

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

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

Prepared for:

**Jack Barstow Airport
Midland, Michigan**

**June 2011
Final November 2011**

Contact:

Mr. Brian McManus
Jack Barstow Airport
333 West Ellsworth
Midland, MI 48640
989-837-3231
fax 989-837-5710

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

*ACIP includes current development year (2011 already programmed - minor changes acceptable)

Airport Name: Jack Barstow Airport Date prepared: June 23, 2011 Revised November 11, 2011

Associated City: Midland, MI Prepared By: GWS

Sponsor: City of Midland, Michigan Sponsor email address & phone: bmcmanus@midland-mi.org (989) 837-3353

Airport Identifier: IKW **FINAL ACIP due to MDOT AERO: no later than 12/03/2010**

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	Construct SRE Building	No	STBDSN	38	\$302,100	\$0	\$0	\$7,950	\$7,950	\$318,000	SRE building will be constructed in vicinity of administration building. Airport is still considering different locations for building. When they decide, the Airport Layout Plan will be updated with as constructed location.
	Design Terminal Apron Reconstruction and Airfield Restriping	Yes	REAPIM	58	\$21,170	\$0	\$0	\$557	\$557	\$22,284	The terminal apron is showing age and stress related distress (PCI 46).
	Carry forward remainder of GA Entitlement (\$95,320)	NA									
2013	Reconstruct Terminal Apron and Restripe Airfield	Yes	REAPIM	58	\$245,320	\$91,930	\$0	\$8,875	\$8,875	\$355,000	The terminal apron is showing age and stress related distress (PCI 46). Recent inspection of airfield showed pavement markings need to be reapplied.
2014	Carry forward GA Entitlement (\$150,000)	NA									
2015	Phase I Replace Fence, install 2 Power Gates, Rehab Hangar Access Roads	Yes	STEQSE	40	\$300,000	\$0	\$0	\$7,895	\$7,895	\$315,789	Security fence will be replaced in phases starting with the vicinity of the airport entrance drive and the terminal building. The airport also wishes to install two power gates and rehabilitate hangar access roads.
2016	Carry forward GA Entitlements (\$150,000)	NA									
2017	Carry forward GA Entitlements (\$300,000)	NA									
2018	ALP Update	NA	PLPLMA	64	\$76,000			\$2,000	\$2,000	\$80,000	FAA grant assurances require that proposed airport improvements be on approved Airport Layout Plan before they are eligible for AIP funding. Also, last full Airport Layout Plan update was completed in January 1998. A full update (including aerial photography) is warranted.
	Carry forward GA Entitlements (\$374,000)	NA									
2019	Construct T-Hangar and Bulk Hangar	Yes	STBDMS	31	\$524,000	\$75,574	\$0	\$15,778	\$15,778	\$631,130	Airport management anticipates that additional aircraft storage will be required.
2020	Carry forward GA Entitlements (\$150,000)	NA									
2021	Design and Construct Phase II Replacement Fence	Yes	STEQSE	40	\$300,000	\$0	\$0	\$7,895	\$7,895	\$315,789	Phase II of fence installation started in 2015
2022	Carry forward GA Entitlements (\$150,000)	NA									

ENGINEERING COST ESTIMATE

PROJECT: Reconstruct Terminal Apron and Remark Airfield
 LOCATION: Jack Barstow Airport
 CITY: Midland, MI
 DATE: 10/31/11
 PREPARED BY: BJH, GWS

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

WORK DESCRIPTION: Reconstruct terminal apron (4300 syd) and remark airfield and hangar areas

