### Albia Municipal Airport

**Pavement Management Report** 



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### ALBIA MUNICIPAL AIRPORT PAVEMENT MANAGEMENT REPORT

#### **Prepared For:**



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Introduction August 2025

#### INTRODUCTION

Applied Pavement Technology, Inc. (APTech), with assistance from Robinson Engineering Company Consulting Engineers (Robinson), updated the Airport Pavement Management System (APMS) for the Iowa Department of Transportation, Modal Transportation Bureau (Iowa DOT). The APMS provides a means to monitor the condition of the pavements within the State of Iowa and to proactively plan for their preservation.

As part of this project, pavement conditions at Albia Municipal Airport were visually assessed in March 2025 using the Pavement Condition Index (PCI) procedure. During a PCI inspection, the types, severities, and amounts of distress present on the pavement surface are quantified. This information is then used to develop a composite index that represents the overall condition of the pavement in numerical terms, ranging from 0 (*Failed*) to 100 (*Excellent*). The PCI provides an overall measure of condition and an indication of the level of work that will be required to maintain or repair a pavement. The distress information also provides insight into what is causing the pavement to deteriorate, which is the first step in selecting the appropriate repair action to correct the problem.

Programmed into an APMS, PCI data and results are used to determine when preventive maintenance actions (such as crack or joint sealing) are advisable and to identify the most cost-effective time to perform major rehabilitation (such as an overlay or whitetopping). Delaying maintenance and rehabilitation (M&R) until a pavement structure has seriously degraded can cost many times more than if M&R was applied earlier in a pavement's life cycle, as shown in Figure 1. From a safety perspective, pavement distresses, such as cracks and loose debris, may pose risks in terms of the potential for aircraft tire damage and the ability of a pilot to safely control aircraft.

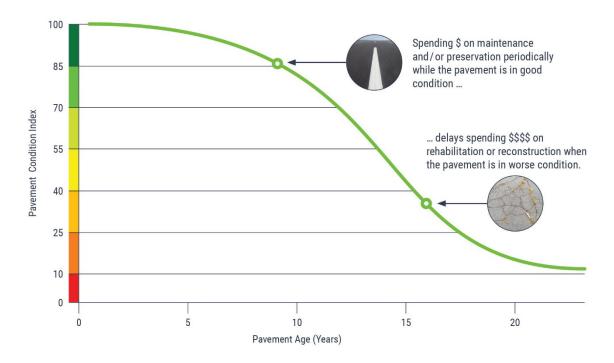


Figure 1. Pavement condition versus cost of repair.

Introduction August 2025

The pavement evaluation results for Albia Municipal Airport are presented within this report and can be used by Albia Municipal Airport, the Iowa DOT, and the Federal Aviation Administration (FAA) to identify, prioritize, and schedule pavement M&R actions at the airport. In addition to this report, the web-based interactive pavement data visualization tool IDEA, containing the information collected during this project, was updated and may be accessed from the <a href="Lowa DOT's website">Lowa DOT's website</a> or directly (<a href="Lowa APMS IDEA">Lowa APMS IDEA</a>).

Pavement Inventory August 2025

#### PAVEMENT INVENTORY

The project began with a review of the existing inventory information pertaining to the pavements at Albia Municipal Airport. The date of original construction, along with the date of any subsequent rehabilitation; the location of completed work; and the type of work undertaken were gathered. The information was used to update the pavement management database and associated maps, as necessary, to account for pavement-related work that had been undertaken since the last time the airport was evaluated in 2021.

The pavement network at Albia Municipal Airport was then divided into branches, sections, and sample units. A branch is a single entity that serves a distinct function. For example, a runway is considered a branch because it serves a single function (allowing aircraft to take off and land). Taxiways, aprons, and T-hangars are also separate branches.

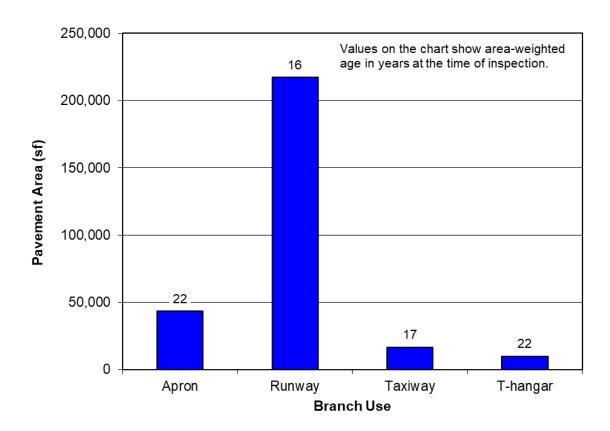
Each branch was further divided into sections. Traditionally, sections are defined as parts of the branch that share common attributes, such as cross section, date of last construction, traffic level, and performance. Using this approach, if a runway was built in 1968 and then extended in 1984, it would contain two separate sections.

To estimate the overall condition of a pavement section, each section was subdivided into sample units. Portions of these sample units were evaluated during the pavement inspection, and the collected information was extrapolated to predict the overall section condition and quantities of distress.

Approximately 287,600 square feet of pavement were evaluated at Albia Municipal Airport, as illustrated in Figure 2. This figure also shows the area-weighted age in years of the pavements at the time of the inspection. Figure 3 provides a map that details how the pavement network was divided into management units and identifies the sample units that were evaluated during the pavement inspection at Albia Municipal Airport.

Pavement Inventory August 2025

Figure 2. Pavement area by branch use at Albia Municipal Airport.



#### FIGURE 3. NETWORK DEFINITION MAP. A01AL-03 (47) A01AL-02 (63) - TH01AL-02 (42) - T03AL-01 (38) TH01AL-01 (13) - A01AL-01 (40) - T02AL-01 (34) - R13AL-02 (33) <sub>-</sub> R13AL-01 (74) R13AL-05 (29) T01AL-01 (24) -24 23 22 21 20 19 18 17 16 15 08 07 06 05 04 13 12 11 10 02 08 03 02 ~ R13AL-03 (19) R13AL-04 (69) applied pavement TECHNOLOGY Iowa Department of Transportation NETWORK DEFINITION LEGEND Modal Transportation Bureau - Aviation BRANCH IDENTIFIER SECTION IDENTIFIER PCI VALUE Albia Municipal Airport Albia, Iowa Network Definition Map SAMPLE UNIT BREAK LINE JOB NUMBER: 2021-125-AM03 NOV. 2024 NOV. 2024 LJR SAMPLE UNIT NUMBER 1"=300' JUN. 2025 KEW KEW SAMPLE UNIT INSPECTED ADDITIONAL SAMPLE UNIT NET. DEF. Albia.dwg

#### **PAVEMENT EVALUATION**

#### **Pavement Evaluation Procedure**

APTech visually inspected the pavements at Albia Municipal Airport using the PCI procedure described in:

- FAA Advisory Circular 150/5380-6C, <u>Guidelines and Procedures for Maintenance of Airport Pavements</u>.
- FAA Advisory Circular 150/5380-7B, <u>Airport Pavement Management Program (PMP)</u>.
- ASTM D5340, Standard Test Method for Airport Pavement Condition Index Surveys.

During the PCI inspection, a cursory inspection of the entirety of a pavement section was performed. Sample units identified for more detailed inspection were verified, and adjustments to the selected sample units for inspection were made as needed to ensure an accurate assessment of the pavement's condition. Data pertaining to the types, severities, and quantities of observed pavement distresses were then collected within each sample unit. These data were then used to calculate the composite PCI of each pavement section. The PCI provides a numerical indication of overall pavement condition, as illustrated in Figure 4. The PCI ranges from a value of 0, which represents a pavement in a *Failed* condition, to a value of 100, which represents a pavement in *Excellent* condition with no visible signs of deterioration. It is important to note that factors other than overall PCI need to be considered when identifying the appropriate type of repair, including types of distress present and rate of deterioration. Also, since the PCI does not assess the structural integrity or capacity of the pavement structure, further testing may be needed to validate and refine the treatment strategy.

PCI: 100
PCI: 83

Figure 4. Visual representation of PCI scale on typical pavement surfaces.

Note: Photographs shown are not specific to Albia Municipal Airport.

PCI: 66

Generally, pavements with relatively high PCIs that are not exhibiting significant load-related distress will benefit from preventive maintenance actions, such as crack sealing or joint resealing. As the PCI drops, the pavements may require major rehabilitation, such as an overlay or whitetopping. In some situations where the PCI has dropped low enough, reconstruction may be the only viable alternative due to the substantial damage to the pavement structure. Figure 5 illustrates how the appropriate repair type varies with the PCI of a pavement section and provides the corresponding colors used for the maps and charts in this report for each range of PCIs.

PCI Range

86-100

71-85

Preventive Maintenance

56-70

Major Rehabilitation

26-40

11-25

Reconstruction

Figure 5. PCI versus repair type.

The types of distress identified during the PCI inspection provide insight into the cause of pavement deterioration, which is useful when selecting M&R strategies. Understanding the cause of distress helps in selecting a rehabilitation alternative that corrects the cause and thus eliminates or delays its recurrence. PCI distress types are characterized as:

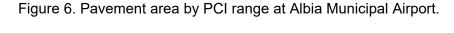
- Load-related—These distress types are defined as being caused by aircraft or vehicular traffic and may indicate a structural deficiency. Examples of load-related distress include alligator cracking on asphalt-surfaced pavements and corner breaks on portland cement concrete (PCC) pavements.
- Climate/durability-related—These distress types often signify the presence of aged or environmentally susceptible (or both) material and include durability-related issues.
   Examples of climate/durability-related distress include weathering on asphalt-surfaced pavements, which is climate-related, and durability cracking on PCC pavements, which is durability-related.
- Other—Distress types that fall into this category cannot be attributed solely to load or climate/durability. Examples of this type of distress include depressions on asphaltsurfaced pavements and shrinkage cracking on PCC pavements.

