6	1 4	7 36	5 18	3 14	2 8	12 58	5 30	8 42	5 22	2 6
6196	6197	6198	6205	6210	6215	6220	6225	6230	6315	6320	6325	6330	6335	6340	6345	6350	6355
AC	100' X 50'	100' X 50'	100' X 50'	200' X 25'	100' X 50'	100' X 50'	100' X 50'	200' X 25'	100' X 50'	200' X 25'	100' X 50'	100' X 50'	100' X 50'	200' X 25'	100' X 50'	200' X 25'	100' X 50'
1 4	2 18	2 10	20 95	10 48	3 11	2 7	2 9	1 4	7 43	2 22	2 8	1 4	2 7	1 4	2 19	2 6	5 16
6360	6365	6370	6405	6410													
200' X 25'	100' X 50'	200' X 25'	100' X 50'	100' X 40'													
2 10	2 10	2 6	8 48	1 4													

- LEGEND**
- RW 13-31 TYPICAL RUNWAY BRANCH ID
  - TW A TYPICAL TAXIWAY BRANCH ID
  - AP S TYPICAL APRON BRANCH ID
  - PCI 86-100 GOOD
  - PCI 71-85 SATISFACTORY
  - PCI 56-70 FAIR
  - PCI 41-55 POOR
  - PCI 26-40 VERY POOR
  - PCI 11-25 SERIOUS
  - PCI 0-10 FAILED

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

NUMBER	DATE	REVISIONS
DESIGNED:	ALB	DRAWN:
CHECKED:	ALB	ELT
DATE:		



2012 CONDITION MAP  
**ST. PETERSBURG-CLEARWATER INTERNATIONAL**  
 ST. PETERSBURG/CLEARWATER, PINELLAS, FLORIDA  
 FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER  
**PIE**  
 FOOTPRINT  
**7**

**St. Petersburg-Clearwater International Airport (PIE)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2012	Holding Apron	4205	AC	15,819	\$66,915.92	60	Mill and Overlay	100
2012	Main Apron	4105	APC	403,434	\$3,275,074.74	51	Mill and Overlay	100
2012	Main Apron	4160	APC	2,825	\$24,153.74	50	Mill and Overlay	100
2012	Main Apron	4170	AAC	16,727	\$349,250.91	30	Reconstruction	100
2012	Main Apron	4175	PCC	123,408	\$2,576,765.33	18	Reconstruction	100
2012	Main Apron	4177	APC	37,700	\$322,334.89	45	Mill and Overlay	100
2012	Main Apron	4180	AC	166,642	\$1,208,822.26	53	Mill and Overlay	100
2012	Main Apron	4185	PCC	9,797	\$204,560.89	26	Reconstruction	100
2012	Main Apron	4190	PCC	18,650	\$389,411.91	21	Reconstruction	100
2012	Main Apron	4195	PCC	11,250	\$96,187.47	42	PCC Restoration	100
2012	Main Apron	4198	PCC	11,250	\$234,899.94	29	Reconstruction	100
2012	Main Apron	4199	PCC	74,320	\$272,308.28	62	PCC Restoration	100
2012	Run-Up Apron at RW 22	4305	AC	14,459	\$248,411.42	33	Reconstruction	100
2012	Runway 18R-36L	6405	AAC	172,500	\$534,404.78	64	Mill and Overlay	100
2012	Runway 4-22	6225	AC	42,500	\$167,747.36	61	Mill and Overlay	100
2012	Runway 4-22	6230	AC	21,250	\$181,687.44	44	Mill and Overlay	100
2012	Runway 9-27	6315	AAC	215,945	\$852,334.20	61	Mill and Overlay	100
2012	Runway 9-27	6320	AAC	107,972	\$643,299.53	56	Mill and Overlay	100
2012	Runway 9-27	6325	AAC	29,892	\$191,012.78	55	Mill and Overlay	100
2012	Runway 9-27	6335	AAC	35,000	\$193,409.88	57	Mill and Overlay	100
2012	Runway 9-27	6340	AAC	17,500	\$104,264.94	56	Mill and Overlay	100



**St. Petersburg-Clearwater International Airport (PIE)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario (Continued)**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2012	Runway 9-27	6345	AAC	45,000	\$384,749.87	47	Mill and Overlay	100
2012	Runway 9-27	6350	AAC	22,500	\$143,774.92	55	Mill and Overlay	100
2012	Runway 9-27	6355	AAC	80,000	\$683,999.77	47	Mill and Overlay	100
2012	Runway 9-27	6365	AAC	51,500	\$884,821.25	33	Reconstruction	100
2012	Runway 9-27	6370	AAC	25,750	\$131,170.41	58	Mill and Overlay	100
2012	Taxiway Alpha	110	AAC	31,051	\$211,831.20	54	Mill and Overlay	100
2012	Taxiway Alpha	114	AC	2,361	\$20,184.23	40	Mill and Overlay	100
2012	Taxiway Alpha	117	AAC	2,422	\$29,663.15	37	Reconstruction	100
2012	Taxiway Alpha	119	AC	3,424	\$23,357.56	54	Mill and Overlay	100
2012	Taxiway Alpha	160	AC	165,437	\$1,200,077.64	53	Mill and Overlay	100
2012	Taxiway Charlie	305	AAC	42,706	\$156,473.97	62	Mill and Overlay	100
2012	Taxiway Delta	410	AAC	9,971	\$36,533.20	62	Mill and Overlay	100
2012	Taxiway Echo	505	AAC	22,927	\$90,491.21	61	Mill and Overlay	100
2012	Taxiway Foxtrot	605	AAC	18,703	\$127,589.42	54	Mill and Overlay	100
2012	Taxiway Golf	705	AAC	6,915	\$44,186.63	55	Mill and Overlay	100
2012	Taxiway Hotel	810	AC	90,000	\$536,219.68	56	Mill and Overlay	100
2012	Taxiway Kilo	1120	AC	1,969	\$16,837.68	42	Mill and Overlay	100
2012	Taxiway Kilo	1125	AC	2,137	\$18,267.07	47	Mill and Overlay	100
2012	Taxiway Kilo	1130	AC	2,268	\$10,574.53	59	Mill and Overlay	100
2012	Taxiway Lima	1205	AC	19,403	\$98,840.60	58	Mill and Overlay	100
2012	Taxiway Lima	1210	AC	13,858	\$255,177.11	32	Reconstruction	100
2012	Taxiway Lima	1215	AAC	12,990	\$43,919.20	63	Mill and Overlay	100

