Checklist
Request for Federal Assistance
Airport Improvement Program (AIP)

Federal Fiscal Year 2008

Iowa Department of Transportation

Please attach the following documents with your application:

☑ Sponsor Identification Sheet for the Airport

☑ ACIP Data Sheet (one for **each** project)

☑ 5-year Capital Improvement Program (CIP)

☑ Long Range Needs Assessment

☑ Verification of an updated ALP (when applying for new construction of buildings or airfield expansion) **CONDITIONAL APPROVAL BY FAA OF MAJOR ALP UPDATE 4/23/2002**

☐ Verification of completed environmental processing in accordance with NEPA. **N/A**

☐ Verification of completed land acquisition or signed purchase agreement. **N/A**

☐ Verification of pavement maintenance program (when applying for pavement preservation or reconstruction) **N/A**

☑ If requesting Federal assistance for snow removal equipment, please include an inventory of the existing equipment and calculations based on Chapters 4 & 5 of the Airport Winter Safety and Operations, Advisory Circular (AC) 150/5200-30 and the Airport Snow and Ice Control Equipment, AC 150/5220-20 showing the minimum equipment needed, along with the ACIP Data Sheet. Please use the Snowplow Design software at: http://www.faa.gov/arp/ace/planning.cfm, and include a copy of the completed spreadsheet.

☐ If requesting Federal assistance for General Aviation (GA) apron expansion, please use the GA Apron Design software at: http://www.faa.gov/arp/ace/planning.cfm, and include a copy of the completed spreadsheet. **N/A**

☑ For Revenue-Producing Facilities (i.e., fueling facilities and hangars), please submit: 1) A statement that airside development needs are met or a financial plan to fund airside needs over the next 3 years, 2) A statement that runway approach surfaces are clear of obstructions, and 3) Justification for the project. **N/A**

Iowa DOT use only		
Airport Role:_____ Population:_____ Based Aircraft: _____		
Runway Length:_____ ALP Date:_____ Operations: _____		

Please mail application and support documents to:
Office of Aviation, Iowa DOT, 800 Lincoln Way, Ames, Iowa 50010
ATTN: Kay Thede 515-239-1048 kay.thede@dot.iowa.gov

Sponsor Identification
Federal Airport Improvement
Program (AIP) Pre-application

Federal Fiscal Year 2008

Airport Name: ___Muscatine Municipal Airport___

Airport Sponsor Name: ___City of Muscatine, Iowa___

Contact Person: ___Steve Boka___ Title: ___Director of Planning, Zoning, & Building Safety___

Complete Mailing Address: ___Muscatine City Hall, 215 Sycamore Street___

___Muscatine___ ___Iowa___ ___52761-3899___ Daytime Phone: ___(563) 262-4141___
City   State   Postal Code

Email Address: ___sboka@ci.muscatine.ia.us___ Fax Number: ___(563) 262-4142___

U.S. Congressional District Number: ___2___

ECHO Control Number: ___69AA3015___

Tax Identification Number: ___42-6005008___

Dun and Bradstreet Number (DUNS): ___08-029-2048___

Please mail application and support documents to:
Office of Aviation, Iowa DOT, 800 Lincoln Way, Ames, Iowa 50010
ATTN: Kay Thede 515-239-1048 kay.thede@dot.iowa.gov *ianvings.com*

REQUEST FOR FEDERAL ASSISTANCE
FEDERAL AVIATION ADMINISTRATION
CENTRAL REGION \ AIRPORTS DIVISION

1. **AIRPORT CAPITAL IMPROVEMENT PLAN DATA SHEET (ACIP DATA SHEET)**

_____ An ACIP Data Sheet (see next page) must be submitted for each work item listed on the sponsor's ACIP for the current and next fiscal year - Include the name of the airport, the local priority of the requested work and the work item description. Contact the State Airport Planner responsible for your state regarding which fiscal years they are working on.

> **SKETCH** - color-coded sketch which depicts and identifies the scope of the proposed project.

> **JUSTIFICATION** - the justification should be brief and describe the need, objectives, method of accomplishment, and the benefit expected to be obtained from the assistance.

> **COST ESTIMATE** - the total cost estimate (including, engineering, administrative, legal, and appraisal costs, etc.) must show unit costs, aggregate in square yards (S.Y.), concrete paving in square yards (S.Y.) and asphaltic paving in tons. Separate the costs for land acquired in fee and land acquired in easement. NOTE: cost estimates cannot include an amount for contingencies. Attach additional sheets if necessary.

Satisfying environmental requirements and a current FAA-approved Airport Layout Plan (ALP) are prerequisite for work reflected in the current year and next year program.

