

# Ten-Year Airport Capital Improvement Program (ACIP) 2012-2022



## **Evert Municipal Airport**

Evart, MI

**November 10, 2011**

**Michigan State Block Grant Program**

### **Submitted by:**

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PROBABLE PROJECT COST

EVART MUNICIPAL AIRPORT  
EVART, MI  
SNOW REMOVAL EQUIPMENT  
BASED ON FY 2012 DOLLARS

H18.MKT

07/26/11

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1		SNOW REMOVAL EQUIPMENT	1	LS	\$150,000.00	\$150,000.00
		EQUIPMENT COST				\$150,000.00
		ENGINEERING & ADMINISTRATION				\$10,000.00
TOTAL PROJECT COST						\$160,000.00

JUSTIFICATION

Currently the City of Evert uses the snow removal equipment that is used on the local streets for airport snow removal. This equipment is old and requires an extensive amount of maintenance. The airport would benefit from having its own snow removal equipment to keep the pavement surfaces clear in the winter.

## Snow Removal Equipment Calculations

### Michigan State Block Grant Program - Non-Commercial Service

*\*Except for the Notes sections, the darkly shaded areas will automatically calculate*

Airport Name:   
 Annual Aircraft Operations:   
 (MDOT AERO will provide upon request, if needed.)

Associated City:   
 Average Annual Snowfall (inches):   
 Source:

Current MASP Classification (i.e. CII, BII, etc.):  (refer to Table 36)  
 Clearance Time per AC 150-5200-30B (refer to Table 1-2):  hours

#### Priority 1 (Critical) Snow Removal Areas

##### Primary Runway

Designation:	6-24	<input type="text" value="3800"/>	length (ft) x	<input type="text" value="75"/>	width (ft)	=	<input type="text" value="285,000"/>	sq. ft.
Designation:		<input type="text"/>	length (ft) x	<input type="text"/>	width (ft)	=	<input type="text" value="0"/>	sq. ft.
Designation:		<input type="text"/>	length (ft) x	<input type="text"/>	width (ft)	=	<input type="text" value="0"/>	sq. ft.
<b>TOTAL</b>							<b><input type="text" value="285,000"/></b>	

Notes:

##### Parallel Taxiway and one or two principal connecting taxiways

Designation:	Txy A	<input type="text" value="1980"/>	length (ft) x	<input type="text" value="35"/>	width (ft)	=	<input type="text" value="69,300"/>	sq. ft.
Designation:	Txy C	<input type="text" value="380"/>	length (ft) x	<input type="text" value="35"/>	width (ft)	=	<input type="text" value="13,300"/>	sq. ft.
Designation:	Txy B	<input type="text" value="240"/>	length (ft) x	<input type="text" value="35"/>	width (ft)	=	<input type="text" value="8,400"/>	sq. ft.
Designation:		<input type="text"/>	length (ft) x	<input type="text"/>	width (ft)	=	<input type="text" value="0"/>	sq. ft.
<b>TOTAL</b>							<b><input type="text" value="91,000"/></b>	

Notes:

##### Terminal, Cargo, and/or General Aviation Aprons (Critical apron area assumed as 2/3 of the apron)

<input type="text" value="67"/> % Req' x	<input type="text" value="130"/>	length (ft) x	<input type="text" value="120"/>	width (ft)	=	<input type="text" value="10,452"/>	sq. ft.	
<input type="text" value="67"/> % Req' x	<input type="text" value="310"/>	length (ft) x	<input type="text" value="155"/>	width (ft)	=	<input type="text" value="32,194"/>	sq. ft.	
<input type="text" value="67"/> % Req' x	<input type="text"/>	length (ft) x	<input type="text"/>	width (ft)	=	<input type="text" value="0"/>	sq. ft.	
<input type="text" value="67"/> % Req' x	<input type="text"/>	length (ft) x	<input type="text"/>	width (ft)	=	<input type="text" value="0"/>	sq. ft.	
<b>TOTAL</b>							<b><input type="text" value="42,646"/></b>	

*If more of apron(s) is considered critical, written justification must be provided.*

Notes:

##### Other Critical Areas (i.e. emergency service roads, ARFF access roads, NAVAIDs, & other areas deemed essential)

Describe:	<input type="text"/>	length (ft) x	<input type="text"/>	width (ft)	=	<input type="text" value="0"/>	sq. ft.	
Describe:	<input type="text"/>	length (ft) x	<input type="text"/>	width (ft)	=	<input type="text" value="0"/>	sq. ft.	
Describe:	<input type="text"/>	length (ft) x	<input type="text"/>	width (ft)	=	<input type="text" value="0"/>	sq. ft.	
Describe:	<input type="text"/>	length (ft) x	<input type="text"/>	width (ft)	=	<input type="text" value="0"/>	sq. ft.	
<b>TOTAL</b>							<b><input type="text" value="0"/></b>	

Notes:

Total Priority 1 (Critical) Area	<input type="text" value="418,646"/>	sq. ft.
Snow Density (using 1" of snow at 25 lbs/cu ft.)	<input type="text" value="436"/>	tons
Minimum snow removal rate (70% efficiency)	<input type="text" value="104"/>	tons/hr

#### Snow Removal Equipment Determination

AC 150-5220-20	Eligible SRE Items	Quantity	Requirements and Assumptions
Rotary Plows (Chapter 2)	Snow Blower	1	Class I up to 600 tons/hr <i>(Refer to Table 2-1 - Rotary Plow Capacities)</i> <i>The largest class is automatically populated based on tons/hr</i>
Displacement Plows (Chapter 6)	Plow	2	2 x the # of eligible snow blowers (equal capacity to blower) If annual snowfall > 30 " or > 10,000 annual operations and at least 15" of snow.
Snowsweepers (Chapter 8)	Sweeper	enter manually	Considered Supporting Equipment as needed to complete snow removal operations in accordance with FAA AC 150/5220-20
Carrier Vehicles (Chapter 5)	Front End Loader/Tractor	enter manually	Considered Supporting Equipment as needed to complete snow removal operations in accordance with FAA AC 150/5220-20

Above table based on AC 150/5220-20, Chapter 6, Paragraph 38 (b & c) for Minimum Equipment Requirements.

*If an airport requests more than the eligible quantities of snow removal equipment, additional justification must be submitted for determination of eligibility.*

Sponsor Remarks:

MDOT will review sheet and make final determination of eligible SRE.

MDOT Use ONLY



PROBABLE PROJECT COST

EVART MUNICIPAL AIRPORT H18.MKT  
EVART, MI  
SNOW REMOVAL EQUIPMENT BUILDING 07/26/11  
BASED ON FY 2012 DOLLARS

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1		SNOW REMOVAL EQUIPMENT BUILDING	1	LS	\$170,000.00	\$170,000.00
		CONSTRUCTION COST				\$170,000.00
		ENGINEERING & ADMINISTRATION (20%+/-)				\$34,000.00
TOTAL PROJECT COST						\$204,000.00

JUSTIFICATION

An SRE building is important to house new snow removal equipment to keep it out of the harsh weather, and give airport personnel a place to repair and maintain the equipment. This will keep the equipment running at a higher performance for a longer period of time.



PROBABLE PROJECT COST

EVART MUNICIPAL AIRPORT  
 EVART, MI  
 PAVEMENT REPAIRS AND LIGHTING IMPROVEMENTS  
 BASED ON FY 2012 DOLLARS

H18.MKT.CRM  
 07/26/11

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	P-152	SUBGRADE UNDERCUTTING	50	CY	\$20.00	\$1,000.00
2	P-208	AGGREGATE BASE COURSE, 50% CRUSHED, 1" MAXIMUM, COMPACTED IN PLACE	50	CY	\$40.00	\$2,000.00
3	P-605	MISC. JOINT AND CRACK SEALING, AS SPECIFIED	12,000	LF	\$1.50	\$18,000.00
4	P-620	REMARKING AIRPORT PAVEMENT, SOLID, WHITE OR YELLOW, WITH REFLECTIVE BEADS	44,200	SF	\$0.50	\$22,100.00
5	N/A	MISC. 2' PAVEMENT REPAIR	4,250	LF	\$15.00	\$63,750.00
6	N/A	MISC. 4' PAVEMENT REPAIR	850	LF	\$25.00	\$21,250.00
7	N/A	MISC. 6' PAVEMENT REPAIR	350	LF	\$45.00	\$15,750.00
8	L-109	ELECTRIC HANDHOLE	2	EACH	\$800.00	\$1,600.00
9	L125	REMOVE AIRFIELD GUIDANCE SIGN	2	EACH	\$300.00	\$600.00
10	L125	AIRFIELD GUIDANCE SIGN	2	EACH	\$4,000.00	\$8,000.00
11	M-100	MAINTENANCE AND PROTECTION OF TRAFFIC	1	LS	\$20,000.00	\$20,000.00
12	M-200	MOBILIZATION (4% MAXIMUM)	1	LS	\$6,950.00	\$6,950.00
CONSTRUCTION COST						\$181,000.00
DESIGN ENGINEERING & ADMINISTRATION (10%+/-)						\$18,000.00
CONSTRUCTION INSPECTION & ADMINISTRATION (12%+/-)						\$22,000.00
<b>TOTAL PROJECT COST</b>						<b>\$221,000.00</b>

