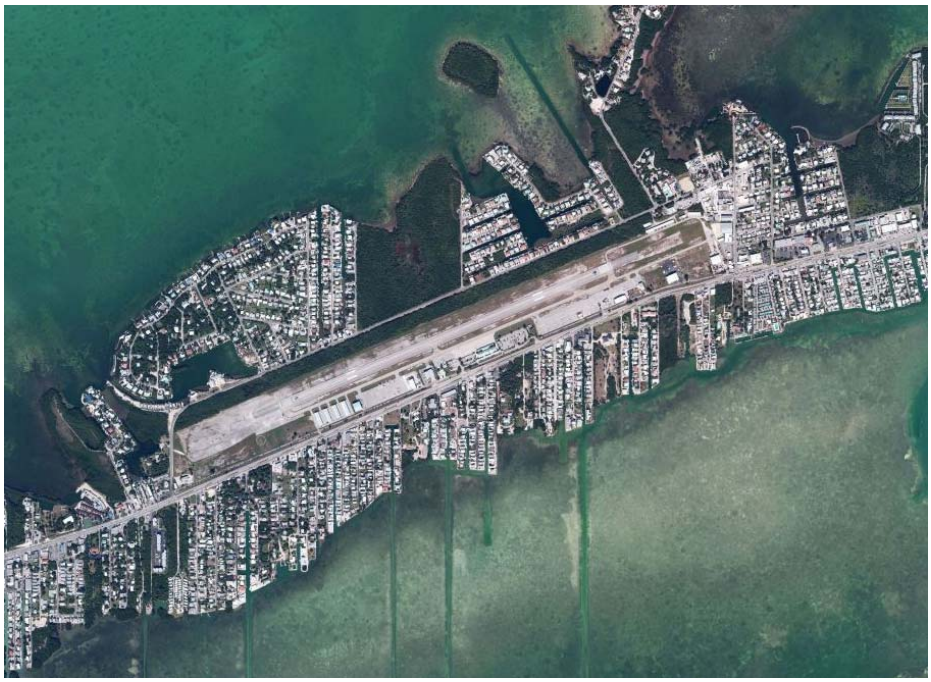
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

AVIATION OFFICE

Statewide Airfield Pavement Management Program

Florida Keys Marathon Airport – MTH
(Primary)
Marathon, Florida
(District 6)



May 2011

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EXECUTIVE SUMMARY

In 2010, the Florida Department of Transportation (FDOT) Aviation Office selected a Consultant team consisting of Kimley-Horn and Associates and their Subconsultants, MACTEC Engineering and Consulting and All About Pavements, Inc., to provide services in support of FDOT in the continuing evaluation and updating of the existing Statewide Airfield Pavement Management Program (SAPMP) to be completed over fiscal years 2011 and 2012.

The tasks required to achieve this objective at Florida Keys Marathon Airport included:

- Obtain recent construction history from the Airport to update the Pavement Inventory CADD drawings 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,
- Develop a 10-year M&R plan to address the pavement needs at Florida Keys Marathon Airport, and
- Provide the estimated costs associated with the suggested immediate and future M&R activities

During May 2011, the PCI survey was performed at Florida Keys Marathon Airport. The results of the survey indicate that, based on a numerical scale of 0 to 100, the overall area-weighted average PCI of the airfield pavements in 2011 is 67, representing a Fair overall network condition.

Table I below summarizes the overall condition summary by network branch.

Table I: Condition Summary by Branch

Branch Name	Area Weighted PCI	Condition Rating	FDOT Minimum Service Level	MicroPAVER Minimum PCI	Action Required
Apron East	48	Fair	65	65	X
Apron at Flight Center	67	Fair	65	65	
Jet Center Apron	58	Fair	65	65	X
Terminal Apron	65	Fair	65	65	
T-Hangar Aprons	88	Good	65	65	
Runway 7-25	64	Fair	75	65	X
Taxiway Alpha	77	Satisfactory	70	65	
Taxiway Bravo	69	Fair	70	65	X
Taxiway Charlie	66	Fair	70	65	X
Taxiway Delta	71	Satisfactory	70	65	
Taxiway Echo	76	Satisfactory	70	65	
Taxiway NE	83	Satisfactory	70	65	

Tables II and III below illustrate the area-weighted PCI computed individually for each pavement use and rank, respectively.

Table II: Condition Summary by Pavement Use

Use	Average Area-Weighted PCI	Condition Rating
Runway	63	Fair
Taxiway	76	Satisfactory
Apron	64	Fair
All (Weighted)	**67**	**Fair**

Table III: Condition Summary by Pavement Rank

Rank*	Average Area-Weighted PCI	Condition Rating
Primary	67	Fair
Tertiary	47	Fair
All (Weighted)	**67**	**Fair**

*The pavement rank for the airport pavement network is listed on Table 2-3.

The immediate M&R 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 at Florida Keys Marathon Airport, include: Apron East, Apron at Flight Center, Jet Center Apron, Terminal Apron, Runway 7-25 and Taxiway Charlie. Pavement distresses in these areas justify either mill and overlay rehabilitation, concrete pavement restoration or full pavement reconstruction. The immediate needs are summarized in Table IV below.

Table IV: Immediate Major M&R Needs

Branch Name	Section ID	Surface Type	Section Area (ft^2)	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
Apron East	4505	AC	35,120	$220,904.82	43	Mill and Overlay	100
Apron East	4510	AC	17,050	$72,991.08	57	Mill and Overlay	100
Apron at Flight Center	4110	PCC	3,294	$44,864.29	0	Reconstruction	100
Apron at Flight Center	4115	AC	35,580	$111,970.34	61	Mill and Overlay	100
Jet Center Apron	4305	AC	112,150	$512,301.41	56	Mill and Overlay	100
Jet Center Apron	4310	PCC	17,440	$237,532.88	26	Reconstruction	100
Jet Center Apron	4320	AC	8,020	$50,445.80	45	Mill and Overlay	100
Terminal Apron	4210	AC	19,260	$50,095.29	63	Mill and Overlay	100
Terminal Apron	4220	PCC	78,600	$182,980.92	64	Concrete Pavement Restoration	100
Runway 7-25	6105	AAC	375,600	$874,397.35	64	Mill and Overlay	100
Runway 7-25	6110	AAC	125,200	$325,645.40	63	Mill and Overlay	100
Taxiway Charlie	205	AAC	6,247	$16,248.46	63	Mill and Overlay	100
			Total	**$2,700,378.04**	**50**		**100**

* Costs are adjusted for inflation.

A forecast of Major M&R needs for a 10-year period, starting from 2011, was developed using an unlimited budget. The analysis identified ongoing maintenance needs and major M&R during that interval. The results of this analysis are provided in Table V below.

Table V: 10-Year M&R Costs under Unlimited Funding Scenario

Year	Preventative	Major M&R	Total Year Cost
2011	$39,207.05	$2,700,378.04	$2,739,585.09
2012	$141,416.66	$47,980.81	$189,397.47
2013	$158,944.78	$0.00	$158,944.78
2014	$107,181.30	$686,870.35	$794,051.65
2015	$133,508.16	$0.00	$133,508.16
2016	$155,238.33	$75,053.40	$230,291.73
2017	$189,897.55	$0.00	$189,897.55
2018	$180,579.25	$363,900.40	$544,479.65
2019	$215,631.59	$0.00	$215,631.59
2020	$251,190.09	$11,764.29	$262,954.38
Total	**$1,572,794.76**	**$3,885,947.29**	**$5,458,742.05**

Note: Costs are adjusted for inflation.

The implementation of the 10-Year Major M&R Plan is expected to provide an improvement in the overall condition of the airfield pavement, where the area-weighted PCI would increase from 67 in 2011 to 78 in 2020. Appendix F lists the Major M&R for the 10-Year program. Appendix G graphically depicts the program activity.

It is important to note that although preventative and some major M&R activities would have to be conducted over several years, the area-weighted PCI value for all Florida Keys Marathon Airport pavements in 2020 may remain near 78. The airport manager should realize that what is most important is that the pavement repair work (preventative and major M&R) that has been identified for Florida Keys Marathon Airport is conducted at some point in the 10-year plan.

1. INTRODUCTION

The State of Florida has more than 100 public airports that are vital to the Florida economy as well as the economy of the United States. 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 (M&R) of these pavements allows the airports to operate efficiently, economically and without excessive down time.

In order to support the planning, scheduling, and design of the M&R activities 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 and their Subconsultants, MACTEC Engineering and Consulting 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.

This report discusses the work performed, a summary of the findings, results, and recommendations for M&R planning associated with the update to the SAPMP. It also describes the procedures used to ensure that the appropriate engineering and scientific standards of care, quality, budget, and schedule requirements are implemented during the performance of the SAPMP.

1.1 Purpose

This Florida Airport Pavement Evaluation Report is intended to:

- Describe, briefly, the SAPMP and the roles and responsibilities of the program's participants;
- Provide background information on pavement management principles, objectives, and benefits to this airport;
- Outline the procedures used to collect, evaluate and report pavement inspection results at this airport;
- Present the findings from the pavement inspection;
- Analyze and discuss the needs for Maintenance and Rehabilitation (M&R) activities and associated costs for this airport.

1.2 FDOT Statewide Airfield Pavement Management Program

In 1992, the FDOT implemented the SAPMP to improve the knowledge of pavement conditions at public airports in the State system, identify maintenance needs at individual airports, automate information management, and establish standards to address future needs. The 1992 SAPMP provided valuable information for establishing and performing pavement M&R.

In 1992/1993, and 1998/1999, the FDOT Aviation Office participated in the development of a proprietary software pavement management system and developed and populated a pavement management database that provided valuable information for establishing M&R policies, estimating M&R costs, and developing recommendations for performing routine pavement maintenance. This system, AIRPAV, was implemented, and initial condition surveys were

performed in 1992 and 1993. The SAPMP was updated with additional surveys in 1998 and 1999.

In 2004, the FDOT Aviation Office undertook a project to update the pavement management system software utilized for the SAPMP. This project involved a review of the AIRPAV software and other available pavement management system software. As a result of this review, MicroPAVER was selected as the software for the update project. Data from the 1998/1999 condition surveys were converted to the MicroPAVER system, and the inventory of the pavement systems and drawings of the pavements were updated to reflect maintenance, rehabilitation, and construction activities since 1998/1999. The pavements were inspected between 2006 and 2008, and an updated M&R program was developed based on the new condition of the airfield pavements. As part of the update, procedures for the inspection and collection of pavement data were developed, and a website (www.floridaairportpavement.com) was created for the input of data under secure procedures.

Currently, airports using the AIP Grant Program are required by the Federal Aviation Administration (FAA) to develop a pavement maintenance program (FAA/AC 150/5380-6B "Guidelines and Procedures for Maintenance of Airport Pavements") using trained personnel to perform a detailed inspection of airfield pavements. The inspections are required to be performed at least once a year or every 3 years if pavement inspection is characterized in the form of a Pavement Condition Index (PCI) survey (such as ASTM D 5340 "Standard Test Method for Airport Pavement Condition Index Surveys", (2004 edition)). The 2004 edition was utilized in lieu of the 2010 edition to maintain database integrity and benefit of pavement performance curves from the previous inspections.

In 2010, the FDOT Aviation Office selected a team consisting of the Consultant and their Subconsultants to provided services in support of FDOT in the continuing evaluation and updating of the existing SAPMP to be completed over fiscal years 2011 and 2012.

1.3 Organization

1.3.1 *Aviation Office Program Manager Role*

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

1.3.2 *Consultant Role*

The Consultant (Kimley-Horn and Associates, Inc.) and their Subconsultants (MACTEC Engineering and Consulting and All About Pavements, Inc.) provide technical and administrative assistance to the AO-PM during the execution of this program, which involves the continuing evaluation of airport pavements and updating of the SAPMP based upon procedures outlined in FAA Advisory Circular 150/5380-6B "Guidelines and Procedures for Maintenance of Airport Pavements" and ASTM D 5340 "Standard Test Method for Airport Pavement Condition Index Surveys" (2004).

1.3.3 *Airport Role*

The airports are the ultimate client for each of the field inspections and reports. Individual airports will be provided final deliverables prepared by the Consultant that have been reviewed and approved by the AO-PM. The airport should provide a current Airport Layout Plan (ALP) to the Consultant and, if they participated in the previous SAPMP update, indicate any construction activity that has been performed since the previous inspections.

1.4 Pavement Types and Pavement Management

1.4.1 *Pavement basics*

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

- Flexible pavement, composed of an asphalt concrete (AC) surface, and
- Rigid pavement composed of a Portland Cement Concrete (PCC) surface.

Both pavement types use a combination of layered materials and thicknesses in order to support the traffic loads and protect the underlying natural subgrade soil. Flexible pavements (AC) dissipate the load from layer to layer until the load magnitude is small enough to be supported by the subgrade soil. In rigid pavements (PCC), the Portland Cement Concrete supports most of the load, and the base or subbase layer is mainly constructed to provide a smooth and continuous platform for the construction of the concrete surface.

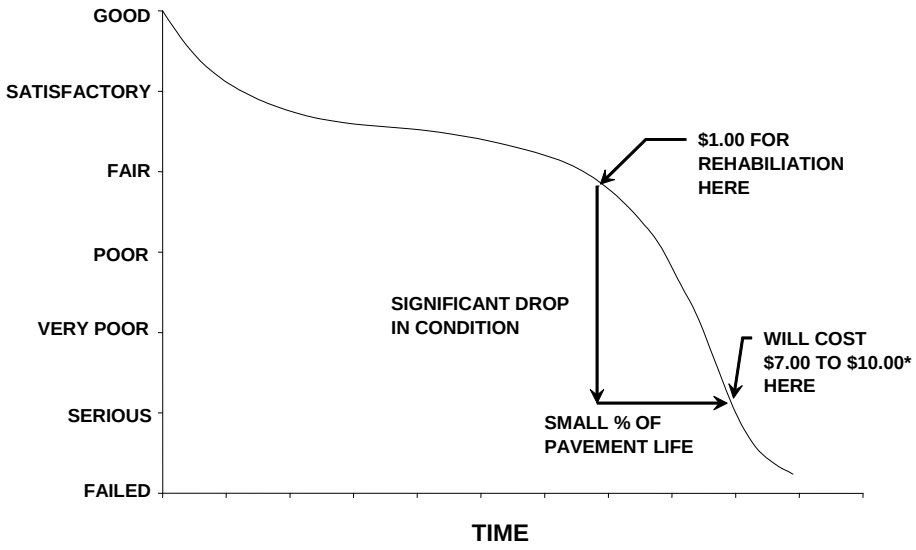
A small percentage of the airport pavements in Florida are composed of asphalt concrete surface over Portland Cement Concrete (APC). This pavement type is known as “composite” pavement.

Due to the different nature of the pavement types and their materials, flexible and rigid pavements have different distresses and failure mechanisms. Understanding the mechanics and failure modes of both pavement types will assist engineers in making adequate and long lasting repairs or rehabilitation to the pavement structures.

1.4.2 *Pavement Management System Concept*

The SAPMP utilized a Pavement Management System (PMS) to develop the M&R recommendations discussed in this report. A PMS is a tool to assist engineers, planners and managing agencies in making decisions when planning pavement M&R. The management of pavements involves scheduling pavement maintenance and rehabilitation before pavements deteriorate to a condition where reconstruction (the most expensive alternative) is the only solution. Figure 1-1 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 75 percent of a pavement’s life, it performs relatively well. After that, however, it begins to deteriorate rapidly. The number of years a pavement stays in “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.*

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

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

1.4.3 *Pavement Inspection Methodology for the SAPMP*

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

For the Statewide Aviation Pavement Management Program update, only visual surveys were performed. Further structural and geotechnical testing should be conducted to determine the appropriate rehabilitation methods during the design process.

In preparation of the PCI surveys, the airfield pavements are divided into sample units as established in FAA AC 150/5380-6B and ASTM D 5340. Further discussion of how the airport pavements are divided and subdivided into units by construction and use can be found in Section 2 "Network Definition and Pavement Inventory" of this report.

Sample unit sizes are approximately 5000 ± 2000 square feet for AC-surfaced pavements and 20 ± 8 slabs for PCC-surfaced pavements. Prior to conducting the field inspections, the sampling plan was developed based on previous sampling and modified based on the available knowledge of Branches, Sections, use patterns, construction types and history. The sampling rate used for the FDOT Statewide Airfield Pavement Management Program is provided in Table 1-1 below.

Table 1-1: Sampling Rate for FDOT Condition Surveys

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

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

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

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

Figure 1-2: PCI Rating Scale

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

1.5 Definitions

Aviation Office - The Aviation Office is charged with responsibility for promoting the safe development of aviation to serve the people of the State of Florida. The Aviation Office Program Manager (AO-PM) has review and approval authority for each program task of the SAPMP.

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

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

Branch ID - A short form identification for the pavement Branch. In this report, Branch includes the common designation for the item e.g. RW 18-36.

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

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

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

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.

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.

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

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

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

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

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.

2. NETWORK DEFINITION AND PAVEMENT INVENTORY

Florida Keys Marathon Airport (MTH) consists of a single runway; RW 7-25, which is 100-ft wide by 5,008-ft long. Parallel taxiway Alpha is 50-ft wide and is used to direct traffic to and from the active runway. Currently the airport has multiple T-Hangar and apron tie-down spaces located along the south side of taxiway Alpha. The majority of the pavement throughout the airport is constructed out of Asphalt Concrete, with exception to the main Portland Cement Concrete apron at the terminal building.

It is important to note that the aforementioned runway data in addition to the remaining airfield pavement facilities geometric dimensions may vary slightly from the geometry used in the condition and M&R analysis based on field measurements.

Marathon Airport was originally constructed by the United States Navy in the early 1940's as Outlying Field Marathon, an auxiliary airfield to Naval Air Station Key West. The airfield was deactivated at the end of World War II and ownership was transferred over to the government of Monroe County. For most of its existence, the airport has been a general aviation facility. This airport is designated as a Primary airport and is located in District 6 of the Florida Department of Transportation.

2.1 Network Definition

The pavements within the network are defined in MicroPAVER in terms of manageable units that help to organize the data into similar groups. An organizational hierarchy is used to establish these units.

2.1.1 *Branch Section Identification*

The airport pavement network is subdivided into separate Branches (runways, taxiways, or aprons) that have distinctly different uses. Branches are then further divided into Sections with similar pavement construction and performance that may share other common attributes.

Sections are manageable units used to organize the data collection and are treated individually during the rehabilitation planning stage. A pavement rank, consisting of primary, secondary, and tertiary levels, is assigned to each Section based on their level and type of use. The pavement rankings that were designated for each Section in the previous SAPMP update were again used for this update.

As discussed in Section 1.4.3 "Pavement Inspection Methodology for the SAPMP", the sections are sub-divided into sample units, which are the smallest subdivision in a pavement network, only for the purpose of conducting the pavement condition survey.

2.1.2 *System Inventory and Network Definition Update*

The System Inventory and Network Definition drawings are used to identify changes in the network since the most recent update from the 2006/2008 inspections and also to plan the field inspection activities for the 2011 survey. Prior to the field inspection process, the System Inventory drawing was updated from the previous inspection with notes indicating recent construction projects on the various Sections of pavement throughout the airfield. This System Inventory drawing is used to update the Network Definition drawing.

The Network Definition drawing 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 previous airport configuration and history was compared with the current airport configuration, and the existing network branch, section and sample unit designations were revised to match the current configuration. This drawing serves not only as a primary guide for the airfield inspectors but also as an important historical record.

The updated System Inventory and Network Definition drawings for Florida Keys Marathon Airport are provided in Appendix A. Table 2-1 below lists the recent construction projects at the airport.

Table 2-1: Construction Since Last Inspection & Anticipated Construction Activity

Construction Year	Location	Work Type / Pavement Section
No recent activity information provided		

As indicated by the airport, no recent construction projects have occurred on the airfield pavement since the previous update.

2.2 Pavement Inventory

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

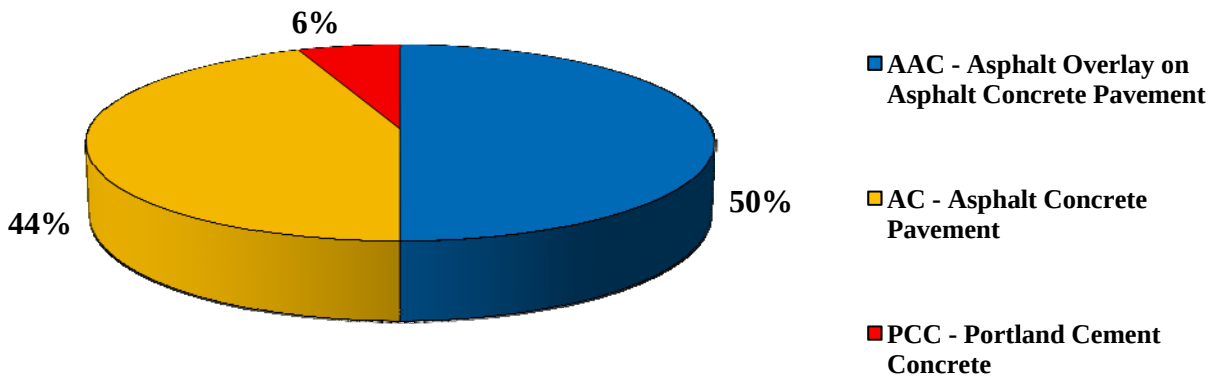
The total airfield pavement area in 2011 at Florida Keys Marathon Airport is 1,649,749 square feet. The breakdown of pavement area for each pavement use is provided in Table 2-2.