Appendix A identifies the distress types considered during a PCI inspection and describes the likely cause of each distress type. It should be noted that a PCI is based on visual signs of pavement deterioration and does not provide a measure of structural capacity.

#### **Pavement Evaluation Results**

The pavements at Albia Municipal Airport were inspected in March 2025. The 2025 area-weighted condition of Albia Municipal Airport is 54, with conditions ranging from 13 to 74 (on a scale of 0 [failed] to 100 [excellent]). During the previous pavement inspection in 2021, the area-weighted PCI of the airport was 56.

Figure 6 summarizes the overall condition of the pavements at Albia Municipal Airport, and Figure 7 presents area-weighted condition (average PCI adjusted to account for the relative size of the pavement sections) by branch use. Figure 8 is a map that displays the condition of the evaluated pavements. Table 1 summarizes the results of the pavement evaluation. Appendix B presents photographs taken during the PCI inspection, and Appendix C contains detailed information on the distress types observed during the visual survey. Appendix D includes detailed work history information that was collected during the record review process.



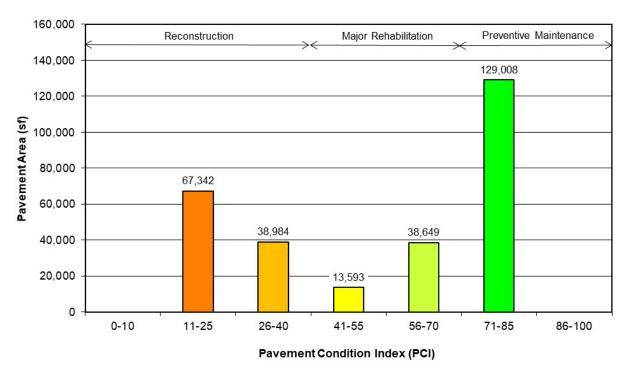
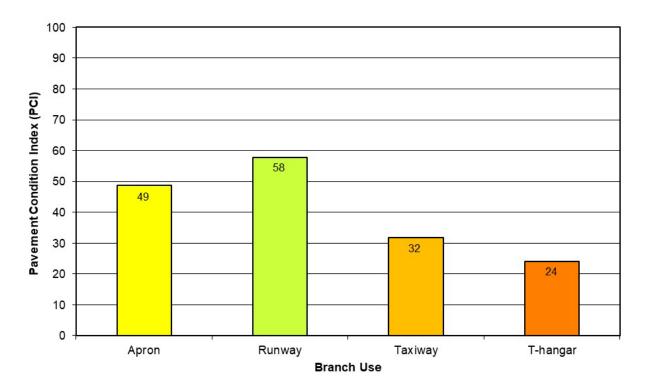
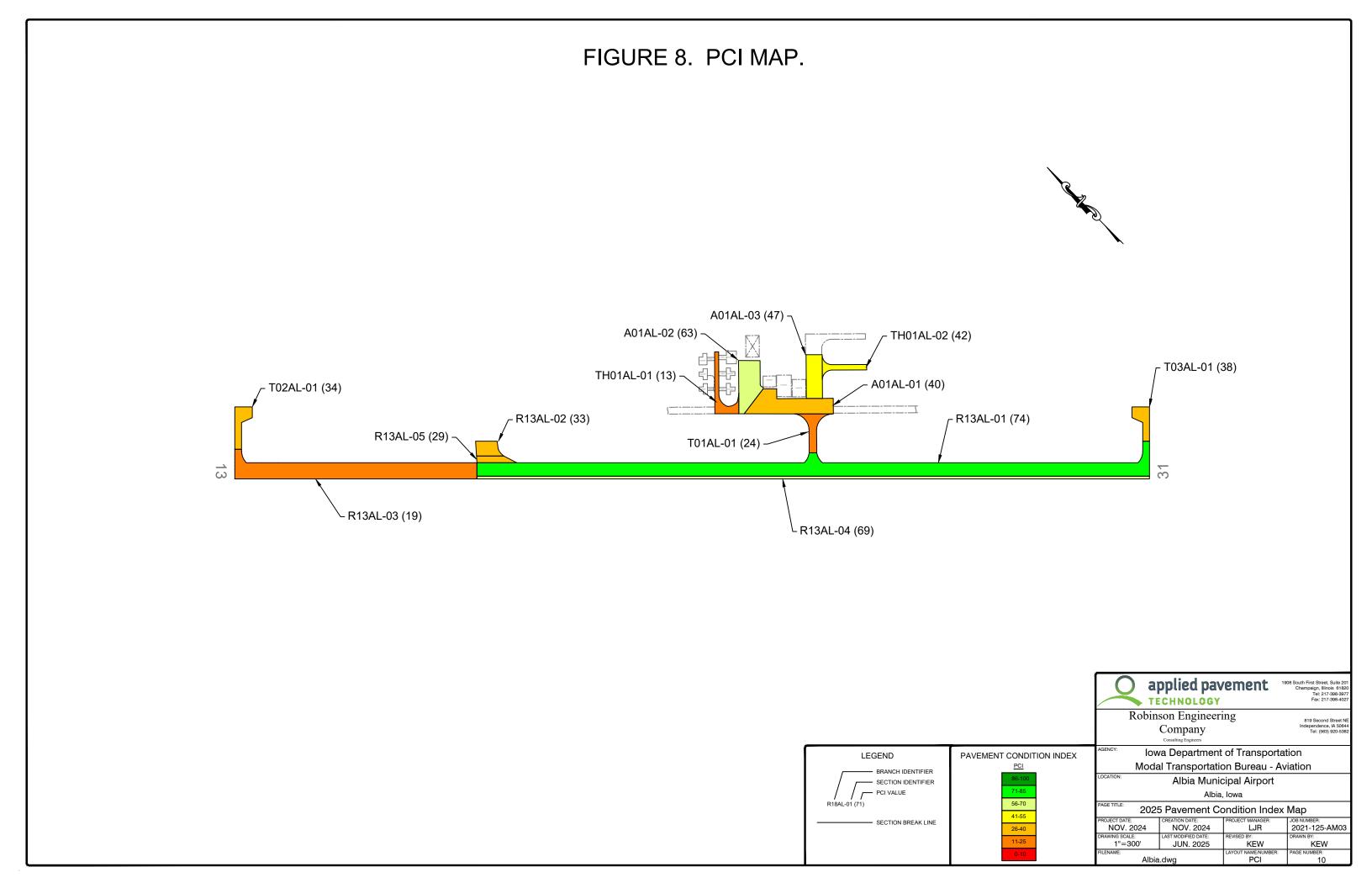


Figure 7. Area-weighted PCI by branch use at Albia Municipal Airport.

(Values on chart are area weighted.)





Pavement Evaluation

Table 1. 2025 pavement evaluation results.

Branch	Section	Surface Type	Section Area (sf)	LCD	2025 PCI	% Distress Due to Load	% Distress Due to Climate/ Durability	% Distress Due to Other	Type of Distress
A01AL	01	AAC	20,142	6/1/2003	40	38	59	3	Alligator Cracking, L&T Cracking, Raveling, Rutting, Swelling, Weathering
A01AL	02	AC	13,649	6/4/2003	63	0	75	25	Depression, L&T Cracking, Raveling, Swelling, Weathering
A01AL	03	AC	9,748	6/1/2003	47	41	44	15	Alligator Cracking, Depression, L&T Cracking, Patching, Rutting, Weathering
R13AL	01	AAC	129,008	7/1/2015	74	0	100	0	L&T Cracking, Weathering
R13AL	02	AAC	4,696	5/1/1981	33	0	100	0	L&T Cracking, Raveling
R13AL	03	AC	55,477	1/1/1998	19	32	68	0	Alligator Cracking, L&T Cracking, Raveling, Rutting
R13AL	04	AAC	25,000	7/1/2015	69	0	100	0	L&T Cracking, Weathering
R13AL	05	AAC	3,100	6/1/1981	29	0	100	0	L&T Cracking, Patching, Raveling
T01AL	01	AAC	5,680	6/1/2003	24	65	30	5	Alligator Cracking, Depression, L&T Cracking, Raveling, Rutting, Weathering
T02AL	01	AC	5,898	6/1/2010	34	38	62	0	Alligator Cracking, L&T Cracking, Raveling, Weathering
T03AL	01	AC	5,148	6/1/2010	38	52	46	2	Alligator Cracking, L&T Cracking, Raveling, Swelling, Weathering
TH01AL	01	AC	6,185	6/4/2003	13	57	43	0	Alligator Cracking, L&T Cracking, Raveling, Rutting, Weathering
TH01AL	02	AC	3,845	1/1/2004	42	34	60	6	Alligator Cracking, L&T Cracking, Raveling, Swelling, Weathering

#### Table Notes:

- 1. See Figure 3 for the location of the branch and section.
- 2. Surface Type: AC = asphalt cement concrete; AAC = asphalt overlay on AC; PCC = portland cement concrete; APC = asphalt overlay on PCC.
- 3. LCD = last construction date.
- 4. Distress due to load includes distress types that are attributed to a structural deficiency in the pavement, such as alligator cracking or rutting on asphalt-surfaced pavements or shattered slabs on PCC pavements.

Pavement Evaluation

#### Table 1. 2025 pavement evaluation results (continued).

- 5. Distress due to climate or durability includes distress types that are attributed to either the aging of the pavement and the effects of the environment (such as weathering, raveling, or block cracking on asphalt-surfaced pavements) or to a materials-related problem (such as durability cracking or alkali-silica reaction [ASR] on PCC pavements). If materials-related distresses were recorded during the inspection, further laboratory testing is required to definitively determine the type present.
- 6. Distress due to other refers to distress types that are not attributed to one factor but rather may be caused by a combination of factors.
- 7. Distress types are defined by ASTM D5340. L&T cracking = longitudinal and transverse cracking; LTD cracking = longitudinal, transverse, and diagonal cracking; ASR = alkali-silica reaction.

#### **Inspection Comments**

Albia Municipal Airport was inspected on March 26, 2025. There were 13 pavement sections defined during the inspection.