**St. Petersburg-Clearwater International Airport (PIE)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario (Continued)**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2012	Taxiway Lima	1235	AAC	13,428	\$103,209.11	52	Mill and Overlay	100
2012	Taxiway Lima	1245	AAC	50,000	\$982,349.78	31	Reconstruction	100
2012	Taxiway Lima	1250	AC	20,556	\$429,218.58	15	Reconstruction	100
2012	Taxiway Lima	1255	AC	54,804	\$421,223.62	52	Mill and Overlay	100
2012	Taxiway Mike	1310	AAC	9,951	\$85,083.59	46	Mill and Overlay	100
2012	Taxiway Mike	1325	AC	220,840	\$1,315,760.96	56	Mill and Overlay	100
2012	Taxiway Mike	1330	AC	15,477	\$189,582.73	37	Reconstruction	100
2012	Taxiway Tango	2050	AC	169,638	\$2,287,052.36	36	Reconstruction	100
2013	Taxiway Delta	405	AAC	5,250	\$16,752.43	64	Mill and Overlay	100
2013	Taxiway Golf	710	AAC	19,029	\$60,719.41	64	Mill and Overlay	100
2014	Runway 9-27	6360	AAC	40,000	\$131,466.67	64	Mill and Overlay	100
2014	Taxiway Alpha	115	AAC	135,281	\$485,240.66	63	Mill and Overlay	100
2014	Taxiway Bravo	205	AC	13,950	\$45,849.00	64	Mill and Overlay	100
2014	Taxiway Delta	407	AAC	25,816	\$84,849.94	64	Mill and Overlay	100
2014	Taxiway Echo	510	AAC	30,710	\$100,933.14	64	Mill and Overlay	100
2014	Taxiway Lima	1240	AAC	10,347	\$37,114.70	63	Mill and Overlay	100
2015	Runway 18L-36R	6197	AC	92,900	\$314,491.29	64	Mill and Overlay	100
2015	Taxiway Alpha	130	AAC	195,500	\$722,275.20	63	Mill and Overlay	100
2015	Taxiway Bravo	210	AAC	6,353	\$23,471.73	63	Mill and Overlay	100
2015	Taxiway Foxtrot	615	AAC	25,000	\$92,362.70	63	Mill and Overlay	100
2015	Taxiway Juliet	1005	AC	17,650	\$65,208.18	63	Mill and Overlay	100
2015	Taxiway Mike	1315	AAC	6,865	\$23,239.08	64	Mill and Overlay	100

**St. Petersburg-Clearwater International Airport (PIE)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario (Continued)**