Table 2-2: Pavement Area by Pavement Use

Use	Area (ft^2)	% of Total Area
Runway	500,800	30%
Taxiway	395,295	24%
Apron	753,654	46%
All (Weighted)	**1,649,749**	**100%**

Figure 2-1 presents the breakdown of the pavement area at Florida Keys Marathon Airport by surface type.

Figure 2-1: Pavement Area by Surface Type



Details of pavement Branch and Section information including Branch name (which indicates pavement use), Branch ID, Section ID, section area, rank, surface type, last construction date, number of samples inspected, and number of samples in each Section are given in Table 2-3 below. A more detailed Pavement Inventory Table may be found in Appendix A of this report.

Table 2-3: Branch and Section Inventory

Branch Name	Branch ID	Section ID	True Area (ft^2)	Section Rank	Surface Type	Last Const. Date	Total Samples Inspected	Total Samples
Apron East	AP E	4510	17,050.00	T	AC	1/1/1999	1	4
Apron East	AP E	4505	35,120.00	T	AC	9/1/2007	1	7
Apron at Flight Center	AP FLGHT C	4115	35,580.00	P	AC	1/1/1966	2	9
Apron at Flight Center	AP FLGHT C	4105	270,010.00	P	AC	1/1/1983	6	58
Apron at Flight Center	AP FLGHT C	4110	3,294.00	P	PCC	1/1/1983	1	1
Apron at Flight Center	AP FLGHT C	4120	18,520.00	P	AC	1/1/1998	1	4
Apron at Flight Center	AP FLGHT C	4125	14,265.00	P	AC	12/25/1999	1	3
Jet Center Apron	AP JET CTR	4310	17,440.00	P	PCC	1/1/1987	1	4
Jet Center Apron	AP JET CTR	4305	112,150.00	P	AC	1/1/1990	2	27
Jet Center Apron	AP JET CTR	4320	8,020.00	P	AC	1/1/1990	1	2
Jet Center Apron	AP JET CTR	4315	60,630.00	P	AC	12/25/1999	3	16
Terminal Apron	AP TERM	4205	20,010.00	P	AAC	1/1/1978	1	4
Terminal Apron	AP TERM	4220	78,600.00	P	PCC	1/1/1994	2	12
Terminal Apron	AP TERM	4230	6,270.00	P	PCC	1/1/1994	1	2
Terminal Apron	AP TERM	4210	19,260.00	P	AC	1/1/1999	1	5
T-Hangar Aprons	AP T-HAN	4405	37,435.00	P	AC	12/25/1999	2	15
Runway 7-25	RW 7-25	6105	375,600.00	P	AAC	1/1/1985	21	100
Runway 7-25	RW 7-25	6110	125,200.00	P	AAC	1/1/1985	5	25
Taxiway Alpha	TW A	105	252,880.00	P	AAC	1/1/1998	5	51
Taxiway Alpha	TW A	115	50,655.00	P	AC	12/25/1999	2	14
Taxiway Bravo	TW B	151	10,710.00	P	AAC	1/1/1998	1	2
Taxiway Charlie	TW C	205	6,247.00	P	AAC	1/1/1998	1	1
Taxiway Charlie	TW C	210	3,873.00	P	AAC	1/1/1998	1	1
Taxiway Delta	TW D	305	9,290.00	P	AAC	1/1/1983	1	2
Taxiway Delta	TW D	310	7,470.00	P	AAC	1/1/1998	1	1
Taxiway Echo	TW E	152	5,537.00	P	AAC	1/1/1998	1	1
Taxiway Echo	TW E	155	5,103.00	P	AAC	1/1/1998	1	1
Taxiway Northeast	TW NE	405	43,530.00	P	AC	12/25/1999	3	16

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

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

3. PAVEMENT CONDITION

Pavement conditions were inspected in accordance with the methods outlined in FAA AC 150/5380-6B and ASTM D 5340-04 "Standard Practice for Airport Pavement Condition Index Surveys." These procedures define distress type, severity and quantity for sampling areas within each section to determine the Pavement Condition Index (PCI).

3.1 Inspection Methodology

A PCI survey is performed by measuring the amount and severity of pavement distresses, which are caused by traffic load, climate, and other factors, observed within a sample unit. This data is imported into MicroPAVER, which calculates PCI values for the pavement sections. Tables 3-1 and 3-2 below list the pavement distress types and related causes for asphalt concrete (AC) and Portland Cement Concrete (PCC), respectively.

Table 3-1: Pavement Distresses for Asphalt Concrete Surfaces

Code	Distress	Mechanism
41	Alligator Cracking	Load
42	Bleeding	Construction Quality/ Mix Design
43	Block Cracking	Climate / Age
44	Corrugation	Load / Construction Quality
45	Depression	Subgrade Quality
46	Jet Blast	Aircraft
47	Joint Reflection - Cracking	Climate / Prior Pavement
48	Longitudinal/Transverse Cracking	Climate / Age
49	Oil Spillage	Aircraft / Vehicle
50	Patching	Utility / Pavement Repair
51	Polished Aggregate	Load
52	Weathering/Raveling	Climate / Load
53	Rutting	Load
54	Shoving	Pavement Growth
55	Slippage Cracking	Load / Pavement Bond
56	Swelling	Climate / Subgrade Quality

Source: U.S. Army CERL, FDOT Airfield Inspection Reference Manual

Table 3-2: Pavement Distresses for Portland Cement Concrete Surfaces

Code	Distress	Mechanism
61	Blow-up	Climate
62	Corner Break	Load
63	Linear Cracking	Load
64	Durability Cracking	Climate
65	Joint Seal Damage	Climate
66	Small Patch	Pavement Repair
67	Large Patch/Utility Cut	Utility / Pavement Repair
68	Popout	Climate
69	Pumping	Load
70	Scaling/Crazing	Construction Quality
71	Faulting	Subgrade Quality
72	Shattered Slab	Load
73	Shrinkage Cracking	Construction Quality / Load
74	Joint Spalling	Load
75	Corner Spalling	Load
Source: U.S. Army CERL, FDOT Airfield Inspection Reference Manual		

Prior to conducting the inspections, Global Positioning System (GPS) coordinates were recorded using CADD at the centroid of each sample unit. The centroid is usually the geometric center of the area, but in cases where sample units are irregular in shape, this is the center of mass. These data are presented in a table on the updated Network Definition Map in Appendix A of this report.

Pavement condition inspections at the Florida Keys Marathon Airport were performed in May 2011. Data were recorded in the field in accordance with FAA Advisory Circular 150/5380-6B "Guidelines and Procedures for Maintenance of Airport Pavements" and ASTM D 5340 "Standard Test Method for Airport Pavement Condition Index Surveys" (2004).

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

3.2 Pavement Condition Index Results

According to the 2011 survey, the overall area-weighted PCI at Florida Keys Marathon Airport is 67, representing a Fair overall network condition.

Overall the airport exhibited pavement distresses associated with climate and age distresses. Asphalt Concrete pavement distresses include; weathering, raveling, longitudinal and transverse cracking, and block cracking distresses of which are common of pavements of similar age.

The 75-ft wide Asphalt Concrete pavement section of RW 7-25 exhibited low, medium and high severity longitudinal and transverse cracking along with low, medium and high severity weathering and raveling. This runway section has a PCI of 64 with a condition rating of 'Fair'. It is currently below both the FDOT and the FAA Primary minimum PCI. The 25-ft wide Asphalt

Concrete pavement section of RW 7-25 exhibited low and medium severity block cracking along with low severity longitudinal and transverse cracking and weathering and raveling. This runway section has a PCI of 63 with a condition rating of 'Fair'. It is currently below both the FDOT and the FAA Primary minimum PCI. These two pavement sections together make up the entire runway pavement, which has an overall PCI of 63 with a condition rating of 'Fair'.

Taxiway Alpha exhibited distresses such as low severity longitudinal and transverse cracking, block cracking, weathering and raveling. These distresses were in small quantities representing pavement that is holding up well against the applied loading and climate.

The Apron and T-Hangar pavement constructed of Asphalt Concrete exhibited weathering and raveling, longitudinal and transverse cracking, and block cracking distresses of which are common of pavements of similar age. These distresses varied in severity from low to medium throughout. The Portland Cement Concrete apron located in front of the Terminal building exhibited low severity longitudinal, transverse and diagonal cracking, patching, map cracking, shrinkage cracking, joint and corner spalling. These are all common distresses for the pavements age and the pavement appears to be holding up well to the climate and loading.

Appendix B contains a table and a Condition Map which depicts the PCI results by Section, and Appendix C contains a table of PCI results by Branch. Appendix I includes detailed distress data generated by MicroPAVER for each inspected sample unit.

Figure 3-1 provides the PCI distribution by rating category for Florida Keys Marathon Airport.

Figure 3-1: Network PCI Distribution by Rating Category

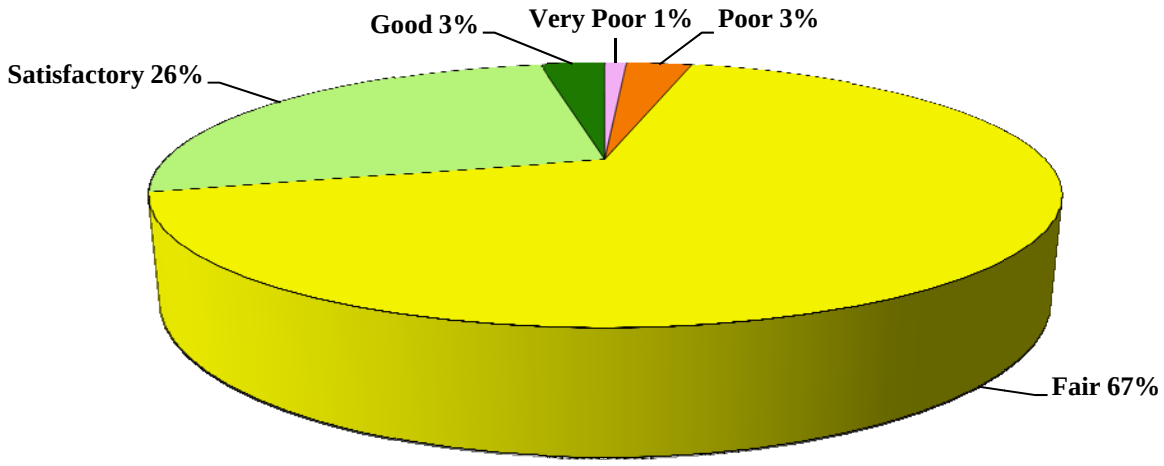


Figure 3-1a: Condition Rating Summary

Condition Rating	Total Area (ft^2)	Percent
Good	43,705	3%
Satisfactory	434,967	26%
Fair	1,107,203	67%
Poor	43,140	3%
Very Poor	17,440	1%
Serious	0	0%
Failed	3,294	0%

Approximately 29% of the network is in Good and Satisfactory condition while 4% of the network is in Poor and Very Poor condition. Table 3-3 illustrates the area-weighted PCI computed individually for each pavement use.

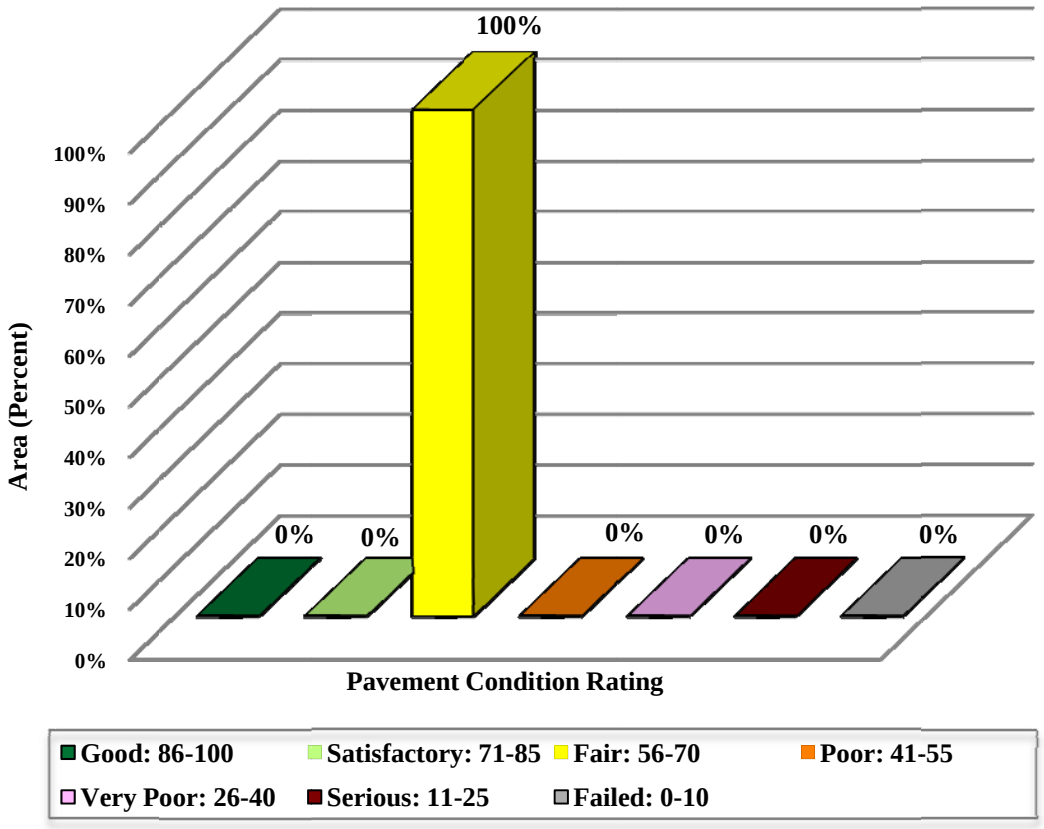
Table 3-3: Condition by Pavement Use

Use	Area-Weighted PCI	Condition Rating
Runway	63	Fair
Taxiway	76	Satisfactory
Apron	64	Fair
All (Weighted)	**67**	**Fair**

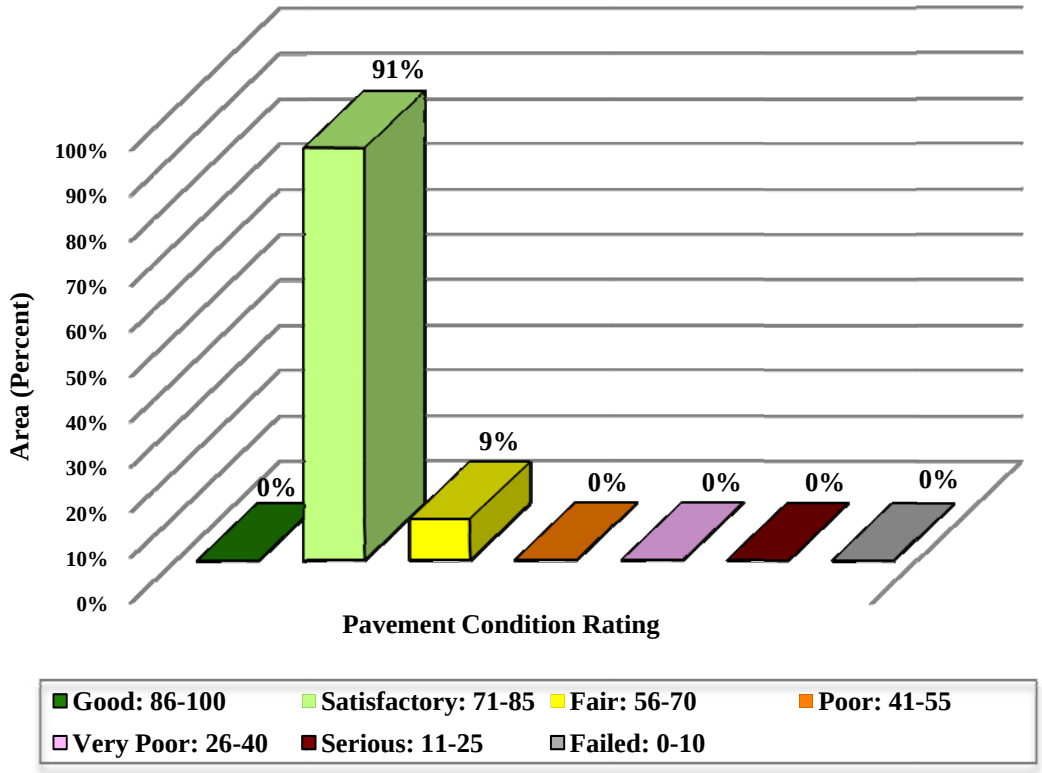
Figure 3-2 presents the breakdown of PCI by range for each pavement use.

Figure 3-2: Percentage of Pavement Area within Each PCI Range by Pavement Use

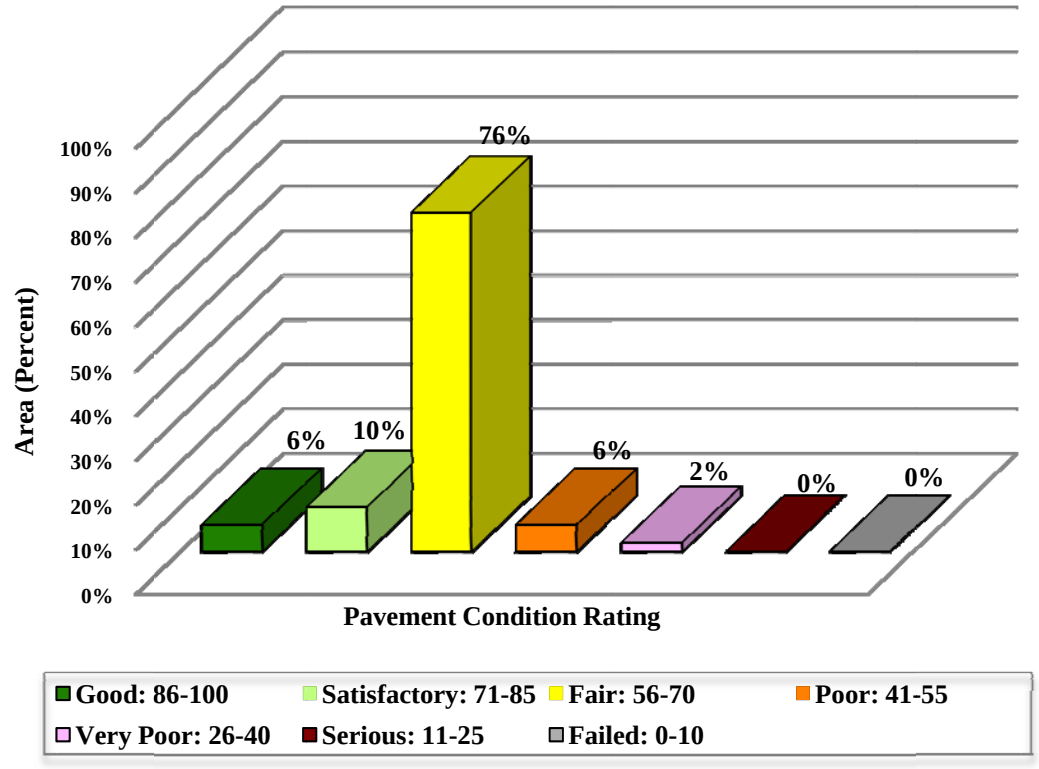
(a) Runway



(b) Taxiway



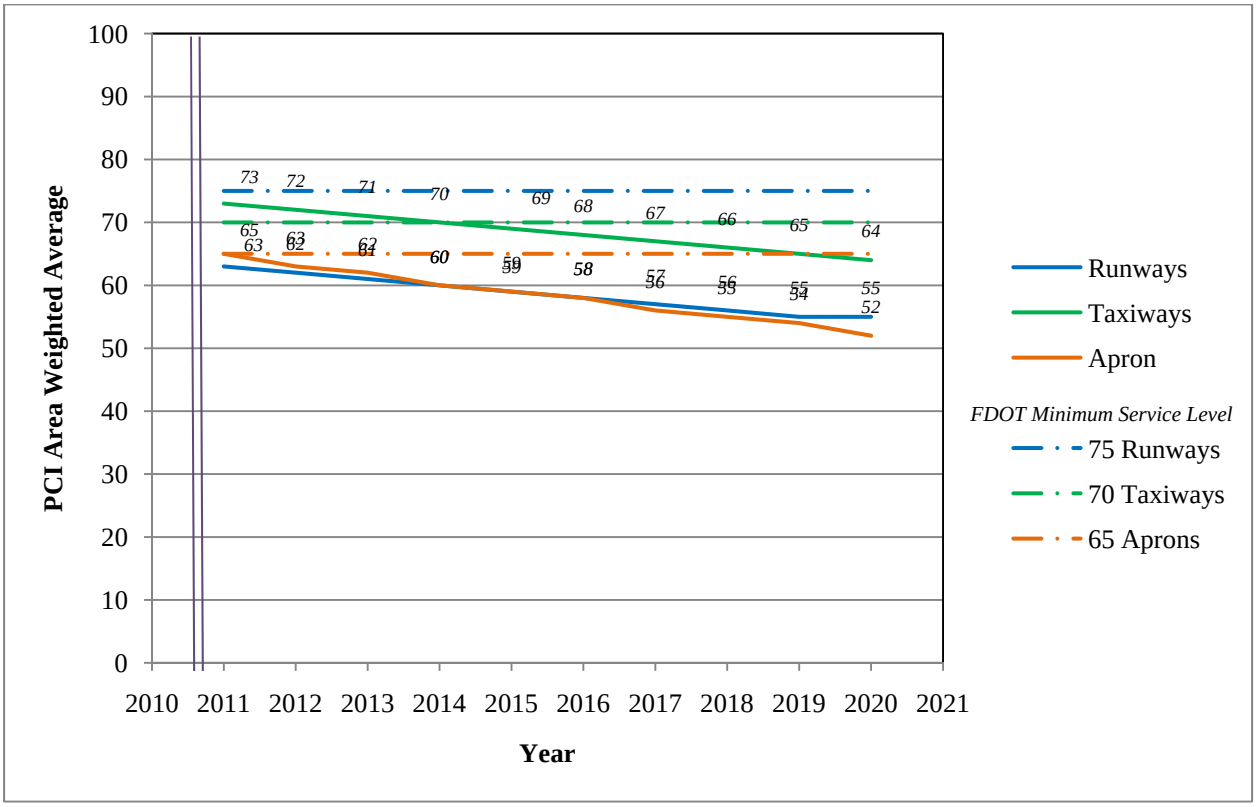
(c) Apron



4. PAVEMENT CONDITION PREDICTION

Performance prediction models or deterioration curves for PCI were used to develop a condition forecast. The performance models were developed for combinations of variables such as pavement use (runway, taxiway or apron), surface type (AC or PCC) and airport category (GA, RL, or PR). Figure 4-1 illustrates the predicted performance of pavements at Florida Keys Marathon Airport based on current condition, age since last construction and the deterioration model appropriate for the type of pavement. The figure presents the forecast for each pavement use and displays the FDOT minimum service level for Primary (PR) airports.