JUSTIFICATION

Runway 6-24 at Evert Municipal Airport had a Pavement Condition Index (PCI) of 91 as of 2007. On average, the PCI rating will decrease by 2-3 points per year, which puts the PCI for Runway 6-24 at about 70-77 by 2014. In 2007, the apron, taxiways and taxilanes all had a PCI above 96. Minor repairs will be necessary by 2014. The parking lot had a PCI of 52 in 2007 and is not included in this estimate since the pavement condition is beyond the rehabilitation stage and would require reconstruction.

A majority of the airfield signage and lighting equipment is approximately 10-15 years old. Airfield lighting circuits have required a substantial amount of maintenance and repair over the years. In 2003, additional taxiway entrance lights and one airfield guidance sign were added to the existing runway circuit. Replacement parts for internal sign components have been costly and difficult to find. This project is not expected to cause any significant environmental impacts and should fall under a categorical exclusion.



PROBABLE PROJECT COST

EVART MUNICIPAL AIRPORT  
EVART, MI  
FUEL FACILITIES  
BASED ON FY 2012 DOLLARS

H18.MKT

07/26/11

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1		FUEL FACILITIES	1	LS	\$150,000.00	\$150,000.00
		CONSTRUCTION COST				\$150,000.00
		ENGINEERING & ADMINISTRATION (20%+/-)				\$30,000.00
<hr/>						
TOTAL PROJECT COST						\$180,000.00

JUSTIFICATION

Evert Municipal Airport does not currently offer fueling facilities on the airfield. This project will attract users and increase operations at the airport.



PROBABLE PROJECT COST

EVART MUNICIPAL AIRPORT  
EVART, MI  
WILDLIFE FENCING  
BASED ON FY 2012 DOLLARS

H18.MKT

07/26/11

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	F-162	10-FOOT CHAIN LINK FENCE	6,300	LF	\$30.00	\$189,000.00
2	M-100	SAFETY AND SECURITY	1	LS	\$3,500.00	\$3,500.00
3	M-200	MOBILIZATION (4% MAXIMUM)	1	LS	\$7,500.00	\$7,500.00
CONSTRUCTION COST						\$200,000.00
ENGINEERING & ADMINISTRATION (20%+/-)						\$40,000.00
<b>TOTAL PROJECT COST</b>						<b>\$240,000.00</b>

JUSTIFICATION

The runway is currently in close proximity to wetlands and areas where there is a high concentration of deer. The wildlife fence will keep the deer from entering the airport property and prevent accidents with aircraft.

It is anticipated that some level of environmental assessment will be needed for this project because of the location of the fence. This will be determined well before design starts for this project.



PROBABLE PROJECT COST

EVART MUNICIPAL AIRPORT  
EVART, MI  
10 UNIT T-HANGAR  
BASED ON FY 2012 DOLLARS

H18.MKT

07/26/11

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1		10 UNIT T-HANGAR	1	LS	\$575,000.00	\$575,000.00
		CONSTRUCTION COST				\$575,000.00
		ENGINEERING & ADMINISTRATION (15%+/-)				\$86,250.00
TOTAL PROJECT COST						\$661,250.00

JUSTIFICATION

Evert Municipal Airport currently has no based aircraft, and there are no hangars for rent on the airfield. In order to attract users and increase operations, t-hangars are needed.