If required, evidence of State and Regional Clearinghouse coordination should be provided with the ACIP Data Sheet. If requesting Federal assistance for snow removal equipment, please include an inventory of the existing equipment and calculations based on Chapters 4 & 5 of the Airport Winter Safety and Operations, Advisory Circular (AC) 150/5200-30 and the Airport Snow and Ice Control Equipment, AC 150/5220-20 showing the minimum equipment needed, along with the ACIP Data Sheet.

2. **SPONSOR IDENTIFICATION, CHECKLIST, FIVE-YEAR CIP, AND NPIAS NEEDS**

_____ Please complete the Sponsor Identification Form, Checklist, Five-year CIP, and NPIAS Needs that are also enclosed.
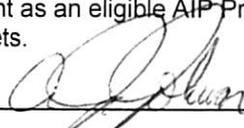
ACIP DATA SHEET

AIRPORT	Muscatine Municipal Airport	LOCAL PRIORITY	1	UPDATED	
WORK ITEM	Snow Removal Equipment			Identify FY that you desire to construct	08

SKETCH:

JUSTIFICATION:

1. The airport currently owns one piece of snow removal equipment, which is a 1991 Ford L8000 Diesel Truck with a 12' Coates plow. This existing worn out street department equipment is not ideal for airport snow removal.
2. AC 150/5220 - 20 indicates that the Muscatine Airport is eligible for one snow blower supported by two displacement plows of equal capacity, along with one sweeper and one hopper spreader.
3. The Federal AIP Funding brochure lists snow removal equipment as an eligible AIP Project.
4. See attached snow removal equipment sizing guide spreadsheets.

SPONSOR SIGNATURE: _____ DATE: 4/27/07

PRINTED NAME: A. J. Johnson   TITLE: City Administrator

COST ESTIMATE:

New displacement plow with spreader	$210,500

FAA USE ONLY

PREAPP NUMBER	GRANT NUMBER	NPIAS CODE	WORK CODE	FAA PRIORITY	FEDERAL $

ACIP DATA SHEET

AIRPORT	Muscatine Municipal Airport	LOCAL PRIORITY	2	UPDATED	
WORK ITEM	Snow Removal Equipment Building for storage and maintenance of snow removal equipment	Identify FY that you desire to construct		09	

SKETCH:
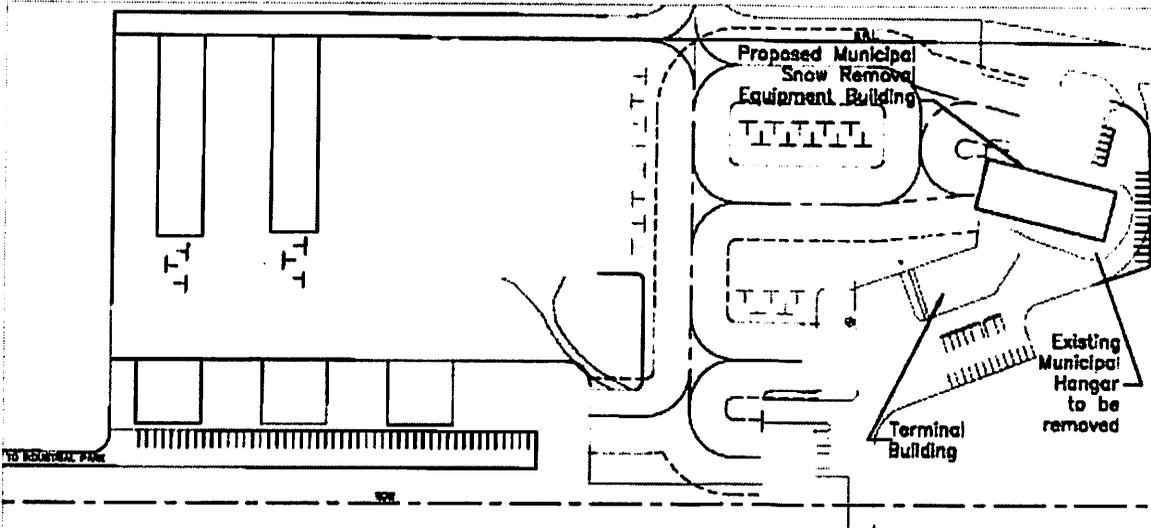
JUSTIFICATION:

1. A building will be needed for the storage of snow removal equipment. AC 150/5200 - 30A indicates that wherever possible, snow and ice control equipment should be housed in heated garages during the winter to prolong the life of the equipment and to enable rapid response to operational needs. It also indicates that onsite repair facilities should be available for the snow removal equipment.
2. The existing municipal hangar is in need of replacement, and is not laid out for snow removal equipment storage and maintenance and does not have enough room for these items.
3. The snow removal equipment building is shown on the approved ALP and discussed in the accompanying narrative report.
4. Federal AIP Funding brochure lists snow removal equipment storage as an eligible AIP Project.
5. In regards to obstruction removal, this building is not planned to be revenue producing (regardless, no known obstruction removal is necessary at this time in the vicinity of the airport).