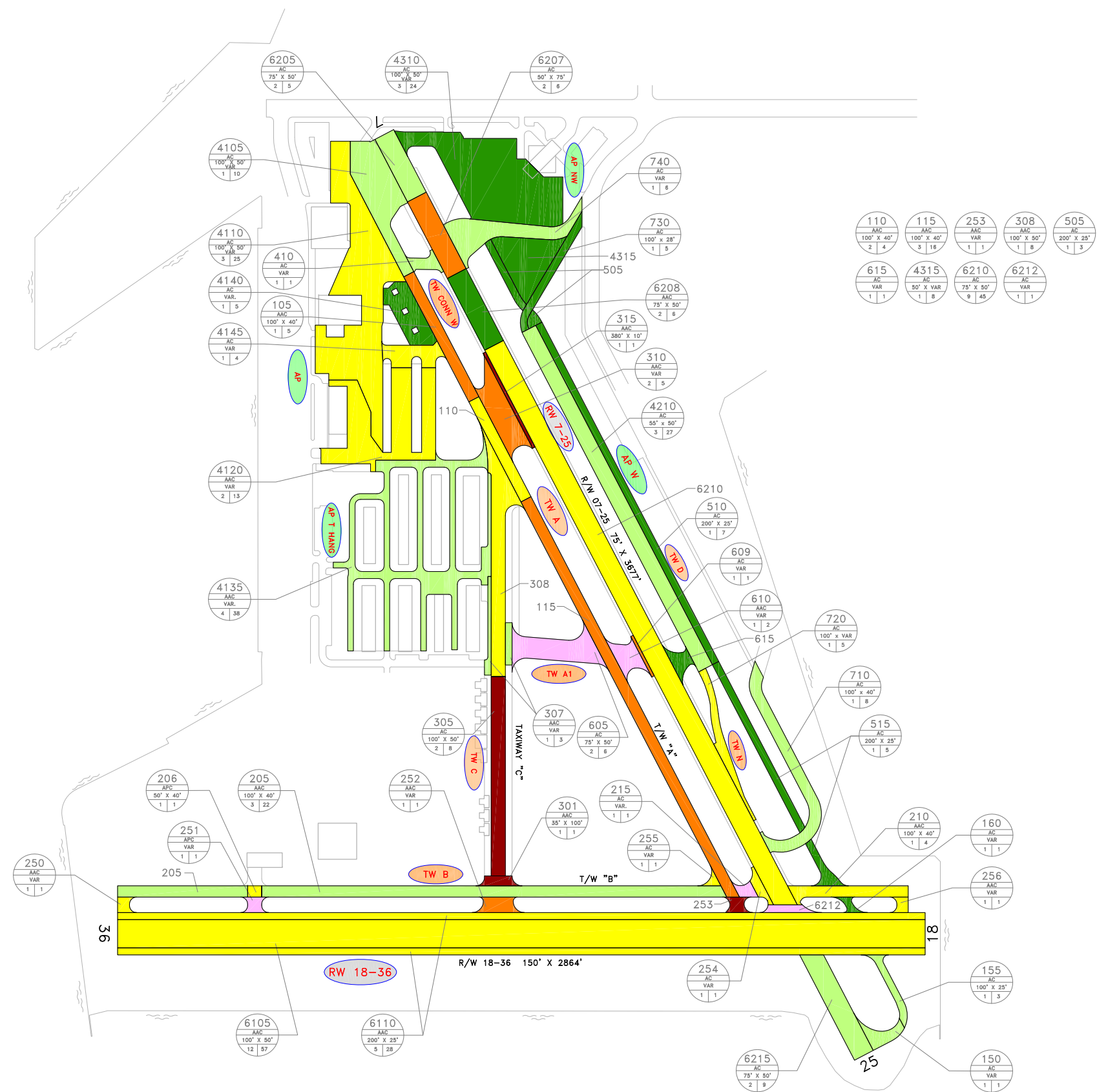
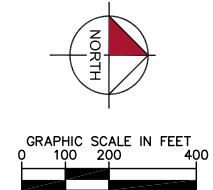
<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2016	Taxiway Alpha	120	APC	33,577	\$127,773.61	63	Mill and Overlay	100
2016	Taxiway Lima	1220	AAC	3,200	\$11,157.84	64	Mill and Overlay	100
2017	Runway 18L-36R	6145	AAC	30,000	\$117,585.11	63	Mill and Overlay	100
2017	Taxiway Foxtrot	625	AAC	9,480	\$34,045.32	64	Mill and Overlay	100
2017	Taxiway Kilo	1110	AAC	19,512	\$70,077.73	64	Mill and Overlay	100
2017	Taxiway Mike	1305	AAC	12,805	\$45,989.15	64	Mill and Overlay	100
2018	Runway 18R-36L	6410	AAC	14,063	\$52,019.61	64	Mill and Overlay	100
2018	Taxiway Foxtrot	620	AAC	7,753	\$28,679.61	64	Mill and Overlay	100
2018	Taxiway Kilo	1105	AC	21,520	\$79,606.75	64	Mill and Overlay	100
2019	Runway 18L-36R	6155	AAC	180,000	\$748,476.23	63	Mill and Overlay	100
2019	Runway 18L-36R	6165	AAC	70,000	\$291,074.09	63	Mill and Overlay	100
2019	Runway 18L-36R	6175	AAC	290,000	\$1,205,878.37	63	Mill and Overlay	100
2019	Taxiway Alpha	112	AAC	3,583	\$14,897.59	63	Mill and Overlay	100
2019	Taxiway Hotel	805	AAC	20,584	\$78,427.93	64	Mill and Overlay	100
2019	Taxiway Mike	1320	AAC	3,658	\$13,937.86	64	Mill and Overlay	100
2020	Main Apron	4123	APC	54,018	\$231,354.36	63	Mill and Overlay	100
2020	Runway 18L-36R	6135	AAC	20,000	\$78,489.04	64	Mill and Overlay	100
2020	Runway 18L-36R	6140	AAC	10,000	\$39,244.52	64	Mill and Overlay	100
2020	Runway 18L-36R	6150	AAC	15,000	\$58,866.78	64	Mill and Overlay	100
2020	Runway 18L-36R	6170	AAC	35,000	\$149,903.16	63	Mill and Overlay	100
2020	Runway 18L-36R	6185	AAC	210,000	\$824,134.93	64	Mill and Overlay	100

**St. Petersburg-Clearwater International Airport (PIE)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario (Continued)**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2021	Runway 18L-36R	6160	AAC	90,000	\$363,796.71	64	Mill and Overlay	100
<b>Total</b>					<b>\$29,968,870.07</b>	<b>54</b>		<b>100</b>

\* Costs are adjusted for inflation.



**LEGEND**

	TYPICAL RUNWAY BRANCH ID
	TYPICAL TAXIWAY BRANCH ID
	TYPICAL APRON BRANCH ID
	PCI 86-100 GOOD
	PCI 71-85 SATISFACTORY
	PCI 56-70 FAIR
	PCI 41-55 POOR
	PCI 26-40 VERY POOR
	PCI 11-25 SERIOUS
	PCI 0-10 FAILED

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

NUMBER	DATE	REVISIONS
DESIGNED: KHA	DRAWN: KHA	CHECKED: KHA
DATE: PLOTTED: April 16, 2012 - 8:13 AM BY: Leann, Brent		



**Albert Whitted Airport (SPG)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario**

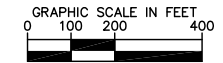
<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2012	Apron	4145	AC	14,186	\$68,928.00	57	Mill and Overlay	100
2012	Apron	4110	AC	128,902	\$474,360.74	60	Mill and Overlay	100
2012	Runway 7-25	6212	AC	4,117	\$76,458.63	26	Reconstruction	100
2012	Runway 7-25	6207	AC	22,950	\$138,572.17	54	Mill and Overlay	100
2012	Runway 7-25	6210	AC	167,790	\$617,468.98	60	Mill and Overlay	100
2012	Taxiway Alpha	105	AAC	20,000	\$152,200.08	48	Mill and Overlay	100
2012	Taxiway Alpha	115	AAC	63,617	\$384,117.70	54	Mill and Overlay	100
2012	Taxiway Alpha	110	AAC	16,000	\$71,456.02	58	Mill and Overlay	100
2012	Taxiway A-1	610	AAC	9,394	\$174,444.15	29	Reconstruction	100
2012	Taxiway A-1	605	AC	26,490	\$491,923.35	26	Reconstruction	100
2012	Taxiway A-1	609	AC	1,620	\$12,324.93	43	Mill and Overlay	100
2012	Taxiway Bravo	253	AAC	3,405	\$63,239.95	21	Reconstruction	100
2012	Taxiway Bravo	251	APC	3,287	\$50,224.29	33	Reconstruction	100
2012	Taxiway Bravo	252	AAC	6,613	\$47,728.21	51	Mill and Overlay	100
2012	Taxiway Bravo	250	AAC	2,578	\$7,337.70	63	Mill and Overlay	100
2012	Taxiway Bravo	210	AAC	17,315	\$44,465.10	64	Mill and Overlay	100
2012	Taxiway Bravo	215	AC	3,065	\$30,039.71	38	Reconstruction	100
2012	Taxiway Bravo	255	AC	1,557	\$8,178.26	56	Mill and Overlay	100
2012	Taxiway Bravo	254	AC	3,707	\$18,014.51	57	Mill and Overlay	100
2012	Taxiway Bravo	206	APC	2,000	\$10,504.00	56	Mill and Overlay	100
2012	Taxiway Charlie	315	AAC	3,800	\$70,566.00	13	Reconstruction	100
2012	Taxiway Charlie	301	AAC	3,886	\$72,163.57	22	Reconstruction	100