Figure 4-1: Predicted PCI by Pavement Use



Appendix D presents the tabular summary of the predicted Section PCI for each year from 2011 to 2020.

5. MAINTENANCE POLICIES AND COSTS

5.1 Policies

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

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

Table 5-1 provides the list of the maintenance activities used in MicroPAVER to treat specific distress types. 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.

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 M&R plan for the airport. Sections above critical PCI levels receive routine maintenances while pavements predicted to deteriorate below their respective critical PCI level during the analysis period will be identified for Major M&R. Table 5-2 gives the critical PCI levels for Primary Airports.

The maintenance rehabilitation policy and activity costs have been updated based on the study of readily available construction cost data at the time of this study. The costs depicted in this report are intended for planning purposes.

Table 5-1: Routine Maintenance Activities for Airfield Pavements

Surface	Distress	Severity*	Work Type	Code	Work Unit
AC	Alligator Crack	M, H	Patching - AC Deep	PA-AD	SqFt
	Bleeding	N/A	No Localized M&R	NONE	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
PCC	Blow-Up	L, M, H	Patching - PCC Full Depth	PA-PF	SqFt
	Corner Break	M, H	Patching - PCC Full Depth	PA-PF	SqFt
	Linear Crack	M, H	Crack Sealing – PCC	CS-PC	Ft
	Durability Crack	H	Slab Replacement – PCC	SL-PC	SqFt
		M	Patching - PCC Full Depth	PA-PF	SqFt
	Jt. Seal Damage	M, H	Joint Seal (Localized)	JS-LC	Ft
	Small Patch	M, H	Patching - PCC Partial Depth	PA-PP	SqFt
	Large Patch	M, H	Patching - PCC Full Depth	PA-PF	SqFt
	Popouts	N/A	No Localized M&R	NONE	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

Table 5-2: Critical PCI for Primary Airports

Use	Critical PCI
Runway	65
Taxiway	65
Apron	65

It should be noted that critical PCI is not the same as Minimum PCI or Minimum Condition. The Minimum PCI is a value set by the user so pavement sections are rehabilitated before they fall below the set minimum. Table 5-3 gives the targeted, or desired, Minimum PCI values for runways, taxiways, and aprons of Primary Airports.

Table 5-3: FDOT Minimum Service Level PCI for Primary Airports

Minimum PCI		
Runway	**Taxiway**	**Apron**
75	70	65

Typical Major M&R activities range from overlays to reconstruction. Based on the critical PCI values in Table 5-2, the PCI trigger range when the likely activity would be a mill and resurface was 40 to 79 and reconstruction at a PCI of 39 or lower. One important concept of pavement management systems is that it is cost effective to maintain pavements that are already in good condition rather than wait for them to get worse and require more expensive rehabilitation.

Crack sealing and full-depth patching are the M&R activities recommended to repair pavements with PCI values between 80 and 90. MicroPAVER considers these as preventative M&R with their primary objective being to slow the rate of pavement deterioration. While the trigger PCI for mill and overlay has been set to 55, MicroPAVER also assigns mill and overlay to sections with a PCI greater than 55 if they exhibit some structural distress. Table 5-4 summarizes the M&R activities for Primary Airports based on PCI value.

Table 5-4: M&R Activities for Primary Airports

	Activity	PCI Range
Maintenance	Crack Sealing and Full-Depth Patching	80 and 90
Rehabilitation	Mill and Overlay (AC) or Concrete Pavement Restoration (PCC)	40 to 79
	Reconstruction	39 and less

5.2 Unit Costs

FDOT cost databases for airports and highway pavement maintenance and rehabilitation were updated from the previous SAPMP study based on current construction cost trends in order to determine meaningful costs for the program. Table 5-5 presents the unit costs summary.

5.3 M&R Activities

FDOT recognizes that although Mill and Overlay work is recommended for asphalt pavements within a PCI range from 40 to 79, it is conceivable that airports may not have adequate funding to perform this type of rehabilitation. Microsurfacing treatment is a maintenance/rehabilitation measure that can be used in lieu of asphalt pavement mill and overlay; however it should be understood that this measure is intended for short term pavement life extension. While the cost of microsurfacing is significantly lower than that of pavement mill and overlay, it is not intended to be a full rehabilitative measure for long term benefit.

Table 5-5: Maintenance Unit Costs for FDOT

Code	Name	Cost	Unit
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

The improvement in condition due to maintenance actions applied to specific distresses is only performed when an inspection was performed recently and only in the first year of the M&R analysis. In subsequent years, MicroPAVER calculates M&R costs based on expected unit costs for pavements in a range of PCIs. That is, for low PCI, it is expected that the repair would be significant (e.g. reconstruction) and therefore very costly.

Using available unit cost data, the Major M&R Cost by Condition table was set up as shown in Table 5-6. The cost assigned to each range of PCI is based on a Transportation Cost Report provided by Office of Planning Policy of FDOT where the unit costs of reconstruction and resurfacing of airfield pavements were included. These costs were then assigned to the appropriate PCI range to arrive at a cost per square foot necessary to restore pavements at that PCI level to new condition, i.e. a PCI of 100.

Table 5-6: M&R Activities and Unit Costs by Condition for Primary Airports

	Activity	PCI Trigger	Cost/SqFt
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
	Reconstruction	30	$13.62
		20	$13.62

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

6. PAVEMENT REHABILITATION NEEDS ANALYSIS

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

The objective of the M&R analysis is to observe the effect of different fiscal scenarios on the network condition, over a period of ten years, starting from 2011. The analysis was conducted using an unlimited budget. An unlimited budget allows all M&R needs to be identified along with the associated cost regardless of priority.

Table 6-1 presents the M&R list of immediate needs for Major M&R, i.e. Year 1 of the forecast. The importance of this listing is that it points out the major activities triggered by the current condition of the pavements.

Table 6-1: Summary of Immediate Major M&R Needs Option No. 1

Branch Name	Section ID	Surface Type	Section Area (ft^2)	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
Apron East	4505	AC	35,120	$220,904.82	43	Mill and Overlay	100
Apron East	4510	AC	17,050	$72,991.08	57	Mill and Overlay	100
Apron at Flight Center	4110	PCC	3,294	$44,864.29	0	Reconstruction	100
Apron at Flight Center	4115	AC	35,580	$111,970.34	61	Mill and Overlay	100
Jet Center Apron	4305	AC	112,150	$512,301.41	56	Mill and Overlay	100
Jet Center Apron	4310	PCC	17,440	$237,532.88	26	Reconstruction	100
Jet Center Apron	4320	AC	8,020	$50,445.80	45	Mill and Overlay	100
Terminal Apron	4210	AC	19,260	$50,095.29	63	Mill and Overlay	100
Terminal Apron	4220	PCC	78,600	$182,980.92	64	Concrete Pavement Restoration	100
Runway 7-25	6105	AAC	375,600	$874,397.35	64	Mill and Overlay	100
Runway 7-25	6110	AAC	125,200	$325,645.40	63	Mill and Overlay	100
Taxiway Charlie	205	AAC	6,247	$16,248.46	63	Mill and Overlay	100
			Total	**$2,700,378.04**	**50**		**100**

* Costs are adjusted for inflation.

FDOT recognizes that the costs attributed to the aforementioned ‘Major Activity’ of performing a pavement ‘Mill and Overlay’ may conflict with budgetary constraints. Table 6-2 presents an alternative minor rehabilitative activity to the mid-range performing pavements. The alternative activity is performing a ‘Microsurfacing/Slurry Seal’ to the pavement to retard the degradation of the facility until funding is available for a ‘Mill and Overlay’ activity.

Table 6-2: Summary of Immediate Major M&R Needs Option No. 2

Branch Name	Section ID	Surface Type	Section Area (ft^2)	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
Apron East	4505	AC	35,120	$22,828.00	43	Microsurfacing	100
Apron East	4510	AC	17,050	$11,082.50	57	Microsurfacing	100
Apron at Flight Center	4110	PCC	3,294	$44,864.29	0	Reconstruction	100
Apron at Flight Center	4115	AC	35,580	$23,127.00	61	Microsurfacing	100
Jet Center Apron	4305	AC	112,150	$72,897.50	56	Microsurfacing	100
Jet Center Apron	4310	PCC	17,440	$237,532.88	26	Reconstruction	100
Jet Center Apron	4320	AC	8,020	$5,213.00	45	Microsurfacing	100
Terminal Apron	4210	AC	19,260	$12,519.00	63	Microsurfacing	100
Terminal Apron	4220	PCC	78,600	$182,980.92	64	Concrete Pavement Restoration	100
Runway 7-25	6105	AAC	375,600	$244,140.00	64	Microsurfacing	100
Runway 7-25	6110	AAC	125,200	$81,380.00	63	Microsurfacing	100
Taxiway Charlie	205	AAC	6,247	$4,060.55	63	Microsurfacing	100
			Total	**$942,625.64**	**50**		**100**

* Costs are adjusted for inflation.

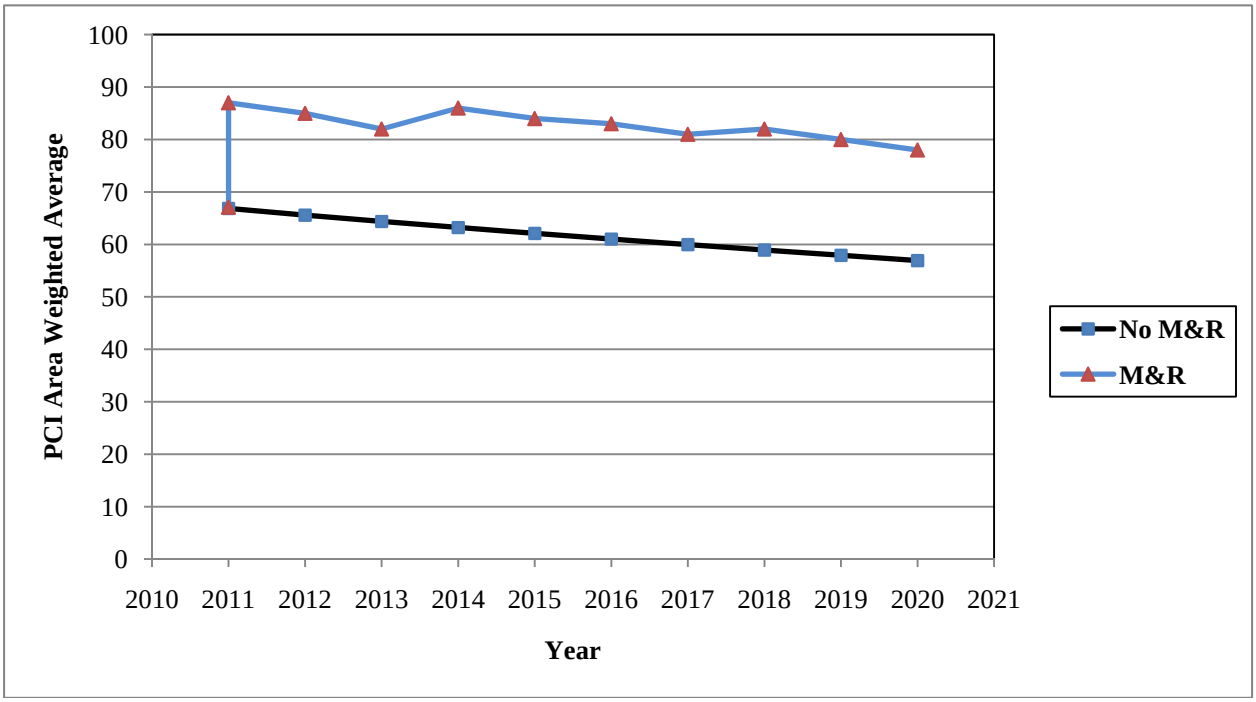
In addition to the immediate Major M&R needs, maintenance activities for pavement areas above critical PCI have been recommended by MicroPAVER for Year 1 and are shown in Table 6-3 below. The costs provided in Table 5-5 were used to calculate the costs associated with this work, which is intended to treat specific distress types. A more detailed table is provided in Appendix E.

Table 6-3: Summary of Year 1 Maintenance Activities

Branch Name	Branch ID	Section ID	Distress Description	Distress Severity	Work Description	Work Quantity	Work Unit	Unit Cost	Work Cost
Apron at Flight Center	AP FLGHT C	4105	OIL SPILLAGE	N	Patching - AC Shallow	161.10	SqFt	$2.90	$467.13
Apron at Flight Center	AP FLGHT C	4105	WEATH/RAVEL	M	Surface Seal - Coat Tar	95.10	SqFt	$0.40	$38.03
Apron at Flight Center	AP FLGHT C	4105	WEATH/RAVEL	L	Surface Seal - Rejuvenating	31,184.00	SqFt	$0.40	$12,473.70
Apron at Flight Center	AP FLGHT C	4105	PATCHING	M	Patching - AC Deep	138.30	SqFt	$4.90	$677.76
Apron at Flight Center	AP FLGHT C	4120	WEATH/RAVEL	L	Surface Seal - Rejuvenating	9,526.70	SqFt	$0.40	$3,810.70
Apron at Flight Center	AP FLGHT C	4125	WEATH/RAVEL	L	Surface Seal - Rejuvenating	4,278.20	SqFt	$0.40	$1,711.31
Jet Center Apron	AP JET CTR	4315	PATCHING	M	Patching - AC Deep	316.70	SqFt	$4.90	$1,551.96
Jet Center Apron	AP JET CTR	4315	WEATH/RAVEL	M	Surface Seal - Coat Tar	152.60	SqFt	$0.40	$61.03
Jet Center Apron	AP JET CTR	4315	WEATH/RAVEL	L	Surface Seal - Rejuvenating	5,451.70	SqFt	$0.40	$2,180.69
Jet Center Apron	AP JET CTR	4315	OIL SPILLAGE	N	Patching - AC Shallow	158.50	SqFt	$2.90	$459.52
Terminal Apron	AP TERM	4205	PATCHING	M	Patching - AC Deep	58.80	SqFt	$4.90	$288.07
Terminal Apron	AP TERM	4205	WEATH/RAVEL	L	Surface Seal - Rejuvenating	8,003.90	SqFt	$0.40	$3,201.60
T-Hangar Aprons	AP T-HAN	4405	WEATH/RAVEL	M	Surface Seal - Coat Tar	419.00	SqFt	$0.40	$167.58
T-Hangar Aprons	AP T-HAN	4405	WEATH/RAVEL	L	Surface Seal - Rejuvenating	1,551.70	SqFt	$0.40	$620.68
Taxiway Alpha	TW A	105	WEATH/RAVEL	L	Surface Seal - Rejuvenating	12,138.10	SqFt	$0.40	$4,855.30
Taxiway Alpha	TW A	105	OIL SPILLAGE	N	Patching - AC Shallow	263.50	SqFt	$2.90	$764.29
Taxiway Alpha	TW A	115	WEATH/RAVEL	L	Surface Seal - Rejuvenating	3,256.40	SqFt	$0.40	$1,302.56
Taxiway Bravo	TW B	151	WEATH/RAVEL	L	Surface Seal - Rejuvenating	620.90	SqFt	$0.40	$248.35
Taxiway Charlie	TW C	210	L & T CR	M	Crack Sealing - AC	17.00	Ft	$2.25	$38.26
Taxiway Delta	TW D	305	WEATH/RAVEL	L	Surface Seal - Rejuvenating	3,715.60	SqFt	$0.40	$1,486.26
Taxiway Delta	TW D	310	WEATH/RAVEL	L	Surface Seal - Rejuvenating	2,988.00	SqFt	$0.40	$1,195.20
Taxiway Echo	TW E	152	WEATH/RAVEL	L	Surface Seal - Rejuvenating	220.10	SqFt	$0.40	$88.02
Taxiway Echo	TW E	155	WEATH/RAVEL	L	Surface Seal - Rejuvenating	600.00	SqFt	$0.40	$240.00
Taxiway Northeast	TW NE	405	WEATH/RAVEL	L	Surface Seal - Rejuvenating	3,197.60	SqFt	$0.40	$1,279.05
								Total =	$39,207.05

The 10 year forecast results are shown in Figure 6-1, illustrating the effect on pavement condition (PCI) of doing no maintenance versus having unlimited funds and performing all M&R actions based on the policies.

Figure 6-1: Budget Scenario Analysis



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

- The PCI will deteriorate from 67 in 2011 to 56 in ten years if no M&R activities are performed.
- The PCI will remain at or above 78 through the 10-year analysis period under the unlimited budget scenario. A 2020 PCI of 78 with this scenario is 22 PCI points higher than a "No M&R" scenario. The total cost for Major M&R over this 10-year period is about $3.9 million.

7. MAINTENANCE AND REHABILITATION PLAN

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

Table 7-1 provides the summary results under the critical PCI unlimited funding scenario.

Table 7-1: M&R Costs under Unlimited Funding Scenario

Year	Preventative	Major M&R	Total Year Cost
2011	$39,207.05	$2,700,378.04	$2,739,585.09
2012	$141,416.66	$47,980.81	$189,397.47
2013	$158,944.78	$0.00	$158,944.78
2014	$107,181.30	$686,870.35	$794,051.65
2015	$133,508.16	$0.00	$133,508.16
2016	$155,238.33	$75,053.40	$230,291.73
2017	$189,897.55	$0.00	$189,897.55
2018	$180,579.25	$363,900.40	$544,479.65
2019	$215,631.59	$0.00	$215,631.59
2020	$251,190.09	$11,764.29	$262,954.38
Total	**$1,572,794.76**	**$3,885,947.29**	**$5,458,742.05**

Note: Costs are adjusted for inflation.

Approximately 69% of the total Major M&R cost is required in the first year (2011). According to the 2011 inspections, the following pavement sections were in immediate need of Major M&R Activity:

- **Apron East** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification.
- **Apron at Flight Center** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification and Portland Cement Concrete pavement reconstruction activity per the FDOT P-501 Specification.
- **Jet Center Apron** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification and Portland Cement Concrete pavement reconstruction activity per the FDOT P-501 Specification.

- **Terminal Apron** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification and Portland Cement Concrete pavement restoration activity per the FDOT P-501 Specification.
- **Runway 7-25** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification.
- **Taxiway Charlie** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification.

The unlimited budget scenario provides the basis for estimating the total repair cost.

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

8. VISUAL AIDS

8.1 System Inventory and Network Definition Drawings

The System Inventory and Network Definition CADD drawings, which show the airport pavement outline with Branch and Section boundaries and identify changes in the network pavement since the last inspection and the sampling plan, respectively, are included in Appendix A of this report.