SPONSOR SIGNATURE: _____ DATE: 4/27/07

PRINTED NAME: A. J. Johnson   TITLE: City Administrator

COST ESTIMATE:

1.	Building Demolition	$50,000
2.	Construction	$570,000
3.	Architect/Engineer	$80,000
	TOTAL	$700,000

FAA USE ONLY

PREAPP NUMBER	GRANT NUMBER	NPIAS CODE	WORK CODE	FAA PRIORITY	FEDERAL $

ACIP DATA SHEET

AIRPORT	**Muscatine Municipal Airport**	LOCAL PRIORITY	**3**	UPDATED	
WORK ITEM	**Update Pavement Maintenance Program**			Identify FY that you desire to construct	**09**

SKETCH:

NONE

JUSTIFICATION:

FAA requires sponsor to implement a pavement maintenance program to ensure the pavement is properly maintained at the airport; failure to have such a plan could impact future consideration for AIP Funds.

SPONSOR SIGNATURE: _____ DATE: _4/27/07_____

PRINTED NAME: _A. J. Johnson_____ TITLE: _City Administrator____

COST ESTIMATE:

Engineering $7,500

FAA USE ONLY

PREAPP NUMBER	GRANT NUMBER	NPIAS CODE	WORK CODE	FAA PRIORITY	FEDERAL $

Five-Year
Capital Improvement Program
(CIP)

Airport Name: __Muscatine Municipal Airport__   **Telephone:** __(319) 377-4629__

Jayne C. DeCoste, P.E.
Program Prepared By: __Anderson-Bogert Engineers & Surveyors, Inc.__

Date Prepared: __11/27/06 (revised 4/26/07)__   **Date Approved:** _____

Project Description	Funding Source	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Snow Removal Equipment	Federal State Local Total	$ 199,975 $ $ 10,525 $ 210,500				
Snow Removal Equipment Storage Building	Federal State Local Total		$ 665,000 $ $ 35,000 $ 700,000			
Update Pavement Maintenance Program (Engineering)	Federal State Local Total		$ 7,125 $ $ 375 $ 7,500			
Pavement Maintenance	Federal State Local Total			$ 85,500 $ $ 4,500 $ 90,000		
Tee Hangar Improvements	Federal State Local Total			$ 570,000 $ $ 30,000 $ 600,000		
Upgrade MIRL to HIRL Runway 6/24 for Full ILS	Federal State Local Total				$ 76,000 $ $ 4,000 $ 80,000	
Snow Removal Equipment	Federal State Local Total				$ 123,500 $ $ 6,500 $ 130,000	
Rehabilitation to Existing Apron / Apron Expansion	Federal State Local Total					$ 1,372,750 $ $ 72,250 $ 1,445,000

Long Range Needs Assessment

FFY 2013 – FFY 2017

Airport Name: _____ Muscatine Municipal Airport _____

Description of Project (include estimated FAA fiscal year)	Funding Source	Total Estimated Cost
Rehabilitation to Runway 6/24 and Parallel Taxiway Fiscal Year 2013	Federal: State: Local:	$ 522,500 $ $ 27,500
Pavement Maintenance Fiscal Year 2014	Federal: State: Local:	$ 95,000 $ $ 5,000
Snow Removal Equipment Fiscal Year 2016	Federal: State: Local:	$ 400,000 $ $ 20,000
Pavement Maintenance Fiscal Year 2017	Federal: State: Local:	$ 95,000 $ $ 5,000
	Federal: State: Local:	$ $ $
	Federal: State: Local:	$ $ $

Snow Removal Equipment Sizing Guide

1. Clearance Priorties

Enter Length and width values

	length (ft)	width (ft)	Area in sf
Primary Runway	5,500	100	550,000
Primary Taxiways	7,100	35	248,500
High speed turnoffs			0
Primary Ramp	470	300	141,000
ARFF Access	0	0	0
NAVAID (Instrument RW)	0	0	0
Other			0