**Albert Whitted Airport (SPG)**

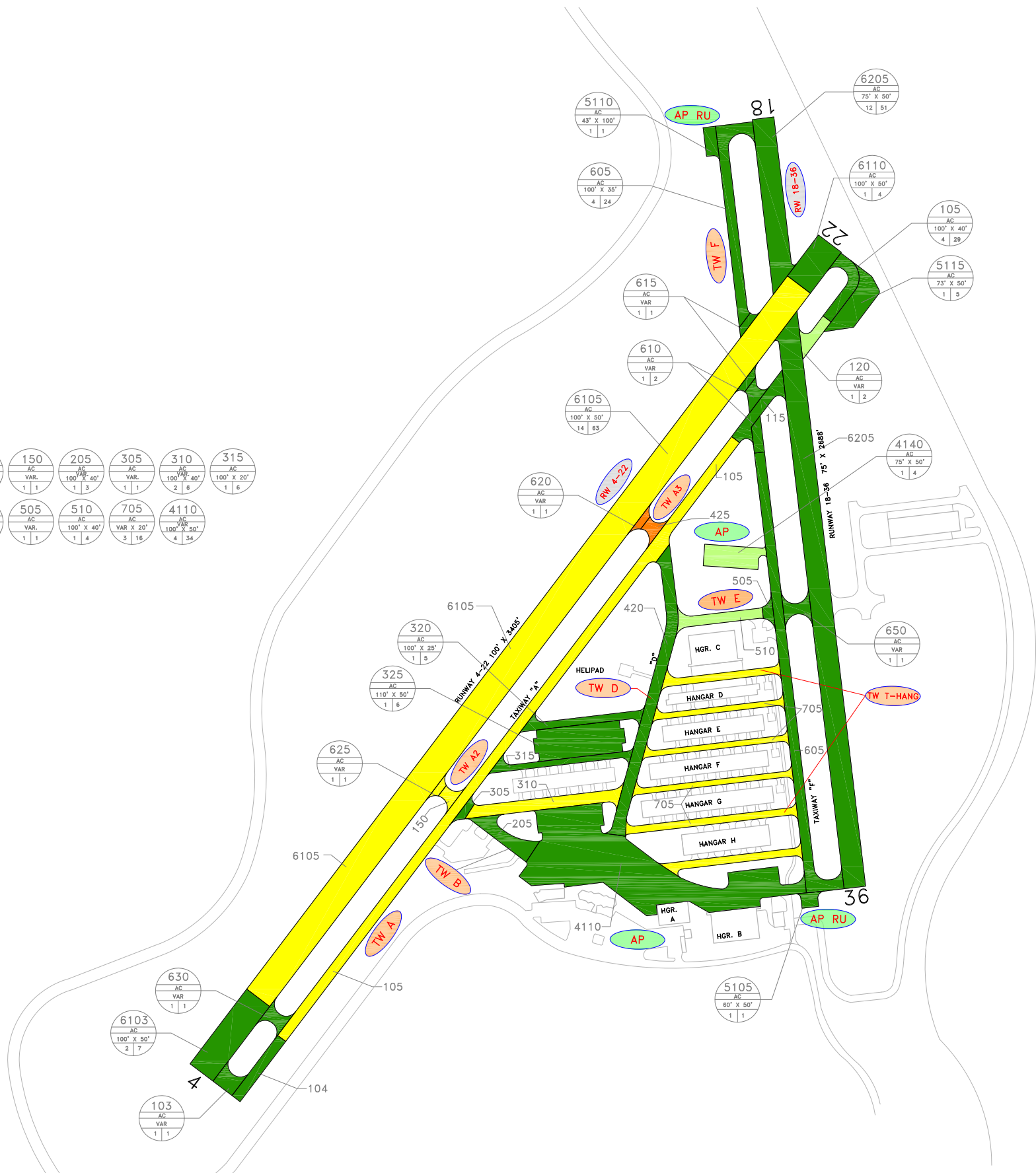
**Major Rehabilitation Plan by Year under Unlimited Funding Scenario (Continued)**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2012	Taxiway Charlie	310	AAC	23,994	\$182,592.45	47	Mill and Overlay	100
2012	Taxiway Charlie	305	AC	35,350	\$656,449.46	23	Reconstruction	100
2012	North Taxiway	720	AC	13,337	\$34,248.85	64	Mill and Overlay	100
2014	Runway 18-36	6105	AAC	286,400	\$780,265.58	64	Mill and Overlay	100
2015	Runway 18-36	6110	AAC	143,200	\$401,836.77	64	Mill and Overlay	100
2016	Apron	4120	AAC	73,716	\$213,060.61	64	Mill and Overlay	100
2017	Runway 7-25	6215	AC	30,125	\$99,389.75	63	Mill and Overlay	100
2019	Taxiway Bravo	256	AAC	2,468	\$7,795.51	64	Mill and Overlay	100
2019	Taxiway West Connector	410	AC	5,039	\$15,916.24	64	Mill and Overlay	100
2020	Apron	4105	AC	44,489	\$144,725.75	64	Mill and Overlay	100
2020	Taxiway Charlie	308	AAC	44,775	\$145,655.54	64	Mill and Overlay	100
2021	Runway 7-25	6205	AC	18,750	\$69,625.96	63	Mill and Overlay	100
<b>Total</b>					<b>\$5,836,278.52</b>	<b>50</b>		<b>100</b>

\* Costs are adjusted for inflation.