#### Runway

Runway 13/31 consisted of five sections. Low- and medium-severity longitudinal and transverse (L&T) cracking and weathering were recorded in Section 01. Sections 02 and 03 were in *Poor* condition. Section 02 had low- and medium-severity L&T cracking along with medium-severity raveling. The low-severity cracking in Section 02 was unsealed, and the medium-severity cracking was due to either crack sealant that had failed or unsealed crack widths greater than 1/4 inch. Low- and medium-severity alligator cracking and L&T cracking were recorded in Section 03, along with high-severity raveling and low-severity rutting. The low-severity cracking in Section 03 was both sealed and unsealed, while the medium-severity cracking was due to either unsealed crack widths that exceeded 1/4 inch, unsatisfactory crack sealant, or the development of secondary cracking. Section 04 had areas of low- and medium-severity L&T cracking with low-severity weathering recorded throughout. Low- and medium-severity L&T cracking and medium-severity patching and raveling were identified in Section 05. In Sections 01, 04, and 05, most of the low-severity cracking was sealed, and the medium-severity cracking was due to either crack sealant in unsatisfactory condition or the development of secondary cracking.

#### **Taxiways**

Taxiway 01 contained one section that was in *Poor* condition and connected the apron area to Runway 13/31. Low- and medium-severity alligator cracking, medium-severity depression, and low- and high-severity L&T cracking were identified, with the low-severity cracking mostly sealed and the high-severity cracking due to spalling along the crack. Low-severity raveling, rutting, and weathering were also observed.

Taxiway 02 was defined by one section in *Poor* condition having low-severity alligator cracking along with all severities of L&T cracking. The low-severity cracking was mostly sealed, and the medium-severity cracking was due to unsatisfactory crack sealant. Low- and medium-severity raveling and weathering were also identified.

Taxiway 03 consisted of one section that was in *Poor* condition. Low- and medium-severity alligator cracking and weathering, low- and high-severity L&T cracking, and low-severity raveling and swelling were observed. The low-severity cracking was sealed.

#### **Apron**

The apron area contained three sections. Low- and medium-severity alligator cracking and L&T cracking, medium- and high-severity weathering and raveling, and low-severity swelling and rutting were recorded in Section 01. The low-severity cracking was both sealed and unsealed and the medium-severity cracking was due to either unsealed crack widths greater than 1/4 inch, unsatisfactory crack sealant, or secondary cracking development. Section 02 had areas of low- and medium-severity depression and L&T cracking, medium-severity raveling and weathering, and low-severity swelling. The low-severity cracking was unsealed, and the medium-severity cracking was due to either unsealed crack widths that exceeded 1/4 inch or crack sealant that was unsatisfactory. Medium-severity alligator cracking and patching; low- and medium-severity depression, L&T cracking, and rutting; and medium- and high-severity weathering were recorded in Section 03. The low-severity cracking was unsealed, while the medium-severity cracking was due to either unsealed crack widths greater than 1/4 inch or the development of secondary cracking.

#### T-Hangar

The T-hangar area consisted of two sections. Section 01 was in *Poor* condition with medium-and high-severity alligator cracking and weathering, low- and medium-severity L&T cracking, low- and high-severity raveling, and low-severity rutting. Low- and medium-severity alligator cracking and L&T cracking were recorded in Section 02, along with areas of low-severity raveling, low-severity swelling, and medium-severity weathering. The low-severity cracking in both sections was unsealed. The medium-severity cracking in Section 01 was due to either unsealed crack widths greater than 1/4 inch, unsatisfactory crack sealant, or secondary cracking development and, in Section 02, it was due to unsealed crack widths that exceeded 1/4 inch.

#### PAVEMENT MAINTENANCE AND REHABILITATION PROGRAM

Using the information collected during the pavement inspection, the PAVER pavement management software was used to develop a 5-year M&R program for Albia Municipal Airport. In addition, a 1-year plan for localized preventive maintenance (such as crack sealing and patching) was prepared.

#### **Analysis Parameters**

#### Critical PCIs

PAVER uses critical PCIs to determine whether localized preventive maintenance or major rehabilitation is the appropriate repair action. Above the critical PCI, localized preventive maintenance activities are recommended. Below the critical PCI, major rehabilitation actions, such as an overlay or reconstruction, are recommended. The lowa DOT set the critical PCIs at 65 for runways, 60 for taxiways, and 55 for aprons and T-hangars.

#### Localized Preventive Maintenance Policies and Unit Costs

Localized preventive maintenance policies were developed for asphalt-surfaced and PCC pavements. These policies, shown in Appendix E, identify the localized preventive maintenance actions that the Iowa DOT considered appropriate to correct the different distress types and severities. The Iowa DOT provided unit costs for each of the localized preventive maintenance actions included in these policies, and these costs are detailed in Appendix E. Please note that this information is of a general nature for the entire State. The localized preventive maintenance policies and unit costs may require adjustments to reflect specific conditions at Albia Municipal Airport.

#### Major Rehabilitation Unit Costs

PAVER estimates the cost of major rehabilitation based on the predicted PCI of the pavement section. The lowa DOT provided the costs for major rehabilitation, and they are presented in Appendix E. If major rehabilitation is recommended in the 5-year program, further engineering investigation will be needed to identify the most appropriate rehabilitation action and to estimate the cost of such work more accurately.

#### **Budget and Inflation Rate**

An unlimited budget with a start date of July 1, 2025, and an inflation rate of 2.3 percent was used during the analysis.

#### **Analysis Approach**

The 5-year M&R program was prepared with the goal of maintaining the pavements above established critical PCIs. During this analysis, major rehabilitation was recommended for pavements in the year they dropped below their critical PCI. For the first year (2025) of the analysis only, a localized preventive maintenance plan was developed for those pavement sections that were above their critical PCI. If major rehabilitation was triggered for a section in 2026 or 2027, then localized preventive maintenance was not recommended for 2025. While localized preventive maintenance should be an annual undertaking at Albia Municipal Airport, it is not possible to accurately predict the propagation of cracking and other distress types. Therefore, the airport should budget for maintenance every year and can use the 2025 localized preventive maintenance plan as a baseline for that work. As the pavements age, it can be assumed that the amount of localized preventive maintenance required will increase.

#### **Analysis Results**

A summary of the M&R program for Albia Municipal Airport is presented in Table 2. Detailed information on the recommended localized preventive maintenance plan for 2025 is provided in Appendix F.

Year	Branch	Section	Surface Type	Type of Repair	Estimated Cost
2025	A01AL	01	AAC	Major Rehabilitation	\$227,395
2025	A01AL	02	AC	Preventive Maintenance	\$780
2025	A01AL	03	AC	Major Rehabilitation	\$75,021
2025	R13AL	01	AAC	Preventive Maintenance	\$2,690
2025	R13AL	02	AAC	Major Rehabilitation	\$53,016
2025	R13AL	03	AC	Major Rehabilitation	\$626,312
2025	R13AL	04	AAC	Preventive Maintenance	\$170
2025	R13AL	05	AAC	Major Rehabilitation	\$34,998
2025	T01AL	01	AAC	Major Rehabilitation	\$64,125
2025	T02AL	01	AC	Major Rehabilitation	\$66,586
2025	T03AL	01	AC	Major Rehabilitation	\$58,119
2025	TH01AL	01	AC	Major Rehabilitation	\$69,826
2025	TH01AL	02	AC	Major Rehabilitation	\$41,487
2028	A01AL	02	AC	Major Rehabilitation	\$78,031
2028	R13AL	04	AAC	Major Rehabilitation	\$142,925

Table 2. 5-year M&R program under an unlimited funding analysis scenario.

Total Estimated Cost: \$1,541,000

#### Table Notes:

- 1. See Figure 3 for the location of the branch and section.
- 2. Surface Type: AC = asphalt cement concrete; AAC = asphalt overlay on AC; PCC = portland cement concrete; APC = asphalt overlay on PCC.
- 3. Type of Repair: Major Rehabilitation, such as pavement reconstruction or an overlay; Localized Preventive Maintenance, such as crack sealing or patching.
- 4. The estimated costs provided are of a general nature for the entire State and may require adjustments to reflect specific conditions at Albia Municipal Airport.

The recommendations made in this report are based on a broad network-level analysis and meant to provide Albia Municipal Airport with an indication of the type of pavement-related work required during the next 5 years. Further engineering investigation may be necessary to identify which repair action is most appropriate. In addition, the cost estimates provided are based on overall unit costs for the entire State, and Albia Municipal Airport should adjust the plan to reflect local costs.

Because an unlimited budget was used in the analysis, it is possible that the pavement repair program may need to be adjusted to consider economic or operational constraints. The identification of a project need does not necessarily mean that State or Federal funding will be available in the year it is indicated. It is important to remember that regardless of the recommendations presented within this report, Albia Municipal Airport is responsible for repairing pavements where existing conditions pose a hazard to safe operations.

#### **General Maintenance Recommendations**

In addition to the specific maintenance actions presented in Appendix F, it is recommended that the following strategies be considered for prolonging pavement life:

- Regularly inspect all safety areas of the airport and document all inspection activity. A sample form that can be used to perform these inspections is provided in Table 3 of this report.
- Provide a method of tracking all maintenance activities that occur because of these
  inspections. This documentation needs to be reported to the FAA and the lowa DOT.
  This information is used to update the APMS records and is required to remain in
  compliance with Public Law 103-305 (see the next section of this report for further
  information on this law).
- 3. Conduct an aggressive campaign against weed growth through timely herbicide applications and mowing programs of the safety areas. Vegetation growth in pavement cracks is destructive and significantly increases the rate of pavement deterioration.
- 4. Implement a periodic crack and joint sealing program. Keeping water and debris out of the pavement system by sealing cracks and joints is a proven and cost-effective method for extending the life of the pavement system.
- 5. Ensure all edges of pavement maintain the required 1.5-inch lip. This enables the water to drain away from the pavement system.
- 6. Closely monitor the movement of heavy equipment (particularly farming, construction, mowing, and fueling equipment) to make sure it is only operating on pavements that are designed to accommodate heavy loads. Failure to restrict heavy equipment to appropriate areas may result in the premature failure of airport pavements.

