

**MICHIGAN AIRPORT DEVELOPMENT
PROGRAM PACKAGE
MDOT Airports Division**

**Ten Year Airport Capital Improvement Plan
2012-2022**

Prepared for:

**Hastings City - Barry County Airport
Hastings, Michigan**

**August 2011
Final November 2011**

Contact:

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Prepared by:

Mead&Hunt

MICHIGAN STATE BLOCK GRANT PROGRAM
TEN-YEAR AIRPORT CAPITAL IMPROVEMENT PROGRAM (CIP) FY-2012* to FY-2022

*ACIP includes current development year (2012 already programmed - minor changes acceptable)

Airport Name: Hastings City/Barry County Airport	Airport Identifier: 9D9	Date prepared: 6/22/2011
Associated City: Hastings, Michigan		Prepared By: Mead & Hunt, Rodney Nettleton
Sponsor: City of Hastings and Barry County	NPIAS Airport Code: C	Sponsor email address & phone: marknoteboom@core.com, (616) 813-1811

ACIP due to MDOT AERO: no later than 8/3/2011

Development Year	Project Description	Shown on ALP*? (Yes or No)	ACIP Code**	NPIAS Priority Rating**	Federal Entitlements	Federal Apportionment	Federal Discretionary	State	Local	Total	Remarks/Item Justification - Provide as much detail as possible.
2012	EA for Runway 12/30 Extension-Short Form Design for Runway Extension Approach Survey	NA	CA RW EX	53	\$125,400	\$0	\$0	\$3,300	\$3,300	\$132,000	Environmental Assessment required prior to runway and parallel taxiway extension. Runway 12/30 length will be increased from 3,900 feet to 4,250 feet. Increased length allows access by aircraft that are presently not allowed to land at the airport because of runway length constraints. Design includes request for DONH from FAA for trees in the 7:1 transitional surface south of the runway on the south side of the river. (Design=\$32,000; EA-Short Form=\$40,000; Approach Survey=\$60,000)
2012	Carryover Funds										Carryover \$24,600, Cumulative \$29,715
2013	Easement for Runway 12/30 Extension	Yes	CA RW EX	53	\$150,000	\$0	\$0	\$3,947	\$3,947	\$157,895	Easement for new Runway 30 approach including consultant costs.
2013	Runway 12/30 Extension Construction Crack Sealing and Pavement Marking	Yes	CA RW EX	53	\$50,615	\$473,785	\$0	\$13,800	\$13,800	\$552,000	Construction of the runway and parallel taxiway. Crack sealing and pavement marking entire airport
2014	Carryover Funds										Carryover \$150,000
2015	Taxilane for Hangar Development	Yes	CA TW CO	57	\$190,000	\$0	\$0	\$5,000	\$5,000	\$200,000	CAT-EX, Construct taxilane for hangar development.
2015	Crack Sealing and Pavement Marking	No	RE RW IM	68	\$20,900	\$0	\$0	\$550	\$550	\$22,000	Crack sealing and pavement marking entire airport
2015	Carryover Funds										Carryover \$68,200
2016	Carryover Funds										Carryover \$150,000, Cumulative \$218,200
2017	Carryover Funds										Carryover \$150,000, Cumulative \$368,200.
2018	Northwest Apron and Taxistreet Rehabilitation - Design and Construction	No	RE TW IM	64	\$518,200	\$61,300	\$0	\$15,250	\$15,250	\$610,000	CAT-EX, The north taxistreets are shown in the 2007 Pavement Condition Index in the reconstruction area, PCI=21. The north apron is shown in the major rehabilitation area and has a PCI=53.
2018	Crack Sealing and Pavement Marking	No	RE RW IM	68	\$0	\$20,900	\$0	\$550	\$550	\$22,000	Crack sealing and pavement marking entire airport
2019	Carryover Funds										Carryover \$150,000, Cumulative \$150,000
2020	Design Twy E Extension	Yes	CA TW EX	49	\$40,850	\$0	\$0	\$1,075	\$1,075	\$43,000	CAT-EX, Completion of the parallel taxiway will increase safety. This project will also design the removal of approximately 2,900 feet of existing taxiway that will not be needed when the full parallel taxiway is completed.
2020	Carryover Funds										Carryover \$259,150
2021	Twy E Extension	Yes	CA TW EX	49	\$409,150	\$369,850	\$0	\$20,500	\$20,500	\$820,000	CAT-EX, Completion of the parallel taxiway will increase safety. This project will also complete the removal of approximately 2,900 feet of existing taxiway that will not be needed after the full parallel taxiway is completed. \$104,400 carried over from previous years.
2022	Construct SRE Storage Building	Yes	ST BD SN	38	\$150,000	\$0	\$0	\$3,947	\$3,947	\$157,895	CAT-EX, A storage facility is required to protect the investment that has been made in snow removal equipment.
2022	Crack Sealing and Pavement Marking	No	RE RW IM	68	\$0	\$20,900	\$0	\$550	\$550	\$22,000	Crack sealing and pavement marking entire airport