8.2 Condition Map

A Condition Map that has been prepared based on data linked to the airport's shape file is included in Appendix B. The Condition Map graphically show the inventory and condition of the airport via color coding shown on the shape file. The coding provides a visual representation that illustrates the PCIs for each pavement section.

8.3 10-Year M&R Map

A 10-Year M&R Map that shows the summary of the M&R plan is attached in Appendix G.

8.4 Photographs

Selected digital photographs taken during the pavement inspection are provided in Appendix H to provide visual support to special pavement conditions or distress observed during the inspection of the airport.

9. RECOMMENDATIONS

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

The following recommendations were made based on the 2011 condition inspection and M&R analysis results:

- **Apron East** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification.
- **Apron at Flight Center** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification and Portland Cement Concrete pavement reconstruction activity per the FDOT P-501 Specification.
- **Jet Center Apron** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification and Portland Cement Concrete pavement reconstruction activity per the FDOT P-501 Specification.
- **Terminal Apron** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification and Portland Cement Concrete pavement restoration activity per the FDOT P-501 Specification.
- **Runway 7-25** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification.
- **Taxiway Charlie** – Asphalt Pavement mill and overlay activity per the FDOT P-401 Specification.

Further evaluation of these features is necessary in order to develop repair plans and timing for future budgets since these needs cannot be addressed with typical annual expenditures.

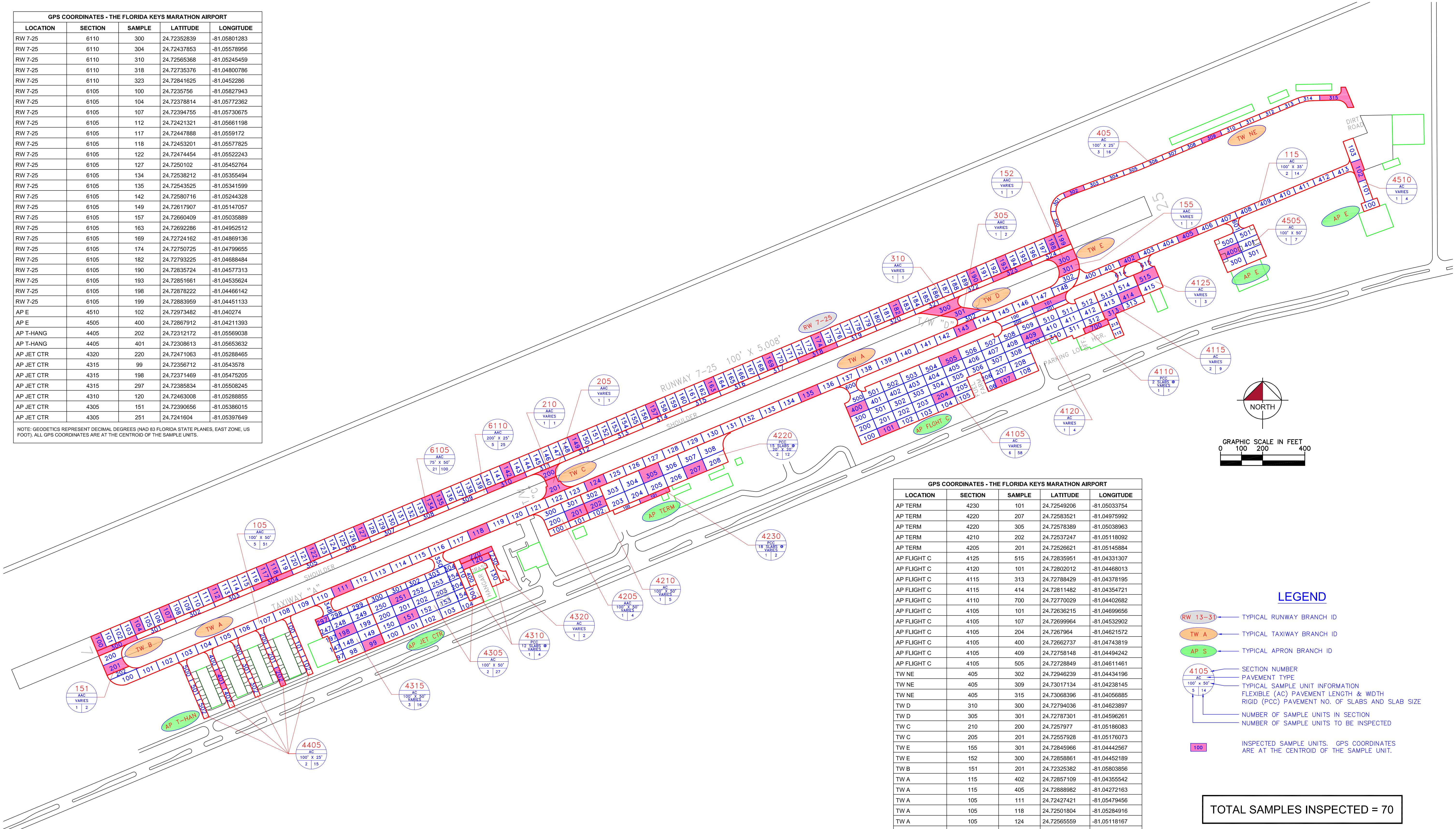
APPENDIX A

NETWORK DEFINITION MAP

SYSTEM INVENTORY MAP

PAVEMENT INVENTORY TABLE

WORK HISTORY REPORT



GPS COORDINATES - THE FLORIDA KEYS MARATHON AIRPORT				
LOCATION	**SECTION**	**SAMPLE**	**LATITUDE**	**LONGITUDE**
RW 7-25	6110	300	24.72352839	-81.05801283
RW 7-25	6110	304	24.72437853	-81.05578956
RW 7-25	6110	310	24.72565368	-81.05245459
RW 7-25	6110	318	24.72735376	-81.04800786
RW 7-25	6110	323	24.72841625	-81.0452286
RW 7-25	6105	100	24.7235756	-81.05827943
RW 7-25	6105	104	24.72378814	-81.05772362
RW 7-25	6105	107	24.72394755	-81.05730675
RW 7-25	6105	112	24.72421321	-81.05661198
RW 7-25	6105	117	24.72447888	-81.0559172
RW 7-25	6105	118	24.72453201	-81.05577825
RW 7-25	6105	122	24.72474454	-81.05522243
RW 7-25	6105	127	24.7250102	-81.05452764
RW 7-25	6105	134	24.72538212	-81.05355494
RW 7-25	6105	135	24.72543525	-81.05341599
RW 7-25	6105	142	24.72580716	-81.05244328
RW 7-25	6105	149	24.72617907	-81.05147057
RW 7-25	6105	157	24.72660409	-81.05035889
RW 7-25	6105	163	24.72692286	-81.04952512
RW 7-25	6105	169	24.72724162	-81.04869136
RW 7-25	6105	174	24.72750725	-81.04799655
RW 7-25	6105	182	24.72793225	-81.04688484
RW 7-25	6105	190	24.72835724	-81.04577313
RW 7-25	6105	193	24.72851661	-81.04535624
RW 7-25	6105	198	24.72878222	-81.04466142
RW 7-25	6105	199	24.72883959	-81.04451133
AP E	4510	102	24.72973482	-81.040274
AP E	4505	400	24.72867912	-81.04211393
AP T-HANG	4405	202	24.72312172	-81.05569038
AP T-HANG	4405	401	24.72308613	-81.05653632
AP JET CTR	4320	220	24.72471063	-81.05288465
AP JET CTR	4315	99	24.72356712	-81.0543578
AP JET CTR	4315	198	24.72371469	-81.05475205
AP JET CTR	4315	297	24.72385834	-81.05508245
AP JET CTR	4310	120	24.72463008	-81.05288855
AP JET CTR	4305	151	24.72390656	-81.05386015
AP JET CTR	4305	251	24.7241604	-81.05397649

NOTE: GEODETICS REPRESENT DECIMAL DEGREES (NAD 83 FLORIDA STATE PLANES, EAST ZONE, US FOOT). ALL GPS COORDINATES ARE AT THE CENTROID OF THE SAMPLE UNITS.

GPS COORDINATES - THE FLORIDA KEYS MARATHON AIRPORT				
LOCATION	**SECTION**	**SAMPLE**	**LATITUDE**	**LONGITUDE**
AP TERM	4230	101	24.72549206	-81.05033754
AP TERM	4220	207	24.72583521	-81.04975992
AP TERM	4220	305	24.72578389	-81.05038963
AP TERM	4210	202	24.72537247	-81.05118092
AP TERM	4205	201	24.72526621	-81.05145884
AP FLIGHT C	4125	515	24.72835951	-81.04331307
AP FLIGHT C	4120	101	24.72802012	-81.04468013
AP FLIGHT C	4115	313	24.72788429	-81.04378195
AP FLIGHT C	4115	414	24.72811482	-81.04354721
AP FLIGHT C	4110	700	24.72770029	-81.04402682
AP FLIGHT C	4105	101	24.72636215	-81.04699656
AP FLIGHT C	4105	107	24.72699964	-81.04532902
AP FLIGHT C	4105	204	24.7267964	-81.04621572
AP FLIGHT C	4105	400	24.72662737	-81.04743819
AP FLIGHT C	4105	409	24.72758148	-81.04494242
AP FLIGHT C	4105	505	24.72728849	-81.04611461
TW NE	405	302	24.72946239	-81.04434196
TW NE	405	309	24.73017134	-81.04238145
TW NE	405	315	24.73068396	-81.04056885
TW D	310	300	24.72794036	-81.04623897
TW D	305	301	24.72787301	-81.04596261
TW C	210	200	24.7257977	-81.05186083
TW C	205	201	24.72557928	-81.05176073
TW E	155	301	24.72845966	-81.04442567
TW E	152	300	24.72858861	-81.04452189
TW B	151	201	24.72325382	-81.05803856
TW A	115	402	24.72857109	-81.04355542
TW A	115	405	24.72888982	-81.04272163
TW A	105	111	24.72427421	-81.05479456
TW A	105	118	24.72501804	-81.05284916
TW A	105	124	24.72565559	-81.05118167
TW A	105	135	24.72682439	-81.04812454
TW A	105	143	24.72767438	-81.04590114

NOTE: GEODETICS REPRESENT DECIMAL DEGREES (NAD 83 FLORIDA STATE PLANES, EAST ZONE, US FOOT). ALL GPS COORDINATES ARE AT THE CENTROID OF THE SAMPLE UNITS.

LEGEND

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

4105 — SECTION NUMBER
AC — PAVEMENT TYPE
100' X 50' — TYPICAL SAMPLE UNIT INFORMATION
FLEXIBLE (AC) PAVEMENT LENGTH & WIDTH
RIGID (PCC) PAVEMENT NO. OF SLABS AND SLAB SIZE
5 — NUMBER OF SAMPLE UNITS IN SECTION
14 — NUMBER OF SAMPLE UNITS TO BE INSPECTED

100 — INSPECTED SAMPLE UNITS. GPS COORDINATES ARE AT THE CENTROID OF THE SAMPLE UNIT.

TOTAL SAMPLES INSPECTED = 70

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

NUMBER	DATE	REVISIONS

DESIGNED: ELT DRAWN: ALB CHECKED: DRB DATE:

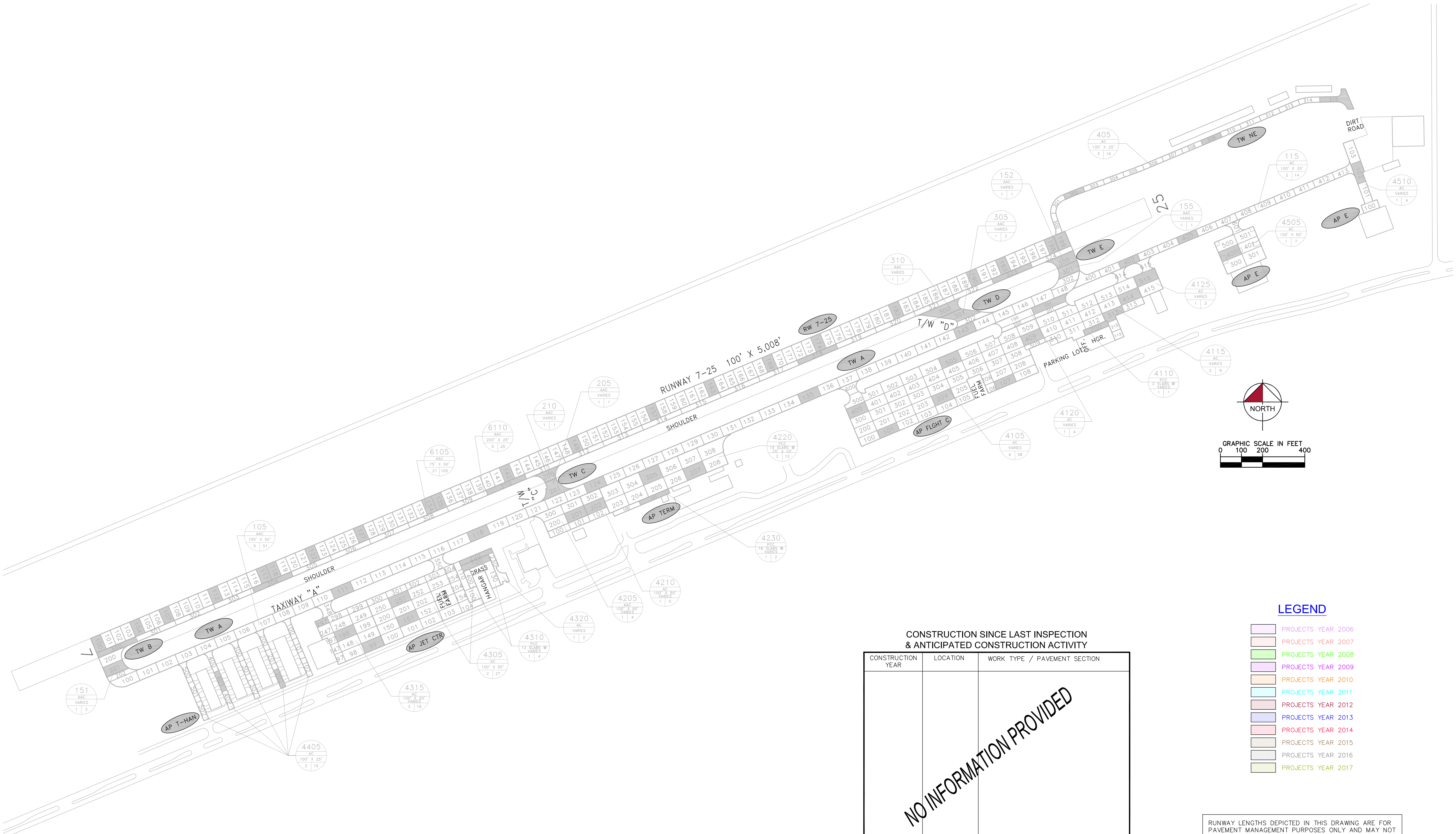
NETWORK DEFINITION MAP

THE FLORIDA KEYS MARATHON AIRPORT
MONROE COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER MTH

FDOT DISTRICT 6



CONSTRUCTION SINCE LAST INSPECTION & ANTICIPATED CONSTRUCTION ACTIVITY

CONSTRUCTION YEAR	LOCATION	WORK TYPE / PAVEMENT SECTION
		NO INFORMATION PROVIDED

LEGEND

- PROJECTS YEAR 2006
- PROJECTS YEAR 2007
- PROJECTS YEAR 2008
- PROJECTS YEAR 2009
- PROJECTS YEAR 2010
- PROJECTS YEAR 2011
- PROJECTS YEAR 2012
- PROJECTS YEAR 2013
- PROJECTS YEAR 2014
- PROJECTS YEAR 2015
- PROJECTS YEAR 2016
- PROJECTS YEAR 2017

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

NUMBER	DATE	REVISIONS

DESIGNED: ELT DRAWN: ALB CHECKED: DRB DATE:

SYSTEM INVENTORY MAP

THE FLORIDA KEYS MARATHON AIRPORT
MONROE COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER **MTH**

FDOT DISTRICT 6

Table A-1: Pavement Inventory

Branch Name	Branch ID	Branch Use	Section ID	Length (ft)	Width (ft)	True Area (ft^2)	Section Rank	Surface Type	Last Const. Date	Last Insp. Date	Total Samples
Apron East	AP E	APRON	4510	346	45	17,050.00	T	AC	1/1/1999	5/3/2011	4
Apron East	AP E	APRON	4505	200	163	35,120.00	T	AC	9/1/2007	5/3/2011	7
Apron at Flight Center	AP FLGHT C	APRON	4115	204	143	35,580.00	P	AC	1/1/1966	5/3/2011	9
Apron at Flight Center	AP FLGHT C	APRON	4105	1,300.00	245	270,010.00	P	AC	1/1/1983	5/3/2011	58
Apron at Flight Center	AP FLGHT C	APRON	4110	122	27	3,294.00	P	PCC	1/1/1983	5/3/2011	1
Apron at Flight Center	AP FLGHT C	APRON	4120	345	54	18,520.00	P	AC	1/1/1998	5/3/2011	4
Apron at Flight Center	AP FLGHT C	APRON	4125	108	107	14,265.00	P	AC	12/25/1999	5/3/2011	3
Jet Center Apron	AP JET CTR	APRON	4310	580	30	17,440.00	P	PCC	1/1/1987	5/3/2011	4
Jet Center Apron	AP JET CTR	APRON	4305	231	510	112,150.00	P	AC	1/1/1990	5/3/2011	27
Jet Center Apron	AP JET CTR	APRON	4320	350	23	8,020.00	P	AC	1/1/1990	5/3/2011	2
Jet Center Apron	AP JET CTR	APRON	4315	231	237	60,630.00	P	AC	12/25/1999	5/3/2011	16
Terminal Apron	AP TERM	APRON	4205	205	95	20,010.00	P	AAC	1/1/1978	5/3/2011	4
Terminal Apron	AP TERM	APRON	4220	609	127	78,600.00	P	PCC	1/1/1994	5/3/2011	12
Terminal Apron	AP TERM	APRON	4230	285	22	6,270.00	P	PCC	1/1/1994	5/3/2011	2
Terminal Apron	AP TERM	APRON	4210	305	60	19,260.00	P	AC	1/1/1999	5/3/2011	5
T-Hangar Aprons	AP T-HAN	APRON	4405	1,465.00	25	37,435.00	P	AC	12/25/1999	5/3/2011	15
Runway 7-25	RW 7-25	RUNWAY	6105	5,008.00	75	375,600.00	P	AAC	1/1/1985	5/3/2011	100
Runway 7-25	RW 7-25	RUNWAY	6110	5,008.00	25	125,200.00	P	AAC	1/1/1985	5/3/2011	25
Taxiway Alpha	TW A	TAXIWAY	105	4,950.00	50	252,880.00	P	AAC	1/1/1998	5/3/2011	51
Taxiway Alpha	TW A	TAXIWAY	115	1,420.00	35	50,655.00	P	AC	12/25/1999	5/3/2011	14
Taxiway Bravo	TW B	TAXIWAY	151	100	100	10,710.00	P	AAC	1/1/1998	5/3/2011	2
Taxiway Charlie	TW C	TAXIWAY	205	75	56	6,247.00	P	AAC	1/1/1998	5/3/2011	1
Taxiway Charlie	TW C	TAXIWAY	210	50	56	3,873.00	P	AAC	1/1/1998	5/3/2011	1

Table A-1: Pavement Inventory (Continued)

Branch Name	Branch ID	Branch Use	Section ID	Length (ft)	Width (ft)	True Area (ft^2)	Section Rank	Surface Type	Last Const. Date	Last Insp. Date	Total Samples
Taxiway Delta	TW D	TAXIWAY	305	110	110	9,290.00	P	AAC	1/1/1983	5/3/2011	2
Taxiway Delta	TW D	TAXIWAY	310	60	110	7,470.00	P	AAC	1/1/1998	5/3/2011	1
Taxiway Echo	TW E	TAXIWAY	152	50	100	5,537.00	P	AAC	1/1/1998	5/3/2011	1
Taxiway Echo	TW E	TAXIWAY	155	50	100	5,103.00	P	AAC	1/1/1998	5/3/2011	1
Taxiway Northeast	TW NE	TAXIWAY	405	1,640.00	25	43,530.00	P	AC	12/25/1999	5/3/2011	16

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

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

Network: MTH **Branch:** AP E (APRON E) **Section:** 4505 **Surface:** AC
L.C.D.: 09/01/2007 **Use:** APRON **Rank:** T **Length:** 200.00 Ft **Width:** 163.00 Ft **True Area:** 35.120.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
09/01/2007	SR-AC	Surface Reconstruction - AC	$0	0.00	True	
01/01/1999	INITIAL	Initial Construction	$0	2.00	True	2" AC/ 6" Limerock