#### FAA Requirements (Public Law 103-305)

Because Albia Municipal Airport is in the National Plan of Integrated Airport Systems (NPIAS), the airport sponsor is required to keep the airport in a viable operating condition. This includes maintaining airport pavements in accordance with Public Law 103-305. Public Law 103-305 states that after January 1, 1995, NPIAS airport sponsors must provide assurances or certifications that an airport has implemented an effective airport pavement maintenance management system (PMMS) before the airport will be considered for Federal funding of pavement replacement or reconstruction projects. To be in full compliance with the Federal law, the PMMS must include the following components at minimum: pavement inventory, pavement inspections, record keeping, information retrieval, and program funding.

This report serves as a complete pavement inventory and detailed inspection. To remain in compliance with the law, Albia Municipal Airport will also need to undertake monthly drive-by inspections of pavement conditions and track pavement-related maintenance activities.

FAA Advisory Circular 150/5380-7B provides detailed guidance pertaining to the requirements for an acceptable pavement management program. Appendix A of the FAA Advisory Circular 150/5380-7B outlines what needs to be included in a PMP to remain in compliance with this law and Grant Assurance #11. The following is a copy of this appendix, along with instructions for supplementing this report so that all requirements are met. Note that the italicized text is a direct quotation from the FAA Advisory Circular.

#### FAA Advisory Circular 150/5830-7B, Appendix A. Pavement Management Program

**A-1.0.** An effective PMP specifies the procedures to follow to assure that proper preventative and remedial pavement maintenance is performed. The program should identify funding or anticipated funding and other resources available to provide remedial and preventive maintenance activities. An airport sponsor may use any format deemed appropriate, but the program needs to, as a minimum, include the following:

#### A-1.1. Pavement Inventory. The following must be depicted:

a. Identification of all runways, taxiways, and aprons with pavement broken down into sections each having similar properties.

The network definition map provided in Figure 3 of this report shows the location of all runways, taxiways, aprons, and T-hangars at Albia Municipal Airport. If any new pavements are constructed or any pavement areas are permanently closed, this map must be updated. Project plans should be submitted to the lowa DOT after project completion.

b. Dimensions of pavement sections.

The dimensions of all runways, taxiways, aprons, and T-hangars are stored in the PAVER database. Appendix C provides information on length, width, and area. In addition, the network definition map provided in Figure 3 is drawn to scale. Any changes to pavement dimensions must be recorded.

c. Type of pavement surface.

The type of pavement for each section at Albia Municipal Airport is listed in Table 1 of this report and is also stored in the PAVER database. Any changes to the pavement type (through an overlay or reconstruction) must be recorded.

d. Year of construction and/or most recent major rehabilitation.

Dates for pavement construction, rehabilitation, or reconstruction must be recorded. The current pavement history for Albia Municipal Airport is provided in Appendix D of this report.

e. Whether AIP [Airport Improvement Program] or PFC [Passenger Facility Charge] funds were used to construct, reconstruct, or repair the pavement.

Funding sources for all pavement projects should be recorded.

**A-1.2. PMP Pavement Inspection Schedule.** Airports must perform a detailed inspection of airfield pavements at least once a year for the PMP. If a pavement condition index (PCI) survey is performed, as set forth in ASTM D5340, "Standard Test Method for Airport Pavement Condition Index Surveys," the frequency of the detailed inspection by PCI surveys may be extended to three years. Less comprehensive routine daily, weekly, and monthly maintenance inspections required for operations should be addressed.

This report consists of a detailed inspection that will extend the inspection period to 3 years. It is the airport sponsor's responsibility to perform monthly drive-by inspections. A sample pavement inspection report form is provided in Table 3 of this report.

**A-1.3. Record Keeping.** The airport must record and keep on file complete information about all detailed inspections and maintenance performed until the pavement system is replaced. The types of distress, their locations, and remedial action, scheduled or performed, must be documented. The minimum information recorded includes:

- a. Inspection date
- b. Location
- c. Distress types
- d. Maintenance scheduled or performed

Items A through C are satisfied by this inspection report. Item D is the responsibility of the airport, as is record keeping of the monthly drive-by inspections.

**A-1.4.** Information Retrieval. An airport sponsor may use any form of record keeping it deems appropriate so long as the information and records from the pavement survey can generate required reports, as necessary.

Keep this report, monthly drive-by inspection reports, construction updates, and all records of maintenance activities in a readily accessible location so that they can be easily retrieved as requested by the FAA.

Pavement Maintenance and Rehabilitation Program

Table 3. Pavement inspection report.

Inspected By:	
Date Inspected:	

Branch	Section	Distress Description/Dimensions/Severity/ Recommended Action	Description of Repair	Date Performed	Cost	Funding Source
A01AL	01					
A01AL	02					
A01AL	03					
R13AL	01					
R13AL	02					
R13AL	03					

Pavement Maintenance and Rehabilitation Program

Table 3. Pavement inspection report (continued
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Inspected By:	
Date Inspected:	

Branch	Section	Distress Description/Dimensions/Severity/ Recommended Action	Description of Repair	Date Performed	Cost	Funding Source
R13AL	04					
R13AL	05					
T01AL	01					
T02AL	01					
T03AL	01					
TH01AL	01					

Pavement Maintenance and Rehabilitation Program

Table 3. Pavement ins	pection report	(continued)
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Inspected By:		
Date Inspected:		

Branch	Section	Distress Description/Dimensions/Severity/ Recommended Action	Description of Repair	Date Performed	Cost	Funding Source
TH01AL	02					

Table Note: See Figure 3 for the location of the branch and section.

Summary August 2025

#### **SUMMARY**

This report documents the results of the pavement evaluation conducted at Albia Municipal Airport. A visual inspection of the pavements in 2025 found that the overall condition of the pavement network is a PCI of 54. A 5-year pavement repair program, shown in Table 2, was generated for Albia Municipal Airport, which revealed that approximately \$1,541,000 needs to be expended on M&R. Albia Municipal Airport should utilize these study results to assist in planning for future maintenance needs as part of the airport CIP planning process.

References August 2025

#### **REFERENCES**

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US Army Corps of Engineers (USACE). 2009. <u>Asphalt Surfaced Airfields</u>. PAVER Distress Identification Manual. USACE, Washington, DC.

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# APPENDIX A CAUSE OF DISTRESS TABLES

Cause of Distress Tables August 2025

Table A-1. Cause of pavement distress, asphalt-surfaced pavements (USACE 2009a).

Distress Type	Probable Cause of Distress
Alligator Cracking	Fatigue failure of the asphalt surface under repeated traffic loading.
Bleeding	Excessive amounts of asphalt cement or tars in the mix or low air void content, or both.
Block Cracking	Shrinkage of the asphalt and daily temperature cycling; it is not load associated.
Corrugation	Traffic action combined with an unstable pavement layer.
Depression	Settlement of the foundation soil or can be "built up" during construction.
Jet-Blast Erosion	Bituminous binder has been burned or carbonized.
Joint Reflection Cracking	Movement of the concrete slab beneath the asphalt surface due to thermal and moisture changes.
L&T Cracking	Cracks may be caused by (1) a poorly constructed paving lane joint, (2) shrinkage of the asphalt surface due to low temperatures or hardening of the asphalt, or (3) reflective cracking caused by cracks in an underlying PCC slab.
Oil Spillage	Deterioration or softening of the pavement surface caused by the spilling of oil, fuel, or other solvents.
Patching	N/A
Polished Aggregate	Repeated traffic applications.
Raveling	Asphalt binder may have hardened significantly, causing coarse aggregate pieces to dislodge.
Rutting	Usually caused by consolidation or lateral movement of the materials due to traffic loads.
Shoving	Where PCC pavements adjoin flexible pavements, PCC "growth" may shove the asphalt pavement.
Slippage Cracking	Low-strength surface mix or poor bond between the surface and the next layer of the pavement structure.
Swelling	Usually caused by frost action or by swelling soil.
Weathering	Asphalt binder and/or fine aggregate may wear away as the pavement ages and hardens.

Cause of Distress Tables August 2025

Table A-2. Cause of pavement distress, PCC pavements (USACE 2009b).

Distress Type	Probable Cause of Distress
ASR	Chemical reaction of alkalis in the cement with certain reactive silica minerals. ASR may be accelerated by the use of chemical pavement deicers.
Blowup	Incompressible materials in the joints.
Corner Break	Load repetition combined with loss of support and curling stresses.
Durability Cracking	Concrete's inability to withstand environmental factors, such as freeze-thaw cycles.
Faulting	Upheaval or consolidation.
Joint Seal Damage	Stripping of joint sealant, extrusion of joint sealant, weed growth, hardening of the filler (oxidation), loss of bond to the slab edges, or absence of sealant in the joint.
LTD Cracking	Combination of load repetition, curling stresses, and shrinkage stresses.
Patching (Small and Large)	N/A
Popouts	Freeze-thaw action in combination with expansive aggregates.
Pumping	Poor drainage, poor joint sealant.
Scaling	Over finishing of concrete, deicing salts, improper construction, freeze-thaw cycles, and poor aggregate.
Shattered Slab	Load repetition.
Shrinkage Cracking	Setting and curing of the concrete.
Spalling (Joint and Corner)	Excessive stresses at the joint caused by infiltration of incompressible materials or traffic loads; weak concrete at the joint combined with traffic loads.

# APPENDIX B INSPECTION PHOTOGRAPHS

Inspection Photos August 2025

A01AL-01. Overview.



A01AL-01. Alligator Cracking (Sample Unit No. 05).



Inspection Photos August 2025

A01AL-01. L&T Cracking (Sample Unit No. 05).



A01AL-01. Weathering (Sample Unit No. 05).



Inspection Photos August 2025

A01AL-02. Overview.



A01AL-02. L&T Cracking (Sample Unit No. 03).