104 AC 100' X 35' 1   3	115 AC VAR 1   3	150 AC VAR 1   1	205 AC 100' X 40' 1   3	305 AC VAR 1   1	310 AC 100' X 40' 2   6	315 AC 100' X 20' 1   6
420 AC 100' X 40' 2   10	425 AC VAR 1   1	505 AC VAR 1   1	510 AC 100' X 40' 1   4	705 AC VAR X 20' 3   16	4110 AC 100' X 50' 4   34	



**LEGEND**

- RW 13-31 TYPICAL RUNWAY BRANCH ID
- TW A TYPICAL TAXIWAY BRANCH ID
- AP S TYPICAL APRON BRANCH ID
- PCI 86-100 GOOD
- PCI 71-85 SATISFACTORY
- PCI 56-70 FAIR
- PCI 41-55 POOR
- PCI 26-40 VERY POOR
- PCI 11-25 SERIOUS
- PCI 0-10 FAILED

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

NUMBER	DATE	REVISIONS

DESIGNED: BAL DRAWN: ALB CHECKED: EVV DATE: February 21, 2012 - 2:50 PM '12 Rev. 01



2012 CONDITION MAP  
**PETER O. KNIGHT AIRPORT**  
**HILLSBOROUGH COUNTY, FLORIDA**  
 FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER  
**TPF**  
 FOOTPRINT  
**7**

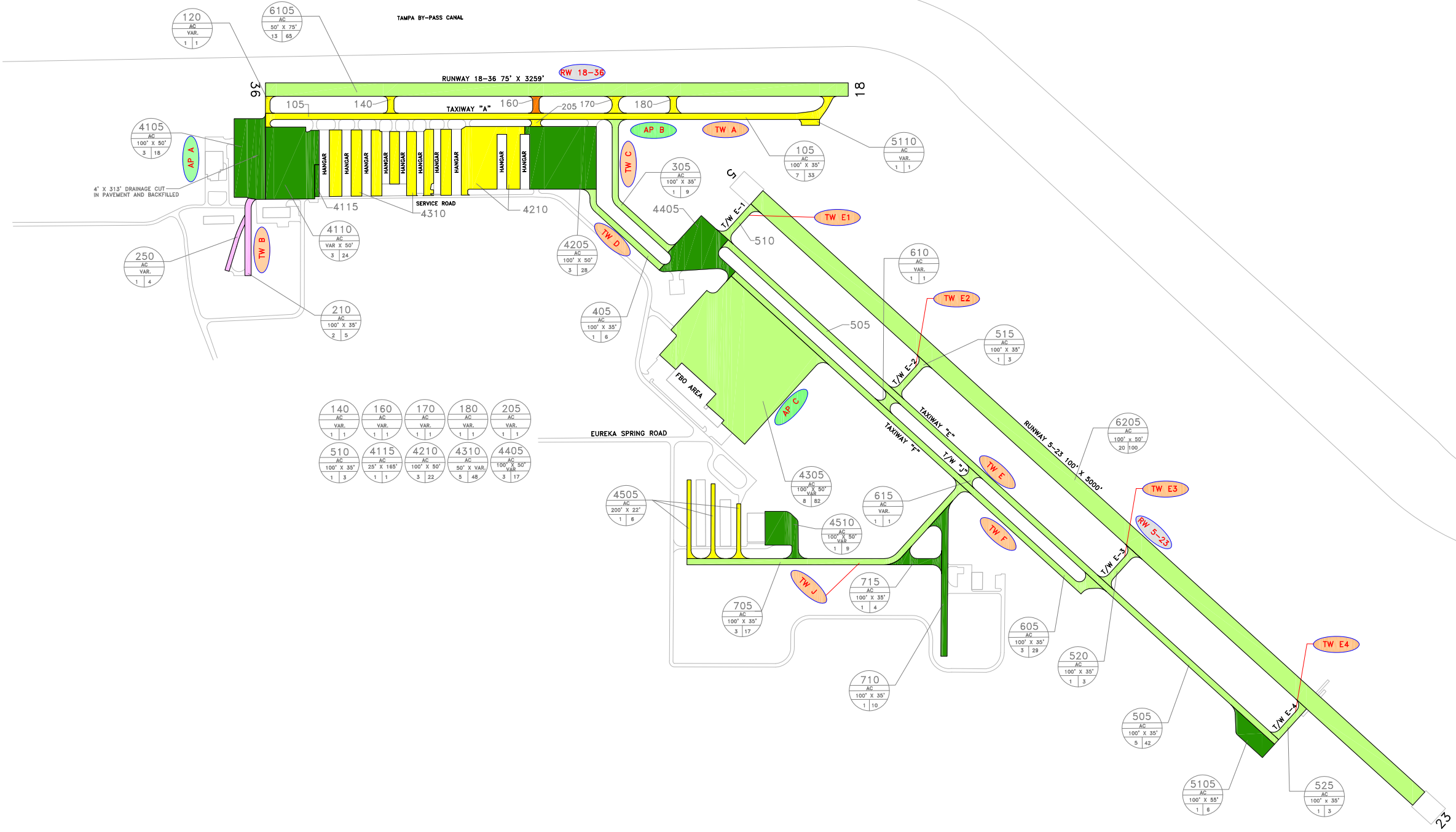
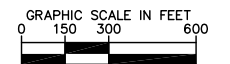