PROBABLE PROJECT COST

EVART MUNICIPAL AIRPORT  
 EVART, MI  
 RUNWAY LIGHTING IMPROVEMENTS  
 BASED ON FY 2012 DOLLARS

H18.MKT.CRM

07/26/11

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	L-108	CABLE TRENCH, 18" AND LESS WIDTH, 18" DEPTH	22,000	LF	\$2.50	\$55,000.00
2	L-108	UNDERGROUND CABLE, 1/C, #8, 5000V, L824, TYPE C, IN TRENCH OR DUCT	12,800	LF	\$1.50	\$19,200.00
3	L-108	MISC. BARE COUNTERPOISE WIRE, #6, SOLID, IN TRENCH OR DUCT	12,000	LF	\$1.00	\$12,000.00
4	L-109	FURNISH & INSTALL SPECIFIED ELECTRICAL VAULT EQUIPMENT	1	LS	\$17,500.00	\$17,500.00
5	L-109	ELECTRIC HANDHOLE	3	EACH	\$800.00	\$2,400.00
6	L-110	2" SCH. 40 PVC CONDUIT, IN TURF	12,000	LF	\$2.00	\$24,000.00
7	L-125	MEDIUM INTENSITY EDGE LIGHT, L861, (MIRL/MITL), 30" HIGH, 6.6A, BASE MOUNT, COMPLETE EXCEPT LENS AND LAMP	56	EACH	\$800.00	\$44,800.00
8	L-125	LENS & LAMP FOR MITL, TYPE L861T, 360 BLUE COLOR	6	EACH	\$100.00	\$600.00
9	L-125	LENS & LAMP FOR MITL, TYPE L861, 360 CLEAR COLOR	38	EACH	\$100.00	\$3,800.00
10	L-125	LENS & LAMP FOR MITL, TYPE L861, 360 GREEN/RED COLOR	12	EACH	\$100.00	\$1,200.00
11	L-125	REMOVE EXISTING MEDIUM INTENSITY STAKE MOUNTED LIGHT	50	EACH	\$50.00	\$2,500.00
12	L-125	REMOVE EXISTING MEDIUM INTENSITY BASE MOUNTED LIGHT	8	EACH	\$150.00	\$1,200.00
13	L125	REMOVE AIRFIELD GUIDANCE SIGN	2	EACH	\$300.00	\$600.00
14	L125	AIRFIELD GUIDANCE SIGN	2	EACH	\$4,000.00	\$8,000.00
15	M-100	MAINTENANCE AND PROTECTION OF TRAFFIC	1	LS	\$15,000.00	\$15,000.00
16	M-200	MOBILIZATION (4% MAXIMUM)	1	LS	\$8,200.00	\$8,200.00
CONSTRUCTION COST						\$216,000.00
DESIGN ENGINEERING & ADMINISTRATION (10%+/-)						\$22,000.00
CONSTRUCTION INSPECTION & ADMINISTRATION (12%+/-)						\$26,000.00
<b>TOTAL PROJECT COST</b>						<b>\$264,000.00</b>

JUSTIFICATION

A majority of the airfield signage and lighting equipment is approximately 10-15 years old. Airfield lighting circuits have required a substantial amount of maintenance and repair over the years. In 2003, additional taxiway entrance lights and one airfield guidance sign were added to the existing runway circuit. Replacement part for internal sign components have been costly and difficult to find.