A01AL-02. Swelling (Sample Unit No. 03).



A01AL-02. Weathering (Sample Unit No. 03).



A01AL-03. Overview.



A01AL-03. L&T Cracking (Sample Unit No. 01).



A01AL-03. Patching (Sample Unit No. 01).



A01AL-03. Weathering (Sample Unit No. 01).



R13AL-01. Overview.



R13AL-01. L&T Cracking (Sample Unit No. 025).



R13AL-01. Weathering (Sample Unit No. 025).



R13AL-02. Overview.



R13AL-02. L&T Cracking (Sample Unit No. 01).



R13AL-02. Raveling (Sample Unit No. 01).



R13AL-03. Overview.



R13AL-03. L&T Cracking (Sample Unit No. 08).



R13AL-03. Raveling (Sample Unit No. 08).



R13AL-04. Overview.



R13AL-04. L&T Cracking (Sample Unit No. 04).



R13AL-04. Weathering (Sample Unit No. 04).



R13AL-05. Overview.



R13AL-05 L&T. Cracking (Sample Unit No. 01).



R13AL-05. Patching (Sample Unit No. 01).



T01AL-01. Overview.



T01AL-01. Alligator Cracking (Sample Unit No. 01).



T01AL-01. Depression (Sample Unit No. 01).



T01AL-01. L&T Cracking (Sample Unit No. 01) (1).



T01AL-01. L&T Cracking (Sample Unit No. 01) (2).



T02AL-01. Overview.



T02AL-01. L&T Cracking (Sample Unit No. 01) (1).



T02AL-01. L&T Cracking (Sample Unit No. 01) (2).



T02AL-01. Weathering (Sample Unit No. 01).



T03AL-01. Overview.



T03AL-01. Alligator Cracking (Sample Unit No. 01).



T03AL-01. L&T Cracking (Sample Unit No. 01).



TH01AL-01. Overview.



TH01AL-01. Alligator Cracking (Sample Unit No. 01).



TH01AL-01. Raveling (Sample Unit No. 01).



TH01AL-02. Overview.



TH01AL-02. Alligator Cracking (Sample Unit No. 01).



TH01AL-02. L&T Cracking (Sample Unit No. 01).



TH01AL-02. Swelling (Sample Unit No. 01).



# APPENDIX C INSPECTION REPORT

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8 Page 1

	Branch - Section ID:	A01AL - 001	
Branch Name: APRON			Use: APRON
LCD: 6/1/2003 Surface Type: AAC Rank: P Section Area (sf): 20,142.00 Length (ft): 329.00 Width (ft): 57.00 From: TAXIWAY To: AIRCRAFT HANGERS	PCI Fam	ily: IowaAACAP_Souther	1
Slabs: Slab Length (ft): Slab Width (ft): Joint Length (ft):	Section (	Comments:	
Last Insp Date: 3/26/2025 PCI: 40 Total Samples: 6 Surveyed: 4	Inspection	on Comments:	
Sample Number: 02			
Sample Type: R Sample PCI: 47 Sample Area (SF): 3,000.00		Comments:	
41 ALLIGATOR CR 48 L & T CR 48 L & T CR 48 L & T CR 57 WEATHERING	M L L M M	70.00 SF 50.00 FT 120.00 FT 95.00 FT 3,000.00 SF	lu Is w, fs
Sample Number: 03			
Sample Type: R Sample PCI: 57 Sample Area (SF): 3,000.00	Sample (	Comments:	
48 L & T CR 48 L & T CR 48 L & T CR 56 SWELLING 57 WEATHERING	L L M L M	120.00 FT 75.00 FT 170.00 FT 50.00 SF 3,000.00 SF	ls lu w fs
Sample Number: 04			
Sample Type: R Sample PCI: 38 Sample Area (SF): 3,560.00	Sample (	Comments:	
41 ALLIGATOR CR 41 ALLIGATOR CR 48 L & T CR 48 L & T CR 56 SWELLING 57 WEATHERING	L M L M L M	45.00 SF 75.00 SF 85.00 FT 145.00 FT 80.00 SF 3,560.00 SF	Edge Iu fs w 2ndy

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8 Page 2

#### Sample Number: 05

Sample Type: R Sample Comments:

Sample PCI: 24

Sample Area (SF): 4,225.00

41 ALLIGATOR CR	M	80.00 SF	
48 L & T CR	M	222.00 FT	fs w 2ndy
52 RAVELING	Н	140.00 SF	
52 RAVELING	M	210.00 SF	
53 RUTTING	L	75.00 SF	
56 SWELLING	L	120.00 SF	
57 WEATHERING	Н	200.00 SF	
57 WEATHERING	M	3,675.00 SF	

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8 Page 3

			<u> </u>
5	Branch - Section ID:	: A01AL - 002	
Branch Name: APRON			Use: APRON
LCD: 6/4/2003 Surface Type: AC Rank: P Section Area (sf): 13,649.00 Length (ft): 200.00 Width (ft): 80.00 From: A01AL-01 To:	PCI Fai	mily: IowaACAP_Southern	
Slabs: Slab Length (ft): Slab Width (ft): Joint Length (ft):	Section	Comments:	
Last Insp Date: 3/26/2025 PCI: 63 Total Samples: 3 Surveyed: 3	Inspect	ion Comments:	
Sample Number: 01			
Sample Type: R Sample PCI: 52 Sample Area (SF): 3,852.00 45 DEPRESSION	Sample L	Comments: 40.00 SF	
45 DEPRESSION	M	80.00 SF	
48 L & T CR	L	195.00 FT	lu
48 L & T CR	M	85.00 FT	W
52 RAVELING	M	20.00 SF	
56 SWELLING 57 WEATHERING	L M	15.00 SF 3,832.00 SF	
Sample Number: 02	IVI	0,002.00 01	
Sample Type: R Sample PCI: 69 Sample Area (SF): 4,997.00	Sample	Comments:	
45 DEPRESSION	L	10.00 SF	
48 L & T CR	L	155.00 FT	lu
48 L & T CR	M	65.00 FT	fs w
57 WEATHERING	M	4,997.00 SF	
Sample Number: 03			
Sample Type: R Sample PCI: 66 Sample Area (SF): 4,800.00	Sample	Comments:	
45 DEPRESSION	L	10.00 SF	
48 L & T CR	L	155.00 FT	lu
48 L & T CR	M	20.00 FT	w fs
56 SWELLING	L	35.00 SF	
57 WEATHERING	M	4,800.00 SF	

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8

Network ID: 4C8				Page 4
	Branch - Sectio	n ID: A01AL - 003		
Branch Name: APRON				Use: APRON
LCD: 6/1/2003 Surface Type: AC Rank: P Section Area (sf): 9,748.00 Length (ft): 162.00 Width (ft): 60.00 From: A01AL-01 To:	F	PCI Family: IowaACAP_Southern	1	
Slabs: Slab Length (ft): Slab Width (ft): Joint Length (ft):	S	Section Comments:		
Last Insp Date: 3/26/2025 PCI: 47 Total Samples: 2 Surveyed: 2	Ir	nspection Comments:		
Sample Number: 01				
Sample Type: R Sample PCI: 60 Sample Area (SF): 4,948.00	s	Sample Comments:		
45 DEPRESSION 48 L & T CR 48 L & T CR 50 PATCHING 57 WEATHERING	L L M M M	45.00 SF 102.00 FT 55.00 FT 30.00 SF 4,918.00 SF	lu w 2ndy	
Sample Number: 02				
Sample Type: R Sample PCI: 34 Sample Area (SF): 4,800.00	S	Sample Comments:		
41 ALLIGATOR CR 45 DEPRESSION 45 DEPRESSION	M L M	60.00 SF 15.00 SF 80.00 SF		

L

Μ

L

M

Н

Μ

95.00 FT

60.00 FT

35.00 SF

20.00 SF

100.00 SF

4,700.00 SF

lu

48 L & T CR

48 L & T CR

53 RUTTING

53 RUTTING

57 WEATHERING

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8 Page 5

Network ID: 4C8			Pa	ge 5
	Branch - Section ID:	R13AL - 001		
Branch Name: RUNWAY 13/31			Use: RUNV	VAY
LCD: 7/1/2015 Surface Type: AAC Rank: P Section Area (sf): 129,008.00 Length (ft): 2,500.00 Width (ft): 50.00 From: 31 END OF RUNWAY To: 13 END OF RUNWAY	PCI Fam	nily: lowaAACRW_SE		
Slabs: Slab Length (ft): Slab Width (ft): Joint Length (ft):	Section	Comments:		
Last Insp Date: 3/26/2025 PCI: 74 Total Samples: 26 Surveyed: 6	Inspection	on Comments:		
Sample Number: 004				
Sample Type: R Sample PCI: 76 Sample Area (SF): 5,000.00	Sample	Comments:		
48 L & T CR 48 L & T CR 48 L & T CR 57 WEATHERING	L L M L	220.00 FT 10.00 FT 60.00 FT 5,000.00 SF	ls lu fs 2nd	
Sample Number: 007				
Sample Type: R Sample PCI: 77 Sample Area (SF): 5,000.00	Sample	Comments:		
48 L & T CR 48 L & T CR 48 L & T CR 57 WEATHERING	L L M L	15.00 FT 200.00 FT 30.00 FT 5,000.00 SF	lu Is fs 2ndy	
Sample Number: 011				
Sample Type: R Sample PCI: 72 Sample Area (SF): 5,000.00	Sample	Comments:		
48 L & T CR 48 L & T CR 48 L & T CR 57 WEATHERING 57 WEATHERING	L L M L M	275.00 FT 30.00 FT 40.00 FT 4,975.00 SF 25.00 SF	ls lu fs	
Sample Number: 015				
Sample Type: R Sample PCI: 70 Sample Area (SF): 5,000.00	Sample	Comments:		
48 L & T CR 48 L & T CR	L L	65.00 FT 275.00 FT	lu Is	