**Peter O Knight Airport (TPF)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2012	Runway 4-22	6105	AAC	310,500	\$797,363.94	64	Mill and Overlay	100
2012	Taxiway A	105	AAC	103,252	\$542,280.73	56	Mill and Overlay	100
2012	Taxiway B	150	AAC	3,015	\$7,743.75	64	Mill and Overlay	100
2012	Taxiway C	310	AC	17,091	\$76,329.55	58	Mill and Overlay	100
2012	Taxiway D	425	AAC	3,373	\$25,671.13	45	Mill and Overlay	100
2012	Taxiway D	620	AAC	1,965	\$14,178.09	51	Mill and Overlay	100
2015	T-Hangars Taxiway	705	AC	72,024	\$202,108.32	64	Mill and Overlay	100
2018	Apron	4140	AC	14,967	\$45,893.00	64	Mill and Overlay	100
2020	Taxiway B	625	AAC	1,658	\$5,393.52	64	Mill and Overlay	100
2020	Taxiway E	510	AC	11,126	\$36,192.92	64	Mill and Overlay	100
<b>Total</b>					<b>\$1,753,154.95</b>	<b>59</b>		<b>100</b>

\* Costs are adjusted for inflation.



140	160	170	180	205
AC	AC	AC	AC	AC
VAR.	VAR.	VAR.	VAR.	VAR.
1   1	1   1	1   1	1   1	1   1

510	4115	4210	4310	4405
AC	AC	AC	AC	AC
VAR.	VAR.	VAR.	VAR.	VAR.
1   3	25' X 185'	100' X 50'	50' X VAR.	100' X 50'
1   3	1   1	3   22	5   48	3   17

**LEGEND**

- RW 13-33 TYPICAL RUNWAY BRANCH ID
- TW A TYPICAL TAXIWAY BRANCH ID
- AP S TYPICAL APRON BRANCH ID
- PCI 86-100 GOOD
- PCI 71-85 SATISFACTORY
- PCI 56-70 FAIR
- PCI 41-55 POOR
- PCI 26-40 VERY POOR
- PCI 11-25 SERIOUS
- PCI 0-10 FAILED

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

NUMBER	DATE	REVISIONS

DESIGNED:	BAL	DRAWN:	BAL	CHECKED:	EVV	DATE:	
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PUBLISHED: February 23, 2012 - 2:45 PM BY: Baha, AJ



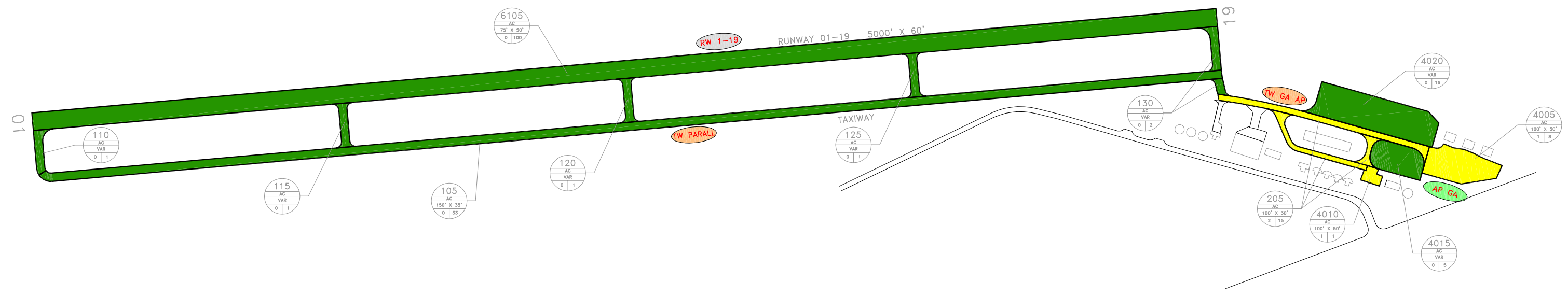
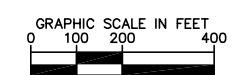
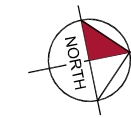
2012 CONDITION MAP  
**TAMPA EXECUTIVE AIRPORT**  
**HILLSBOROUGH COUNTY, FLORIDA**  
 FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

**Tampa Executive Airport (VDF)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2012	Taxiway Alpha	160	AC	3,861	\$30,261.57	47	Mill and Overlay	100
2012	Taxiway Alpha	180	AC	4,111	\$18,908.36	58	Mill and Overlay	100
2012	Taxiway Bravo	210	AC	15,268	\$223,084.50	34	Reconstruction	100
2012	Taxiway Bravo	250	AC	7,286	\$81,788.19	37	Reconstruction	100
2012	Taxiway Charlie	170	AC	5,063	\$23,290.95	58	Mill and Overlay	100
2013	Apron at T-Hangars	4310	AC	147,914	\$402,976.58	64	Mill and Overlay	100
2014	Taxiway Alpha	105	AC	114,945	\$322,551.15	64	Mill and Overlay	100
2015	North Apron B	4210	AC	100,788	\$291,306.87	64	Mill and Overlay	100
2016	Run-Up Apron	5110	AC	3,338	\$9,938.02	64	Mill and Overlay	100
2016	West Apron	4505	AC	28,314	\$84,292.47	64	Mill and Overlay	100
2016	Taxiway Alpha	120	AC	2,772	\$8,252.32	64	Mill and Overlay	100
2016	Taxiway Alpha	140	AC	3,862	\$11,495.75	64	Mill and Overlay	100
2016	Taxiway Alpha	205	AC	2,293	\$6,827.37	64	Mill and Overlay	100
2017	Taxiway E-1	510	AC	9,577	\$29,366.36	64	Mill and Overlay	100
2017	Taxiway E-2	515	AC	9,511	\$29,163.67	64	Mill and Overlay	100
2018	Runway 5-23	6205	AC	500,000	\$1,579,157.92	64	Mill and Overlay	100
2019	Runway 18-36	6105	AC	244,425	\$795,130.49	64	Mill and Overlay	100
2020	Taxiway Foxtrot	610	AC	4,871	\$16,322.26	64	Mill and Overlay	100
2021	Taxiway Foxtrot	615	AC	4,552	\$15,708.20	64	Mill and Overlay	100
<b>Total</b>					<b>\$3,979,823.00</b>	<b>59</b>		<b>100</b>

\* Costs are adjusted for inflation.