Network: MTH **Branch:** AP E (APRON E) **Section:** 4510 **Surface:** AC
L.C.D.: 01/01/1999 **Use:** APRON **Rank:** T **Length:** 346.00 Ft **Width:** 45.00 Ft **True Area:** 17.050.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1999	INITIAL	Initial Construction	$0	2.00	True	2" AC / 6" Limerock

Network: MTH **Branch:** AP FLGHT C (APRON AT FLIGHT CENTER) **Section:** 4105 **Surface:** AC
L.C.D.: 01/01/1983 **Use:** APRON **Rank:** P **Length:** 1.300.00 Ft **Width:** 245.00 Ft **True Area:** 270.010.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1990	IMPORTED	REPAIR			False	1990 SEAL COAT
01/01/1983	IMPORTED	BUILT		2.00	True	1983 P-625 2" P-401 8" P-211

Network: MTH **Branch:** AP FLGHT C (APRON AT FLIGHT CENTER) **Section:** 4110 **Surface:** PCC
L.C.D.: 01/01/1983 **Use:** APRON **Rank:** P **Length:** 122.00 Ft **Width:** 27.00 Ft **True Area:** 3.294.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1983	IMPORTED	BUILT			True	1983 PCC

Network: MTH **Branch:** AP FLGHT C (APRON AT FLIGHT CENTER) **Section:** 4115 **Surface:** AC
L.C.D.: 01/01/1966 **Use:** APRON **Rank:** P **Length:** 204.00 Ft **Width:** 143.00 Ft **True Area:** 35.580.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1966	IMPORTED	BUILT			True	EST 1966 BIT

Network: MTH **Branch:** AP FLGHT C (APRON AT FLIGHT CENTER) **Section:** 4120 **Surface:** AC
L.C.D.: 01/01/1998 **Use:** APRON **Rank:** P **Length:** 345.00 Ft **Width:** 54.00 Ft **True Area:** 18.520.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1998	IMPORTED	OVERLAY			True	1998 TAPERED AC OVERLAY
01/01/1973	IMPORTED	BUILT		4.00	True	1973 4" P401 ON 6" P211

Network: MTH **Branch:** AP FLGHT C (APRON AT FLIGHT CENTER) **Section:** 4125 **Surface:** AC
L.C.D.: 12/25/1999 **Use:** APRON **Rank:** P **Length:** 108.00 Ft **Width:** 107.00 Ft **True Area:** 14.265.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
12/25/1999	INITIAL	Initial Construction	$0	0.00	True	

Network: MTH **Branch:** AP JET CTR (JET CENTER APRON) **Section:** 4305 **Surface:** AC
L.C.D.: 01/01/1990 **Use:** APRON **Rank:** P **Length:** 231.00 Ft **Width:** 510.00 Ft **True Area:** 112.150.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1990	IMPORTED	BUILT		2.00	True	1990 P-625 2" P-401 8" P-211 12" P-154

Network: MTH **Branch:** AP JET CTR (JET CENTER APRON) **Section:** 4310 **Surface:** PCC
L.C.D.: 01/01/1987 **Use:** APRON **Rank:** P **Length:** 580.00 Ft **Width:** 30.00 Ft **True Area:** 17.440.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1987	IMPORTED	BUILT			True	EST 1987 P-501

Network: MTH **Branch:** AP JET CTR (JET CENTER APRON) **Section:** 4315 **Surface:** AC
L.C.D.: 12/25/1999 **Use:** APRON **Rank:** P **Length:** 231.00 Ft **Width:** 237.00 Ft **True Area:** 60.630.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
12/25/1999	INITIAL	Initial Construction	$0	0.00	True	

Network: MTH **Branch:** AP JET CTR (JET CENTER APRON) **Section:** 4320 **Surface:** AC
L.C.D.: 01/01/1990 **Use:** APRON **Rank:** P **Length:** 350.00 Ft **Width:** 23.00 Ft **True Area:** 8.020.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1990	INITIAL	Initial Construction	$0	0.00	True	

Network: MTH **Branch:** AP TERM (TERMINAL APRON) **Section:** 4205 **Surface:** AAC
L.C.D.: 01/01/1978 **Use:** APRON **Rank:** P **Length:** 205.00 Ft **Width:** 95.00 Ft **True Area:** 20.010.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1987	IMPORTED	REPAIR			False	1987 SEAL COAT
01/01/1978	IMPORTED	OVERLAY		3.00	True	1978 3" P-401
01/01/1966	IMPORTED	BUILT		1.00	True	1966 1" P-401 6" P-211

Network: MTH **Branch:** AP TERM (TERMINAL APRON) **Section:** 4210 **Surface:** AC
L.C.D.: 01/01/1999 **Use:** APRON **Rank:** P **Length:** 305.00 Ft **Width:** 60.00 Ft **True Area:** 19.260.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1999	CR-AC	Complete Reconstruction - AC	$0	2.00	True	2" AC / 6" Limerock
01/01/1978	IMPORTED	BUILT		4.00	True	1978 P-625 4" P-401 6" P-211

Network: MTH **Branch:** AP TERM (TERMINAL APRON) **Section:** 4220 **Surface:** PCC
L.C.D.: 01/01/1994 **Use:** APRON **Rank:** P **Length:** 609.00 Ft **Width:** 127.00 Ft **True Area:** 78.600.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1994	IMPORTED	BUILT			True	1994 P501 ON LIMEROCK

Network: MTH **Branch:** AP TERM (TERMINAL APRON) **Section:** 4230 **Surface:** PCC
L.C.D.: 01/01/1994 **Use:** APRON **Rank:** P **Length:** 285.00 Ft **Width:** 22.00 Ft **True Area:** 6.270.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1994	IMPORTED	BUILT			True	1994 P501

Network: MTH **Branch:** AP T-HAN (T-HANGAR APRONS) **Section:** 4405 **Surface:** AC
L.C.D.: 12/25/1999 **Use:** APRON **Rank:** P **Length:** 1.465.00 Ft **Width:** 25.00 Ft **True Area:** 37.435.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
12/25/1999	INITIAL	Initial Construction	$0	0.00	True	

Network: MTH **Branch:** RW 7-25 (RUNWAY 7-25) **Section:** 6105 **Surface:** AAC
L.C.D.: 01/01/1985 **Use:** RUNWAY **Rank:** P **Length:** 5.008.00 Ft **Width:** 75.00 Ft **True Area:** 375.600.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1985	IMPORTED	OVERLAY		6.00	True	1985 1.5-6" P-401 OL
01/01/1966	IMPORTED	BUILT		1.00	True	1966 1" P-401 OL

Network: MTH **Branch:** RW 7-25 (RUNWAY 7-25) **Section:** 6110 **Surface:** AAC
L.C.D.: 01/01/1985 **Use:** RUNWAY **Rank:** P **Length:** 5.008.00 Ft **Width:** 25.00 Ft **True Area:** 125.200.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments

01/01/1985	IMPORTED	OVERLAY		1.50	True	1985 1.5" P-401
01/01/1966	IMPORTED	BUILT		1.00	True	1966 1" P-401

Network: MTH **Branch:** TW A (TAXIWAY A) **Section:** 105 **Surface:** AAC
L.C.D.: 01/01/1998 **Use:** TAXIWAY **Rank:** P **Length:** 4,950.00 Ft **Width:** 50.00 Ft **True Area:** 252,880.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1998	IMPORTED	OVERLAY		1.50	True	1998 1.5" P401 OVERLAY
01/01/1978	IMPORTED	OVERLAY		3.00	True	1978 3" P401
01/01/1973	IMPORTED	BUILT		1.00	True	1973 1" P401 ON 6" P211

Network: MTH **Branch:** TW A (TAXIWAY A) **Section:** 115 **Surface:** AC
L.C.D.: 12/25/1999 **Use:** TAXIWAY **Rank:** P **Length:** 1,420.00 Ft **Width:** 35.00 Ft **True Area:** 50,655.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
12/25/1999	INITIAL	Initial Construction	$0	0.00	True	

Network: MTH **Branch:** TW B (TAXIWAY B) **Section:** 151 **Surface:** AAC
L.C.D.: 01/01/1998 **Use:** TAXIWAY **Rank:** P **Length:** 100.00 Ft **Width:** 100.00 Ft **True Area:** 10,710.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1998	OL-AS	Overlay - AC Structural	$0	1.50	True	1998 1.5" P401
01/01/1973	INITIAL	Initial Construction	$0	1.00	True	1973 1" P401 ON 6" P211

Network: MTH **Branch:** TW C (TAXIWAY C) **Section:** 205 **Surface:** AAC
L.C.D.: 01/01/1998 **Use:** TAXIWAY **Rank:** P **Length:** 75.00 Ft **Width:** 56.00 Ft **True Area:** 6,247.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1998	IMPORTED	OVERLAY		1.50	True	1998 1.5" P401
01/01/1978	IMPORTED	OVERLAY		3.00	True	1978 3" P401
01/01/1966	IMPORTED	BUILT		1.00	True	1966 1" P401 ON 6" P211

Network: MTH **Branch:** TW C (TAXIWAY C) **Section:** 210 **Surface:** AAC
L.C.D.: 01/01/1998 **Use:** TAXIWAY **Rank:** P **Length:** 50.00 Ft **Width:** 56.00 Ft **True Area:** 3,873.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1998	IMPORTED	OVERLAY		1.50	True	1998 1.5" P401 OVERLAY
01/01/1966	IMPORTED	OVERLAY		1.00	True	1966 1" P401 OVERLAY
01/01/1942	IMPORTED	BUILT			True	1942 ORIGINAL CONSTRUCTION

Network: MTH **Branch:** TW D (TAXIWAY D) **Section:** 305 **Surface:** AAC
L.C.D.: 01/01/1983 **Use:** TAXIWAY **Rank:** P **Length:** 110.00 Ft **Width:** 110.00 Ft **True Area:** 9,290.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1998	IMPORTED	REPAIR			False	1998 AC OVERLAY
01/01/1983	IMPORTED	BUILT		3.00	True	1983 3" P-401 8" P-211

Network: MTH **Branch:** TW D (TAXIWAY D) **Section:** 310 **Surface:** AAC
L.C.D.: 01/01/1998 **Use:** TAXIWAY **Rank:** P **Length:** 60.00 Ft **Width:** 110.00 Ft **True Area:** 7,470.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1998	IMPORTED	OVERLAY		1.50	True	1998 1.5" P401 OVERLAY
01/01/1966	IMPORTED	OVERLAY		1.00	True	1966 1" P401 OVERLAY
01/01/1942	IMPORTED	BUILT			True	1942 ORIGINAL CONSTRUCTION

Network: MTH **Branch:** TW E (TAXIWAY E) **Section:** 152 **Surface:** AAC
L.C.D.: 01/01/1998 **Use:** TAXIWAY **Rank:** P **Length:** 50.00 Ft **Width:** 100.00 Ft **True Area:** 5,537.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1998	OL-AS	Overlay - AC Structural	$0	1.50	True	1998 1.5" P401
01/01/1985	OL-AS	Overlay - AC Structural	$0	1.50	True	1985 1.5" P401 TAPERED
01/01/1973	OL-AS	Overlay - AC Structural	$0	1.00	True	1973 1" P401 ON 6" P211
01/01/1942	INITIAL	Initial Construction	$0	1.00	True	1942 1" P401 ON ORIGINAL BASE

Network: MTH **Branch:** TW E (TAXIWAY E) **Section:** 155 **Surface:** AAC
L.C.D.: 01/01/1998 **Use:** TAXIWAY **Rank:** P **Length:** 50.00 Ft **Width:** 100.00 Ft **True Area:** 5,103.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
01/01/1998	OL-AS	Overlay - AC Structural	$0	1.50	True	1998 1.5" P401
01/01/1973	OL-AS	Overlay - AC Structural	$0	1.00	True	1973 1" P401 ON 6" P211
01/01/1966	OL-AS	Overlay - AC Structural	$0	1.00	True	1966 1" P401
01/01/1942	INITIAL	Initial Construction	$0	0.00	True	1942 ORIGINAL

Network: MTH **Branch:** TW NE (TAXIWAY NE) **Section:** 405 **Surface:** AC
L.C.D.: 12/25/1999 **Use:** TAXIWAY **Rank:** P **Length:** 1,640.00 Ft **Width:** 25.00 Ft **True Area:** 43,530.00 SqF

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major M&R	Comments
12/25/1999	INITIAL	Initial Construction	$0	0.00	True	

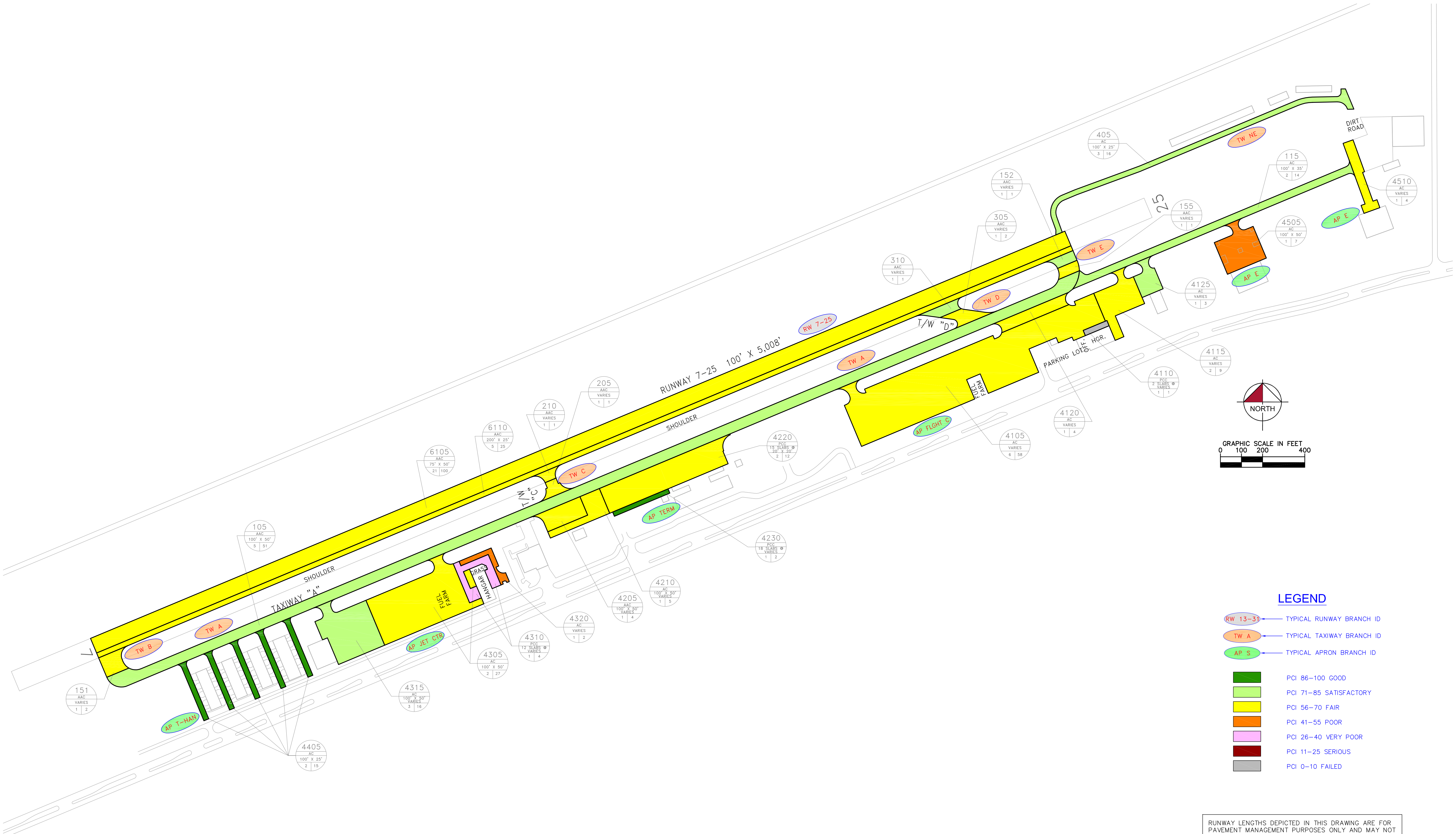
Summary:

Work Description	Section Count	Area Total (SqFt)	Thickness Avg (in)	Thickness STD (in)
BUILT	17	1,361,694.00	2.00	1.25
Complete Reconstruction - AC	1	19,260.00	2.00	
Initial Construction	11	288,055.00	.55	.82
OVERLAY	12	1,080,270.00	2.23	1.47
Overlay - AC Structural	7	42,630.00	1.29	.27
REPAIR	3	299,310.00		
Surface Reconstruction - AC	1	35,120.00	.00	

STD = Standard Deviation

APPENDIX B

2011 CONDITION MAP
PAVEMENT CONDITION INDEX TABLE



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

NUMBER	DATE	REVISIONS

DESIGNED: ELT DRAWN: ALB CHECKED: DRB DATE:

2011 CONDITION MAP

THE FLORIDA KEYS MARATHON AIRPORT
MONROE COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER **MTH**

FDOT DISTRICT 6

Table B-1: Pavement Condition Index

Branch Name	Branch ID	Branch Use	Section ID	True Area (ft^2)	Section Rank	Surface Type	Total Samples Inspected	Total Samples	PCI	PCI Category
Apron East	AP E	APRON	4510	17,050.00	T	AC	1	4	57	Fair
Apron East	AP E	APRON	4505	35,120.00	T	AC	1	7	43	Poor
Apron at Flight Center	AP FLGHT C	APRON	4115	35,580.00	P	AC	2	9	61	Fair
Apron at Flight Center	AP FLGHT C	APRON	4105	270,010.00	P	AC	6	58	68	Fair
Apron at Flight Center	AP FLGHT C	APRON	4110	3,294.00	P	PCC	1	1	0	Failed
Apron at Flight Center	AP FLGHT C	APRON	4120	18,520.00	P	AC	1	4	70	Fair
Apron at Flight Center	AP FLGHT C	APRON	4125	14,265.00	P	AC	1	3	79	Satisfactory
Jet Center Apron	AP JET CTR	APRON	4310	17,440.00	P	PCC	1	4	26	Very Poor
Jet Center Apron	AP JET CTR	APRON	4305	112,150.00	P	AC	2	27	56	Fair
Jet Center Apron	AP JET CTR	APRON	4320	8,020.00	P	AC	1	2	45	Poor
Jet Center Apron	AP JET CTR	APRON	4315	60,630.00	P	AC	3	16	73	Satisfactory
Terminal Apron	AP TERM	APRON	4205	20,010.00	P	AAC	1	4	66	Fair
Terminal Apron	AP TERM	APRON	4220	78,600.00	P	PCC	2	12	64	Fair
Terminal Apron	AP TERM	APRON	4230	6,270.00	P	PCC	1	2	86	Good
Terminal Apron	AP TERM	APRON	4210	19,260.00	P	AC	1	5	63	Fair
T-Hangar Aprons	AP T-HAN	APRON	4405	37,435.00	P	AC	2	15	88	Good
Runway 7-25	RW 7-25	RUNWAY	6105	375,600.00	P	AAC	21	100	64	Fair
Runway 7-25	RW 7-25	RUNWAY	6110	125,200.00	P	AAC	5	25	63	Fair
Taxiway Alpha	TW A	TAXIWAY	105	252,880.00	P	AAC	5	51	78	Satisfactory
Taxiway Alpha	TW A	TAXIWAY	115	50,655.00	P	AC	2	14	72	Satisfactory
Taxiway Bravo	TW B	TAXIWAY	151	10,710.00	P	AAC	1	2	69	Fair

Table B-1: Pavement Condition Index (Continued)

Branch Name	Branch ID	Branch Use	Section ID	True Area (ft^2)	Section Rank	Surface Type	Total Samples Inspected	Total Samples	PCI	PCI Category
Taxiway Charlie	TW C	TAXIWAY	205	6,247.00	P	AAC	1	1	63	Fair
Taxiway Charlie	TW C	TAXIWAY	210	3,873.00	P	AAC	1	1	70	Fair
Taxiway Delta	TW D	TAXIWAY	305	9,290.00	P	AAC	1	2	67	Fair
Taxiway Delta	TW D	TAXIWAY	310	7,470.00	P	AAC	1	1	76	Satisfactory
Taxiway Echo	TW E	TAXIWAY	152	5,537.00	P	AAC	1	1	83	Satisfactory
Taxiway Echo	TW E	TAXIWAY	155	5,103.00	P	AAC	1	1	69	Fair
Taxiway Northeast	TW NE	TAXIWAY	405	43,530.00	P	AC	3	16	83	Satisfactory