Μ

L

Μ

100.00 FT

25.00 SF

4,975.00 SF

2ndy fs

48 L & T CR

57 WEATHERING

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8

Sample Number: 021

Sample Type: R Sample Comments:

Sample PCI: 77

Sample Area (SF): 5,000.00

 48 L & T CR
 L
 45.00 FT
 lu

 48 L & T CR
 L
 290.00 FT
 ls

 57 WEATHERING
 L
 5,000.00 SF

Sample Number: 025

Sample Type: R Sample Comments:

Sample PCI: 74

Sample Area (SF): 5,000.00

 48 L & T CR
 L
 15.00 FT
 Iu

 48 L & T CR
 L
 360.00 FT
 Is

 57 WEATHERING
 L
 4,950.00 SF

 57 WEATHERING
 M
 50.00 SF

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8

Branch - Section ID: R13AL - 002

PCI Family: IowaAACRW SE

Branch Name: RUNWAY 13/31 Use: RUNWAY

LCD: 5/1/1981

Surface Type: AAC

Rank: P

Section Area (sf): 4,696.00

Length (ft): 81.00 Width (ft): 56.25 From: RUNWAY END 13 To: END OF TURNAROUND

Slabs: Section Comments:

Slab Length (ft): Slab Width (ft): Joint Length (ft):

Last Insp Date: 3/26/2025 Inspection Comments:

PCI: 33 Total Samples: 1 Surveyed: 1

Sample Number: 01

Sample Type: R Sample Comments:

Sample PCI: 33

Sample Area (SF): 4,696.00

 48 L & T CR
 L
 80.00 FT
 lu

 48 L & T CR
 L
 65.00 FT
 ls

 48 L & T CR
 M
 246.00 FT
 fs w veg

52 RAVELING M 4,696.00 SF

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8

Network ID: 4C8					Page 8
Branch Name: RUNWAY 1	13/31	Branch - Sect	ion ID: R13AL - 003		Use: RUNWAY
LCD: 1/1/1998 Surface Type: AC Rank: P Section Area (sf): 55,477 Length (ft): 900.00 Width (ft): 60.00 From: RUNWAY 13AL-05 To: END OF RUNWAY	.00		PCI Family: IowaACRW_Southern	n	
Slabs: Slab Length (ft): Slab Width (ft): Joint Length (ft):			Section Comments:		
Last Insp Date: 3/26/2025 PCI: 19 Total Samples: 9 Surveyed: 4			Inspection Comments:		
Sample Number: 01					
Sample Type: R Sample PCI: 12 Sample Area (SF):	6,000.00		Sample Comments:		
41 ALLIGATOR	CR	M	300.00 SF		
48 L & T CR		L	260.00 FT	ls for One day	
48 L & T CR 52 RAVELING		M H	400.00 FT 6,000.00 SF	fs 2ndy	
53 RUTTING		L	100.00 SF		
Sample Number: 03					
Sample Type: R Sample PCI: 20 Sample Area (SF):	6,000.00		Sample Comments:		
48 L & T CR		L	95.00 FT	lu	
48 L & T CR		L	40.00 FT	ls	
48 L & T CR		M	560.00 FT	fs w 2ndy	
52 RAVELING 53 RUTTING		H L	6,000.00 SF 100.00 SF		
Sample Number: 05		<u>L</u>	100.00 01		
Sample Type: R Sample PCI: 20	c 000 00		Sample Comments:		
Sample Area (SF):	6,000.00		5.00.05		
41 ALLIGATOR 48 L & T CR	CR	L L	5.00 SF 142.00 FT		
48 L & T CR		M	585.00 FT	fs 2ndy	
52 RAVELING		H	6,000.00 SF	io Ziidy	
Sample Number: 08					
Sample Type: R Sample PCI: 25 Sample Area (SF):	6,000.00		Sample Comments:		
48 L & T CR	_,000.00	L	15.00 FT	lu	
48 L & T CR		M	490.00 FT	fs 2ndy	
FO DAY/FUNC			0,000,00,05	,	

6,000.00 SF

52 RAVELING

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8		Page 9
	Branch - Section ID: R13AL - 004	
Branch Name: RUNWAY 13/31		Use: RUNWAY
LCD: 7/1/2015 Surface Type: AAC Rank: P Section Area (sf): 25,000.00 Length (ft): 2,500.00 Width (ft): 10.00 From: END OF RUNWAY To: R13AL-03	PCI Family: IowaAACRW_SE	
Slabs: Slab Length (ft): Slab Width (ft): Joint Length (ft):	Section Comments: FOLLOWS SW EDGE	E OF RUNWAY 13
Last Insp Date: 3/26/2025 PCI: 69 Total Samples: 5 Surveyed: 4	Inspection Comments:	
Sample Number: 01		
Sample Type: R Sample PCI: 70 Sample Area (SF): 5,000.00  48 L & T CR 48 L & T CR	Sample Comments:  L 530.00 FT Is L 55.00 FT Iu	
57 WEATHERING	L 5,000.00 SF	
Sample Number: 02		
Sample Type: R Sample PCI: 69 Sample Area (SF): 5,000.00 48 L & T CR	Sample Comments:  L 530.00 FT Is	
48 L & T CR	L 530.00 FT Is L 85.00 FT Iu	
57 WEATHERING	L 5,000.00 SF	
Sample Number: 03		
Sample Type: R Sample PCI: 67 Sample Area (SF): 5,000.00	Sample Comments:	
48 L & T CR 48 L & T CR 48 L & T CR 57 WEATHERING	L 30.00 FT lu L 465.00 FT ls M 50.00 FT fs L 5,000.00 SF	
Sample Number: 04		
Sample Type: R Sample PCI: 70 Sample Area (SF): 5,000.00	Sample Comments:	

L

530.00 FT

30.00 FT

5,000.00 SF

ls

lu

48 L & T CR

48 L & T CR

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8 Page 10

Branch - Section ID: R13AL - 005

Branch Name: RUNWAY 13/31 Use: RUNWAY

LCD: 6/1/1981 PCI Family: lowaAACRW\_SE

Surface Type: AAC Rank: P

Section Area (sf): 3,100.00

Length (ft): 125.00 Width (ft): 25.00 From: SEE MAP To: SEE MAP

Slabs: Section Comments:

Slab Length (ft): Slab Width (ft): Joint Length (ft):

Last Insp Date: 3/26/2025 Inspection Comments:

PCI: 29 Total Samples: 1 Surveyed: 1

Sample Number: 01

Sample Type: R Sample Comments:

Sample PCI: 29

Sample Area (SF): 3,100.00

48 L & T CR 74.00 FT L lu 48 L & T CR L 225.00 FT ls 48 L & T CR М 110.00 FT fs **50 PATCHING** Μ 90.00 SF 52 RAVELING М 3,010.00 SF

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8 Page 11

Branch - Section ID: T01AL - 001

Branch Name: TAXIWAY 01 Use: TAXIWAY

LCD: 6/1/2003 PCI Family: lowaAACTW\_SE

Surface Type: AAC

Rank: P

Section Area (sf): 5,680.00

Length (ft): 145.00 Width (ft): 30.00 From: RUNWAY 13/31

To: APRON

Slabs: Section Comments:

Slab Length (ft): Slab Width (ft): Joint Length (ft):

Last Insp Date: 3/26/2025

PCI: 24 Total Samples: 1 Surveyed: 1 Inspection Comments:

Sample Number: 01

Sample Type: R Sample Comments:

Sample PCI: 24

Sample Area (SF): 5,680.00

41 ALLIGATOR CR	L	10.00 SF	Edge
41 ALLIGATOR CR	M	425.00 SF	
45 DEPRESSION	M	10.00 SF	
48 L & T CR	Н	5.00 FT	spalling
48 L & T CR	L	240.00 FT	ls
48 L & T CR	L	10.00 FT	lu
52 RAVELING	L	800.00 SF	
53 RUTTING	L	330.00 SF	
57 WEATHERING	L	5,680.00 SF	

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8 Page 12

Branch - Section ID: T02AL - 001

Branch Name: TAXIWAY 02 Use: TAXIWAY

LCD: 6/1/2010

Surface Type: AC

Rank: P

Section Area (sf): 5,898.00 Length (ft): 160.00 Width (ft): 35.00 From: RUNWAY END

To: END

Slabs: Section Comments:

Slab Length (ft): Slab Width (ft): Joint Length (ft):

Last Insp Date: 3/26/2025

PCI: 34
Total Samples: 1
Surveyed: 1

PCI Family: lowaACTW\_Southern <>Enhanced

Edge 1 ft Is Iu fs

Inspection Comments:

#### Sample Number: 01

Sample Type: R Sample Comments:

Sample PCI: 34

Sample Area (SF): 5,898.00

41 ALLIGATOR CR	L	300.00 SF
48 L & T CR	Н	5.00 FT
48 L & T CR	L	160.00 FT
48 L & T CR	L	45.00 FT
48 L & T CR	M	15.00 FT
52 RAVELING	L	500.00 SF
52 RAVELING	M	300.00 SF
57 WEATHERING	L	5,048.00 SF
57 WEATHERING	M	550.00 SF

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8 Page 13

Branch - Section ID: T03AL - 001

Branch Name: TAXIWAY 03 Use: TAXIWAY

LCD: 6/1/2010

Surface Type: AC

Rank: P

Section Area (sf): 5,148.00 Length (ft): 167.00 Width (ft): 30.00

From: RUNWAY END

To: END

Slabs: Section Comments:

Slab Length (ft): Slab Width (ft): Joint Length (ft):

Last Insp Date: 3/26/2025

PCI: 38 Total Samples: 1 Surveyed: 1

Inspection Comments:

PCI Family: lowaACTW\_Southern <>Enhanced

Sample Number: 01

Sample Type: R Sample Comments:

Sample PCI: 38

Sample Area (SF): 5,148.00

41 ALLIGATOR CR	L	200.00 SF	Edge
41 ALLIGATOR CR	M	25.00 SF	
48 L & T CR	Н	15.00 FT	
48 L & T CR	L	30.00 FT	ls
52 RAVELING	L	5,148.00 SF	
56 SWELLING	L	24.00 SF	
57 WEATHERING	L	5,100.00 SF	
57 WEATHERING	М	48.00 SF	