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM COST
Mobilization and General Conditions	LS	1	\$ 20,000.00	\$ 20,000
Safety and Security	LS	1	\$ 10,000.00	\$ 10,000
Unclassified Excavation (24")	CY	3,000	\$ 8.00	\$ 24,000
Sand Subbase (18")	CY	2,200	\$ 18.00	\$ 39,600
Gravel Base (6")	CY	750	\$ 40.00	\$ 30,000
Bituminous Surface (4")	TON	1,100	\$ 100.00	\$ 110,000
Pavement Removal	SY	4,300	\$ 2.00	\$ 8,600
Airport Pavement Marking, Solid, Yellow	Sft	41,153	\$ 0.25	\$ 10,288
Airport Pavement Marking, Solid, White	Sft	35,328	\$ 0.25	\$ 8,832
Airport Pavement Marking, Solid, Black	Sft	49,989	\$ 0.25	\$ 12,497
Turfing and Mulching	AC	1	\$ 3,000.00	\$ 3,000
CONSTRUCTION TOTAL = \$				276,818
CONSTRUCTION CONTINGENCIES (15%) = \$				41,523
CONSTRUCTION TOTAL = \$				318,340
ENGINEERING DESIGN (7%) Note 2 = \$				22,284
CONSTRUCTION ADMIN (10%) = \$				31,834
\$				372,458
PROJECT YEAR BUDGET ESTIMATE = \$				380,000



Note 1: 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: Phase 1 Fence with 2 Power Gates and Access Roads
 LOCATION: Jack Barstow Airport
 CITY: Midland, MI
 DATE: 7/29/09 (Reviewed 7/28/2010)
 PREPARED BY: BJH

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

WORK DESCRIPTION: Install 3650 feet of fence, two power gates, and pave two access roads (2750 syd)

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM COST
Mobilization and General Conditions	LS	1	\$ 13,000.00	\$ 13,000
Safety and Security	LS	1	\$ 12,000.00	\$ 12,000
6' Fencing	LF	3,650	\$ 15.00	\$ 54,750
20' Power Slide Gate	EA	2	\$ 30,000.00	\$ 60,000
Bituminous Surface (4")	TON	725	\$ 110.00	\$ 79,750
Cold Mill/Pulverize Existing Pavement	SY	2,750	\$ 1.50	\$ 4,125
Salvage Pulverized Material	CY	200	\$ 5.00	\$ 1,000
Fine Grade & Compact Aggregate Base	SY	2,750	\$ 1.50	\$ 4,125
Turfing and Mulching	AC	2	\$ 3,000.00	\$ 6,000
CONSTRUCTION TOTAL = \$				234,750
CONSTRUCTION CONTINGENCIES (15%) = \$				35,213
CONSTRUCTION TOTAL = \$				269,963
ENGINEERING DESIGN (7%) = \$				18,897
CONSTRUCTION ADMIN (10%) = \$				26,996
				\$ 315,856
PROJECT YEAR BUDGET ESTIMATE = \$				316,000



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: T-Hangar and Bulk Storage
 LOCATION: Jack Barstow Airport
 CITY: Midland, MI
 DATE: 7/29/09
 PREPARED BY: BJH

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

WORK DESCRIPTION: Construct T-Hangar and Bulk Storage. Construct access taxilane (2150 syd)

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
T-Hangar and Bulk Storage	LS	1	\$ 400,000.00	\$ 400,000
Unclassified Excavation (28")	CY	1,000	\$ 10.00	\$ 10,000
Sand Subbase (12")	CY	600	\$ 18.00	\$ 10,800
Gravel Base (6")	CY	300	\$ 40.00	\$ 12,000
Bituminous Surface (3")	TON	300	\$ 90.00	\$ 27,000
Pavement Marking (Taxiway)	LS	1	\$ 500.00	\$ 500
Turfing and Mulching	AC	1	\$ 3,000.00	\$ 3,000
CONSTRUCTION TOTAL = \$				498,300
CONSTRUCTION CONTINGENCIES (10%) = \$				49,830
CONSTRUCTION TOTAL = \$				548,130
ENGINEERING DESIGN = \$				32,000
CONSTRUCTION ADMIN = \$				51,000
\$				631,130
ANTICIPATED CONSTRUCTION YEAR =				2017
PROJECT YEAR TOTAL COST = \$				631,130
PROJECT YEAR BUDGET ESTIMATE = \$				632,000



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: Phase 2 Fence
 LOCATION: Jack Barstow Airport
 CITY: Midland, MI
 DATE: 8/4/2010 (Reviewed)
 PREPARED BY: GWS