**LEGEND**

- RW 13-31 TYPICAL RUNWAY BRANCH ID
- TW A TYPICAL TAXIWAY BRANCH ID
- AP S TYPICAL APRON BRANCH ID
- PCI 86-100 GOOD
- PCI 71-85 SATISFACTORY
- PCI 56-70 FAIR
- PCI 41-55 POOR
- PCI 26-40 VERY POOR
- PCI 11-25 SERIOUS
- PCI 0-10 FAILED

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

NUMBER	DATE	REVISIONS
DESIGNED:	FL	DRAWN: GB
CHECKED:		DATE: MAY 2011



**Inverness Airport (X40)**

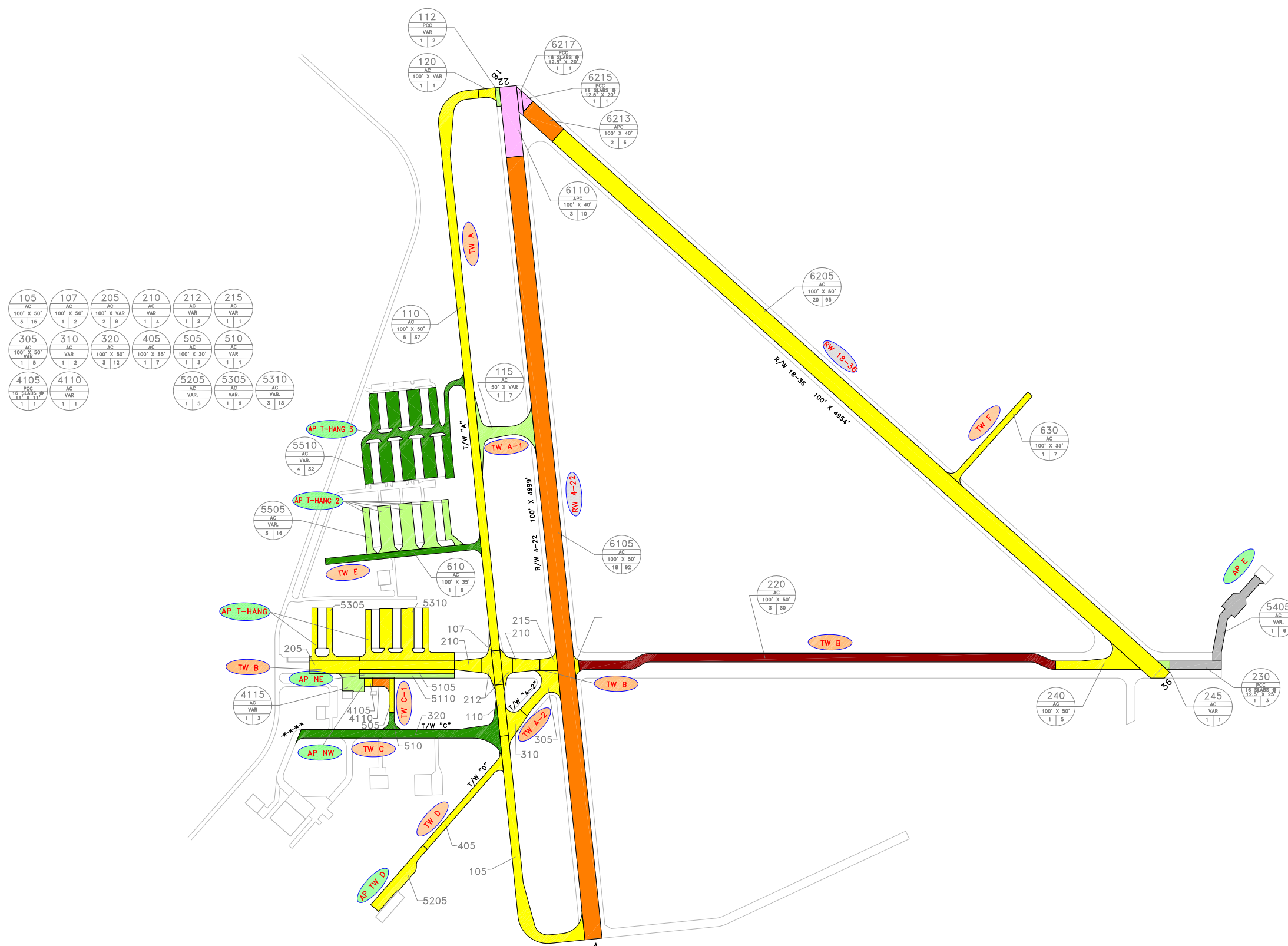
**Major Rehabilitation Plan by Year under Unlimited Funding Scenario**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2011	GA Apron	4010	AC	4,737	\$12,320.94	63	Mill and Overlay	100
2011	Taxiway to GA Apron	205	AC	39,494	\$102,723.96	63	Mill and Overlay	100
2014	GA Apron	4005	AC	36,668	\$93,278.63	64	Mill and Overlay	100
<b>Total</b>					<b>\$208,323.53</b>	<b>63</b>		<b>100</b>

\* Costs are adjusted for inflation.