*Proposed airport development must be shown on current FAA-approved ALP prior to funding project.

**In accordance with FAA Order 5100.39A, Appendix 6 - Fields should be completed

ENGINEERING COST ESTIMATE

PROJECT: 350 LFT RUNWAY EXTENSION
 LOCATION: HASTINGS CITY/BARRY COUNTY AIRPORT
 CITY: HASTINGS, MI
 DATE: 6/22/2009, REV. 7/11/2011
 PREPARED BY: RGN

FINAL DESIGN
 PROJECT PROGRAMMING
 FEASIBILITY STUDY
 STATE PLANNING
 BASED ON FY 2011 DOLLARS

WORK DESCRIPTION: RUNWAY 12/30 & PARALLEL TWY EXTENSION (350'x75 TO 4,250 LFT TOTAL)

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM COST
Mobilization and General Conditions	LS	1	\$ 25,000.00	\$ 25,000
Safety and Security	LS	1	\$ 10,000.00	\$ 10,000
Cable, 5KV, CIC (incl. Counterpoise)	LF	2,100	\$ 3.50	\$ 7,350
Elec. Handhole	EA	8	\$ 1,500.00	\$ 12,000
Electrical Duct (2@50')	LF	100	\$ 50.00	\$ 5,000
MIRL (incl. Lens & Lamp)	EA	16	\$ 650.00	\$ 10,400
Relocate Existing PAPI	LS	1	\$ 8,000.00	\$ 8,000
Remove MIRL	EA	11	\$ 100.00	\$ 1,100
Guidance / Hold Short Signs / Dist Remaining Signs	EA	3	\$ 2,700.00	\$ 8,100
Approach Markers/CL Marker	EA	5	\$ 300.00	\$ 1,500
REIL	EA	1	\$ 10,000.00	\$ 10,000
Unclassified Excavation	CY	6,600	\$ 3.00	\$ 19,800
Sand Subbase	CY	4,700	\$ 18.00	\$ 84,600
Gravel Base	CY	1,200	\$ 35.00	\$ 42,000
Bituminous Surface (4")	TON	1,300	\$ 80.00	\$ 104,000
Pavement Marking Removal	SF	40,000	\$ 0.60	\$ 24,000
Pavement Marking (Runway)	SF	40,000	\$ 0.30	\$ 12,000
Drainage Pipe (2 @ 80' EA)	LF	160	\$ 45.00	\$ 7,200
Turfing and Mulching	AC	2	\$ 3,000.00	\$ 6,000
CONSTRUCTION TOTAL =				\$ 398,050
CONSTRUCTION CONTINGENCIES (15%) =				\$ 59,708
CONSTRUCTION TOTAL =				\$ 457,758
ENGINEERING DESIGN (7%) =				\$ 32,043
CONSTRUCTION ADMIN (10%) =				\$ 45,776
(Value not including Engineering Design) =				\$ 503,533
ANTICIPATED CONSTRUCTION YEAR =				2013
RATE OF INFLATION =				2.00%
PROJECT YEAR TOTAL COST =				\$523,875.99
PROJECT YEAR BUDGET ESTIMATE =				\$ 530,000



Note: These costs were developed without the benefit of field surveys or soils investigation.
 A final cost estimate will be dependent upon development of these items and further design.