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

WORK DESCRIPTION: Install 18400 feet of woven wire fence, 8 gates

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	ITEM COST
Mobilization and General Conditions	LS	1	\$ 20,000.00	\$ 20,000
Safety and Security	LS	1	\$ 6,000.00	\$ 6,000
10' Woven Wire Fencing	LF	18,400	\$ 10.00	\$ 184,000
20' Double Leaf Swing Gate, 10' Chain-Link	EA	8	\$ 3,000.00	\$ 24,000
CONSTRUCTION TOTAL = \$				234,000
CONSTRUCTION CONTINGENCIES (15%) = \$				35,100
CONSTRUCTION TOTAL = \$				269,100
ENGINEERING DESIGN (7%) = \$				18,837
CONSTRUCTION ADMIN (10%) = \$				26,910
				\$ 314,847
PROJECT YEAR BUDGET ESTIMATE = \$				315,000



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.

JACK BARSTOW AIRPORT

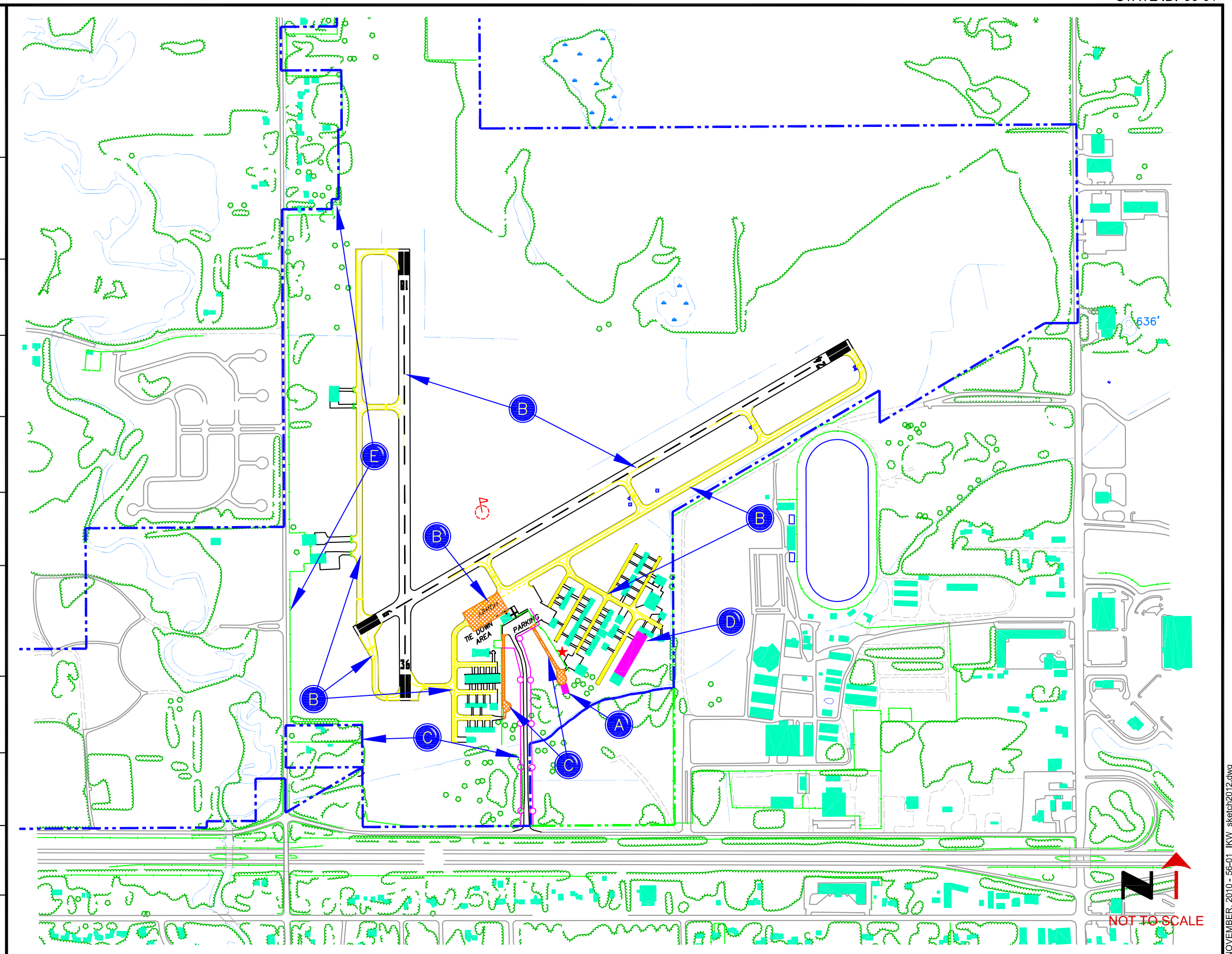
MIDLAND, MICHIGAN



TEN-YEAR DEVELOPMENT PLAN - YEARS 2012 TO 2022

FAA IDENTIFIER: IKW
STATE ID: 56-01

<p>YEAR - 2012</p> <ul style="list-style-type: none"> A — CONSTRUCT SRE BUILDING B — DESIGN TERMINAL APRON RECONSTRUCTION AND AIRFIELD RESTRIPING CARRY FORWARD THE REMAINDER OF GA ENTITLEMENT (\$95,320)
<p>YEAR - 2013</p> <ul style="list-style-type: none"> B — RECONSTRUCT TERMINAL APRON AND RESTRIPE AIRFIELD
<p>YEAR - 2014</p> <p>CARRY FORWARD GA ENTITLEMENT (\$150,000)</p>
<p>YEAR - 2015</p> <ul style="list-style-type: none"> C — PHASE I REPLACEMENT FENCE, INSTALL 2 POWER GATES, REHAB HANGAR ACCESS ROADS
<p>YEAR - 2016</p> <p>CARRY FORWARD GA ENTITLEMENTS (\$150,000)</p>