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8 Page 14

Branch - Section ID: TH01AL - 001

Branch Name: T-HANGAR 01 Use: T-HANGAR

LCD: 6/4/2003

Surface Type: AC

Rank: P

Section Area (sf): 6,185.00 Length (ft): 229.00 Width (ft): 27.00

From: SEE MAP
To: SEE MAP

Slabs: Section Comments:

Slab Length (ft): Slab Width (ft): Joint Length (ft):

Last Insp Date: 3/26/2025

PCI: 13 Total Samples: 1 Surveyed: 1 Inspection Comments:

PCI Family: IowaAsphaltTH Southern

lu w fs 2ndy

Sample Number: 01

Sample Type: R Sample Comments:

Sample PCI: 13

Sample Area (SF): 6,185.00

41 ALLIGATOR CR	Н	212.00 SF
41 ALLIGATOR CR	M	1,000.00 SF
48 L & T CR	L	160.00 FT
48 L & T CR	M	150.00 FT
52 RAVELING	Н	120.00 SF
52 RAVELING	L	619.00 SF
53 RUTTING	L	70.00 SF
57 WEATHERING	Н	300.00 SF
57 WEATHERING	M	5,765.00 SF

Pavement Database: IA 2024 Generate Date: 8/11/2025

Network ID: 4C8 Page 15

Branch - Section ID: TH01AL - 002

Branch Name: T-HANGAR 01 Use: T-HANGAR

LCD: 1/1/2004

Surface Type: AC

Rank: P

Section Area (sf): 3,845.00 Length (ft): 167.00 Width (ft): 23.00 From: SEE MAP

Slabs: Section Comments:

Slab Length (ft): Slab Width (ft): Joint Length (ft):

To: SEE MAP

Last Insp Date: 3/26/2025

PCI: 42 Total Samples: 1 Surveyed: 1 Coolion Commonio.

PCI Family: IowaAsphaltTH Southern

Inspection Comments:

lu w

#### Sample Number: 01

Sample Type: R Sample Comments:

Sample PCI: 42

Sample Area (SF): 3,845.00

L	60.00 SF
M	5.00 SF
L	90.00 FT
M	35.00 FT
L	3,845.00 SF
L	95.00 SF
M	3,845.00 SF
	L M L L

# APPENDIX D WORK HISTORY REPORT

Pavement Database: IA 2024 Generate Date: 6/30/2025

Network ID: 4C8

# **Network: ALBIA MUNICIPAL AIRPORT**

Branch - Section ID: A01AL - 001

 LCD: 6/1/2003
 Length (ft):
 329.00

 Use: APRON
 Width (ft):
 57.00

 Rank: P
 True Area (sf):
 20,142.00

Surface: AAC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
09-18-2008	CS-AC	Crack Sealing - AC	\$5,420.00	0.00	False	Total Project Cost: \$77,425
06-01-2003	OL-AT	Overlay - AC Thin	\$0.00	0.00	True	-
06-01-1981	NC-AC	New Construction - AC	\$0.00	0.00	True	-

#### Branch - Section ID: A01AL - 002

 LCD: 6/4/2003
 Length (ft):
 200.00

 Use: APRON
 Width (ft):
 80.00

 Rank: P
 True Area (sf):
 13,649.00

Surface: AC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
09-18-2008	CS-AC	Crack Sealing - AC	\$3,871.00	0.00	False	Total Project Cost: \$77,425
06-04-2003	NC-AC	New Construction - AC	\$0.00	2.00	True	4" P-401 AC SURFACE
06-03-2003	BA-BI	Base Course - Bituminous	\$0.00	2.00	False	2" P-401 AC BASE
06-02-2003	BA-AG	Base Course - Aggregate	\$0.00	6.00	False	6" P-209 CABC
06-01-2003	SG-ST	Subgrade - Stabilized	\$0.00	8.00	False	8" P-155 FLY ASH TREATED SUBGRADE

# Branch - Section ID: A01AL - 003

 LCD: 6/1/2003
 Length (ft):
 162.00

 Use: APRON
 Width (ft):
 60.00

 Rank: P
 True Area (sf):
 9,748.00

Surface: AC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
06-01-2016	PA-AS	Patching - AC Shallow	\$0.00	0.00	False	FIELD ESTIMATE
06-01-2003	NC-IN	New Construction - Initial	\$0.00	0.00	True	-

# Branch - Section ID: R13AL - 001

 LCD: 7/1/2015
 Length (ft):
 2,500.00

 Use: RUNWAY
 Width (ft):
 50.00

 Rank: P
 True Area (sf):
 129,008.00

Surface: AAC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
06-01-2022	CS-AC	Crack Sealing - AC	\$0.00	0.00	False	field estimate
07-01-2015	OL-AS	Overlay - AC Structural	\$0.00	3.00	True	3' P401 OVERLAY
09-18-2008	CS-AC	Crack Sealing - AC	\$37,938.00	0.00	False	Total Project Cost: \$77,425
06-01-1981	OL-AC	Overlay - AC	\$0.00	4.00	True	4" P401 AC OVERLAY
06-04-1966	NC-AC	New Construction - AC	\$0.00	2.00	True	2" P401 AC
06-03-1966	BA-AG	Base Course - Aggregate	\$0.00	6.00	False	6" P209 CABC
06-02-1966	SB-AG	Subbase - Aggregate	\$0.00	4.00	False	4" P154 SUBBASE
06-01-1966	SG-CO	Subgrade - Compacted	\$0.00	0.00	False	P152

Pavement Database: IA 2024 Generate Date: 6/30/2025

Network ID: 4C8

Branch - Section ID: R13AL - 002

 LCD: 5/1/1981
 Length (ft):
 81.00

 Use: RUNWAY
 Width (ft):
 56.25

 Rank: P
 True Area (sf):
 4,696.00

Surface: AAC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
06-01-2022	CS-AC	Crack Sealing - AC	\$0.00	0.00	False	field estimate
09-18-2008	CS-AC	Crack Sealing - AC	\$1,549.00	0.00	False	Total Project Cost: \$77,425
05-01-1981	OL-AC	Overlay - AC	\$0.00	0.00	True	EST
06-04-1966	NC-AC	New Construction - AC	\$0.00	2.00	True	2" AC
06-03-1966	BA-AG	Base Course - Aggregate	\$0.00	6.00	False	6" P209 CABC
06-02-1966	SB-AG	Subbase - Aggregate	\$0.00	4.00	False	4" P154 SUBBASE
06-01-1966	SG-CO	Subgrade - Compacted	\$0.00	0.00	False	P152

Branch - Section ID: R13AL - 003

 LCD: 1/1/1998
 Length (ft):
 900.00

 Use: RUNWAY
 Width (ft):
 60.00

 Rank: P
 True Area (sf):
 55,477.00

Surface: AC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
06-01-2022	JS-SI	Joint Seal - Silicon	\$0.00	0.00	False	field estimate
09-18-2008	CS-AC	Crack Sealing - AC	\$17,808.00	0.00	False	Total Project Cost: \$77,425
01-01-1998	NC-IN	New Construction - Initial	\$0.00	0.00	True	-

Branch - Section ID: R13AL - 004

 LCD: 7/1/2015
 Length (ft):
 2,500.00

 Use: RUNWAY
 Width (ft):
 10.00

 Rank: P
 True Area (sf):
 25,000.00

Surface: AAC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
06-01-2022	CS-AC	Crack Sealing - AC	\$0.00	0.00	False	field estimate
07-01-2015	OL-AS	Overlay - AC Structural	\$0.00	3.00	True	3" P-401 AC OVERLAY (ASSUMED MAT.)
09-18-2008	CS-AC	Crack Sealing - AC	\$6,968.00	0.00	False	Total Project Cost: \$77,425
01-01-1998	NC-AC	New Construction - AC	\$0.00	0.00	True	-

Branch - Section ID: R13AL - 005

 LCD: 6/1/1981
 Length (ft):
 125.00

 Use: RUNWAY
 Width (ft):
 25.00

 Rank: P
 True Area (sf):
 3,100.00

Surface: AAC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
09-18-2008	CS-AC	Crack Sealing - AC	\$37,938.00	0.00	False	Total Project Cost: \$77,425
06-01-1981	OL-AC	Overlay - AC	\$0.00	4.00	True	-
06-04-1966	NC-AC	New Construction - AC	\$0.00	2.00	True	2" AC
06-03-1966	BA-AG	Base Course - Aggregate	\$0.00	6.00	False	6" P209 CABC
06-02-1966	SB-AG	Subbase - Aggregate	\$0.00	4.00	False	4" P154 SUBBASE
06-01-1966	SG-CO	Subgrade - Compacted	\$0.00	0.00	False	P152

Pavement Database: IA 2024 Generate Date: 6/30/2025

Network ID: 4C8

Branch - Section ID: T01AL - 001

 LCD: 6/1/2003
 Length (ft):
 145.00

 Use: TAXIWAY
 Width (ft):
 30.00

 Rank: P
 True Area (sf):
 5,680.00

Surface: AAC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
06-01-2022	CS-AC	Crack Sealing - AC	\$0.00	0.00	False	field estimate
09-18-2008	CS-AC	Crack Sealing - AC	\$2,323.00	0.00	False	Total Project Cost: \$77,425
06-01-2003	OL-AT	Overlay - AC Thin	\$0.00	0.00	True	-
06-01-1981	OL-AC	Overlay - AC	\$0.00	0.00	True	-
06-04-1966	NC-AC	New Construction - AC	\$0.00	2.00	True	2" AC
06-03-1966	BA-AG	Base Course - Aggregate	\$0.00	6.00	False	6" P209 CABC
06-02-1966	SB-AG	Subbase - Aggregate	\$0.00	4.00	False	4" P154 SUBBASE
06-01-1966	SG-CO	Subgrade - Compacted	\$0.00	0.00	False	P152