PROBABLE PROJECT COST

EVART MUNICIPAL AIRPORT  
 EVART, MI  
 RUNWAY 6 EXTENSION  
 BASED ON FY 2012 DOLLARS

H18.MKT

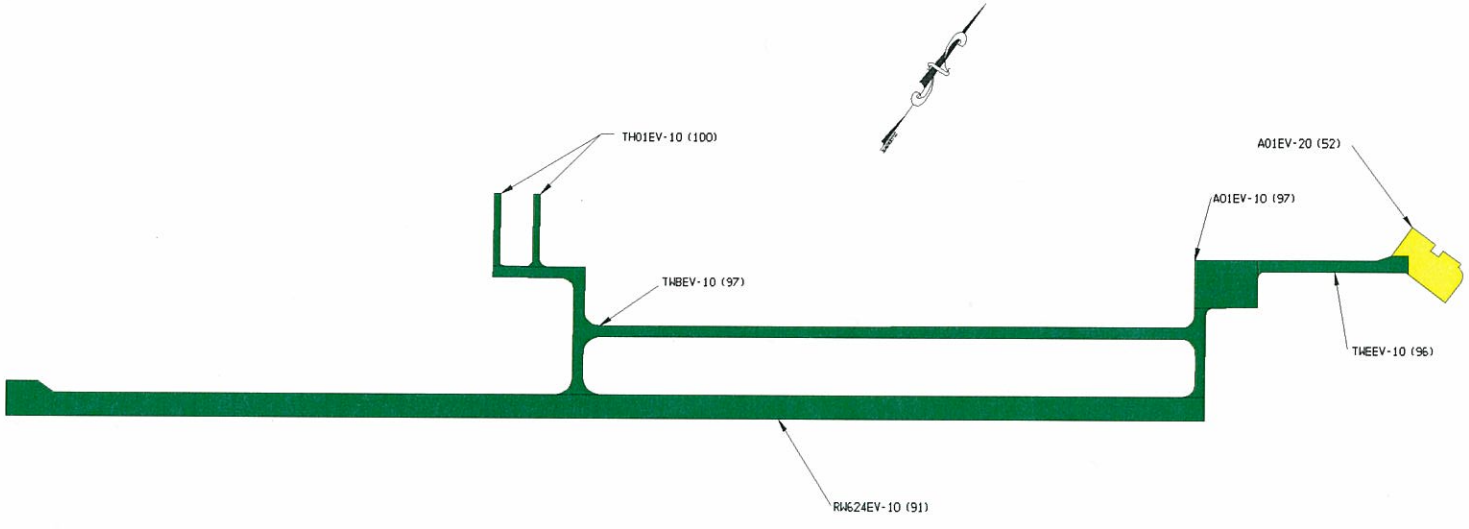
07/26/11

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	P-151	WETLAND CLEARING	58,000	SY	\$0.50	\$29,000.00
2	NA	WETLAND MITIGATION	8	ACRES	\$50,000.00	\$402,500.00
3	P-152	UNCLASSIFIED EXCAVATION	8,000	CY	\$8.00	\$64,000.00
4	P-152	SUITABLE OFF-SITE BORROW	30,000	CY	\$10.00	\$300,000.00
5	P-156	SOIL EROSION AND SEDIMENTATION CONTROL	1	LS	\$25,000.00	\$25,000.00
6	P-208	CRUSHED AGGREGATE BASE COURSE	6,300	CY	\$35.00	\$220,500.00
7	P-411	4" BITUMINOUS PAVEMENT	2,600	TON	\$75.00	\$195,000.00
8	P-603	BITUMINOUS TACK COAT	630	GAL	\$5.00	\$3,150.00
9	P-620	RUNWAY & TAXIWAY PAINTING	8,900	SF	\$1.00	\$8,900.00
10	P-620	PAINT REMOVAL	7,500	SF	\$1.00	\$7,500.00
11	D-701	DRAINAGE	1	LS	\$23,000.00	\$23,000.00
12	D-705	6-INCH UNDERDRAIN	3,450	LF	\$7.00	\$24,150.00
13	D-705	CLEANOUTS	8	EACH	\$600.00	\$4,800.00
14	D-710	STABILIZATION FABRIC	115,000	SF	\$0.20	\$23,000.00
15	T-906	TOPSOIL (4"), SEED AND MULCH	14,400	SY	\$3.00	\$43,200.00
16	L-108	NO. 8 AWG, 600V, 1/C AIRPORT LIGHTING CABLE	9,200	LF	\$2.00	\$18,400.00
17	L-108	COUNTERPOISE WIRE	6,200	LF	\$1.50	\$9,300.00
18	L-110	2-INCH DIA. PVC CONDUIT IN TRENCH	6,200	LF	\$10.00	\$62,000.00
19	L-115	ELECTRIC JUNCTION CAN	4	EACH	\$800.00	\$3,200.00
20	L-125	MEDIUM INTENSITY R/W LIGHTS, BASE MOUNTED	8	EACH	\$1,000.00	\$8,000.00
21	L-125	RELOCATION OF REILS	1	LS	\$6,000.00	\$6,000.00
22	L-125	RELOCATE PAPI SYSTEM	1	LS	\$11,500.00	\$11,500.00
23	M-100	MAINTENANCE AND PROTECTION OF TRAFFIC	1	LS	\$23,000.00	\$23,000.00
24	M-200	MOBILIZATION (4% MAXIMUM)	1	LS	\$60,900.00	\$60,900.00
CONSTRUCTION COST						\$1,576,000.00
ENGINEERING & ADMINISTRATION (20%+/-)						\$315,000.00
<b>TOTAL PROJECT COST</b>						<b>\$1,891,000.00</b>

JUSTIFICATION

Evart Municipal Airport is planning for the future, and would like to accommodate a pending industrial park tenant by providing the runway length needed for larger aircraft. It is understood that justification for the length, environmental assessment and ALP update will be needed before this project can begin.

# Evert Municipal



86-100

71-85

56-70

41-55

26-40

11-25

0-10