Total Area $A =$ [939,500] sq ft

2. Clearance times (Hrs)

- Select Commercial or General Aviation
- Enter Total Annual Operations

  ◌ Commercial Service   Total Annual Operations [15,000]

  ⦿ General Aviation $T =$ [3.0] Hr

3. Rotary Plow Displacement

- Enter design snow depth, plow efficiency and snow density

  $d =$ Snow Depth (in) [1]

  $rp =$ Rotary Plow Efficiency (%) [70]

  $p =$ Snow Density (lbs/cu ft) [25]

4. Minimum Rotary Plow Snow Displacement (tons/hr)   [466] T/hr

(See Figure 2-6 AC 150/5220-20 for GVW & HP rating @ carrier vehicles)
(Check heaviest density snow expected for airport)

5. Displacement Plow Blade Length

- Enter values for Rotary plow Capacity, Operating Speed
  Displacement Plow Efficiency and Cutting Angle

  $Q =$ Rotary Plow Capacity (tons/hr) [1,000]

  $V =$ Operating Speed (mph) [15]

  $Eb =$ Displacement Plow Efficiency (%) [75]

  $ab =$ Displacement Plow Cutting Angle (degrees) [30]

6. Effective blade length   [11.3] ft

7. Actual blade Length   [13.1] ft

(See Figure 3-2 AC 150/5200-20 for HP rating @ carrier vehicle)

* Shaded areas automatically calculated.

Airport Name	Muscatine Municipal
Location	Muscatine Iowa
Average Annual Snow Fall	30.7
Type of Airport	General Aviation ▼
Annual Operations	10,000-40,000 ▼

Time allowed for removal per AC 150/5200-30a

3 hours.

Critical Snow Removal Areas:

Primary Runway (usually one)

5,500	length (ft) x	100	width (ft)	= 550,000 sq. ft.
	length (ft) x		width (ft)	= 0 sq. ft.

Parallel taxiway and one or two principle connecting taxiways.

7,100	length (ft) x	35	width (ft)	= 248,500 sq. ft.
	length (ft) x		width (ft)	= 0 sq. ft.
	length (ft) x		width (ft)	= 0 sq. ft.
	length (ft) x		width (ft)	= 0 sq. ft.

Terminal, Cargo, and General Aviation Aprons

Critical apron area assumed as 1/2 of the apron.

50 % Req' x	470	length (ft) x	300 width (ft)	= 70,500 sq. ft.
50 % Req' x		length (ft) x	width (ft)	= 0 sq. ft.
50 % Req' x		length (ft) x	width (ft)	= 0 sq. ft.
50 % Req' x		length (ft) x	width (ft)	= 0 sq. ft.
50 % Req' x		length (ft) x	width (ft)	= 0 sq. ft.

Other critical areas (ie. emergency or ARFF access roads)

length (ft) x		width (ft)	= 0 sq. ft.
length (ft) x		width (ft)	= 0 sq. ft.
length (ft) x		width (ft)	= 0 sq. ft.

Total Area = 869,000 sq. ft.

Tons of Snow (using 1 in. of snow at 25 .lbs/cu. ft.)   905 tons

Minimum snow removal rate (70% efficiency)   430 tons/hr

Eligible Items	Maximum Quantity	Assumptions Made:
Snow Blower	1	Class 1 (up to 600 tons/hr) ▼
Plow	2	2 times the # of snow blowers (plows should have equal capacity as blower).
Sweeper	1	1 sweeper per 750,000 sq. ft. (rounded up)
Hopper Spreader	1	1 Hopper Spreader per 750,000 sq. ft.
Front End Loader	0	Front End Loader per 500k sq. ft. of critical apron space.

Note: If an airport requests more than the listed quantities of snow removal equipment, special justification must be submitted.

This program, written for the Dakota's, assumes at lease 15" annual snow fall.

Class 1 (up to 600 tons/hr)　　　　General Aviat <6,000　　General Aviation　　　　　　4/26/2007
Class 2 (up to 1500 tons/hr)　　　Commercial ≤6,000-10,000
Class 3 (up to 2500 tons/hr)　　　　　　　　10,000-40,000
Class 4 (up to 3000 tons/hr)　　　　　　　　>40,000
Class 5 (up to 4000 tons/hr)　　　　　　　　　　10,000
　　　　　　　　　　　　　　　　　　　　　　　70,500
　　　　　　　　　　　　Front End Loader Area
　　　　　　　　　　　　　　70,500
　　　　　　　　　　　　　　　　0
　　　　　　　　　　　　　　　　0
　　　　　　　　　　　　　　　　0
　　　　　　　　　　　　　　　　0
　　　　　　　　Total Area　　　70500