ENGINEERING COST ESTIMATE

PROJECT: TAXILANE FOR HANGAR DEVELOPMENT
 LOCATION: HASTINGS CITY/BARRY COUNTY AIRPORT
 CITY: HASTINGS, MI
 DATE: 6/12/2009, REV. 7/11/2011
 PREPARED BY: RGN

FINAL DESIGN
 PROJECT PROGRAMMING
 FEASIBILITY STUDY
 STATE PLANNING
 BASED ON FY 2011 DOLLARS

WORK DESCRIPTION: TAXILANE FOR FUTURE HANGARS NORTH OF APRON (25638 SFT)

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM COST
Mobilization and General Conditions	LS	1	\$ 10,000.00	\$ 10,000
Safety and Security	LS	1	\$ 12,000.00	\$ 12,000
Unclassified Excavation	CY	2,300	\$ 3.00	\$ 6,900
Sand Subbase	CY	1,500	\$ 18.00	\$ 27,000
Gravel Base	CY	500	\$ 35.00	\$ 17,500
Bituminous Surface	TON	700	\$ 80.00	\$ 56,000
Pavement Marking	SF	750	\$ 0.50	\$ 375
Turfing and Mulching	AC	1	\$ 3,000.00	\$ 3,000
				CONSTRUCTION TOTAL = \$ 132,775
				CONSTRUCTION CONTINGENCIES (15%) = \$ 19,916
				CONSTRUCTION TOTAL = \$ 152,691
				ENGINEERING DESIGN (7%) = \$ 10,688
				CONSTRUCTION ADMIN (10%) = \$ 15,269
				\$ 178,649
				ANTICIPATED CONSTRUCTION YEAR = 2015
				RATE OF INFLATION = 2.00%
				PROJECT YEAR TOTAL COST = \$193,375.17
				PROJECT YEAR BUDGET ESTIMATE = \$ 200,000



Note: These costs were developed without the benefit of field surveys or soils investigation.
 A final cost estimate will be dependent upon development of these items and further design.

ENGINEERING COST ESTIMATE

PROJECT: NORTHWEST APRON AND TAXISTREETS REHABILITATION
 LOCATION: HASTINGS CITY/BARRY COUNTY AIRPORT
 CITY: HASTINGS, MI
 DATE: 6/22/2009, REV. 7/11/2011
 PREPARED BY: RGN

FINAL DESIGN
 PROJECT PROGRAMMING
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WORK DESCRIPTION: REHABILITATE NORTHWEST APRON AND TAXISTREETS (109,117 SFT)

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM COST
Mobilization and General Conditions	LS	1	\$ 20,000.00	\$ 20,000
Safety and Security	LS	1	\$ 15,000.00	\$ 15,000
Unclassified Excavation	CY	1,750	\$ 3.00	\$ 5,250
Sand Subbase	CY	1,150	\$ 18.00	\$ 20,700
Gravel Base	CY	400	\$ 35.00	\$ 14,000
Bituminous Surface	TON	3,450	\$ 80.00	\$ 276,000
Cold Mill Existing Pavement	SY	12,200	\$ 1.50	\$ 18,300
Fine Grade and Compact Aggregate Base	SY	12,200	\$ 1.50	\$ 18,300
Pavement Marking	SF	3,000	\$ 0.50	\$ 1,500
Turfing and Mulching	AC	1	\$ 3,000.00	\$ 3,000
CONSTRUCTION TOTAL = \$				392,050
CONSTRUCTION CONTINGENCIES (15%) = \$				58,808
CONSTRUCTION TOTAL = \$				450,858
ENGINEERING DESIGN (7%) = \$				31,560
CONSTRUCTION ADMIN (10%) = \$				45,086
\$				527,503
ANTICIPATED CONSTRUCTION YEAR =				2018
RATE OF INFLATION =				2.00%
PROJECT YEAR TOTAL COST =				\$605,935.45
PROJECT YEAR BUDGET ESTIMATE = \$				610,000



Note: These costs were developed without the benefit of field surveys or soils investigation.
 A final cost estimate will be dependent upon development of these items and further design.