GRAPHIC SCALE IN FEET  
0 150 300 600



105	107	205	210	212	215
AC	AC	AC	AC	AC	AC
100' X 50'	100' X 50'	100' X VAR	100' X VAR	100' X VAR	100' X VAR
3   15	1   2	2   9	1   4	1   2	1   1
305	310	320	405	505	510
AC	AC	AC	AC	AC	AC
100' X 50'	100' X 50'	100' X 50'	100' X 35'	100' X 30'	100' X 30'
1   3	1   2	3   12	1   7	1   3	1   1
4105	4110	5205	5305	5310	
PC	AC	AC	AC	AC	
18' X 11'	11' X 11'	11' X 11'	11' X 11'	11' X 11'	
1   1	1   1	1   5	1   9	3   18	

**LEGEND**

- RW 13-36 TYPICAL RUNWAY BRANCH ID
- TW A TYPICAL TAXIWAY BRANCH ID
- AP S TYPICAL APRON BRANCH ID
- PCI 86-100 GOOD
- PCI 71-85 SATISFACTORY
- PCI 56-70 FAIR
- PCI 41-55 POOR
- PCI 26-40 VERY POOR
- PCI 11-25 SERIOUS
- PCI 0-10 FAILED

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

NUMBER	DATE	REVISIONS
DESIGNED: BAL	DRAWN: ALB	CHECKED: EVV
DATE:		



2012 CONDITION MAP  
**ZEPHYRHILLS MUNICIPAL AIRPORT**  
**PASCO COUNTY, FLORIDA**  
FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER  
**ZPH**  
7

**Zephyrhills Municipal Airport (ZPH)**

**Major Rehabilitation Plan by Year under Unlimited Funding Scenario**

<b>Year</b>	<b>Branch Name</b>	<b>Section ID</b>	<b>Surface Type</b>	<b>Section Area (ft<sup>2</sup>)</b>	<b>Major M&amp;R Costs*</b>	<b>PCI Before M&amp;R</b>	<b>M&amp;R Activity</b>	<b>PCI After M&amp;R</b>
2012	Runway 18-36	6217	PCC	3,708	\$52,011.89	24	Reconstruction	100
2012	Runway 18-36	6215	PCC	3,875	\$42,658.38	34	Reconstruction	100
2012	Runway 18-36	6213	APC	23,862	\$154,594.49	49	Mill and Overlay	100
2012	Runway 4-22	6110	APC	41,200	\$577,978.51	27	Reconstruction	100
2012	Runway 4-22	6105	AAC	458,800	\$2,836,801.98	51	Mill and Overlay	100
2012	East Apron	5405	PCC	34,097	\$478,338.38	0	Reconstruction	100
2012	Apron on Taxiway Delta	5205	AC	26,360	\$70,618.26	63	Mill and Overlay	100
2012	North East Apron	5105	AC	13,872	\$37,164.22	63	Mill and Overlay	100
2012	North West Apron	4110	AC	5,095	\$28,492.60	53	Mill and Overlay	100
2012	North West Apron	4105	PCC	2,160	\$9,524.37	57	Concrete Pavement Restoration	100
2012	Taxiway C-1	505	AC	6,000	\$14,387.05	64	Mill and Overlay	100
2012	Taxiway Bravo	235	AAC	2,233	\$9,187.65	58	Mill and Overlay	100
2012	Taxiway Bravo	230	PCC	15,000	\$210,429.07	5	Reconstruction	100
2012	Taxiway Bravo	220	AC	140,158	\$1,966,222.14	23	Mill and Overlay	100
2012	Taxiway Bravo	215	AAC	7,692	\$31,642.99	58	Mill and Overlay	100
2012	Taxiway Bravo	210	AAC	21,944	\$58,787.89	63	Mill and Overlay	100
2012	Taxiway Bravo	205	AC	49,467	\$218,120.94	57	Mill and Overlay	100
2012	Taxiway Alpha	120	AAC	5,559	\$16,454.39	62	Mill and Overlay	100
2012	Taxiway Alpha	112	PCC	2,175	\$6,438.48	62	Concrete Pavement Restoration	100
2013	Taxiway Alpha	110	AC	190,930	\$471,555.07	64	Mill and Overlay	100
2013	Taxiway Alpha	107	AAC	10,000	\$27,594.03	63	Mill and Overlay	100
2014	Runway 18-36	6205	AAC	473,437	\$1,204,362.49	64	Mill and Overlay	100

**Zephyrhills Municipal Airport (ZPH)**

**M Major Rehabilitation Plan by Year under Unlimited Funding Scenario (Continued)**

Year	Branch Name	Section ID	Surface Type	Section Area (ft <sup>2</sup> )	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2014	Apron at T-Hangars	5310	AC	82,135	\$208,940.74	64	Mill and Overlay	100
2014	Taxiway A-2	310	AAC	12,761	\$32,461.97	64	Mill and Overlay	100
2014	Taxiway A-2	305	AAC	22,999	\$58,505.86	64	Mill and Overlay	100
2014	Taxiway Bravo	240	AAC	31,378	\$79,820.33	64	Mill and Overlay	100
2014	Taxiway Bravo	212	AAC	17,871	\$45,462.67	64	Mill and Overlay	100
2014	Taxiway Alpha	105	AAC	83,872	\$213,358.96	64	Mill and Overlay	100
2015	Taxiway Foxtrot	630	AC	24,348	\$63,796.32	64	Mill and Overlay	100
2015	Taxiway Delta	405	AC	25,063	\$73,372.09	63	Mill and Overlay	100
2016	Apron at T-Hangars	5305	AC	26,803	\$80,819.23	63	Mill and Overlay	100
2018	North East Apron	5110	AC	13,875	\$39,726.18	64	Mill and Overlay	100
2018	North West Apron	4115	AC	12,547	\$35,924.92	64	Mill and Overlay	100
2019	Taxiway A-1	115	AC	32,504	\$107,097.31	63	Mill and Overlay	100
2020	Apron at T-Hangars 2	5505	AC	85,817	\$260,671.73	64	Mill and Overlay	100
2020	Taxiway Bravo	245	AAC	2,300	\$6,986.65	64	Mill and Overlay	100
<b>Total</b>					<b>\$9,830,310.23</b>	<b>54</b>		<b>100</b>

\* Costs are adjusted for inflation.