Branch - Section ID: T02AL - 001

 LCD: 6/1/2010
 Length (ft):
 160.00

 Use: TAXIWAY
 Width (ft):
 35.00

 Rank: P
 True Area (sf):
 5,898.00

Surface: AC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
06-01-2010	NC-IN	New Construction - Initial	\$0.00	2.00	True	2" P-401
05-31-2010	BA-BI	Base Course - Bituminous	\$0.00	4.00	False	4" P-401
05-30-2010	BA-AG	Base Course - Aggregate	\$0.00	6.00	False	6" P-209
05-29-2010	SG-CO	Subgrade - Compacted	\$0.00	6.00	False	6" P-152

Branch - Section ID: T03AL - 001

 LCD: 6/1/2010
 Length (ft):
 167.00

 Use: TAXIWAY
 Width (ft):
 30.00

 Rank: P
 True Area (sf):
 5,148.00

Surface: AC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
06-01-2022	CS-AC	Crack Sealing - AC	\$0.00	0.00	False	field estimate
06-01-2010	NC-IN	New Construction - Initial	\$0.00	2.00	True	2" P-401
05-31-2010	BA-BI	Base Course - Bituminous	\$0.00	4.00	False	4" P-401
05-30-2010	SG-CO	Subgrade - Compacted	\$0.00	6.00	False	6" P-152
05-29-2010	SG-ST	Subgrade - Stabilized	\$0.00	8.00	False	8" P-155

Branch - Section ID: TH01AL - 001

 LCD: 6/4/2003
 Length (ft):
 229.00

 Use: T-HANGAR
 Width (ft):
 27.00

 Rank: P
 True Area (sf):
 6,185.00

Surface: AC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
09-18-2008	CS-AC	Crack Sealing - AC	\$3,871.00	0.00	False	Total Project Cost: \$77,425
06-04-2003	NC-AC	New Construction - AC	\$0.00	2.00	True	4" P-401 AC SURFACE
06-03-2003	BA-BI	Base Course - Bituminous	\$0.00	2.00	False	2" P-401 AC BASE
06-02-2003	BA-AG	Base Course - Aggregate	\$0.00	6.00	False	6" P-209 CABC
06-01-2003	SG-ST	Subgrade - Stabilized	\$0.00	8.00	False	8" P-155 FLY ASH TREATED SUBGRADE

Pavement Database: IA 2024 Generate Date: 6/30/2025

Network ID: 4C8

Branch - Section ID: TH01AL - 002

 LCD: 1/1/2004
 Length (ft):
 167.00

 Use: T-HANGAR
 Width (ft):
 23.00

 Rank: P
 True Area (sf):
 3,845.00

Surface: AC

Work Date	Work Code	Work Description	Cost	Thickness (in)	Major MR	Comments
01-01-2004	NC-AC	New Construction - AC	\$0.00	0.00	True	EST. VIA GE

# **APPENDIX E**

# LOCALIZED PREVENTIVE MAINTENANCE POLICIES AND UNIT COST TABLES

Table E-1. Localized preventive maintenance policy, asphalt-surfaced pavements.

Distress Type	Severity Level	Maintenance Action		
Alligator Cracking	Low	Monitor		
Alligator Cracking	Medium	Asphalt Patch		
Alligator Cracking	High	Asphalt Patch		
Bleeding	N/A	Monitor		
Block Cracking	Low	Monitor		
Block Cracking	Medium	Crack Seal—Asphalt		
Block Cracking	High	Crack Seal—Asphalt		
Corrugation	Low	Monitor		
Corrugation	Medium	Asphalt Patch		
Corrugation	High	Asphalt Patch		
Depression	Low	Monitor		
Depression	Medium	Monitor		
Depression	High	Asphalt Patch		
Jet-Blast Erosion	N/A	Asphalt Patch		
Joint Reflection Cracking	Low	Monitor		
Joint Reflection Cracking	Medium	Crack Seal—Asphalt		
Joint Reflection Cracking	High	Crack Seal—Asphalt		
L&T Cracking	Low	Monitor		
L&T Cracking	Medium	Crack Seal—Asphalt		
L&T Cracking	High	Crack Seal—Asphalt		
Oil Spillage	N/A	Asphalt Patch		
Patching	Low	Monitor		
Patching	Medium	Asphalt Patch		
Patching	High	Asphalt Patch		
Polished Aggregate	N/A	Monitor		
Raveling	Low	Monitor		
Raveling	Medium	Asphalt Patch		
Raveling	High	Asphalt Patch		
Rutting	Low	Monitor		
Rutting	Medium	Monitor		
Rutting	High	Asphalt Patch		
Shoving	Low	Monitor		
Shoving	Medium	Asphalt Patch		
Shoving	High	Asphalt Patch		
Slippage Cracking	N/A	Asphalt Patch		
Swelling	Low	Monitor		
Swelling	Medium	Monitor		
Swelling	High	Asphalt Patch		
Weathering	Low	Monitor		
Weathering	Medium	Monitor		
Weathering	High	Asphalt Patch		

Table E-2. Localized preventive maintenance policy, PCC pavements.

Distress Type	Severity Level	<b>Maintenance</b> Action		
ASR	Low	Monitor		
ASR	Medium	Slab Replacement		
ASR	High	Slab Replacement		
Blowup	Low	Slab Replacement		
Blowup	Medium	Slab Replacement		
Blowup	High	Slab Replacement		
Corner Break	Low	Crack Seal—PCC		
Corner Break	Medium	Full Depth PCC Patch		
Corner Break	High	Full Depth PCC Patch		
Durability Cracking	Low	Monitor		
Durability Cracking	Medium	Full Depth Patch		
Durability Cracking	High	Slab Replacement		
Faulting	Low	Monitor		
Faulting	Medium	Grinding		
Faulting	High	Slab Replacement		
Joint Seal Damage	Low	Monitor		
Joint Seal Damage	Medium	Joint Seal		
Joint Seal Damage	High	Joint Seal		
LTD Cracking	Low	Monitor		
LTD Cracking	Medium	Crack Seal—PCC		
LTD Cracking	High	Slab Replacement		
Patching (Small and Large)	Low	Monitor		
Patching (Small and Large)	Medium	Full Depth PCC Patch		
Patching (Small and Large)	High	Full Depth PCC Patch		
Popouts	N/A	Monitor		
Pumping	N/A	Monitor		
Scaling	Low	Monitor		
Scaling	Medium	Partial Depth PCC Patch		
Scaling	High	Slab Replacement		
Shattered Slab	Low	Crack Seal—PCC		
Shattered Slab	Medium	Slab Replacement		
Shattered Slab	High	Slab Replacement		
Shrinkage Cracking	N/A	Monitor		
Spalling (Joint and Corner)	Low	Monitor		
Spalling (Joint and Corner)	Medium	Partial Depth PCC Patch		
Spalling (Joint and Corner)	High	Partial Depth PCC Patch		

Table E-3. 2025 unit costs for localized preventive maintenance actions.

Maintenance Action	Unit Cost		
Asphalt Patch—Asphalt-Surfaced Pavement	\$15.90/sf		
Crack Sealing—Asphalt-Surfaced Pavement	\$2.72/If		
Partial Depth PCC Patch—PCC Pavement	\$40.74/sf		
Full Depth PCC Patch—PCC Pavement	\$18.19/sf		
Crack Sealing—PCC Pavement	\$3.27/lf		
Joint Sealing—PCC Pavement	\$3.27/lf		
Grinding—PCC Pavement	\$0.39/sf		
Slab Replacement—PCC Pavement	\$18.19/sf		

Table Note: The unit cost estimates are based on broad statewide numbers and should be adjusted to reflect local costs.

Table E-4. 2025 unit costs (per square foot) based on pavement type and PCI ranges.

Pavement Type	PCI Range 0-40	PCI Range 40-50	PCI Range 50-60	PCI Range 60-70	PCI Range 70-80	PCI Range 80-90	PCI Range 90-100
Asphalt- surfaced	\$11.29	\$5.34	\$5.34	\$5.34	\$0.00	\$0.00	\$0.00
PCC	\$18.86	\$8.92	\$8.92	\$8.92	\$0.00	\$0.00	\$0.00

#### Table Notes:

- The unit cost estimates are based on broad statewide numbers and should be adjusted to reflect local costs.
- Pavement Type: Asphalt-surfaced = AC (asphalt cement concrete), AAC (asphalt overlay on AC), or APC (asphalt overlay on PCC); PCC = portland cement concrete

# **APPENDIX F**

# YEAR 2025 LOCALIZED PREVENTIVE MAINTENANCE DETAILS

Year 2025 Localized Preventive Maintenance Details

Table F-1. Year 2025 localized preventive maintenance details.

Branch	Section	Distress Type	Severity	Distress Quantity	Distress Unit	Maintenance Action	Unit Cost	2025 Estimated Cost
A01AL	02	L&T Cracking	Medium	170	Ft	Crack Sealing - AC	\$2.72	\$462
A01AL	02	Raveling	Medium	20	SqFt	Patching - AC Deep	\$15.90	\$318
R13AL	01	L&T Cracking	Medium	989	Ft	Crack Sealing - AC	\$2.72	\$2,690
R13AL	04	L&T Cracking	Medium	63	Ft	Crack Sealing - AC	\$2.72	\$170

#### Table Notes:

- 1. See Figure 3 for the location of the branch and section.
- 2. Distress types are defined by ASTM D5340. L&T cracking = longitudinal and transverse cracking; LTD cracking = longitudinal, transverse, and diagonal cracking; ASR = alkali-silica reaction.
- 3. The costs provided are of a general nature for the entire State and may require adjustments to reflect specific conditions at Albia Municipal Airport.



## PREPARED FOR

Iowa Department of Transportation Modal Transportation Bureau 800 Lincoln Way Ames, Iowa 50010 515-239-1691 https://iowadot.gov/modes-travel/aviation

AUGUST 2025