ENGINEERING COST ESTIMATE

PROJECT: TAXIWAY E EXTENSION
 LOCATION: HASTINGS CITY/BARRY COUNTY AIRPORT
 CITY: HASTINGS, MI
 DATE: 6/22/2009, REV. 7/11/2011
 PREPARED BY: RGN

FINAL DESIGN
 PROJECT PROGRAMMING
 FEASIBILITY STUDY
 STATE PLANNING
 BASED ON FY 2011 DOLLARS

WORK DESCRIPTION: EXTEND PARALLEL TAXIWAY E (APPROX. 2500 LFT). REMOVE TAXIWAY B (APPROX. 1200 LFT)

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM COST
Mobilization and General Conditions	LS	1	\$ 40,000.00	\$ 40,000
Safety and Security	LS	1	\$ 25,000.00	\$ 25,000
Electrical Duct (4@50')	LF	200	\$ 50.00	\$ 10,000
Taxiway Guidance Signs	EA	8	\$ 2,700.00	\$ 21,600
Unclassified Excavation (28")	CY	8,000	\$ 3.00	\$ 24,000
Sand Subbase (18")	CY	5,000	\$ 18.00	\$ 90,000
Gravel Base (6")	CY	1,300	\$ 35.00	\$ 45,500
Bituminous Surface (4")	TON	2,400	\$ 80.00	\$ 192,000
Pulverize Existing Pavement	SY	4,700	\$ 1.50	\$ 7,050
Salvage Pulverized Material (3")	CY	400	\$ 5.00	\$ 2,000
Fine Grade and Compact Aggregate Base	SY	4,700	\$ 1.50	\$ 7,050
Pavement Marking	SF	12,200	\$ 0.50	\$ 6,100
Drainage Pipe	LF	500	\$ 50.00	\$ 25,000
Drainage Structure w/ Cover	EA	2	\$ 2,500.00	\$ 5,000
Turfing and Mulching	AC	10	\$ 3,000.00	\$ 30,000
CONSTRUCTION TOTAL = \$				530,300
CONSTRUCTION CONTINGENCIES (15%) = \$				79,545
CONSTRUCTION TOTAL = \$				609,845
ENGINEERING DESIGN (7%) = \$				42,689
CONSTRUCTION ADMIN (10%) = \$				60,985
(Value not including Engineering Design) \$				670,830
ANTICIPATED CONSTRUCTION YEAR =				2021
RATE OF INFLATION =				2.00%
PROJECT YEAR TOTAL COST =				\$817,737.42
PROJECT YEAR BUDGET ESTIMATE = \$				820,000



Note: These costs were developed without the benefit of field surveys or soils investigation.
 A final cost estimate will be dependent upon development of these items and further design.

HASTINGS CITY/BARRY COUNTY AIRPORT

HASTINGS, MICHIGAN



TEN-YEAR DEVELOPMENT PLAN - YEARS 2012 TO 2022

FAA IDENTIFIER: 9D9
STATE ID: 08-01

<p>YEAR - 2012</p> <p>A — EA AND DESIGN FOR RUNWAY 12/30 EXTENSION APPROACH SURVEY</p>
<p>YEAR - 2013</p> <p>B — EASEMENT FOR RUNWAY 12/30 EXTENSION A — RUNWAY 12/30 EXTENSION CONSTRUCTION CRACK SEALING AND PAVEMENT MARKING</p>
<p>YEAR - 2015</p> <p>C — TAXILANE FOR HANGAR DEVELOPMENT</p>
<p>YEAR - 2016</p> <p>CARRYOVER FUNDS</p>
<p>YEAR - 2017</p> <p>CARRYOVER FUNDS</p>
<p>YEAR - 2018</p> <p>D — NORTHWEST APRON AND TAXISTREET REHABILITATION CRACK SEALING AND PAVEMENT MARKING</p>
<p>YEAR - 2019</p> <p>CARRYOVER FUNDS</p>
<p>YEAR - 2020</p> <p>E — DESIGN TAXIWAY E EXTENSION</p>
<p>YEAR - 2021</p> <p>E — TAXIWAY E EXTENSION</p>
<p>YEAR - 2022</p> <p>CONSTRUCT SRE STORAGE BUILDING CRACK SEALING AND PAVEMENT MARKING</p>