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

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

APPENDIX C

BRANCH CONDITION REPORT
SECTION CONDITION REPORT

Date: 6 /9/2011

Branch Condition Report

Pavement Database: NetworkID: MTH

Branch ID	Number of Sections	Sum Section Length (Ft)	Avg Section Width (Ft)	True Area (SqFt)	Use	Average PCI	PCI Standard Deviation	Weighted Average PCI
AP E (APRON E)	2	546.00	104.00	52,170.00	APRON	50.00	7.00	47.58
AP FLGHT C (APRON AT FLIGHT CENTER)	5	2,079.00	115.20	341,669.00	APRON	55.60	28.39	67.18
AP JET CTR (JET CENTER APRON)	4	1,392.00	200.00	198,240.00	APRON	50.00	17.07	58.12
AP TERM (TERMINAL APRON)	4	1,404.00	76.00	124,140.00	APRON	69.75	9.44	65.28
AP T-HAN (T-HANGAR APRONS)	1	1,465.00	25.00	37,435.00	APRON	88.00	0.00	88.00
RW 7-25 (RUNWAY 7-25)	2	10,016.00	50.00	500,800.00	RUNWAY	63.50	0.50	63.75
TW A (TAXIWAY A)	2	6,370.00	42.50	303,535.00	TAXIWAY	75.00	3.00	77.00
TW B (TAXIWAY B)	1	100.00	100.00	10,710.00	TAXIWAY	69.00	0.00	69.00
TW C (TAXIWAY C)	2	125.00	56.00	10,120.00	TAXIWAY	66.50	3.50	65.68
TW D (TAXIWAY D)	2	170.00	110.00	16,760.00	TAXIWAY	71.50	4.50	71.01
TW E (TAXIWAY E)	2	100.00	100.00	10,640.00	TAXIWAY	76.00	7.00	76.29
TW NE (TAXIWAY NE)	1	1,640.00	25.00	43,530.00	TAXIWAY	83.00	0.00	83.00

Pavement Database:

Use Category	Number of Sections	Total Area (SqFt)	Arithmetic Average PCI	Average PCI STD.	Weighted Average PCI
APRON	16	753,654.00	59.06	21.65	64.16
RUNWAY	2	500,800.00	63.50	0.50	63.75
TAXIWAY	10	395,295.00	73.00	6.42	76.88
All	28	1,649,749.00	64.36	18.03	67.08

STD = Standard Deviation

Date: 6 /9/2011

Section Condition Report

Pavement Database: *NetworkID: MTH*

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
AP E (APRON E)	4505	09/01/2007	AC	APRON	T	0	35,120.00	05/03/2011	4	43.00
AP E (APRON E)	4510	01/01/1999	AC	APRON	T	0	17,050.00	05/03/2011	12	57.00
AP FLGHT C (APRON AT FLIGHT CENTER)	4105	01/01/1983	AC	APRON	P	0	270,010.00	05/03/2011	28	68.00
AP FLGHT C (APRON AT FLIGHT CENTER)	4110	01/01/1983	PCC	APRON	P	0	3,294.00	05/03/2011	28	0.00
AP FLGHT C (APRON AT FLIGHT CENTER)	4115	01/01/1966	AC	APRON	P	0	35,580.00	05/03/2011	45	61.00
AP FLGHT C (APRON AT FLIGHT CENTER)	4120	01/01/1998	AC	APRON	P	0	18,520.00	05/03/2011	13	70.00
AP FLGHT C (APRON AT FLIGHT CENTER)	4125	12/25/1999	AC	APRON	P	0	14,265.00	05/03/2011	12	79.00
AP JET CTR (JET CENTER APRON)	4305	01/01/1990	AC	APRON	P	0	112,150.00	05/03/2011	21	56.00
AP JET CTR (JET CENTER APRON)	4310	01/01/1987	PCC	APRON	P	0	17,440.00	05/03/2011	24	26.00
AP JET CTR (JET CENTER APRON)	4315	12/25/1999	AC	APRON	P	0	60,630.00	05/03/2011	12	73.00
AP JET CTR (JET CENTER APRON)	4320	01/01/1990	AC	APRON	P	0	8,020.00	05/03/2011	21	45.00
AP TERM (TERMINAL APRON)	4205	01/01/1978	AAC	APRON	P	0	20,010.00	05/03/2011	33	66.00
AP TERM (TERMINAL APRON)	4210	01/01/1999	AC	APRON	P	0	19,260.00	05/03/2011	12	63.00
AP TERM (TERMINAL APRON)	4220	01/01/1994	PCC	APRON	P	0	78,600.00	05/03/2011	17	64.00
AP TERM (TERMINAL APRON)	4230	01/01/1994	PCC	APRON	P	0	6,270.00	05/03/2011	17	86.00
AP T-HAN (T-HANGAR APRONS)	4405	12/25/1999	AC	APRON	P	0	37,435.00	05/03/2011	12	88.00
RW 7-25 (RUNWAY 7-25)	6105	01/01/1985	AAC	RUNWAY	P	0	375,600.00	05/03/2011	26	64.00
RW 7-25 (RUNWAY 7-25)	6110	01/01/1985	AAC	RUNWAY	P	0	125,200.00	05/03/2011	26	63.00
TW A (TAXIWAY A)	105	01/01/1998	AAC	TAXIWAY	P	0	252,880.00	05/03/2011	13	78.00
TW A (TAXIWAY A)	115	12/25/1999	AC	TAXIWAY	P	0	50,655.00	05/03/2011	12	72.00
TW B (TAXIWAY B)	151	01/01/1998	AAC	TAXIWAY	P	0	10,710.00	05/03/2011	13	69.00
TW C (TAXIWAY C)	205	01/01/1998	AAC	TAXIWAY	P	0	6,247.00	05/03/2011	13	63.00
TW C (TAXIWAY C)	210	01/01/1998	AAC	TAXIWAY	P	0	3,873.00	05/03/2011	13	70.00
TW D (TAXIWAY D)	305	01/01/1983	AAC	TAXIWAY	P	0	9,290.00	05/03/2011	28	67.00
TW D (TAXIWAY D)	310	01/01/1998	AAC	TAXIWAY	P	0	7,470.00	05/03/2011	13	76.00

Section Condition Report

Pavement Database: *NetworkID: MTH*

Branch ID	Section ID	Last Const. Date	Surface	Use	Rank	Lanes	True Area (SqFt)	Last Inspection Date	Age At Inspection	PCI
TW E (TAXIWAY E)	152	01/01/1998	AAC	TAXIWAY	P	0	5,537.00	05/03/2011	13	83.00
TW E (TAXIWAY E)	155	01/01/1998	AAC	TAXIWAY	P	0	5,103.00	05/03/2011	13	69.00
TW NE (TAXIWAY NE)	405	12/25/1999	AC	TAXIWAY	P	0	43,530.00	05/03/2011	12	83.00

Section Condition Report

Pavement Database:

Age Category	Average Age At Inspection	Total Area (SqFt)	Number of Sections	Arithmetic Average PCI	PCI Standard Deviation	Weighted Average PCI
03-05	4.00	35,120.00	1	43.00	0.00	43.00
11-15	12.53	553,165.00	15	72.87	8.17	76.10
16-20	17.00	84,870.00	2	75.00	11.00	65.63
21-25	22.00	137,610.00	3	42.33	12.39	51.56
26-30	27.20	783,394.00	5	52.40	26.26	64.99
31-35	33.00	20,010.00	1	66.00	0.00	66.00
over 40	45.00	35,580.00	1	61.00	0.00	61.00
All	18.07	1,649,749.00	28	64.36	18.03	67.08

APPENDIX D

PAVEMENT CONDITION PREDICTION TABLE
PREDICTED PCI BY PAVEMENT USE GRAPH

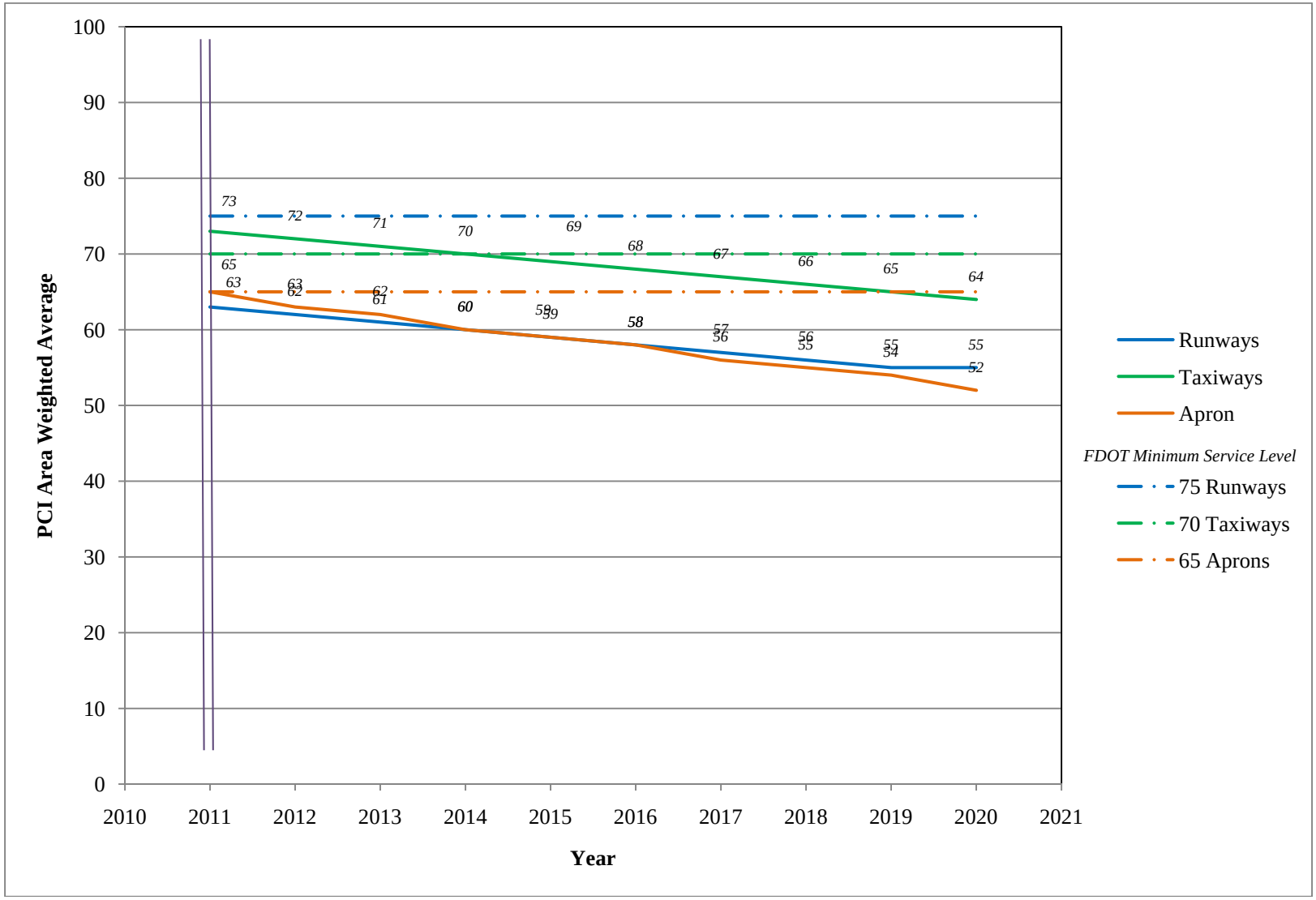
Table D-1: Pavement Condition Prediction

Branch Name	Branch ID	Section ID	Current PCI	PCI Forecast									
				2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Apron East	AP E	4505	43	43	41	40	38	36	34	32	30	28	26
Apron East	AP E	4510	57	57	56	55	53	52	51	50	49	47	46
Apron at Flight Center	AP FLGHT C	4105	68	68	67	65	64	63	62	61	60	59	58
Apron at Flight Center	AP FLGHT C	4110	0	0	0	0	0	0	0	0	0	0	0
Apron at Flight Center	AP FLGHT C	4115	61	61	60	59	58	57	55	54	53	52	51
Apron at Flight Center	AP FLGHT C	4120	70	70	69	67	66	65	64	63	62	61	60
Apron at Flight Center	AP FLGHT C	4125	79	79	77	76	74	73	72	70	69	68	67
Jet Center Apron	AP JET CTR	4305	56	56	55	54	52	51	50	49	47	46	45
Jet Center Apron	AP JET CTR	4310	26	26	25	24	23	22	21	20	19	18	17
Jet Center Apron	AP JET CTR	4315	73	73	71	70	69	68	67	65	64	63	62
Jet Center Apron	AP JET CTR	4320	45	45	43	42	40	38	37	35	33	31	29
Terminal Apron	AP TERM	4205	66	66	64	63	61	59	57	55	53	50	48
Terminal Apron	AP TERM	4210	63	63	62	61	60	59	57	56	55	54	53
Terminal Apron	AP TERM	4220	64	64	63	62	61	60	59	58	57	56	55
Terminal Apron	AP TERM	4230	86	86	85	84	83	82	81	80	79	78	77
T-Hangar Aprons	AP T-HAN	4405	88	88	86	84	82	80	79	77	76	74	73
Runway 7-25	RW 7-25	6105	64	64	63	61	60	59	59	58	57	56	55
Runway 7-25	RW 7-25	6110	63	63	62	61	60	59	58	57	56	55	55
Taxiway Alpha	TW A	105	78	78	76	75	73	72	71	70	69	69	68
Taxiway Alpha	TW A	115	72	72	71	69	68	67	66	65	64	62	61
Taxiway Bravo	TW B	151	69	69	68	67	67	66	66	65	64	64	63
Taxiway Charlie	TW C	205	63	63	62	61	60	59	58	57	56	54	53
Taxiway Charlie	TW C	210	70	70	69	68	68	67	66	66	65	65	64
Taxiway Delta	TW D	305	67	67	66	66	65	65	64	63	63	62	61

Table D-1: Pavement Condition Prediction (Continued)

Branch Name	Branch ID	Section ID	Current PCI	PCI Forecast									
				2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Taxiway Delta	TW D	310	76	76	74	73	72	71	70	69	68	68	67
Taxiway Echo	TW E	152	83	83	81	79	77	75	74	73	72	71	70
Taxiway Echo	TW E	155	69	69	68	67	67	66	66	65	64	64	63
Taxiway Northeast	TW NE	405	83	83	81	80	78	77	75	74	72	71	70

Figure D-1: Predicted PCI by Pavement Use



APPENDIX E

YEAR 1 MAINTENANCE ACTIVITIES TABLE

Table E-1: Year 1 Maintenance Activities

Branch Name	Branch ID	Section ID	Distress Description	Distress Severity	Work Description	Work Quantity	Work Unit	Unit Cost	Work Cost
Apron at Flight Center	AP FLGHT C	4105	OIL SPILLAGE	N	Patching - AC Shallow	161.10	SqFt	$2.90	$467.13
Apron at Flight Center	AP FLGHT C	4105	WEATH/RAVEL	M	Surface Seal - Coat Tar	95.10	SqFt	$0.40	$38.03
Apron at Flight Center	AP FLGHT C	4105	WEATH/RAVEL	L	Surface Seal - Rejuvenating	31,184.00	SqFt	$0.40	$12,473.70
Apron at Flight Center	AP FLGHT C	4105	PATCHING	M	Patching - AC Deep	138.30	SqFt	$4.90	$677.76
Apron at Flight Center	AP FLGHT C	4120	WEATH/RAVEL	L	Surface Seal - Rejuvenating	9,526.70	SqFt	$0.40	$3,810.70
Apron at Flight Center	AP FLGHT C	4125	WEATH/RAVEL	L	Surface Seal - Rejuvenating	4,278.20	SqFt	$0.40	$1,711.31
Jet Center Apron	AP JET CTR	4315	PATCHING	M	Patching - AC Deep	316.70	SqFt	$4.90	$1,551.96
Jet Center Apron	AP JET CTR	4315	WEATH/RAVEL	M	Surface Seal - Coat Tar	152.60	SqFt	$0.40	$61.03
Jet Center Apron	AP JET CTR	4315	WEATH/RAVEL	L	Surface Seal - Rejuvenating	5,451.70	SqFt	$0.40	$2,180.69
Jet Center Apron	AP JET CTR	4315	OIL SPILLAGE	N	Patching - AC Shallow	158.50	SqFt	$2.90	$459.52
Terminal Apron	AP TERM	4205	PATCHING	M	Patching - AC Deep	58.80	SqFt	$4.90	$288.07
Terminal Apron	AP TERM	4205	WEATH/RAVEL	L	Surface Seal - Rejuvenating	8,003.90	SqFt	$0.40	$3,201.60
T-Hangar Aprons	AP T-HAN	4405	WEATH/RAVEL	M	Surface Seal - Coat Tar	419.00	SqFt	$0.40	$167.58
T-Hangar Aprons	AP T-HAN	4405	WEATH/RAVEL	L	Surface Seal - Rejuvenating	1,551.70	SqFt	$0.40	$620.68
Taxiway Alpha	TW A	105	WEATH/RAVEL	L	Surface Seal - Rejuvenating	12,138.10	SqFt	$0.40	$4,855.30
Taxiway Alpha	TW A	105	OIL SPILLAGE	N	Patching - AC Shallow	263.50	SqFt	$2.90	$764.29
Taxiway Alpha	TW A	115	WEATH/RAVEL	L	Surface Seal - Rejuvenating	3,256.40	SqFt	$0.40	$1,302.56
Taxiway Bravo	TW B	151	WEATH/RAVEL	L	Surface Seal - Rejuvenating	620.90	SqFt	$0.40	$248.35
Taxiway Charlie	TW C	210	L & T CR	M	Crack Sealing - AC	17.00	Ft	$2.25	$38.26
Taxiway Delta	TW D	305	WEATH/RAVEL	L	Surface Seal - Rejuvenating	3,715.60	SqFt	$0.40	$1,486.26
Taxiway Delta	TW D	310	WEATH/RAVEL	L	Surface Seal - Rejuvenating	2,988.00	SqFt	$0.40	$1,195.20
Taxiway Echo	TW E	152	WEATH/RAVEL	L	Surface Seal - Rejuvenating	220.10	SqFt	$0.40	$88.02
Taxiway Echo	TW E	155	WEATH/RAVEL	L	Surface Seal - Rejuvenating	600.00	SqFt	$0.40	$240.00
Taxiway Northeast	TW NE	405	WEATH/RAVEL	L	Surface Seal - Rejuvenating	3,197.60	SqFt	$0.40	$1,279.05
								Total =	$39,207.05

APPENDIX F

MAJOR M&R PLAN BY YEAR UNDER UNLIMITED FUNDING SCENARIO TABLE

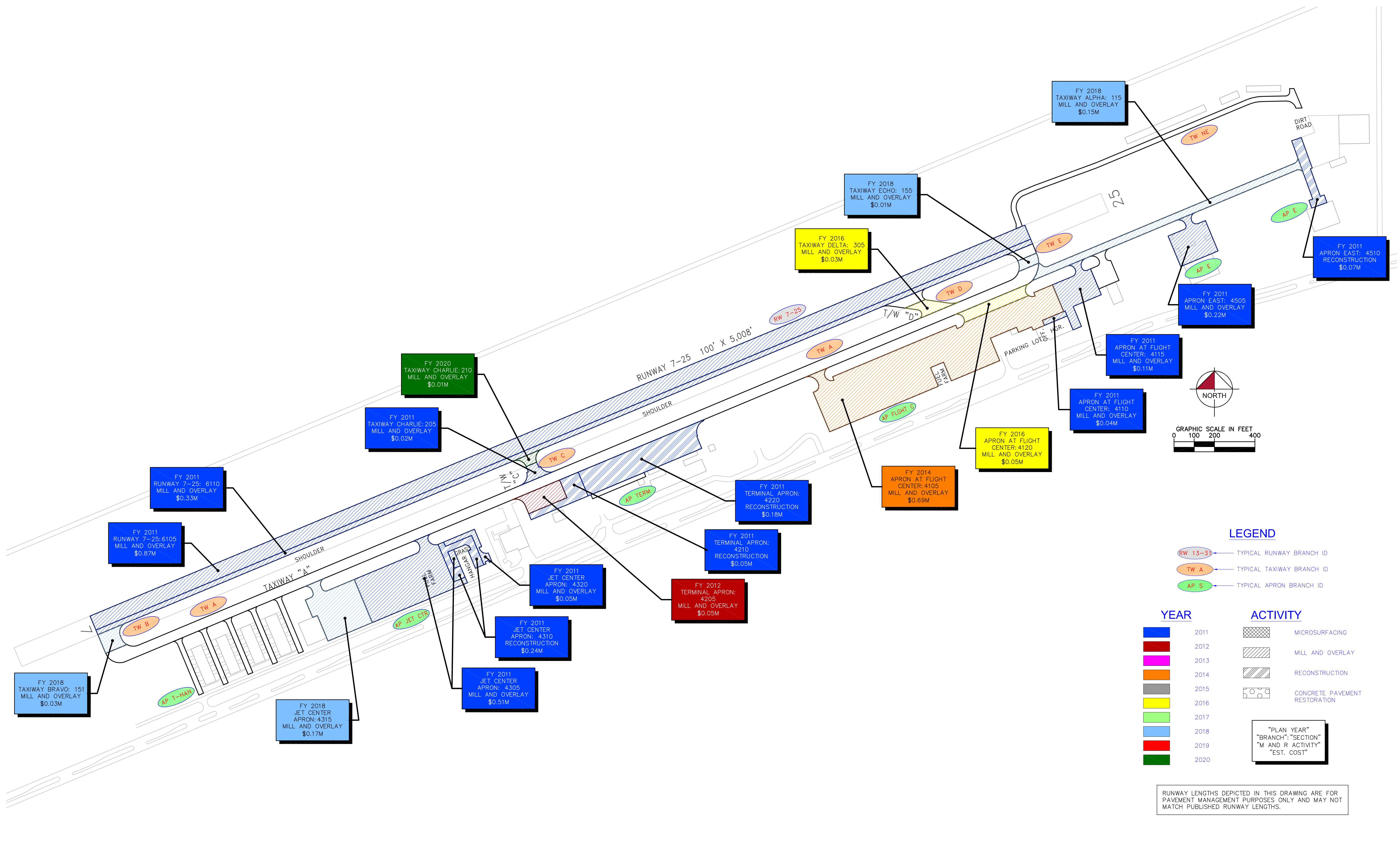
Table F-1: Major M&R Plan by Year under Unlimited Funding Scenario