<p>YEAR - 2017</p> <p>CARRY FORWARD GA ENTITLEMENTS (\$300,000)</p>
<p>YEAR - 2018</p> <p>ALP UPDATE CARRY FORWARD GA ENTITLEMENTS (\$374,000)</p>
<p>YEAR - 2019</p> <ul style="list-style-type: none"> D — CONSTRUCT T-HANGAR AND BULK STORAGE
<p>YEAR - 2020</p> <p>CARRY FORWARD GA ENTITLEMENTS (\$150,000)</p>
<p>YEAR - 2021</p> <ul style="list-style-type: none"> E — DESIGN AND CONSTRUCT PHASE II REPLACEMENT FENCE
<p>YEAR - 2022</p> <p>CARRY FORWARD GA ENTITLEMENTS (\$150,000)</p>



NOVEMBER, 2010 - 56-01_IKW_sketch2012.dwg

MICHIGAN AIRPORT PROGRAM (MAP) MEETINGS

Attendance Sheet

Airport: Midland

Date: September 28, 2011

PLEASE PRINT

Name	Representing	Phone	E-mail
Betsy Steudle	MDOT-AERO (Programming)	517-335-8359	steudleb@michigan.gov
Laura Wise	MDOT-AERO (Proj Mgr)	517-335-9951	wisel2@michigan.gov
NP Chip Kraus	MDOT-AERO (LAND)	517-335-9755	krausf@michigan.gov
VP Ralph Sims	MDOT-AERO (ALP)	517-335-9857	simsr@michigan.gov
VP Molly Lamrouex	MDOT-AERO (ENV)	517-335-9866	lamrouexm@michigan.gov
Steve Schultz	MDOT-Aero (weather)	517-335-9627	schultzs@michigan.gov
SIGAL STEINER	FLIGHTSOP DISTRICT AIR COMM	489-535-1697	SIGALSTEINER@GMAIL.COM
JT BARRIS	" "	989-835-3231	JT@BARSTOWAIRPORT.COM
BRIAN McMUNA	CITY OF MIDLAND	989-837-7353	B.MCMUNA@MIDLAND-MI.GOV
MATT JANSON	BARSTOW COMM	489-631-6956	
Ray Senesac	BARSTOW COMM	989-832-0086	RAYSENESAC@AOL.COM
Gary Siegfried	Meed & Hunt	517-321-8334	gary.siegfried@meedhunt.com

NP = Not Present