Year	Branch Name	Section ID	Surface Type	Section Area (ft^2)	Major M&R Costs*	PCI Before M&R	M&R Activity	PCI After M&R
2011	Apron East	4505	AC	35,120	$220,904.82	43	Mill and Overlay	100
2011	Apron East	4510	AC	17,050	$72,991.08	57	Reconstruction	100
2011	Apron at Flight Center	4110	AC	3,294	$44,864.29	0	Mill and Overlay	100
2011	Apron at Flight Center	4115	AC	35,580	$111,970.34	61	Mill and Overlay	100
2011	Jet Center Apron	4305	AC	112,150	$512,301.41	56	Mill and Overlay	100
2011	Jet Center Apron	4310	AAC	17,440	$237,532.88	26	Reconstruction	100
2011	Jet Center Apron	4320	AC	8,020	$50,445.80	45	Mill and Overlay	100
2011	Terminal Apron	4210	AAC	19,260	$50,095.29	63	Reconstruction	100
2011	Terminal Apron	4220	AAC	78,600	$182,980.92	64	Reconstruction	100
2011	Runway 7-25	6105	AC	375,600	$874,397.35	64	Mill and Overlay	100
2011	Runway 7-25	6110	AC	125,200	$325,645.40	63	Mill and Overlay	100
2011	Taxiway Charlie	205	AC	6,247	$16,248.46	63	Mill and Overlay	100
2012	Terminal Apron	4205	AC	20,010	$47,980.81	64	Mill and Overlay	100
2014	Apron at Flight Center	4105	AC	270,010	$686,870.35	64	Mill and Overlay	100
2016	Apron at Flight Center	4120	AC	18,520	$49,981.62	64	Mill and Overlay	100
2016	Taxiway Delta	305	AC	9,290	$25,071.78	64	Mill and Overlay	100
2018	Jet Center Apron	4315	AC	60,630	$173,592.67	64	Mill and Overlay	100
2018	Taxiway Alpha	115	AC	50,655	$145,032.77	64	Mill and Overlay	100
2018	Taxiway Bravo	151	AC	10,710	$30,664.32	64	Mill and Overlay	100
2018	Taxiway Echo	155	AC	5,103	$14,610.65	64	Mill and Overlay	100
2020	Taxiway Charlie	210	AC	3,873	$11,764.29	64	Mill and Overlay	100
				Total	**$3,885,947.30**	**56**		**100**

* Costs are adjusted for inflation.

APPENDIX G

10-YEAR M&R MAP


FY 2018
TAXIWAY ALPHA: 115
MILL AND OVERLAY
$0.15M
FY 2018
TAXIWAY ECHO: 155
MILL AND OVERLAY
$0.01M
FY 2016
TAXIWAY DELTA: 305
MILL AND OVERLAY
$0.03M
FY 2011
APRON EAST: 4510
RECONSTRUCTION
$0.07M
FY 2011
APRON EAST: 4505
MILL AND OVERLAY
$0.22M
FY 2011
APRON AT FLIGHT CENTER: 4115
MILL AND OVERLAY
$0.11M
FY 2011
APRON AT FLIGHT CENTER: 4110
MILL AND OVERLAY
$0.04M
FY 2016
APRON AT FLIGHT CENTER: 4120
MILL AND OVERLAY
$0.05M
FY 2014
APRON AT FLIGHT CENTER: 4105
MILL AND OVERLAY
$0.69M
FY 2020
TAXIWAY CHARLIE: 210
MILL AND OVERLAY
$0.01M
FY 2011
TAXIWAY CHARLIE: 205
MILL AND OVERLAY
$0.02M
FY 2011
RUNWAY 7-25: 6110
MILL AND OVERLAY
$0.33M
FY 2011
RUNWAY 7-25: 6105
MILL AND OVERLAY
$0.87M
FY 2011
TERMINAL APRON: 4220
RECONSTRUCTION
$0.18M
FY 2011
TERMINAL APRON: 4210
RECONSTRUCTION
$0.05M
FY 2012
TERMINAL APRON: 4205
MILL AND OVERLAY
$0.05M
FY 2011
JET CENTER APRON: 4320
MILL AND OVERLAY
$0.05M
FY 2011
JET CENTER APRON: 4310
RECONSTRUCTION
$0.24M
FY 2011
JET CENTER APRON: 4305
MILL AND OVERLAY
$0.51M
FY 2018
JET CENTER APRON: 4315
MILL AND OVERLAY
$0.17M
FY 2018
TAXIWAY BRAVO: 151
MILL AND OVERLAY
$0.03M
RUNWAY 7-25 100' X 5,008'
TAXIWAY "A"
SHOULDER
T/W "C"
T/W "D"
25
DIRT ROAD
PARKING LOT
FUEL FARM
HANGAR
GRASS
RW 7-25
TW NE
TW E
TW D
TW A
TW C
TW B
AP E
AP FLGHT C
AP TERM
AP JET CTR
AP T-HAN
NORTH
GRAPHIC SCALE IN FEET
0 100 200 400
LEGEND
RW 13-31 TYPICAL RUNWAY BRANCH ID
TW A TYPICAL TAXIWAY BRANCH ID
AP S TYPICAL APRON BRANCH ID
YEAR
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
ACTIVITY
MICROSURFACING
MILL AND OVERLAY
RECONSTRUCTION
CONCRETE PAVEMENT RESTORATION
"PLAN YEAR"
"BRANCH":"SECTION"
"M AND R ACTIVITY"
"EST. COST"
RUNWAY LENGTHS DEPICTED IN THIS DRAWING ARE FOR PAVEMENT MANAGEMENT PURPOSES ONLY AND MAY NOT MATCH PUBLISHED RUNWAY LENGTHS.

NUMBER	DATE	REVISIONS

DESIGNED: ELT DRAWN: ALB CHECKED: DRB DATE:

10-YEAR M & R MAP

THE FLORIDA KEYS MARATHON AIRPORT
MONROE COUNTY, FLORIDA

FLORIDA DEPARTMENT OF TRANSPORTATION - AVIATION OFFICE

IDENTIFIER: **MTH**

FDOT DISTRICT: 6

APPENDIX H

PHOTOGRAPHS

Runway 7-25, Section 6105, Sample Unit 199 – Low and medium severity (48) Longitudinal and Transverse Cracking, low, medium and high severity (52) Raveling and Weathering

Runway 7-25, Section 6105, Sample Unit 199 – Low and medium severity (48) Longitudinal and Transverse Cracking, low, medium and high severity (52) Raveling and Weathering

Runway 7-25, Section 6105, Sample Unit 182 – Low and high severity (48) Longitudinal and Transverse Cracking, low and medium severity (52) Raveling and Weathering

Runway 7-25, Section 6105, Sample Unit 182 – Low and high severity (48) Longitudinal and Transverse Cracking, low and medium severity (52) Raveling and Weathering

Taxiway Alpha, Section 105, Sample Unit 111 – Low severity (43) Block Cracking, low severity (48) Longitudinal and Transverse Cracking, (49) Oil Spillage, low severity (52) Raveling and Weathering

Taxiway Alpha, Section 105, Sample Unit 111 – Low severity (43) Block Cracking, low severity (48) Longitudinal and Transverse Cracking, (49) Oil Spillage, low severity (52) Raveling and Weathering

Apron, Section 4305, Sample Unit 151 – Low severity (43) Block Cracking, low severity (48) Longitudinal and Transverse Cracking, low and medium severity (50) Patch, low severity (52) Raveling and Weathering

Apron, Section 4220, Sample Unit 305 – Low severity (63) Longitudinal, Transverse and Diagonal Cracking, low severity (67) Patch, low severity (70) Map Cracking, (73) Shrinkage Cracking, low severity (74) Joint Spalling, low severity (74) Corner Spalling

Apron, Section 4220, Sample Unit 305 – Low severity (63) Longitudinal, Transverse and Diagonal Cracking, low severity (67) Patch, low severity (70) Map Cracking, (73) Shrinkage Cracking, low severity (74) Joint Spalling, low severity (74) Corner Spalling

Apron, Section 4105, Sample Unit 409 – Low severity (43) Block Cracking, low severity (52) Raveling and Weathering

APPENDIX I

PCI RE-INSPECTION REPORT

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP E Name: APRON E Use: APRON Area: 52,170.00SqFt

Section: 4505 of 2 From: - To: - Last Const.: 9/1/2007
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: T
Area: 35,120.00SqFt Length: 200.00Ft Width: 163.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 7 Surveyed: 1
Conditions: PCI:43.00 |

Sample Number: 400 Type: R Area: 5,000.00SqFt PCI = 43
Sample Comments:

50 PATCHING	L	210.00 SqFt	Comments:
50 PATCHING	L	831.99 SqFt	Comments:
52 WEATHERING/RAVELING	M	3,999.94 SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP E Name: APRON E Use: APRON Area: 52,170.00SqFt

Section: 4510 of 2 From: To: - Last Const.: 1/1/1999
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: T
Area: 17,050.00SqFt Length: 346.00Ft Width: 45.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 4 Surveyed: 1
Conditions: PCI:57.00 |

Sample Number: 102 Type: R Area: 4,550.00SqFt PCI = 57
Sample Comments:

43	BLOCK CRACKING	L	2,859.98 SqFt	Comments:
43	BLOCK CRACKING	L	839.99 SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	41.02 Ft	Comments:
52	WEATHERING/RAVELING	L	2,729.98 SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP FLGHT C Name: APRON AT FLIGHT CENTER Use: APRON Area: 341,669.00SqFt

Section: 4105 of 5 From: - To: - Last Const.: 1/1/1983
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: P
Area: 270,010.00SqFt Length: 1,300.00Ft Width: 245.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 58 Surveyed: 6
Conditions: PCI:68.00 |

Sample Number: 101 Type: R Area: 4,100.00SqFt PCI = 82
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	61.02	Ft	Comments:
52 WEATHERING/RAVELING	L	100.00	SqFt	Comments:
50 PATCHING	M	3.00	SqFt	Comments:
50 PATCHING	L	3.00	SqFt	Comments:

Sample Number: 107 Type: R Area: 4,100.00SqFt PCI = 73
Sample Comments:

43 BLOCK CRACKING	L	77.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	62.02	Ft	Comments:
43 BLOCK CRACKING	L	405.00	SqFt	Comments:
52 WEATHERING/RAVELING	L	100.00	SqFt	Comments:

Sample Number: 204 Type: R Area: 5,000.00SqFt PCI = 74
Sample Comments:

43 BLOCK CRACKING	L	60.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	159.04	Ft	Comments:
52 WEATHERING/RAVELING	L	200.00	SqFt	Comments:
50 PATCHING	M	3.00	SqFt	Comments:

Sample Number: 400 Type: R Area: 4,800.00SqFt PCI = 72
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	122.03	Ft	Comments:
52 WEATHERING/RAVELING	L	380.00	SqFt	Comments:
49 OIL SPILLAGE	N	4.00	SqFt	Comments:
50 PATCHING	L	2.50	SqFt	Comments:
52 WEATHERING/RAVELING	M	10.00	SqFt	Comments:
43 BLOCK CRACKING	L	72.00	SqFt	Comments:

Sample Number: 409 Type: R Area: 5,000.00SqFt PCI = 59
Sample Comments:

43 BLOCK CRACKING	L	4,999.96	SqFt	Comments:
52 WEATHERING/RAVELING	L	2,499.98	SqFt	Comments:

Sample Number: 505 Type: R Area: 5,400.00SqFt PCI = 51
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	241.06	Ft	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	2,000.51	Ft	Comments:
49 OIL SPILLAGE	N	8.00	SqFt	Comments:
50 PATCHING	M	4.00	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP FLGHT C Name: APRON AT FLIGHT CENTER Use: APRON Area: 341,669.00SqFt

Section: 4110 of 5 From: - To: - Last Const.: 1/1/1983
Surface: PCC Family: FDOT-RL-PCC Zone: Category: Rank: P
Area: 3,294.00SqFt Length: 122.00Ft Width: 27.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 1 Surveyed: 1
Conditions: PCI:0.00 |

Sample Number: 700 Type: R Area: 2.00Slabs PCI = 0
Sample Comments:

65	JOINT SEAL DAMAGE	L	2.00 Slabs	Comments:
72	SHATTERED SLAB	L	1.00 Slabs	Comments:
67	LARGE PATCH/UTILITY	M	2.00 Slabs	Comments:
75	CORNER SPALLING	H	2.00 Slabs	Comments:
63	LINEAR CRACKING	H	1.00 Slabs	Comments:
72	SHATTERED SLAB	M	1.00 Slabs	Comments:
63	LINEAR CRACKING	L	1.00 Slabs	Comments:
63	LINEAR CRACKING	M	1.00 Slabs	Comments:
73	SHRINKAGE CRACKING	N	1.00 Slabs	Comments:
74	JOINT SPALLING	M	1.00 Slabs	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP FLGHT C Name: APRON AT FLIGHT CENTER Use: APRON Area: 341,669.00SqFt

Section: 4115 of 5 From: - To: - Last Const.: 1/1/1966
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: P
Area: 35,580.00SqFt Length: 204.00Ft Width: 143.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 9 Surveyed: 2
Conditions: PCI:61.00 |

Sample Number: 313 Type: R Area: 4,160.00SqFt PCI = 31
Sample Comments:

43	BLOCK CRACKING	L	91.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	92.02	Ft	Comments:
43	BLOCK CRACKING	L	176.00	SqFt	Comments:
52	WEATHERING/RAVELING	H	8.00	SqFt	Comments:
52	WEATHERING/RAVELING	M	2,999.98	SqFt	Comments:
52	WEATHERING/RAVELING	L	999.99	SqFt	Comments:
50	PATCHING	L	2.00	SqFt	Comments:
49	OIL SPILLAGE	N	20.00	SqFt	Comments:

Sample Number: 414 Type: R Area: 5,200.00SqFt PCI = 85
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	10.00	Ft	Comments:
52	WEATHERING/RAVELING	M	4.00	SqFt	Comments:
52	WEATHERING/RAVELING	L	200.00	SqFt	Comments:
50	PATCHING	L	1.00	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP FLGHT C Name: APRON AT FLIGHT CENTER Use: APRON Area: 341,669.00SqFt

Section: 4120 of 5 From: - To: - Last Const.: 1/1/1998
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: P
Area: 18,520.00SqFt Length: 345.00Ft Width: 54.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 4 Surveyed: 1
Conditions: PCI:70.00 |

Sample Number: 101 Type: R Area: 5,832.00SqFt PCI = 70
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	269.07	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	140.04	Ft	Comments:
43	BLOCK CRACKING	L	182.00	SqFt	Comments:
52	WEATHERING/RAVELING	L	2,999.98	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP FLGHT C Name: APRON AT FLIGHT CENTER Use: APRON Area: 341,669.00SqFt

Section: 4125 of 5 From: - To: - Last Const.: 12/25/199
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: P
Area: 14,265.00SqFt Length: 108.00Ft Width: 107.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 3 Surveyed: 1
Conditions: PCI:79.00 |

Sample Number: 515 Type: R Area: 5,835.00SqFt PCI = 79
Sample Comments:

50	PATCHING	L	16.00 SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	4.00 Ft	Comments:
52	WEATHERING/RAVELING	L	1,749.99 SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP JET CTR Name: JET CENTER APRON Use: APRON Area: 198,240.00SqFt

Section: 4305 of 4 From: - To: - Last Const.: 1/1/1990
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: P
Area: 112,150.00SqFt Length: 231.00Ft Width: 510.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 27 Surveyed: 2
Conditions: PCI:56.00 |

Sample Number: 151 Type: R Area: 5,000.00SqFt PCI = 52
Sample Comments:

43	BLOCK CRACKING	L	4,197.97 SqFt	Comments:
50	PATCHING	L	2.00 SqFt	Comments:
50	PATCHING	M	400.00 SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	12.00 Ft	Comments:
52	WEATHERING/RAVELING	L	100.00 SqFt	Comments:

Sample Number: 251 Type: R Area: 5,000.00SqFt PCI = 59
Sample Comments:

43	BLOCK CRACKING	L	4,999.96 SqFt	Comments:
52	WEATHERING/RAVELING	L	200.00 SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP JET CTR Name: JET CENTER APRON Use: APRON Area: 198,240.00SqFt

Section: 4310 of 4 From: - To: - Last Const.: 1/1/1987
Surface: PCC Family: FDOT-RL-PCC Zone: Category: Rank: P
Area: 17,440.00SqFt Length: 580.00Ft Width: 30.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 4 Surveyed: 1
Conditions: PCI:26.00 |

Sample Number: 120 Type: R Area: 12.00Slabs PCI = 26
Sample Comments:

65	JOINT SEAL DAMAGE	M	12.00 Slabs	Comments:
72	SHATTERED SLAB	L	2.00 Slabs	Comments:
74	JOINT SPALLING	M	3.00 Slabs	Comments:
73	SHRINKAGE CRACKING	N	3.00 Slabs	Comments:
75	CORNER SPALLING	L	1.00 Slabs	Comments:
62	CORNER BREAK	L	5.00 Slabs	Comments:
62	CORNER BREAK	M	1.00 Slabs	Comments:
72	SHATTERED SLAB	M	1.00 Slabs	Comments:
63	LINEAR CRACKING	L	1.00 Slabs	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP JET CTR Name: JET CENTER APRON Use: APRON Area: 198,240.00SqFt

Section: 4315 of 4 From: - To: - Last Const.: 12/25/199
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: P
Area: 60,630.00SqFt Length: 231.00Ft Width: 237.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 16 Surveyed: 3
Conditions: PCI:73.00 |

Sample Number: 99 Type: R Area: 5,000.00SqFt PCI = 71
Sample Comments:

52 WEATHERING/RAVELING	L	971.99	SqFt	Comments:
50 PATCHING	M	6.00	SqFt	Comments:
49 OIL SPILLAGE	N	10.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	7.00	Ft	Comments:
52 WEATHERING/RAVELING	M	20.00	SqFt	Comments:
49 OIL SPILLAGE	N	12.00	SqFt	Comments:

Sample Number: 198 Type: R Area: 5,000.00SqFt PCI = 75
Sample Comments:

50 PATCHING	L	3.00	SqFt	Comments:
50 PATCHING	M	12.00	SqFt	Comments:
50 PATCHING	M	4.00	SqFt	Comments:
43 BLOCK CRACKING	L	390.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	6.00	Ft	Comments:

Sample Number: 297 Type: R Area: 1,922.00SqFt PCI = 74
Sample Comments:

50 PATCHING	M	27.00	SqFt	Comments:
50 PATCHING	L	2.00	SqFt	Comments:
52 WEATHERING/RAVELING	M	10.00	SqFt	Comments:
52 WEATHERING/RAVELING	L	100.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	5.00	Ft	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP JET CTR Name: JET CENTER APRON Use: APRON Area: 198,240.00SqFt

Section: 4320 of 4 From: - To: - Last Const.: 1/1/1990
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: P
Area: 8,020.00SqFt Length: 350.00Ft Width: 23.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 2 Surveyed: 1
Conditions: PCI:45.00 |

Sample Number: 220 Type: R Area: 3,795.00SqFt PCI = 45
Sample Comments:

45 DEPRESSION	L	56.00	SqFt	Comments:
50 PATCHING	L	14.00	SqFt	Comments:
50 PATCHING	L	113.00	SqFt	Comments:
43 BLOCK CRACKING	M	525.00	SqFt	Comments:
43 BLOCK CRACKING	M	170.00	SqFt	Comments:
43 BLOCK CRACKING	L	113.00	SqFt	Comments:
49 OIL SPILLAGE	N	4.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	M	25.01	Ft	Comments:
43 BLOCK CRACKING	L	224.00	SqFt	Comments:
43 BLOCK CRACKING	L	80.00	SqFt	Comments:
43 BLOCK CRACKING	L	99.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	22.01	Ft	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP TERM Name: TERMINAL APRON Use: APRON Area: 124,140.00SqFt

Section: 4205 of 4 From: - To: - Last Const.: 1/1/1978
Surface: AAC Family: FDOT-RL-AP-AAC Zone: Category: Rank: P
Area: 20,010.00SqFt Length: 205.00Ft Width: 95.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 4 Surveyed: 1
Conditions: PCI:66.00 |

Sample Number: 201 Type: R Area: 5,000.00SqFt PCI = 66
Sample Comments:

50	PATCHING	M	8.00	SqFt	Comments:
52	WEATHERING/RAVELING	L	1,999.98	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	100.03	Ft	Comments:
43	BLOCK CRACKING	L	36.00	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP TERM Name: TERMINAL APRON Use: APRON Area: 124,140.00SqFt

Section: 4210 of 4 From: - To: - Last Const.: 1/1/1999
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: P
Area: 19,260.00SqFt Length: 305.00Ft Width: 60.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 5 Surveyed: 1
Conditions: PCI:63.00 |

Sample Number: 202 Type: R Area: 5,000.00SqFt PCI = 63
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	110.03	Ft	Comments:
50	PATCHING	M	6.00	SqFt	Comments:
43	BLOCK CRACKING	L	200.00	SqFt	Comments:
52	WEATHERING/RAVELING	L	2,999.98	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP TERM Name: TERMINAL APRON Use: APRON Area: 124,140.00SqFt

Section: 4220 of 4 From: - To: - Last Const.: 1/1/1994
Surface: PCC Family: FDOT-RL-PCC Zone: Category: Rank: P
Area: 78,600.00SqFt Length: 609.00Ft Width: 127.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 12 Surveyed: 2
Conditions: PCI:64.00 |

Sample Number: 207 Type: R Area: 15.00Slabs PCI = 73
Sample Comments:

65	JOINT SEAL DAMAGE	L	15.00 Slabs	Comments:
74	JOINT SPALLING	L	13.00 Slabs	Comments:
66	SMALL PATCH	L	1.00 Slabs	Comments:
63	LINEAR CRACKING	L	2.00 Slabs	Comments:
70	SCALING/CRAZING	L	2.00 Slabs	Comments:

Sample Number: 305 Type: R Area: 15.00Slabs PCI = 55
Sample Comments:

65	JOINT SEAL DAMAGE	L	15.00 Slabs	Comments:
63	LINEAR CRACKING	L	4.00 Slabs	Comments:
74	JOINT SPALLING	L	11.00 Slabs	Comments:
67	LARGE PATCH/UTILITY	L	10.00 Slabs	Comments:
73	SHRINKAGE CRACKING	N	4.00 Slabs	Comments:
75	CORNER SPALLING	L	1.00 Slabs	Comments:
70	SCALING/CRAZING	L	1.00 Slabs	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP TERM Name: TERMINAL APRON Use: APRON Area: 124,140.00SqFt

Section: 4230 of 4 From: - To: - Last Const.: 1/1/1994
Surface: PCC Family: FDOT-RL-PCC Zone: Category: Rank: P
Area: 6,270.00SqFt Length: 285.00Ft Width: 22.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 2 Surveyed: 1
Conditions: PCI:86.00 |

Sample Number: 101 Type: R Area: 18.00Slabs PCI = 86
Sample Comments:

74 JOINT SPALLING	L	11.00 Slabs	Comments:
75 CORNER SPALLING	L	1.00 Slabs	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: AP T-HAN Name: T-HANGAR APRONS Use: APRON Area: 37,435.00SqFt

Section: 4405 of 1 From: - To: - Last Const.: 12/25/199
Surface: AC Family: FDOT-RL-AP-AC Zone: Category: Rank: P
Area: 37,435.00SqFt Length: 1,465.00Ft Width: 25.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 15 Surveyed: 2
Conditions: PCI:88.00 |

Sample Number: 202 Type: R Area: 2,325.00SqFt PCI = 82
Sample Comments:

52 WEATHERING/RAVELING	M	54.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	1.00	Ft	Comments:
52 WEATHERING/RAVELING	L	100.00	SqFt	Comments:

Sample Number: 401 Type: R Area: 2,500.00SqFt PCI = 94
Sample Comments:

52 WEATHERING/RAVELING	L	100.00	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: RW 7-25 Name: RUNWAY 7-25 Use: RUNWAY Area: 500,800.00SqFt

Section: 6105 of 2 From: - To: - Last Const.: 1/1/1985
Surface: AAC Family: FDOT-RL-RW-AAC Zone: Category: Rank: P
Area: 375,600.00SqFt Length: 5,008.00Ft Width: 75.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 100 Surveyed: 21
Conditions: PCI:64.00 |

Sample Number: 100 Type: R Area: 3,750.00SqFt PCI = 59
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	270.07 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	75.02 Ft	Comments:
52	WEATHERING/RAVELING	L	2,699.98 SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	300.08 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	50.01 Ft	Comments:

Sample Number: 104 Type: R Area: 3,750.00SqFt PCI = 72
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	100.03 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	100.03 Ft	Comments:
52	WEATHERING/RAVELING	L	150.00 SqFt	Comments:

Sample Number: 107 Type: R Area: 3,750.00SqFt PCI = 74
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	97.02 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	50.01 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	93.02 Ft	Comments:
52	WEATHERING/RAVELING	L	1,007.99 SqFt	Comments:

Sample Number: 112 Type: R Area: 3,750.00SqFt PCI = 73
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	100.03 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	50.01 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	48.01 Ft	Comments:
52	WEATHERING/RAVELING	L	1,199.99 SqFt	Comments:

Sample Number: 117 Type: R Area: 3,750.00SqFt PCI = 67
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	70.02 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	18.00 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	150.04 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	55.01 Ft	Comments:
52	WEATHERING/RAVELING	L	1,199.99 SqFt	Comments:

Sample Number: 118 Type: R Area: 3,750.00SqFt PCI = 68
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	H	50.01 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	75.02 Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	103.03 Ft	Comments:
52	WEATHERING/RAVELING	L	1,199.99 SqFt	Comments:

Sample Number: 122 Type: R Area: 3,750.00SqFt PCI = 62
Sample Comments:

52	WEATHERING/RAVELING	L	1,249.99 SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

52	WEATHERING/RAVELING	L	1,199.99	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	125.03	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	34.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	H	50.01	Ft	Comments:

Sample Number: 127 Type: R Area: 3,750.00SqFt PCI = 62
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	156.04	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	H	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	104.03	Ft	Comments:
52	WEATHERING/RAVELING	L	1,199.99	SqFt	Comments:

Sample Number: 134 Type: R Area: 3,750.00SqFt PCI = 59
Sample Comments:

52	WEATHERING/RAVELING	L	1,199.99	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	100.03	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	H	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	47.01	Ft	Comments:

Sample Number: 135 Type: R Area: 3,750.00SqFt PCI = 62
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	M	100.03	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	100.03	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	H	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	98.03	Ft	Comments:
52	WEATHERING/RAVELING	L	1,199.99	SqFt	Comments:

Sample Number: 142 Type: R Area: 3,750.00SqFt PCI = 63
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	M	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	H	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	67.02	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	51.01	Ft	Comments:
52	WEATHERING/RAVELING	L	1,199.99	SqFt	Comments:

Sample Number: 149 Type: R Area: 3,750.00SqFt PCI = 66
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	59.02	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	100.03	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	30.01	Ft	Comments:
52	WEATHERING/RAVELING	L	1,199.99	SqFt	Comments:

Sample Number: 157 Type: R Area: 3,750.00SqFt PCI = 73
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	75.02	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	50.01	Ft	Comments:
52	WEATHERING/RAVELING	L	1,199.99	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	129.03	Ft	Comments:

Sample Number: 163 Type: R Area: 3,750.00SqFt PCI = 60
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	M	146.04	Ft	Comments:
52	WEATHERING/RAVELING	M	600.00	SqFt	Comments:
52	WEATHERING/RAVELING	L	600.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	100.03	Ft	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Sample Number: 169 Type: R Area: 3,750.00SqFt PCI = 72
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	M	101.03	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	46.01	Ft	Comments:
52	WEATHERING/RAVELING	L	999.99	SqFt	Comments:

Sample Number: 174 Type: R Area: 3,750.00SqFt PCI = 63
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	103.03	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	H	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	82.02	Ft	Comments:
52	WEATHERING/RAVELING	L	1,249.99	SqFt	Comments:
52	WEATHERING/RAVELING	L	100.00	SqFt	Comments:

Sample Number: 182 Type: R Area: 3,750.00SqFt PCI = 50
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	H	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	204.05	Ft	Comments:
52	WEATHERING/RAVELING	M	1,249.99	SqFt	Comments:
52	WEATHERING/RAVELING	L	100.00	SqFt	Comments:

Sample Number: 190 Type: R Area: 3,750.00SqFt PCI = 72
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	M	100.03	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	77.02	Ft	Comments:
52	WEATHERING/RAVELING	L	999.99	SqFt	Comments:

Sample Number: 193 Type: R Area: 3,750.00SqFt PCI = 65
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	M	150.04	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	112.03	Ft	Comments:
50	PATCHING	L	1.00	SqFt	Comments:
52	WEATHERING/RAVELING	L	999.99	SqFt	Comments:

Sample Number: 198 Type: R Area: 3,750.00SqFt PCI = 51
Sample Comments:

52	WEATHERING/RAVELING	H	125.00	SqFt	Comments:
52	WEATHERING/RAVELING	M	50.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	98.03	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	51.01	Ft	Comments:
52	WEATHERING/RAVELING	M	500.00	SqFt	Comments:

Sample Number: 199 Type: R Area: 3,750.00SqFt PCI = 50
Sample Comments:

52	WEATHERING/RAVELING	H	64.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	56.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	100.03	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	50.01	Ft	Comments:
52	WEATHERING/RAVELING	M	500.00	SqFt	Comments:
52	WEATHERING/RAVELING	L	100.00	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: RW 7-25 Name: RUNWAY 7-25 Use: RUNWAY Area: 500,800.00SqFt

Section: 6110 of 2 From: - To: - Last Const.: 1/1/1985
Surface: AAC Family: FDOT-RL-RW-AAC Zone: Category: Rank: P
Area: 125,200.00SqFt Length: 5,008.00Ft Width: 25.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 25 Surveyed: 5
Conditions: PCI:63.00 |

Sample Number: 300 Type: R Area: 5,000.00SqFt PCI = 63
Sample Comments:

43	BLOCK CRACKING	L	243.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	11.00	Ft	Comments:
43	BLOCK CRACKING	L	1,931.98	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	16.00	Ft	Comments:
52	WEATHERING/RAVELING	L	3,999.97	SqFt	Comments:

Sample Number: 304 Type: R Area: 5,000.00SqFt PCI = 70
Sample Comments:

50	PATCHING	M	4.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	316.08	Ft	Comments:
52	WEATHERING/RAVELING	L	2,399.98	SqFt	Comments:

Sample Number: 310 Type: R Area: 5,000.00SqFt PCI = 62
Sample Comments:

43	BLOCK CRACKING	L	2,411.98	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	61.02	Ft	Comments:
52	WEATHERING/RAVELING	L	1,799.99	SqFt	Comments:

Sample Number: 318 Type: R Area: 5,000.00SqFt PCI = 48
Sample Comments:

43	BLOCK CRACKING	L	1,296.32	SqFt	Comments:
43	BLOCK CRACKING	M	1,759.98	SqFt	Comments:
52	WEATHERING/RAVELING	L	1,999.98	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	102.03	Ft	Comments:

Sample Number: 323 Type: R Area: 5,000.00SqFt PCI = 71
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	429.11	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	82.02	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	12.00	Ft	Comments:
52	WEATHERING/RAVELING	L	1,199.99	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: TW A Name: TAXIWAY A Use: TAXIWAY Area: 303,535.00SqFt

Section: 105 of 2 From: - To: - Last Const.: 1/1/1998
Surface: AAC Family: FDOT-RL-TW-AAC Zone: Category: Rank: P
Area: 252,880.00SqFt Length: 4,950.00Ft Width: 50.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 51 Surveyed: 5
Conditions: PCI:78.00 |

Sample Number: 111 Type: R Area: 5,000.00SqFt PCI = 77
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	71.02	Ft	Comments:
43 BLOCK CRACKING	L	93.00	SqFt	Comments:
49 OIL SPILLAGE	N	20.00	SqFt	Comments:
52 WEATHERING/RAVELING	L	200.00	SqFt	Comments:

Sample Number: 118 Type: R Area: 5,000.00SqFt PCI = 81
Sample Comments:

43 BLOCK CRACKING	L	123.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	13.00	Ft	Comments:
52 WEATHERING/RAVELING	L	200.00	SqFt	Comments:

Sample Number: 124 Type: R Area: 5,000.00SqFt PCI = 78
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	20.01	Ft	Comments:
43 BLOCK CRACKING	L	210.00	SqFt	Comments:
52 WEATHERING/RAVELING	L	200.00	SqFt	Comments:

Sample Number: 135 Type: R Area: 5,000.00SqFt PCI = 78
Sample Comments:

48 LONGITUDINAL/TRANSVERSE CRACKING	L	77.02	Ft	Comments:
43 BLOCK CRACKING	L	160.04	SqFt	Comments:
52 WEATHERING/RAVELING	L	200.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	14.00	Ft	Comments:

Sample Number: 143 Type: R Area: 5,000.00SqFt PCI = 76
Sample Comments:

43 BLOCK CRACKING	L	210.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	4.00	Ft	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	51.01	Ft	Comments:
52 WEATHERING/RAVELING	L	400.00	SqFt	Comments:
43 BLOCK CRACKING	L	80.00	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: TW A Name: TAXIWAY A Use: TAXIWAY Area: 303,535.00SqFt

Section: 115 of 2 From: - To: - Last Const.: 12/25/199
Surface: AC Family: FDOT-RL-TW-AC Zone: Category: Rank: P
Area: 50,655.00SqFt Length: 1,420.00Ft Width: 35.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 14 Surveyed: 2
Conditions: PCI:72.00 |

Sample Number: 402 Type: R Area: 3,500.00SqFt PCI = 63
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	21.01 Ft	Comments:
50	PATCHING	L	2.00 SqFt	Comments:
43	BLOCK CRACKING	L	1,119.99 SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	12.00 Ft	Comments:
52	WEATHERING/RAVELING	L	150.00 SqFt	Comments:

Sample Number: 405 Type: R Area: 3,500.00SqFt PCI = 80
Sample Comments:

43	BLOCK CRACKING	L	30.00 SqFt	Comments:
50	PATCHING	L	4.00 SqFt	Comments:
43	BLOCK CRACKING	L	140.00 SqFt	Comments:
52	WEATHERING/RAVELING	L	300.00 SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: TW B Name: TAXIWAY B Use: TAXIWAY Area: 10,710.00SqFt

Section: 151 of 1 From: - To: - Last Const.: 1/1/1998
Surface: AAC Family: FDOT-RL-TW-AAC Zone: Category: Rank: P
Area: 10,710.00SqFt Length: 100.00Ft Width: 100.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 2 Surveyed: 1
Conditions: PCI:69.00 |

Sample Number: 201 Type: R Area: 5,175.00SqFt PCI = 69
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	12.00	Ft	Comments:
43	BLOCK CRACKING	L	899.99	SqFt	Comments:
43	BLOCK CRACKING	L	36.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	40.01	Ft	Comments:
52	WEATHERING/RAVELING	L	300.00	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: TW C Name: TAXIWAY C Use: TAXIWAY Area: 10,120.00SqFt

Section: 205 of 2 From: - To: - Last Const.: 1/1/1998
Surface: AAC Family: FDOT-RL-TW-AAC Zone: Category: Rank: P
Area: 6,247.00SqFt Length: 75.00Ft Width: 56.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 1 Surveyed: 1
Conditions: PCI:63.00 |

Sample Number: 201 Type: R Area: 6,247.00SqFt PCI = 63
Sample Comments:

52	WEATHERING/RAVELING	M	36.00	SqFt	Comments:
52	WEATHERING/RAVELING	H	3.00	SqFt	Comments:
52	WEATHERING/RAVELING	L	144.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	8.00	Ft	Comments:
52	WEATHERING/RAVELING	L	135.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	35.01	Ft	Comments:
52	WEATHERING/RAVELING	L	200.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	9.00	Ft	Comments:
43	BLOCK CRACKING	L	681.99	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: TW C Name: TAXIWAY C Use: TAXIWAY Area: 10,120.00SqFt

Section: 210 of 2 From: - To: - Last Const.: 1/1/1998
Surface: AAC Family: FDOT-RL-TW-AAC Zone: Category: Rank: P
Area: 3,873.00SqFt Length: 50.00Ft Width: 56.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 1 Surveyed: 1
Conditions: PCI:70.00 |

Sample Number: 200 Type: R Area: 3,873.00SqFt PCI = 70
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	39.01	Ft	Comments:
43	BLOCK CRACKING	L	260.07	SqFt	Comments:
43	BLOCK CRACKING	L	420.11	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	50.01	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	M	17.00	Ft	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: TW D Name: TAXIWAY D Use: TAXIWAY Area: 16,760.00SqFt

Section: 305 of 2 From: - To: - Last Const.: 1/1/1983
Surface: AAC Family: FDOT-RL-TW-AAC Zone: Category: Rank: P
Area: 9,290.00SqFt Length: 110.00Ft Width: 110.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 2 Surveyed: 1
Conditions: PCI:67.00 |

Sample Number: 301 Type: R Area: 5,453.00SqFt PCI = 67
Sample Comments:

50 PATCHING	L	1.00	SqFt	Comments:
48 LONGITUDINAL/TRANSVERSE CRACKING	L	464.12	Ft	Comments:
43 BLOCK CRACKING	L	30.00	SqFt	Comments:
52 WEATHERING/RAVELING	L	2,180.98	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: TW D Name: TAXIWAY D Use: TAXIWAY Area: 16,760.00SqFt

Section: 310 of 2 From: - To: - Last Const.: 1/1/1998
Surface: AAC Family: FDOT-RL-TW-AAC Zone: Category: Rank: P
Area: 7,470.00SqFt Length: 60.00Ft Width: 110.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 1 Surveyed: 1
Conditions: PCI:76.00 |

Sample Number: 300 Type: R Area: 7,470.00SqFt PCI = 76
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	198.05 Ft	Comments:
52	WEATHERING/RAVELING	L	2,987.98 SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: TW E Name: TAXIWAY E Use: TAXIWAY Area: 10,640.00SqFt

Section: 152 of 2 From: - To: - Last Const.: 1/1/1998
Surface: AAC Family: FDOT-RL-TW-AAC Zone: Category: Rank: P
Area: 5,537.00SqFt Length: 50.00Ft Width: 100.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 1 Surveyed: 1
Conditions: PCI:83.00 |

Sample Number: 300 Type: R Area: 5,537.00SqFt PCI = 83
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	110.03	Ft	Comments:
52	WEATHERING/RAVELING	L	220.06	SqFt	Comments:
43	BLOCK CRACKING	L	20.00	SqFt	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: TW E Name: TAXIWAY E Use: TAXIWAY Area: 10,640.00SqFt

Section: 155 of 2 From: - To: - Last Const.: 1/1/1998
Surface: AAC Family: FDOT-RL-TW-AAC Zone: Category: Rank: P
Area: 5,103.00SqFt Length: 50.00Ft Width: 100.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 1 Surveyed: 1
Conditions: PCI:69.00 |

Sample Number: 301 Type: R Area: 5,103.00SqFt PCI = 69
Sample Comments:

43	BLOCK CRACKING	L	40.00	SqFt	Comments:
43	BLOCK CRACKING	L	899.99	SqFt	Comments:
52	WEATHERING/RAVELING	L	600.00	SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	80.02	Ft	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	36.01	Ft	Comments:

Re-inspection Report

FDOT
Report Generated Date: 6/9/2011
Site Name:

Network: MTH Name: THE FLORIDA KEYS MARATHON AIRPORT

Branch: TW NE Name: TAXIWAY NE Use: TAXIWAY Area: 43,530.00SqFt

Section: 405 of 1 From: - To: - Last Const.: 12/25/199
Surface: AC Family: FDOT-RL-TW-AC Zone: Category: Rank: P
Area: 43,530.00SqFt Length: 1,640.00Ft Width: 25.00Ft
Shoulder: Street Type: Grade: 0.00 Lanes: 0
Section Comments:

Last Insp. Date: 5/3/2011 Total Samples: 16 Surveyed: 3
Conditions: PCI:83.00 |

Sample Number: 302 Type: R Area: 2,500.00SqFt PCI = 83
Sample Comments:

52	WEATHERING/RAVELING	L	404.00 SqFt	Comments:
48	LONGITUDINAL/TRANSVERSE CRACKING	L	25.01 Ft	Comments:

Sample Number: 309 Type: R Area: 2,500.00SqFt PCI = 94
Sample Comments:

52	WEATHERING/RAVELING	L	100.00 SqFt	Comments:

Sample Number: 315 Type: R Area: 5,945.00SqFt PCI = 79
Sample Comments:

48	LONGITUDINAL/TRANSVERSE CRACKING	L	18.00 Ft	Comments:
43	BLOCK CRACKING	L	234.00 SqFt	Comments:
52	WEATHERING/RAVELING	L	300.00 SqFt	Comments: